

**ABB**

CATALOG

# **ABB solutions for HVAC**



---

## ACH580 series

### Leading the way in HVAC drives

**Comfort. It's something we take for granted in the buildings we live and work in. Comfort requires efficient systems to control heating, ventilation, and air conditioning (HVAC) to ensure the air we breathe is pure and the temperature is comfortable. We also need to ensure air quality and safety in the most energy-efficient and cost-effective ways in both normal and mission critical situations.**

**For half a century, ABB has been leading the way in optimizing HVAC systems using drive control to ensure that you can take comfort for granted. The new ACH580 series of variable frequency drives (VFDs) provides the quality, reliability, and energy savings you expect. They are easy to use and safe to maintain. All you need to do is to set the drive up, and then focus on what counts.**

**Additional information**

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 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.

---

# Contents

- |            |                 |
|------------|-----------------|
| <b>1-1</b> | <b>Drives</b>   |
| <b>2-1</b> | <b>Motors</b>   |
| <b>3-1</b> | <b>Services</b> |

---

# Drives Contents

<b>1-2</b>	<b>The next step in HVAC drives</b>
<b>1-7</b>	<b>ACH580 Ultra-Low Harmonic (ULH) drive</b>
<b>1-13</b>	<b>Complete HVAC drive offering</b>
<b>1-15</b>	<b>Common characteristics of the HVAC family of drives</b>
<b>1-18</b>	<b>How to select a drive</b>
<b>1-19</b>	<b>ACH580 technical data</b>
<b>1-21 to 1-74</b>	<b>Ratings, types and voltages</b>
<b>1-75</b>	<b>Construction compatibility</b>
<b>1-77</b>	<b>Tools</b>
<b>1-78</b>	<b>EtherNet/IP™ Gateway</b>
<b>1-79</b>	<b>DriveTune</b>
<b>1-80</b>	<b>Mobile Connect</b>
<b>1-86</b>	<b>Options</b>

## The next step in HVAC drives

The new ACH580 drives come with a range of advanced features, such as a new primary settings menu that makes commissioning the drives much easier and faster. Optional Bluetooth® connectivity offers improved accessibility for drives in remote areas and increases safety by letting users stay out of arc flash danger zones.

### Simple to select, install and use

All the essentials including DC chokes, EMC filters, cabling clamps, certified BACnet communication, and enclosures from UL (NEMA) Type 1 to UL (NEMA) Type 12 are a standard part of the drive. Simplifying selection, installation, and commissioning.



### Safe maintenance

The packaged disconnect solution provides a main disconnect switch, further increasing safety for people working on air-handling units.



### Motor control options to meet your application needs

ACH580 drives can be integrated with several types of AC motors, including Permanent Magnet (PM), synchronous reluctance (SynRM) motors and Ferrite Assisted SynRM (FASR) including EC Titanium™. Using these motors can reduce your energy costs even more.

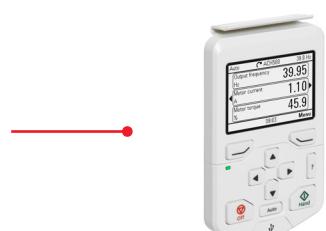


### Additional I/O options

Take advantage of the added flexibility and accessibility — never be without back-up I/O points at the job site again.



ACH580 drives are ideal for HVAC fans, pumps, compressors, air-handling units, and chillers. These are used in hospitals, data centers, shopping centers, tunnel ventilation, factories, office buildings, and more.



#### Intuitive control panel

The drive's HVAC-specific software, intuitive control panel with customizable text, and menu-driven programming simplify setup and operation of even the most complex applications. You can customize the view so that it only shows the information you need, and it automatically saves a backup of your most recent configuration so that it's always available.



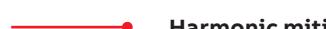
#### Optional Bluetooth capability

ABB's new HVAC Bluetooth control panel lets you commission the drive remotely, safely outside the arc flash boundary. The Drivetune smartphone app allows you to commission and tune the drive from a distance, giving you access to the same primary settings and other menus available on the drive's HVAC control panel.



#### Reliable communication

BTL certified BACnet MS/TP, Modbus RTU, Modbus TCP, Ethernet I/P and Johnson Controls N2 are embedded in every ACH580. In addition, a wide range of optional fieldbus adapters, including DeviceNet, LonWorks, PROFIBUS DP, Ethernet, Modbus TCP, PROFINET IO and BTL certified BACnet/IP, are available to enable connectivity with all major building automation and control systems.



#### Harmonic mitigation

The drive provides reduced harmonics with built-in, DC choke in a small and lightweight design.

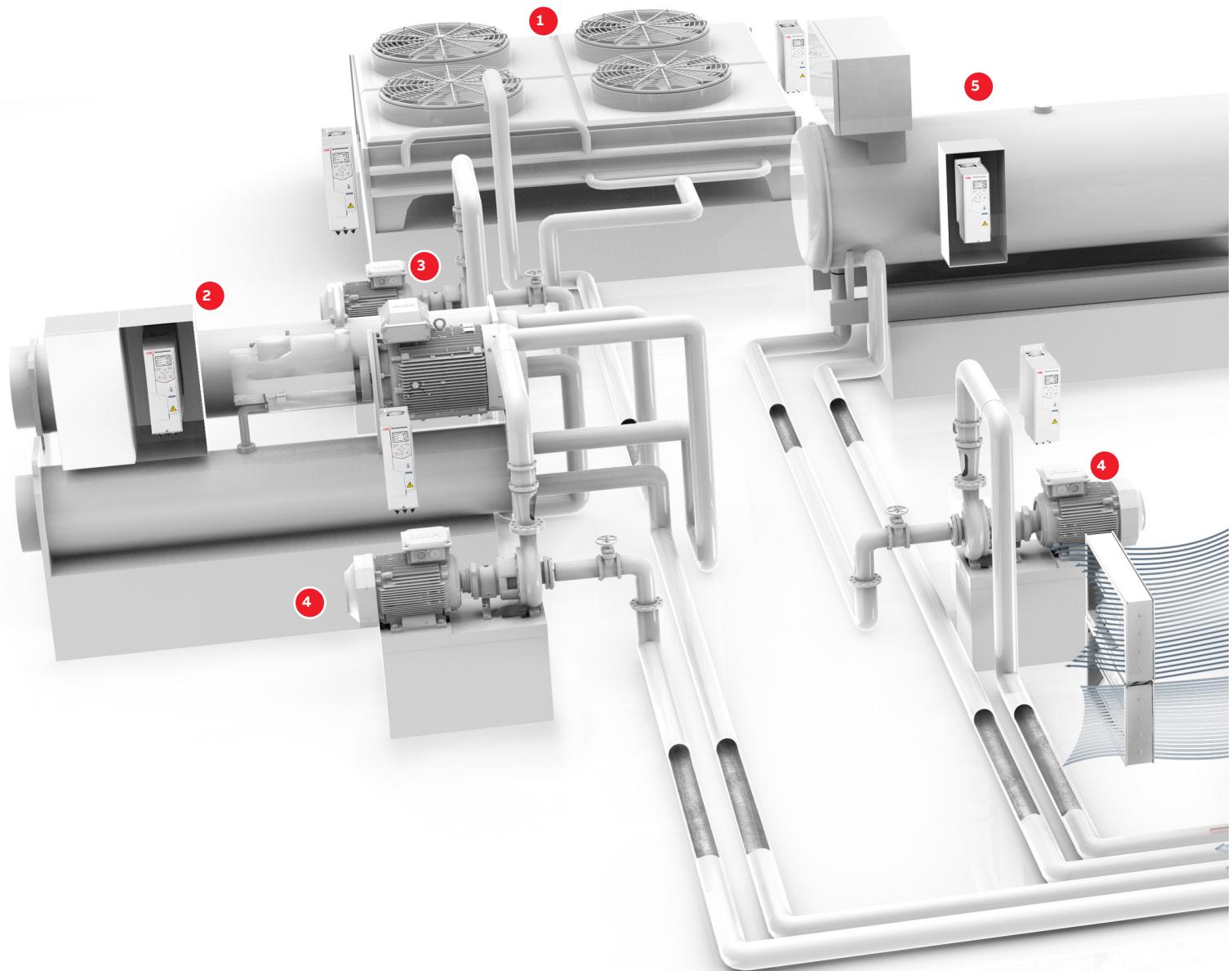


#### Ultra-Low Harmonic (ULH) drive for a clean electrical network

The revolutionary ACH580 Ultra-Low Harmonic drive is designed specifically for the HVAC market, minimizing the effect of harmonics on your system. This all-in-one solution is fully integrated within the ACH580 platform and leverages the same programming tools, user settings, options, and functions, while providing superior harmonic performance.

## Premier HVAC control

We understand the complexity of air handling systems and the need to produce high levels of comfort, control, and safety. Be assured that, regardless of the season or external conditions, we help make your system efficient, safe, and informative.



**1 Cooling tower**

Cools down the condenser water.

- The drive controls the speed of multiple fans simultaneously to achieve high energy savings, while optimizing the installation cost

**2 Chiller**

Chills water or other liquid to cool down and dehumidify the indoor air.

- The drive controls the speed of the compressor for better energy efficiency
- By-pass valves can be avoided
- Less mechanical stress as there are less starts and stops
- Mechanical resonance speeds can be avoided
- Maximum speed is not limited by nominal supply frequency
- Less stress to supply network as high inrush currents can be avoided with VFD controlled start

**3 Condenser water pump**

Circulates water between the cooling tower and the chiller.

- Energy savings can be achieved with variable frequency drives that adjust pump speed to the cooling load

**4 Chilled and hot water circulator pumps**

Circulate water (or other liquid) between heating coil and boiler or cooling coil and chiller.

- The cooling and heating loads vary a lot over time. Speed controlled circulator pumps make sure that an adequate amount of water or other liquid is distributed in the building.
- Soft start and stop of the pump reduces hydraulic stress on pipelines and valves

**5 Boiler**

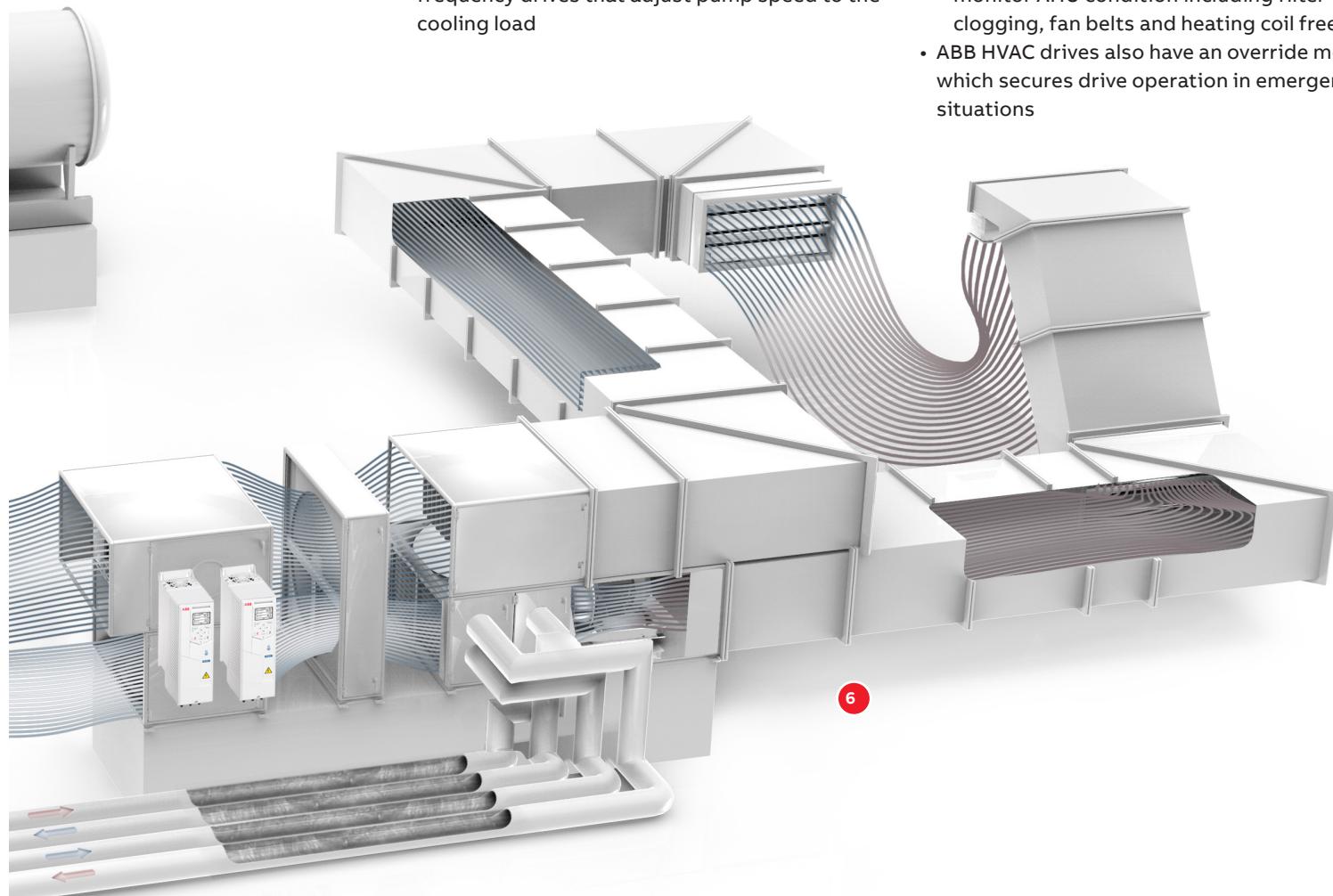
Heats up the water for building heating.

- The drive controls the burner fan to adjust the amount of combustion air to the heating load

**6 Air handling unit**

Circulates, mixes, cleans, humidifies/dehumidifies, heats/cools air.

- Drives can be used to:
  - control the speed of supply and return fans
  - eliminate mechanical stress of air duct system
  - avoid fan resonance speeds
  - control the speed and efficiency of the rotary heat exchangers
  - control the dampers
  - monitor AHU condition including filter clogging, fan belts and heating coil freeze
- ABB HVAC drives also have an override mode, which secures drive operation in emergency situations



# ACH580

## Motor control options



Super-E motor



IEC motors

ABB IE5 synchronous  
reluctance motor SynRMEC Titanium Ferrite assisted  
synchronous reluctance motor (FASR)

### Induction motors, the industry workhorse

Pair the ACH580 with an induction motor for simple and reliable operation. Further simplifying setup, the ACH580 drive is factory-delivered with EM series nameplate motor data.



### Permanent Magnet motors for smooth operation

ABB has the software, hardware and application knowledge to support Permanent Magnet motor technology. Permanent Magnet technology offers users efficiency across the speed range, compact housing for applications such as fan walls, and eliminates the need for mechanical speed reduction equipment.



### IE5 SynRM for optimized energy efficiency

A key to increased energy efficiency is the rotor design of our drive and motor package. Combining the ACH580's control technology with a synchronous reluctance motor (SynRM) will also reduce motor temperature and noise.

### EC Titanium for efficiency and performance

The EC Titanium achieves IE5 efficiencies and is a step above traditional EC motor designs. The EC Titanium is paired with a VFD that enables the use of advanced motor control algorithms for higher efficiencies across the speed load range than traditional EC (electrically commutated) motor solutions.



## Reap the benefits

### Highly efficient and easy to maintain HVACR system

#### Introducing an unbeatable fan array solution

Achieve a best-in-class, sustainable HVAC system when you pair ACH580 with a single Baldor-Reliance® EC Titanium™ high efficiency motor. Available in NEMA or IEC frame, standard duty motors can be replaced easily with a highly efficiency (IE5+) new design.

**Lower cost of ownership • Better control • Expertise • Energy efficiency • Sustainability • Reduced carbon footprint**



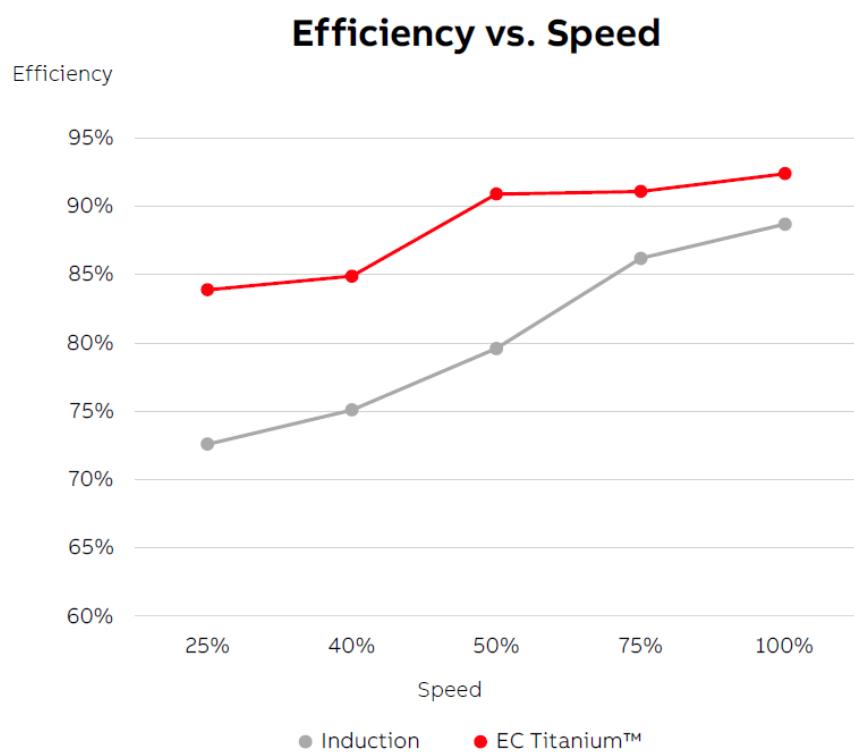
Learn more about  
Drives for HVACR



## Real-world results prove performance and ROI

**BALDOR • RELIANCE®**

The EC Titanium motor achieved significant energy savings during testing, with an average consumption of 45.1 kWh per day compared to 57.69 kWh for the existing motor. This translates to a cost savings of \$43.30 per month or \$520 per year, per unit, with a complete return on investment in under two years.



- Over 12% efficiency improvement, which can be up to \$520 per motor yearly.<sup>1</sup>
- Efficiency does not drop off rapidly like induction motors.
- Reduction of energy consumption enables savings of 12.59 kWh<sup>2</sup> per motor.

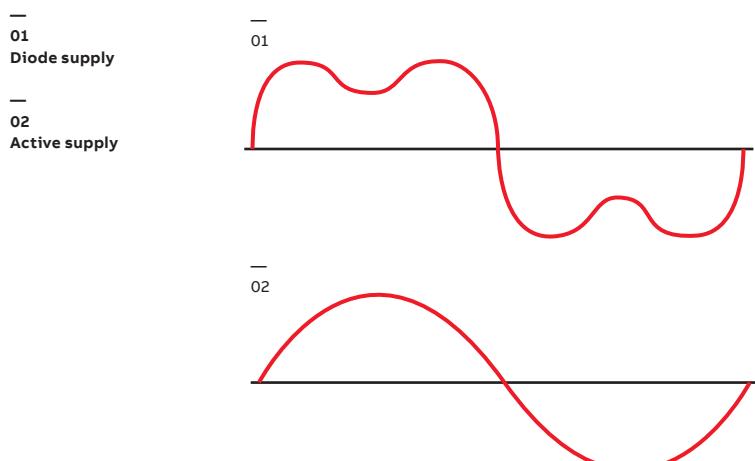
<sup>1</sup> For 7.5 HP motor at 1,800 RPM used in a manufacturing facility  
<sup>2</sup> Average daily energy reduction

# ACH580 Ultra-Low Harmonic (ULH) drive

## What are harmonics?

In an ideal case the current in an AC grid is a pure sine wave and does not contain harmonics. In reality the current deviates from this pure sine wave and contains harmonics. Harmonic current is typically measured as a percentage value, called total harmonic distortion (THDi).

Harmonics can cause damage to sensitive electronic equipment, interference to communication equipment, tripping of circuit breakers, blowing of fuses, and capacitor failures. The effects can also include overheating of cables and motors, overloading of transformers, generator failure, and power factor capacitor damage.



## Complete HVAC functionality

The standard ACH580 ULH has an intuitive control panel used to configure, control, and monitor the drive. An optional Bluetooth control panel allows the drive to be configured via the control panel or the DriveTune app.

A robust HVAC firmware package provides drive, motor, and application protection features. Application specific features, such as accepting four separate start interlocks (safeties), along with broken belt detection, are also included. The drive includes BACnet MS/TP, Modbus RTU, and Johnson Controls N2 as standard.

## Savings in total cost of ownership

Installation costs are reduced with the simple three wires in and three wires out design. Maintenance costs are lowered as compared to other harmonic mitigation solutions like passive filters, multi-pulse, and active filters. There are fewer components to maintain and stock as spares.

Using the ACH580 ULH allows your engineer to design your electrical system and backup generators to the right size and not oversizing for the harmonics in the network.

### Reliability for your building

Harmonics in the network could cause problems with other electrical equipment in the same network. Worst case scenario, it may cause your sensitive electrical equipment to fail.

Harmonics can also cause problems in retrofit projects. In such projects, a transformer might not be able to meet the harmonic levels caused by non-linear loads such as standard 6-pulse drives, so there is a risk of overloading the transformer.

In addition to the problems caused by harmonics, a weak electrical network can cause troubles to your HVAC systems. Weak electrical networks that have sags on the line voltage may cause motors to overheat, trip, or fail.

The ACH580 ULH drive offers a reliable solution to overcome these challenges. It is able to lower the harmonic content so that sensitive equipment stays running and transformers or generators don't fail. In addition, the ACH580 ULH can boost output voltage so that the motor will always run with nominal voltage, despite the fluctuations in line voltage.

### Optimized size and performance

ACH580 ULH has all the harmonic mitigation technology in the drive. With a THDi of 3% or less, there is no need to install external components for reducing harmonics, this drive doesn't create the harmonics to fix.

### ACH580 Ultra-Low Harmonic packaged drives with disconnect

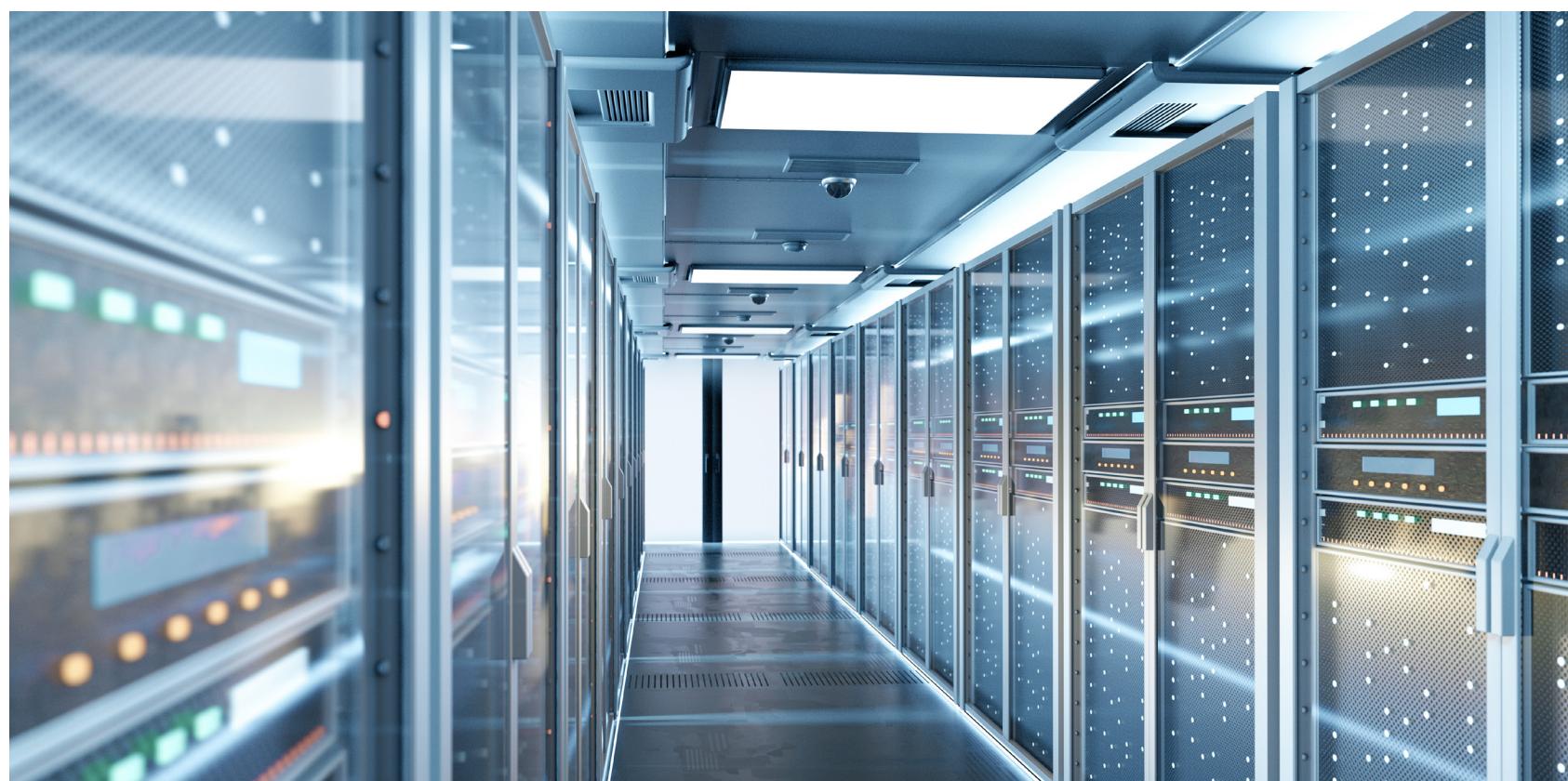
The ACH580 Ultra-Low Harmonic (ULH) packaged drive is an ACH580 ULH variable frequency drive enclosed with either an input disconnect switch and fast acting fuses (ACH580-3PDR) or an input circuit breaker and fast acting fuses (ACH580-3PCR). The ACH580 packaged drive provides a door-mounted input disconnect switch (padlockable in the OFF position), electronic motor overload protection, a door mounted control panel with graphical display for local control, provisions for external control connections, and serial communications capability.

### ACH580 Ultra-Low Harmonic drive E-Clipse bypass

The ACH580 Ultra-Low Harmonic (ULH) drive with ABB E-Clipse bypass is an ACH580 HVAC drive in an integrated UL (NEMA) Type 1, 12 or 3R enclosure with a bypass motor starter. The ACH580 ULH drive with ABB E-Clipse bypass provides an input disconnect switch or circuit breaker with door mounted and interlocked switch (padlockable in the OFF position), a bypass starter, electronic motor overload protection, a door mounted control panel with graphical display for local control, provisions for external control connections, and serial communications capability. Configurations with the +F267 option include a drive service switch.

### Technical details and documentation

PDF, BIM, CAD Drawings and 3D models are available for planning your building.



## What Makes an ACH580 ULH Drive Unique?

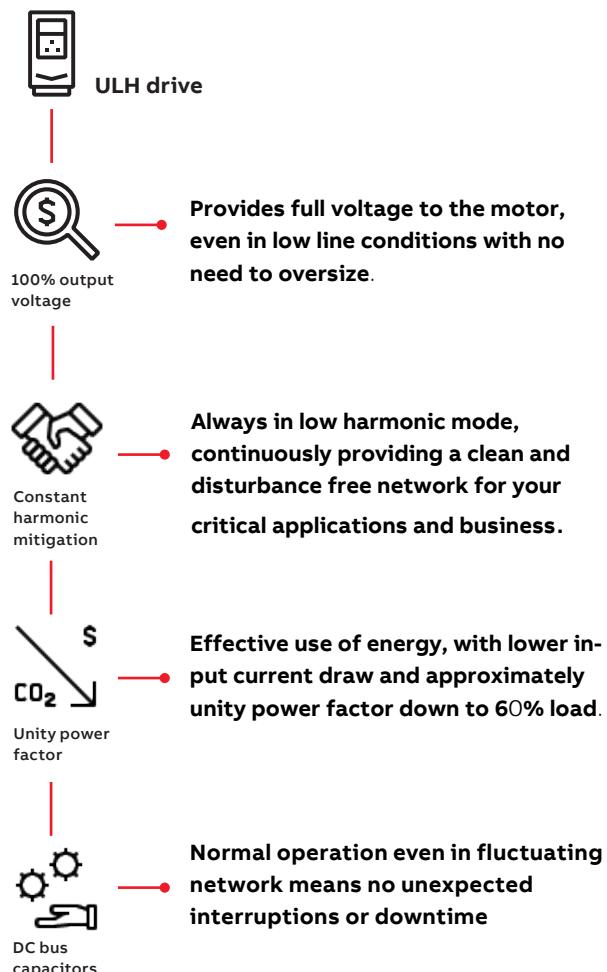
The ACH580 Ultra-Low Harmonics (ULH) drive provides a compact design that provides your critical infrastructure peace of mind. It reduces the risk of electrical disturbances on your electrical network or generator by adhering to the most stringent IEEE519 recommendations.

### AFE technology:

ULH drives use Active Front End (AFE) technology that reduces harmonics by actively controlling the input current waveform to be sinusoidal, which helps to reduce distortion and improve power quality.

### Built to last:

The ACH580 ULH Drive is built with advanced technology and high-quality materials, making it highly reliable and durable.



### Others Offer:

- Products that starve the motor for voltage, causing motors to overheat or require oversizing
- Solutions that only offer 5% or 8% THDi, based on operating mode
- Limited products available for low harmonic solutions, including those that create significant leading power factor at part load

### ABB offers true Ultra-Low Harmonic solutions

- Unity (1.0) Power Factor
- Power factor correction
- 3% THDi
- Boost functionality
- Generator friendly
- Four generations of experience

Who you choose matters



## Complete HVAC drive offering

All ACH580 drives offer ease of use, scalability, reliability, and come in a variety of packages. They can be equipped with an intuitive Bluetooth control panel, allowing the drive to be configured directly via the control panel or via the Drivetune app. A robust HVAC firmware package provides drive, motor, and application protection features. The drive includes BACnet MS/TP, Modbus RTU, and Johnson Controls N2. Additional protocols, such as BACnet/IP, Modbus TCP, Ethernet I/P and LonWorks, are available with optional fieldbus adapters.



Wall-mounted drives, ACH580-01 and ACH580-31 Ultra-Low Harmonic version  
ACH580 wall mounted drives offer side-by-side, flange, and horizontal mounting options. The UL (NEMA) Type 12 / IP55 variants are designed for applications exposed to dust, moisture, vibration, and other harsh conditions. The ACH580-01 is a six-pulse drive that includes an optimized DC choke for harmonic mitigation.

ACH580-31 Ultra-Low Harmonic drives with built-in harmonic mitigation help to keep the power network clean providing exceptionally low harmonic content. This brings significant benefits, including improved reliability and increased energy savings, as well as extended equipment lifetime.

ACH580-01	ACH580-31
<b>HP range</b>	
1-100 HP at 208 VAC	
1-350 HP at 460 VAC	5-150 at 460 VAC
2-250 HP at 575 VAC	
<b>Input Voltage range</b>	
200 - 240 VAC 1-phase	
200 - 240 VAC 3-phase	208/230 VAC 3-phase
380 - 480 VAC 3-phase	380 - 480 VAC 3-phase
500 - 600 VAC 3-phase	
<b>Enclosure type</b>	
UL (NEMA) Type 1	UL (NEMA) Type 1
UL (NEMA) Type 12	UL (NEMA) Type 12
UL (NEMA) Type 4X	
<b>Control mode</b>	
Scalar	Scalar
Open loop vector	Open loop vector
<b>Communications options</b>	
BACnet MS/TP, BACnet/IP, DeviceNet, EtherNet/IP, Modbus RTU, Johnson Controls N2, PROFIBUS DP, GP1	BACnet MS/TP, BACnet/IP, DeviceNet, EtherNet/IP, Modbus RTU, Johnson Controls N2, PROFIBUS DP, GP1
<b>Operator interface</b>	
Local mounted control panel	Local mounted control panel
<b>Disconnect type</b>	
N/A	N/A

## Complete HVAC drive offering

### E-Clipse bypass drive, ACH580-VCR, ACH580-VDR, ACH580-BCR, ACH580-BDR, ACH580-3BCR, ACH580-3BDR

The ACH580 with ABB E-Clipse bypass has an integrated UL (NEMA) Type 1, 12 or 3R enclosure with a bypass motor starter and is available from 1 to 350 hp at 230/460/575 V. The ACH580 with ABB E-Clipse bypass provides an input disconnect switch or circuit breaker with door mounted and interlocked switch (padlockable in the OFF position), a bypass starter, electronic motor overload protection, a door mounted control panel with graphical display for local control, provisions for external control connections, and serial communications capability. The 3BCR/3BDR series features Ultra-Low Harmonics (ULH)



ACH580-VCR/VDR	ACH580-BCR/BDR	ACH580-3BCR/3BDR
<b>HP range</b>		
1-25 HP at 208 VAC	1-100 HP at 208 VAC	
1-60 HP at 460 VAC	1-700 HP at 460 VAC	5-400 HP at 460 VAC
2-75 HP at 575 VAC	2-250 HP at 575 VAC	
<b>Input Voltage range</b>		
200 - 240 VAC 3-phase	200 - 240 VAC 3-phase	
440 - 480 VAC 3-phase	440 - 480 VAC 3-phase	440 - 480 VAC 3-phase
500 - 600 VAC 3-phase	500 - 600 VAC 3-phase	
<b>Enclosure type</b>		
UL (NEMA) Type 1	UL (NEMA) Type 1	UL (NEMA) Type 1
	UL (NEMA) Type 12	UL (NEMA) Type 12
	UL (NEMA) Type 3R	UL (NEMA) Type 3R
<b>Control mode</b>		
Scalar	Scalar	Scalar
Open loop vector	Open loop vector	Open loop vector
<b>Communications options</b>		
BACnet MS/TP, BACnet/IP, DeviceNet, EtherNet/IP, Modbus RTU, Johnson Controls N2, PROFIBUS DP, GP1	BACnet MS/TP, BACnet/IP, DeviceNet, EtherNet/IP, Modbus RTU, Johnson Controls N2, PROFIBUS DP, GP1	BACnet MS/TP, BACnet/IP, DeviceNet, EtherNet/IP, Modbus RTU, Johnson Controls N2, PROFIBUS DP, GP1
<b>Operator interface</b>		
Local mounted LCD display and control panel	Door mounted LCD display and control panel	Door mounted LCD display and control panel
<b>Disconnect type</b>		
Circuit breaker or disconnect	Circuit breaker or disconnect	Circuit breaker or disconnect
<b>Additional configurations</b>		
Service switch (+F267)	Input harmonic filter (+E211), Line reactors (+E213), Manual motor protectors (+xG405+Mxxx), Service Switch (+F267), Soft start (+G390), Special enclosures (3Rx, 4 and 4X)	Service Switch (+F267), Soft start (+G390), Special enclosures (3Rx, 4 and 4X)



#### Packaged drive with disconnect means, ACH580-PCR, ACH580-PDR

The ACH580 Packaged Drive includes an ACH580 drive in a UL (NEMA) Type 1, 12 or 3R enclosure with either an input disconnect switch and fast acting fuses or an input circuit breaker. It is available from 1 to 350 hp at 230/460/575 V. The ACH580 Packaged Drive provides a door-mounted input disconnect switch (padlockable in the OFF position), electronic motor overload protection, a door-mounted control panel with graphical display for local control, provisions for external control connections, and serial communications capability. The 3PCR/3PDR series features ultra-low harmonics (ULH)

ACH580-PCR/PDR	ACH580-3PCR/3PDR
<b>HP range</b>	
1-100 HP at 208 VAC	
1-700 HP at 460 VAC	5-400 HP at 460 VAC
2-250 HP at 575 VAC	
<b>Input Voltage range</b>	
200 - 240 VAC 3-phase	
440 - 480 VAC 3-phase	440 - 480 VAC 3-phase
500 - 600 VAC 3-phase	
<b>Enclosure type</b>	
UL (NEMA) Type 1	UL (NEMA) Type 1
UL (NEMA) Type 12	UL (NEMA) Type 12
UL (NEMA) Type 3R	UL (NEMA) Type 3R
<b>Control mode</b>	
Scalar	Scalar
Open loop vector	Open loop vector
<b>Communications options</b>	
BACnet MS/TP, BACnet/IP, DeviceNet, EtherNet/IP, Modbus RTU, Johnson Controls N2, PROFIBUS DP, GP1	BACnet MS/TP, BACnet/IP, DeviceNet, EtherNet/IP, Modbus RTU, Johnson Controls N2, PROFIBUS DP, GP1
<b>Operator interface</b>	
Local or door mounted control panel	Local or door mounted control panel
<b>Disconnect type</b>	
Circuit breaker or disconnect	Circuit breaker or disconnect
<b>Additional configurations</b>	
Input harmonic filter (+E211), Line reactors (+E213), Manual motor protectors (+xG405+Mxxx), Redundant drive protectors (+xG405+Mxxx), Redundant drive (+C170), Special enclosures (3Rx, 4 drive (+C170), Special enclosures (3Rx, and 4X)	Manual motor protectors (+xG405+Mxxx), Redundant drive (+C170), Special enclosures (3Rx, 4 and 4X)

# Common characteristics of the HVAC family of drives

## HVAC control panel with primary settings

- Primary settings make commissioning of the drive easier than ever before
- An optional Bluetooth enabled control panel allows easy smartphone connection and remote support possibilities
- Easily available USB interface for PC and tool connection
- Help button for problem-solving

## HVAC communication protocols

- BTL certified BACnet MS/TP and other common HVAC communication protocols such as GP1, N2, LONWorks and Modbus RTU as standard
- BACnet/IP with a fieldbus adapter option

## Supported communications for SCADA systems

- Ethernet IP
- Modbus TCP
- DeviceNet
- Profitnet IO

## Suitable for various HVAC applications

ABB HVAC drives are suitable not only for variable torque applications like fans and pumps, but also for basic constant torque applications like compressors.

## Robust and reliable design

- All units are tested under full load in maximum allowed ambient temperature to verify the quality
- Printed circuit boards are protected with extra coating to be able to operate in humid and harsh environments

## Energy efficiency calculators

Optimize energy efficiency with features that help you to save and manage energy. You can monitor the hourly, daily cumulative, last hour, last day and last month energy consumption via kWh counters.

## Diagnostic menu

Analyze and resolve issues with the control panel's diagnostics menu. You can quickly analyze why the drive is performing as it is; running, stopped or running at the present speed.

## Embedded load analyzers

Analyze and optimize the application with the load profile log, which shows how the drive has operated.

## Integrated process control

Reduce costs with the built-in HVAC controllers. They allow the HVAC drives not only to control themselves using an external feedback signal, but also to control other processes.

## Flexibility in programming

Scale up and customize the drive to your application's requirements with flexible parameter pointers or visual adaptive programming.

## Extensive I/O capabilities

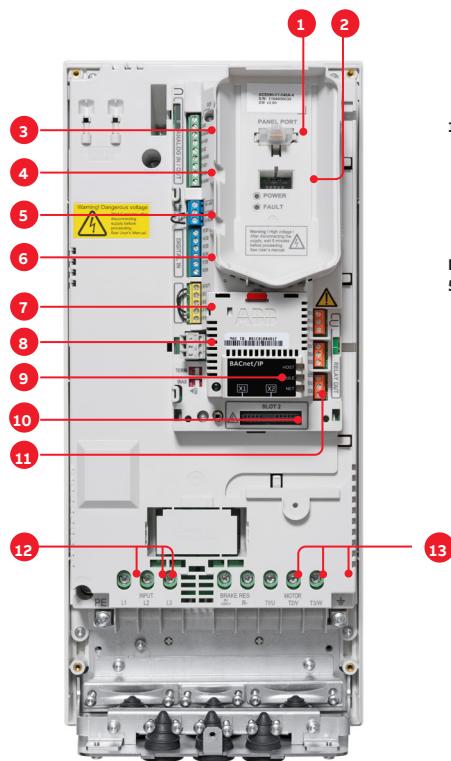
- ABB HVAC drives have an extensive number of I/O terminals in standard configuration
- Colored terminals and clear terminal marking significantly ease drive wiring process
- I/O status can be monitored via I/O menu
- I/O can be forced on or off to verify drive's either from the display or via your fieldbus connected controls

## Advanced motor control

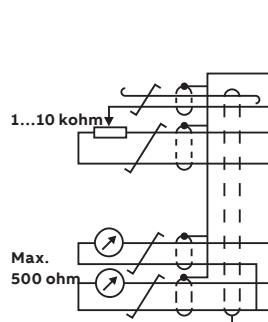
- Support for induction (IM), F (PM) and synchronous reluctance (SynRM) motors, Permanent Magnet assisted synchronous reluctance motor (PMaSynRM)
- Reduce audible motor noise by spreading the switching frequencies over user-specified range

# ACH580 standard I/O diagram

## Default control connections



1. Panel port (PC tools, control panel)
2. ABB drive customizer port for programming the drive without mains
3. Analog inputs (2 × AI)
4. Analog outputs (2 × AO)
5. 24 V DC output
6. Digital inputs (6 × DI)
7. Safe torque off (STO)
8. Embedded fieldbus
9. Communication options (fieldbuses)
10. I/O extensions
11. Relay outputs (3 × RO)
12. Mains connection
13. Motor connection



Terminal	Meaning	Default connections		
<b>X1 Reference voltage and analog inputs and outputs</b>				
1	SCR	Signal cable shield (screen)		
2	AI1	Output frequency/speed reference: 0 to 10 V		
3	AGND	Analog input circuit common		
4	+10 V	Reference voltage 10 V DC		
5	AI2	Actual feedback: 0 to 20 mA		
6	AGND	Analog input circuit common		
7	AO1	Output frequency: 0 to 10 V		
8	AO2	Motor current: 0 to 20 mA		
9	AGND	Analog output circuit common		
<b>X2 &amp; X3 Aux. voltage output and programmable digital inputs</b>				
10	+24 V	Aux. voltage output +24 V DC, max. 250 mA		
11	DGND	Aux. voltage output common		
12	DCOM	Digital input common for all		
13	DI1	Stop (0)/Start (1)		
14	DI2	Not configured		
15	DI3	Constant frequency/speed selection		
16	DI4	Start interlock 1 (1 = allow start)		
17	DI5	Not configured		
18	DI6	Not configured		
<b>X6, X7, X8 Relay outputs</b>				
19	RO1C	Damper control		Energize damper
20	RO1A	250 V AC/30 V DC		19 connected to 21
21	RO1B	2 A		
22	RO2C	Running		
23	RO2A	250 V AC/30 V DC		Running
24	RO2B	2 A		22 connected to 24
25	RO3C	Fault (-1)		Fault condition
26	RO3A	250 V AC/30 V DC		25 connected to 26
27	RO3B	2 A		
<b>X5 Embedded fieldbus</b>				
29	B+			
30	A-	Embedded fieldbus, EFB (EIA-485)		
31	DGND			
S4	TERM	Termination switch		
S5	BIAS	Bias resistors switch		
<b>X4 Safe torque off</b>				
34	OUT1	Safe torque off. Factory connection.		
35	OUT2	Both circuits must be closed for the drive to start. See chapter The Safe torque off function in the hardware manual of the drive.		
36	SGND			
37	IN1			
38	IN2			
<b>X10 24 V AC/DC</b>				
40	24 V AC/DC+ in	R6 to R11 and all ACH580-31 and ACH580-34: Ext. 24 V AC/DC input to power up the control unit when the main supply is disconnected.		
41	24 V AC/DC- in			

Notes:

- 1) Ground the outer shield of the cable 360° under the grounding clamp on the grounding shelf for the control cables.
- 2) Connected with jumpers at the factory.

## The right protection for HVACR environments

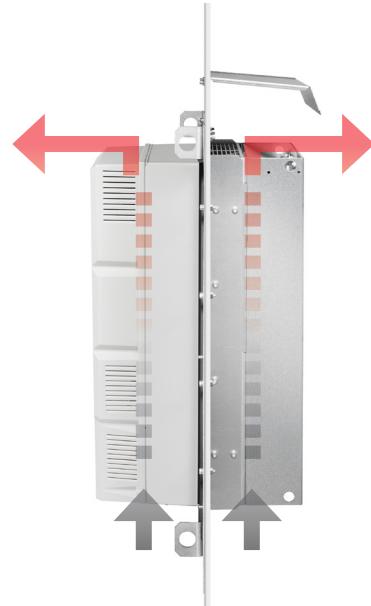
The ACH580-01's wall-mountable construction in both UL (NEMA) Type 1 and Type 12 can be installed in clean rooms and provides protection against circulating dust, falling dirt, and dripping non-corrosive liquids.

The robust, protective design ensures that no additional enclosures or components, such as dust filters and fans, are needed. Overall, drives for HVAC environments require smaller capital expenses by avoiding or advancing maintenance of external components, which in turn improves the reliability of the drive and the process.



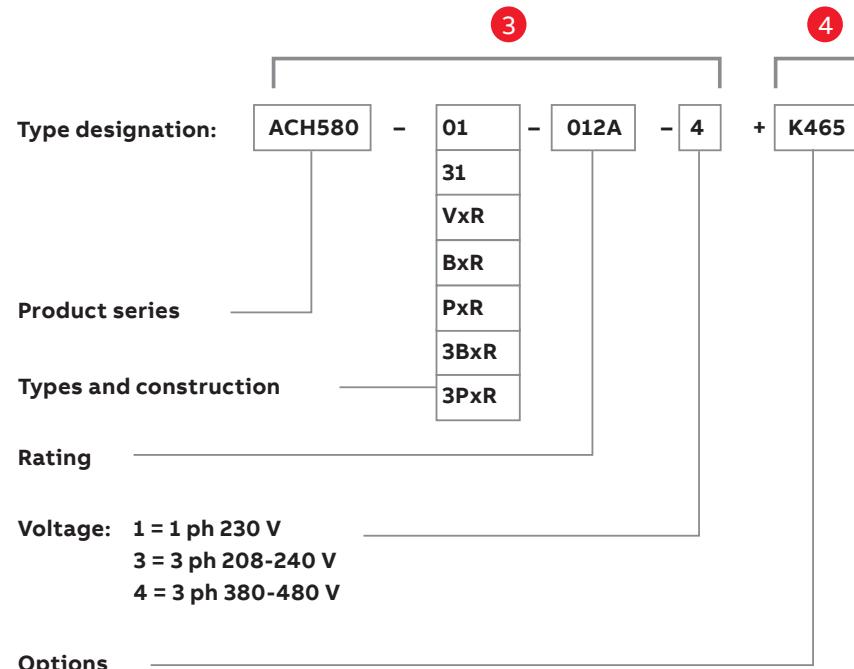
## Flange mounting

The ACH580-01 UL (NEMA) Type 12, wall-mounted drive offers flange mounting as an option, separating the control electronics from the main circuit cooling airflow, saving space and ensuring optimal cooling. This results in better thermal management during panel installation and reduces the overall enclosure size. Furthermore, the need for air-conditioning can often be eliminated, as up to 80 percent of the heat load is removed through the back of the panel.



## How to select a drive

Create your own ordering code using the type designation key.



- 1 Start by identifying your supply voltage.**  
This tells you what rating table to use. See pages 1-18 through 1-69.

- 2 Select your drive's type code**  
from the rating table based on the nominal current rating of your motor.

- 3 Choose the rating of your drive**  
from the ratings tables on pages 1-18 through 1-69.

- 4 Choose your options** (on page 1-77 to 1-82) and add the option codes to the drive's order code. Remember to use a “+”

# ACH580 technical data

<b>Mains connection</b>				
<b>Input voltage and output power range</b>		3-phase (1-phase, 240V), UN 208 to 600 V +10/-15%		
ACH580-01: 1 to 350 HP				
ACH580-04: 400 to 700 HP				
ACH580-31: 5 to 150 HP				
ACH580-34: 200 to 400 HP				
<b>Frequency</b>	48 to 63 Hz			
<b>Power factor ACH580-01, ACH580-04</b>	0.98			
<b>Power factor ACH580-31 and ACH580-34</b>	1.0			
<b>Motor control</b>				
<b>Voltage</b>	0 to UN, 3-phase			
<b>Frequency</b>	0 to 500 Hz			
<b>Motor control</b>	Scalar and vector			
<b>Supported motor types</b>	Asynchronous motor, permanent magnet motor (vector), SynRM (vector)			
<b>Environmental limits</b>				
<b>Operation temperature</b>	ACH580-01	-15 to +50 °C		
	ACH580-04	-15 to +55 °C		
	ACH580-31	-15 to +50 °C		
	ACH580-34	-15 to +50 °C		
<b>Transportation and storage temperature</b>	-40 to +70 °C			
<b>Relative humidity</b>	5 to 95 % no condensation allowed			
<b>Altitude</b>	Rated current available at 0 to 1000 m Reduced by 1% per 100 m over 1000 m up to 4000 m			
<b>Degree of protection</b>	ACH580-01	UL (NEMA) Type 1 / IP21, UL (NEMA) Type 4X (ACH580-01 only), or UL (NEMA) Type 12/ IP55		
	ACH580-31			
	ACH580-04	UL (NEMA) Type Open / IP00 or IP20		
	ACH580-34			
<b>Contamination level</b>	Operation at Class 3C2, Class 3S2 according to IEC 60721-3-3 Transportation at Class 2C2, Class 2S2 according to IEC 60721-3-3 Storage at Class 1C2, Class 1S2 according to IEC 60721-3-3			
<b>Inputs and outputs (standard configuration)</b>				
<b>2 analog inputs</b>	Selection of Current/Voltage input mode is user programmable.			
<b>Voltage signal</b>	0 (2) to 10 V, Rin >200 kΩ			
<b>Current signal</b>	0 (4) to 20 mA, Rin = 100 Ω			
<b>Potentiometer reference value</b>	10 V ±1% max. 20 mA			
<b>2 analog outputs</b>	AO1 is user programmable for current or voltage. AO2 current			
<b>Voltage signal</b>	0 to 10 V, Rload: >100 kΩ			
<b>Current signal</b>	0 to 20 mA, Rload: <500 Ω			
<b>Internal auxiliary voltage</b>	24 V DC ±10%, max. 250 mA			
<b>6 digital inputs</b>	12 to 24 V DC, 24 V AC, Connectivity of PTC sensors supported by a single digital input. PNP or NPN connection (5 DIs with NPN connection).			
<b>3 relay outputs</b>	Maximum switching voltage 250 V AC/30 V DC Maximum continuous current 2 A rms			
<b>Supported thermistors</b>	Any of the analog inputs, or digital input 6, are configurable for PTC with up to 6 sensors. Both analog outputs can be used to feed the PT100, PT1000, KTY83, KTY84 or Ni1000 sensors.			
<b>External power supply</b>				
<b>Standard:</b>	1.5 A at 24 V AC/DC ±10%			
ACH580-01 frames R6-R9, ACH580-04 all frames, ACH580-31 all frames, ACH580-34 all frames				
<b>With option:</b>	ACH580-01 frames R1-R5 1.04 A at 24 V AC/DC ±10%			
<b>Communication</b>				
Protocols as standard (EIA-485): BACnet MS/TP, Modbus RTU, N2, and GP1. Available as 2-port plug-in options: BACnet/IP, Modbus TCP, PROFINET IO, EtherNet/IP.				
Available as plug-in options: CANopen, DeviceNet, LonWorks, Profibus DP.				
Available as an external 2-port option: EtherNet adapter for remote monitoring.				
<b>Product compliance</b>				
CE, BTL	Low Voltage Directive 2014/35/EU, EN 61800-5-1:2007 Machinery Directive 2006/42/EC, EN 61800-5-2:2007 EMC Directive 2014/30/EU, EN 61800-3:2004 + A1:2012 RoHS directive 2011/65/EU Quality assurance system ISO 9001 and Environmental system ISO 14001 Waste electrical and electronic equipment directive (WEEE) 2002/96/EC Galvanic isolation according to PELV UL, EAC, RCM, cUL TÜV Nord (safety functions)			
<b>Harmonics compliance</b>				
Built-in optimized DC choke as standard in ACH580-01 provides a 5% impedance equivalent. ACH580-31/34 with 3% or less THdi at the drive terminal meets the most stringent specifications calling IEEE519 IEEE519.				

# ACH580 technical data

## EMC according to EN 61800-3:2004 + A1:2012

ACH580-01 drive frames R1 to R9 (up to 350 HP) designed to comply with EMC category C2 requirements as standard. Frames R10 and R11 (up to 700 HP) comply with category C3 with standard pre-configured built-in filter. ACH580-31 drive frames R3, R6 & R8 (5 to 150 HP) designed to comply with EMC category C2 requirements as standard. Frame R11 (200 to 400 HP) comply with category C3.

## Functional safety

STO according to EN 61800-5-2:2016, IEC 61508 Parts 1-2:2010, ISO 13849-1:2015, ISO 13849-2:2012, IEC 62061:2015  
SIL 3/PL e

## Application functions

First start assistant  
Primary settings for HVAC applications  
Hand-Off-Auto operation mode  
Start interlock (defrost)  
Delayed start  
Run permissive (damper monitoring)  
Override operation mode  
Real-time clock (scheduling)  
PID controllers for motor and process  
Motor flying start  
Motor preheating  
Energy optimizer and calculators

## Protection functions

Oversupply controller  
Undervoltage controller  
Motor and motor cable earth-leakage monitoring  
Motor and motor cable short-circuit protection  
Motor overtemperature protection  
Output and input switch supervision  
Motor overload protection  
Phase-loss detection (both motor and supply)  
Under load supervision (belt loss detection)  
Overload supervision  
Stall protection  
Loss of control reference

## Environmental protections

<b>Chemical Gases</b>	Class 3C2
<b>Solid Particles</b>	Class 3S2 No conductive dust allowed

**Pollution degree (IEC/EN 61800-5-1)** Pollution degree 2

## Product compliance

Standards and directives  
Low Voltage Directive 2006/95/EC  
EMC Directive 2004/108/EC  
60721-3-3: 2002  
60721-3-1:1997  
Quality assurance system ISO 9001 and  
Environmental system ISO 14001  
CE, UL, cUL, and EAC approvals  
CSA C222N0274  
Galvanic isolation according to PELV  
RoHS2 (Restriction of Hazardous  
Substances)  
EN 61800-5-1: 2007; IEC/EN 61000-3-12;  
EN61800-3: 2017 + A1: 2012 Category C2  
(1st environment restricted distribution);  
Safe torque off (EN 61800-5-2)  
BACnet Testing Laboratory (BTL)  
Seismic (IBC, OSHPD)\*

## Storage (in Protective Shipping Package)

<b>Air Temperature</b>	-40 to +70 °C (-40 to +158 °F)
<b>Relative Humidity</b>	Less than 95% No condensation allowed Maximum relative humidity is 60% in the presence of corrosive gases
<b>Chemical Gases</b>	Class 1C2
<b>Solid Particles</b>	Class 1S2 Contact ABB regarding Class 1S3
<b>Atmospheric pressure</b>	70 to 106 kPa 0.7 to 1.05 atmospheres
<b>Vibration (ISTA)</b>	In accordance with ISTA 1A
<b>R1...R4</b>	In accordance with ISTA 3E
<b>R5...R9</b>	

## Transportation (in Protective Shipping Package)

<b>Air Temperature</b>	-40° to 70°C (-40° to 158°F)
<b>Relative Humidity</b>	Less than 95% No condensation allowed Maximum relative humidity is 60% in the presence of corrosive gases
<b>Atmospheric Pressure</b>	60 to 106 kPa (8.7 to 15.4 PSI) 0.6 to 1.05 atmospheres
<b>Free Fall</b>	R1: 76 cm (30 in) R2: 61 cm (24 in) R3: 46 cm (18 in) R4: 31 cm (12 in) R5: 25 cm (10 in) R6: R7: R8: R9:

<b>Chemical Gases</b>	Class 2C2
<b>Solid Particles</b>	Class 2S2

<b>Shock/ Drop (ISTA)</b>	In accordance with ISTA 1A
<b>R1...R4</b>	In accordance with ISTA 3E
<b>R5...R9</b>	

<b>Vibration (ISTA)</b>	In accordance with ISTA 1A
<b>R1...R4</b>	In accordance with ISTA 3E
<b>R5...R9</b>	

\* Seismic ratings are covered on wall mount drives and standard packages.

# Ratings, types and voltages

## ACH580-01, wall-mounted drives

Type code	Output Ratings <sup>1)</sup>		Frame Size	1-phase supply ratings (only 240V)*		UL (NEMA) Type 1	UL (NEMA) Type 12 (+B056)	UL (NEMA) Type 4X (+B066)
	Current A	Power HP		Power HP	Current A			
<b>U<sub>1</sub> = 208 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208 V 60 Hz</b>								
ACH580-01-04A6-2	4.6	1	R1	0.5	2.2	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-06A6-2	6.6	1.5	R1	0.75	3.2	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-07A5-2	7.5	2	R1	1	4.2	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-10A6-2	10.6	3	R1	1.5	6	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-017A-2	16.7	5	R1	2	6.8	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-024A-2	24.2	7.5	R2	3	9.6	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-031A-2	30.8	10	R2	5	15.2	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-046A-2	46.2	15	R3	7.5	22	01-1-R3	01-12-R3	01-4X-R3
ACH580-01-059A-2	59.4	20	R3	10	28	01-1-R3	01-12-R3	01-4X-R3
ACH580-01-075A-2	74.8	25	R4	10	28	01-1-R4	01-12-R4	-
ACH580-01-088A-2	88	30	R5	15	42	01-1-R5	01-12-R5	-
ACH580-01-114A-2	114	40	R5	20	54	01-1-R5	01-12-R5	-
ACH580-01-143A-2	143	50	R6	25	68	01-1-R6	01-12-R6	-
ACH580-01-169A-2	169	60	R7	30	80	01-1-R7	01-12-R7	-
ACH580-01-211A-2	211	75	R7	40	104	01-1-R7	01-12-R7	-
ACH580-01-273A-2	273	100	R8	50	130	01-1-R8	01-12-R8	-
ACH580-01-343A-2	343	125	R9	60	154	01-1-R9	01-12-R9	-
ACH580-01-396A-2	396	150	R9	75	192	01-1-R9	01-12-R9	-

1) See page 1-1

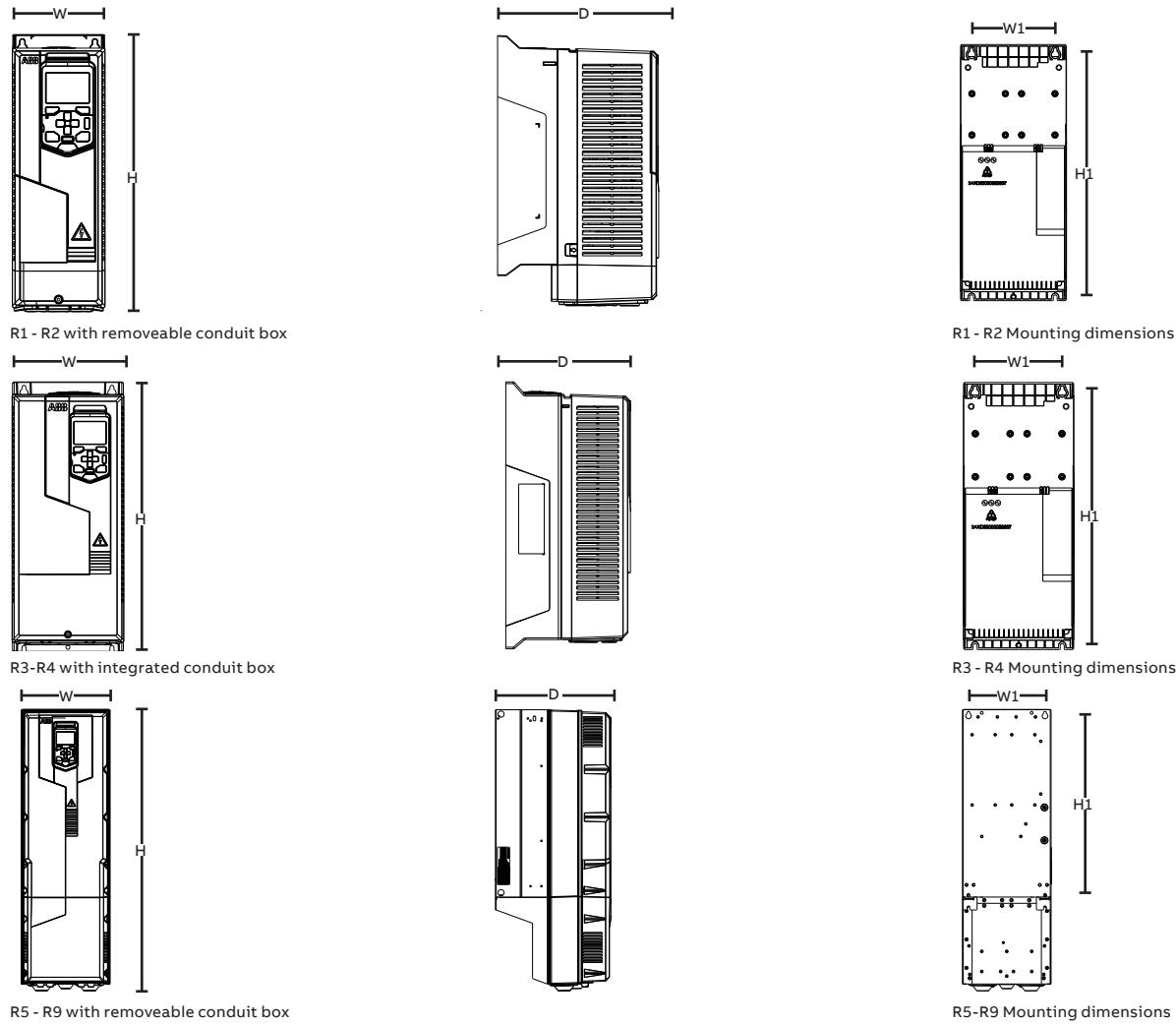
# Ratings, types and voltages

## ACH580-01, wall-mounted drives

Type code	Output Ratings		Frame Size	UL (NEMA) Type 1	UL (NEMA) Type 12 (+B056)	UL (NEMA) Type 4X (+B066)
	Current A	Power HP		Dim Ref	Dim Ref	Dim Ref
<b><i>U<sub>1</sub> = 380 to 480 V. Power ratings are valid at nominal output voltage 460 V 50/60 Hz</i></b>						
ACH580-01-02A1-4	2.1	1	R1	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-03A0-4	3	1.5	R1	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-03A5-4	3.5	2	R1	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-04A8-4	4.8	3	R1	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-07A6-4	7.6	5	R1	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-012A-4	12	7.5	R1	01-1-R1	01-12-R1	01-4X-R1
ACH580-01-014A-4	14	10	R2	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-023A-4	23	15	R2	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-027A-4	27	20	R3	01-1-R3	01-12-R3	01-4X-R3
ACH580-01-034A-4	34	25	R3	01-1-R3	01-12-R3	01-4X-R3
ACH580-01-044A-4	44	30	R3	01-1-R3	01-12-R3	01-4X-R3
ACH580-01-052A-4	52	40	R4	01-1-R4	01-12-R4	-
ACH580-01-065A-4	65	50	R4	01-1-R4	01-12-R4	-
ACH580-01-077A-4	77	60	R4	01-1-R4	01-12-R4	-
ACH580-01-096A-4	96	75	R5	01-1-R5	01-12-R5	-
ACH580-01-124A-4	124	100	R6	01-1-R6	01-12-R6	-
ACH580-01-156A-4	156	125	R7	01-1-R7	01-12-R7	-
ACH580-01-180A-4	180	150	R7	01-1-R7	01-12-R7	-
ACH580-01-240A-4	240	200	R8	01-1-R8	01-12-R8	-
ACH580-01-302A-4	302	250	R9	01-1-R9	01-12-R9	-
ACH580-01-361A-4	361	300	R9	01-1-R9	01-12-R9	-
ACH580-01-414A-4	414	350	R9	01-1-R9	01-12-R9	-
<b><i>U<sub>1</sub> = 500 to 600V. Power ratings are valid at nominal output voltage U<sub>n</sub> = 575 V 50/60 Hz</i></b>						
ACH580-01-02A7-6	2.7	2	R2	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-03A9-6	3.9	3	R2	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-06A1-6	6.1	5	R2	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-09A0-6	9	7.5	R2	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-011A-6	11	10	R2	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-017A-6	17	15	R2	01-1-R2	01-12-R2	01-4X-R2
ACH580-01-022A-6	22	20	R3	01-1-R3	01-12-R3	01-4X-R3
ACH580-01-027A-6	27	25	R3	01-1-R3	01-12-R3	01-4X-R3
ACH580-01-032A-6	32	30	R3	01-1-R3	01-12-R3	01-4X-R3
ACH580-01-041A-6	41	40	R5	01-1-R5	01-12-R5	-
ACH580-01-052A-6	52	50	R5	01-1-R5	01-12-R5	-
ACH580-01-062A-6	62	60	R5	01-1-R5	01-12-R5	-
ACH580-01-077A-6	77	75	R5	01-1-R5	01-12-R5	-
ACH580-01-099A-6	99	100	R7	01-1-R7	01-12-R7	-
ACH580-01-125A-6	125	125	R7	01-1-R7	01-12-R7	-
ACH580-01-144A-6	144	150	R8	01-1-R8	01-12-R8	-
ACH580-01-192A-6	192	200	R9	01-1-R9	01-12-R9	-
ACH580-01-242A-6	242	250	R9	01-1-R9	01-12-R9	-
ACH580-01-271A-6	271	250	R9	01-1-R9	01-12-R9	-

## Dimensions

### ACH580-01 Type 1

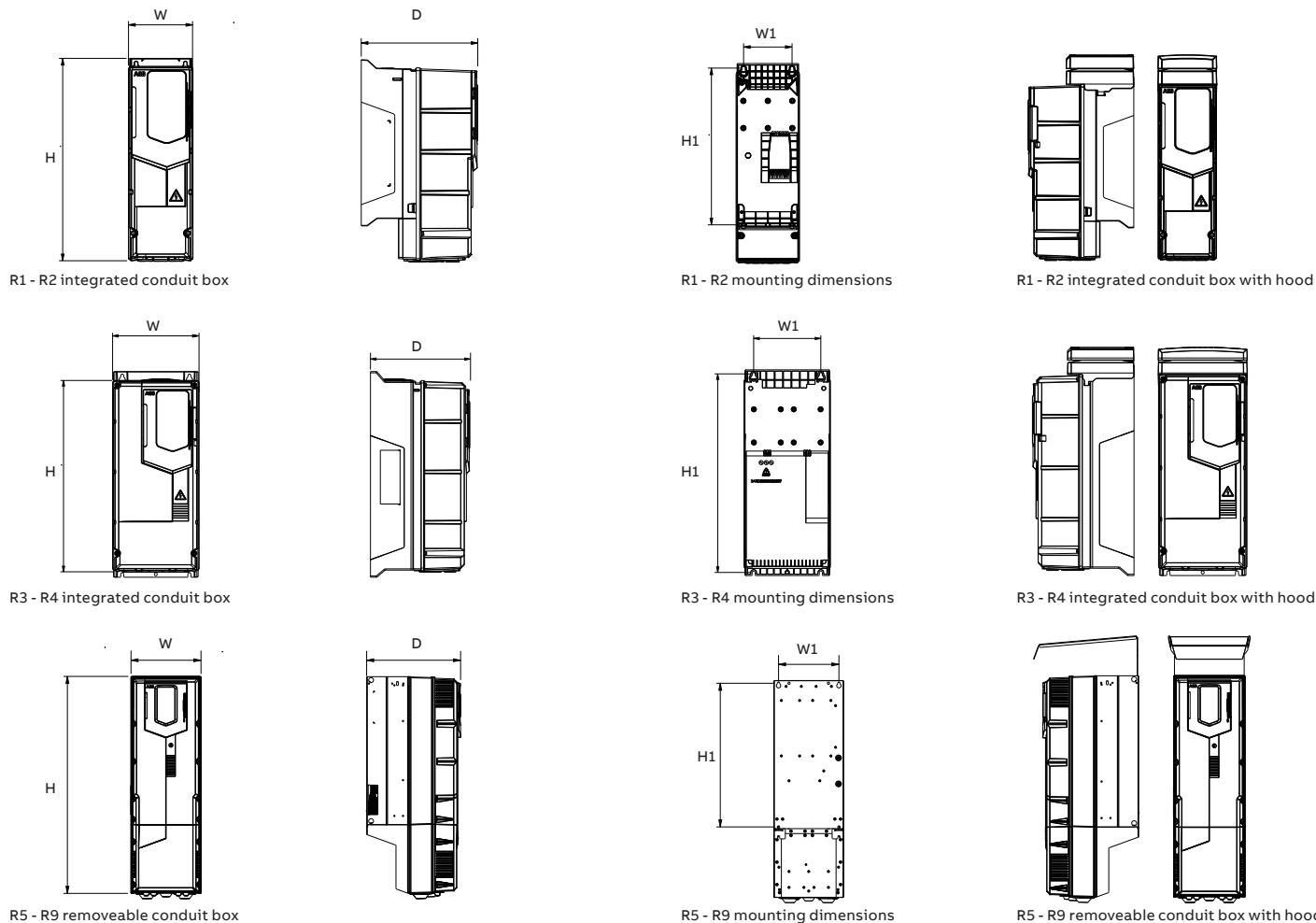


Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions					
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm	in	mm
<b>ACH580-01, wall-mounted UL (NEMA) Type 1</b>														
01-1-R1	14.69	373	4.92	125	8.78	223	10.1	4.6	12.48	317	3.86	98	-	-
01-1-R2	18.62	473	4.92	125	9.02	229	14.6	6.6	16.42	417	3.86	98	-	-
01-1-R3	19.29	490	7.99	203	9.02	229	26.0	11.8	18.62	473	6.30	160	-	-
01-1-R4	25.04	636	7.99	203	10.12	257	41.9	19.0	24.37	619	6.30	160	3.86	98
01-1-R5	28.82	732	7.99	203	11.61	295	62.4	28.3	22.87	581	6.30	160	3.86	98
01-1-R6	28.62	727	9.92	252	14.53	369	93.5	42.4	20.91	531	8.37	213	6.30	160
01-1-R7	34.65	880	11.18	284	14.57	370	119.1	54.0	22.95	583	9.65	245	6.30	160
01-1-R8	37.99	965	11.81	300	15.47	393	152.2	69.0	25.91	658	10.33	263	8.43	214
01-1-R9	37.60	955	14.96	380	16.46	418	213.9	97.0	25.91	658	13.58	345	7.87	200

Standard configuration dimensions for reference only.

## Dimensions

### ACH580-01 Type 12

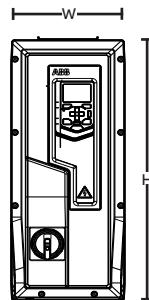


Dim Ref	Height (H)		Height (H5)		Width (W)		Depth (D)		Weight		Mounting Dimensions					
	in	mm	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm	in	mm
<b>ACH580-01, wall-mounted UL (NEMA) Type 12</b>																
01-12-R1	15.87	403	17.78	452	5.04	128	9.17	233	10.6	4.8	12.48	317	3.86	98	-	-
01-12-R2	19.80	503	21.49	546	5.04	128	9.41	239	15.0	6.8	16.42	417	3.86	98	-	-
01-12-R3	19.29	490	20.93	532	8.11	206	9.33	237	28.7	13.0	18.62	473	6.30	160	-	-
01-12-R4	25.04	636	27.03	686	7.99	203	10.43	265	44.1	20.0	24.37	619	6.30	160	3.86	98
01-12-R5	28.82	732	32.01	813	7.99	203	12.60	320	63.9	29.0	22.87	581	6.30	160	3.86	98
01-12-R6	28.62	727	34.81	884	9.92	252	14.96	380	94.8	43.0	20.91	531	8.37	213	6.30	160
01-12-R7	34.65	880	40.86	1038	11.18	284	15.00	381	123.5	56.0	22.95	583	9.65	245	6.30	160
01-12-R8	37.99	965	44.23	1123	11.81	300	17.80	452	169.8	77.0	25.91	658	10.33	263	8.43	214
01-12-R9	37.60	955	46.75	1188	14.96	380	18.78	477	227.1	103.0	25.91	658	13.58	345	7.87	200

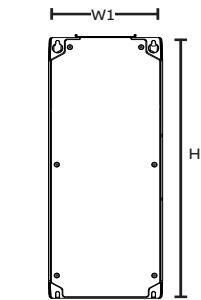
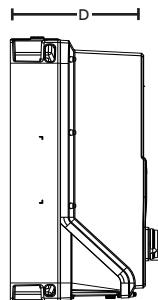
Standard configuration dimensions for reference only.

## Dimensions

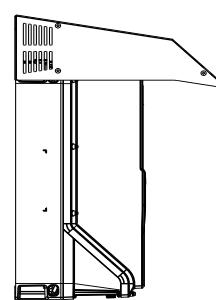
### ACH580-01 Type 4X



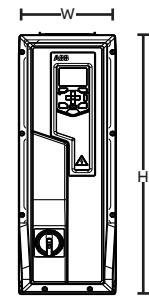
R1 integrated conduit box



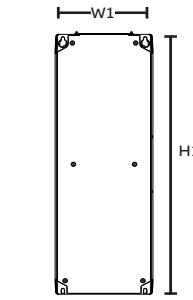
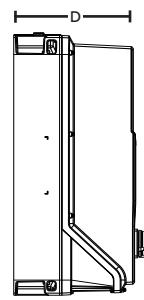
R1 mounting dimensions



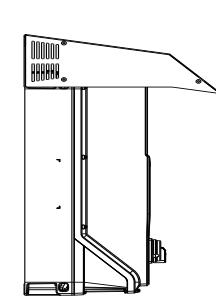
R1 integrated conduit box with sun shield



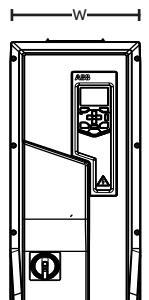
R2 integrated conduit box



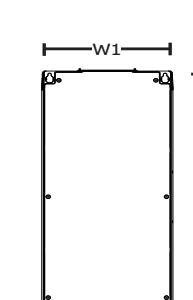
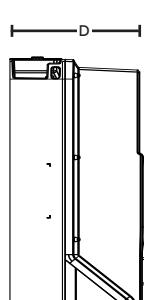
R2 mounting dimensions



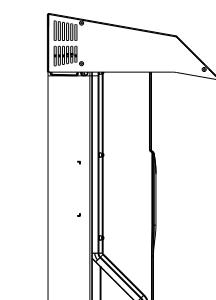
R2 integrated conduit box with sun shield



R3 integrated conduit box



R3 mounting dimensions



R3 integrated conduit box with sun shield

Dim Ref	Height (H)		Height (H5)		Width (W)		Depth (D)		Weight		Mounting Dimensions						
	in	mm	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm	in	mm	
<b>ACH580-01, wall-mounted UL (NEMA) Type 4X</b>																	
01-4X-R1	19.90	506	17.78	452	8.20	208	9.50	242	26.0	11.8	19.57	497	6.89	175	-	-	
01-4X-R2	23.90	606	21.49	546	8.20	208	9.90	252	32.0	14.5	22.87	581	6.89	175	-	-	
01-4x-R3	25.20	641	20.93	532	10.9	277	10.2	260	26.4	13.0	24.50	622	9.60	244	-	-	

Standard configuration dimensions for reference only.

## Ratings, types and voltages

ACH580-VCR, vertical E-Clipse bypass drive with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA) Type 1 Dim Ref
	Current A	Power HP		
<b><math>U_1 = 200 \text{ to } 240\text{V}</math>. Power ratings are valid at nominal output voltage <math>U_n = 208/230\text{ V } 60\text{ Hz}</math></b>				
ACH580-VCR-04A6-2	4.6	1	R1	Vx1-1
ACH580-VCR-06A6-2	6.6	1.5	R1	Vx1-1
ACH580-VCR-07A5-2	7.5	2	R1	Vx1-1
ACH580-VCR-10A6-2	10.6	3	R1	Vx1-1
ACH580-VCR-017A-2	16.7	5	R1	Vx1-1
ACH580-VCR-024A-2	24.2	7.5	R2	Vx1-2
ACH580-VCR-031A-2	30.8	10	R2	Vx1-3
ACH580-VCR-046A-2	46.2	15	R3	Vx1-4
ACH580-VCR-059A-2	59.4	20	R3	Vx1-4
ACH580-VCR-075A-2	74.8	25	R4	Vx1-4
<b><math>U_1 = 440 \text{ to } 480\text{V}</math>. Power ratings are valid at nominal output voltage <math>U_n = 460\text{ V } 60\text{ Hz}</math></b>				
ACH580-VCR-02A1-4	2.1	1	R1	Vx1-1
ACH580-VCR-03A0-4	3	1.5	R1	Vx1-1
ACH580-VCR-03A5-4	3.5	2	R1	Vx1-1
ACH580-VCR-04A8-4	4.8	3	R1	Vx1-1
ACH580-VCR-07A6-4	7.6	5	R1	Vx1-1
ACH580-VCR-012A-4	12	7.5	R1	Vx1-1
ACH580-VCR-014A-4	14	10	R2	Vx1-2
ACH580-VCR-023A-4	23	15	R2	Vx1-2
ACH580-VCR-027A-4	27	20	R3	Vx1-3
ACH580-VCR-034A-4	34	25	R3	Vx1-3
ACH580-VCR-044A-4	44	30	R3	Vx1-3
ACH580-VCR-052A-4	52	40	R4	Vx1-4
ACH580-VCR-065A-4	65	50	R4	Vx1-4
ACH580-VCR-077A-4	77	60	R4	Vx1-4
<b><math>U_1 = 500 \text{ to } 600\text{V}</math>. Power ratings are valid at nominal output voltage <math>U_n = 575\text{ V } 60\text{ Hz}</math></b>				
ACH580-VCR-02A7-6	2.7	2	R2	Vx1-2
ACH580-VCR-03A9-6	3.9	3	R2	Vx1-2
ACH580-VCR-06A1-6	6.1	5	R2	Vx1-2
ACH580-VCR-09A0-6	9	7.5	R2	Vx1-2
ACH580-VCR-011A-6	11	10	R2	Vx1-2
ACH580-VCR-017A-6	17	15	R2	Vx1-2
ACH580-VCR-022A-6	22	20	R3	Vx1-3
ACH580-VCR-027A-6	27	25	R3	Vx1-3
ACH580-VCR-032A-6	32	30	R3	Vx1-3
ACH580-VCR-041A-6	41	40	R5	Vx1-5
ACH580-VCR-052A-6	52	50	R5	Vx1-5
ACH580-VCR-062A-6	62	60	R5	Vx1-5
ACH580-VCR-077A-6	77	75	R5	Vx1-5

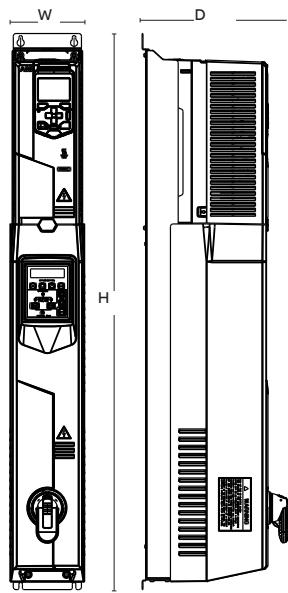
## Ratings, types and voltages

ACH580-VDR, vertical E-Clipse bypass drive with non-fused disconnect switch

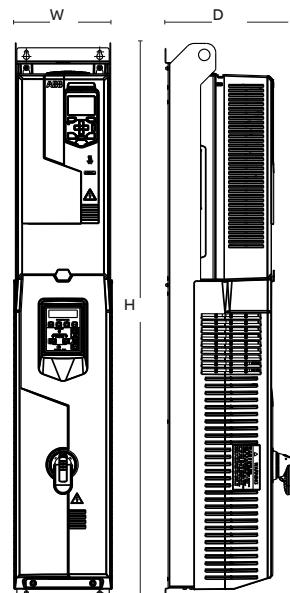
Type code	Output Ratings		Frame Size	UL (NEMA) Type 1 Dim Ref
	Current A	Power HP		
<b><u>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>n</sub> = 208/230 V 60 Hz</u></b>				
ACH580-VDR-04A6-2	4.6	1	R1	Vx1-1
ACH580-VDR-06A6-2	6.6	1.5	R1	Vx1-1
ACH580-VDR-07A5-2	7.5	2	R1	Vx1-1
ACH580-VDR-10A6-2	10.6	3	R1	Vx1-1
ACH580-VDR-017A-2	16.7	5	R1	Vx1-1
ACH580-VDR-024A-2	24.2	7.5	R2	Vx1-2
ACH580-VDR-031A-2	30.8	10	R2	Vx1-3
ACH580-VDR-046A-2	46.2	15	R3	Vx1-4
ACH580-VDR-059A-2	59.4	20	R3	Vx1-4
ACH580-VDR-075A-2	74.8	25	R4	Vx1-4
<b><u>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>n</sub> = 460 V 60 Hz</u></b>				
ACH580-VDR-02A1-4	2.1	1	R1	Vx1-1
ACH580-VDR-03A0-4	3	1.5	R1	Vx1-1
ACH580-VDR-03A5-4	3.5	2	R1	Vx1-1
ACH580-VDR-04A8-4	4.8	3	R1	Vx1-1
ACH580-VDR-07A6-4	7.6	5	R1	Vx1-1
ACH580-VDR-012A-4	12	7.5	R1	Vx1-1
ACH580-VDR-014A-4	14	10	R2	Vx1-2
ACH580-VDR-023A-4	23	15	R2	Vx1-2
ACH580-VDR-027A-4	27	20	R3	Vx1-3
ACH580-VDR-034A-4	34	25	R3	Vx1-3
ACH580-VDR-044A-4	44	30	R3	Vx1-3
ACH580-VDR-052A-4	52	40	R4	Vx1-4
ACH580-VDR-065A-4	65	50	R4	Vx1-4
ACH580-VDR-077A-4	77	60	R4	Vx1-4
<b><u>U<sub>1</sub> = 500 to 600V. Power ratings are valid at nominal output voltage U<sub>n</sub> = 575 V 60 Hz</u></b>				
ACH580-VDR-02A7-6	2.7	2	R2	Vx1-2
ACH580-VDR-03A9-6	3.9	3	R2	Vx1-2
ACH580-VDR-06A1-6	6.1	5	R2	Vx1-2
ACH580-VDR-09A0-6	9	7.5	R2	Vx1-2
ACH580-VDR-011A-6	11	10	R2	Vx1-2
ACH580-VDR-017A-6	17	15	R2	Vx1-2
ACH580-VDR-022A-6	22	20	R3	Vx1-3
ACH580-VDR-027A-6	27	25	R3	Vx1-3
ACH580-VDR-032A-6	32	30	R3	Vx1-3
ACH580-VDR-041A-6	41	40	R5	Vx1-5
ACH580-VDR-052A-6	52	50	R5	Vx1-5
ACH580-VDR-062A-6	62	60	R5	Vx1-5
ACH580-VDR-077A-6	77	75	R5	Vx1-5

## Dimensions

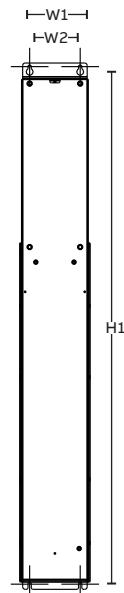
ACH580-VCR and ACH580-VDR



Vx1-1 to Vx1-2



Vx1-3 to Vx1-4



Mounting dimensions

Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions					
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm	in	mm
<b>ACH580-VCR and ACH580-VDR, vertical E-Clipse bypass drives UL (NEMA) Type 1</b>														
Vx1-1	40.18	1021	5.39	137	10.55	268	30.0	13.6	39.51	1004	4.93	125	3.86	98
Vx1-2	44.10	1120	5.39	137	10.77	274	50.7	23.0	43.43	1103	4.93	125	3.86	98
Vx1-3	47.70	1212	8.44	214	10.90	277	59.5	27.0	46.47	1180	8.19	208	6.30	160
Vx1-4	56.82	1443	8.44	214	12.00	305	86.0	39.0	55.70	1415	8.19	208	6.30	160
Vx1-5	56.82	1443	8.35	212	13.26	337	117.0	53.3	55.70	1415	8.19	208	6.3	180

Standard configuration dimensions for reference only.

## Ratings, types and voltages

ACH580-BCR, E-Clipse bypass drive with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)	Dim Ref for +E213	
				Type 1	Type 12 (+B056)	Type 3R (+B058)		
	Current A	Power HP		Dim Ref	Dim Ref	Dim Ref		
<b><math>U_1 = 200 \text{ to } 240V</math>. Power ratings are valid at nominal output voltage <math>U_N = 208/230 \text{ V } 60 \text{ Hz}</math></b>								
ACH580-BCR-04A6-2	4.6	1.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-06A6-2	6.6	1.5	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-07A5-2	7.5	2.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-10A6-2	10.6	3.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-017A-2	16.7	5.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-024A-2	24.2	7.5	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-031A-2	30.8	10.0	R2	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-046A-2	46.2	15.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-059A-2	59.4	20.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-075A-2	74.8	25.0	R4	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-088A-2	88.0	30.0	R5	Bx1-3	Bx12-3	Bx3R-4	Bx1-4/Bx12-4/Bx3R-4	
ACH580-BCR-114A-2	114.0	40.0	R5	Bx1-3	Bx12-3	Bx3R-4	Bx1-4/Bx12-4/Bx3R-4	
ACH580-BCR-143A-2	143.0	50.0	R6	Bx1-3	Bx12-3	Bx3R-4	Bx1-5/Bx12-4/Bx3R-4	
ACH580-BCR-169A-2	169.0	60.0	R7	Bx1-3	Bx12-3	Bx3R-4	Bx1-5/Bx12-4/Bx3R-4	
ACH580-BCR-211A-2	211.0	75.0	R7	Bx1-3	Bx12-3	Bx3R-5	Bx1-5*/Bx12-5*/Bx3R-5	
ACH580-BCR-273A-2	273.0	100.0	R8	Contact Factory				
<b><math>U_1 = 440 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>								
ACH580-BCR-02A1-4	2.1	1.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-03A0-4	3.0	1.5	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-03A5-4	3.5	2.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-04A8-4	4.8	3.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-07A6-4	7.6	5.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-012A-4	12.0	7.5	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-014A-4	14.0	10.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-023A-4	23.0	15.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-027A-4	27.0	20.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-034A-4	34.0	25.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-044A-4	44.0	30.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-052A-4	52.0	40.0	R4	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-065A-4	65.0	50.0	R4	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-077A-4	77.0	60.0	R4	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-096A-4	96.0	75.0	R5	Bx1-3	Bx12-3	Bx3R-3	BX1-4/BX12-4/Bx3R-3*	
ACH580-BCR-124A-4	124.0	100.0	R6	Bx1-3	Bx12-3	Bx3R-4	BX1-5/BX12-4/Bx3R-4	
ACH580-BCR-156A-4	156.0	125.0	R7	Bx1-3	Bx12-3	Bx3R-4	BX1-5/BX12-4/Bx3R-4	
ACH580-BCR-180A-4	180.0	150.0	R7	Bx1-3	Bx12-3	Bx3R-4	BX1-5/BX12-4/Bx3R-4	
ACH580-BCR-240A-4	240.0	200.0	R8	Bx1-3	Bx12-3	Bx3R-5	BX1-6/BX12-6/Bx3R-5	
ACH580-BCR-302A-4	302.0	250.0	R9	Bx1-7	Bx12-7	Bx3R-6	BX1-7/BX12-7/Bx3R-6	
ACH580-BCR-361A-4	361.0	300.0	R9	Bx1-7	Bx12-7	Bx3R-6	BX1-7/BX12-7/Bx3R-6	
ACH580-BCR-414A-4	414.0	350.0	R9	Bx1-7	Bx12-7	Bx3R-6	BX1-7/BX12-7/Bx3R-6	

\*Increases one size with E213 and F267

## Ratings, types and voltages

ACH580-BCR, E-Clipse bypass drive with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)	Dim Ref for +E213	
				Type 1	Type 12 (+B056)	Type 3R (+B058)		
	Current A	Power HP		Dim Ref	Dim Ref	Dim Ref		
<b><math>U_1 = 500 \text{ to } 600V</math>. Power ratings are valid at nominal output voltage <math>U_N = 575 V</math> 60 Hz</b>								
ACH580-BCR-02A7-6	2.7	2.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-03A9-6	3.9	3.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-06A1-6	6.1	5.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-09A0-6	9.0	7.5	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-011A-6	11.0	10.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-017A-6	17.0	15.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BCR-022A-6	22.0	20.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-027A-6	27.0	25.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-032A-6	32.0	30.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BCR-041A-6	41.0	40.0	R5	Bx1-3	Bx12-3	Bx3R-3	Bx3R-3	
ACH580-BCR-052A-6	52.0	50.0	R5	Bx1-3	Bx12-3	Bx3R-3	Bx3R-3	
ACH580-BCR-062A-6	62.0	60.0	R5	Bx1-3	Bx12-3	Bx3R-3	Bx3R-3	
ACH580-BCR-077A-6	77.0	75.0	R5	Bx1-3	Bx12-3	Bx3R-3	Bx3R-3	
ACH580-BCR-099A-6	99.0	100.0	R7	Bx1-3	Bx12-3	Bx3R-4	Bx3R-4	
ACH580-BCR-125A-6	125.0	125.0	R7	Bx1-3	Bx12-3	Bx3R-4	Bx3R-4	
ACH580-BCR-144A-6	144.0	150.0	R8	Bx1-3	Bx12-3	Bx3R-4	Bx3R-4	

\*Increases one size with E213 and F267

## Ratings, types and voltages

ACH580-BDR, E-Clipse bypass drive with non-fused disconnect switch

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)	Dim Ref for +E213	
				Type 1	Type 12 (+B056)	Type 3R (+B058)		
	Current A	Power HP		Dim Ref	Dim Ref	Dim Ref		
<b><math>U_1 = 200 \text{ to } 240V</math>. Power ratings are valid at nominal output voltage <math>U_N = 208/230 \text{ V } 60 \text{ Hz}</math></b>								
ACH580-BDR-04A6-2	4.6	1.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-06A6-2	6.6	1.5	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-07A5-2	7.5	2.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-10A6-2	10.6	3.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-017A-2	16.7	5.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-024A-2	24.2	7.5	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-031A-2	30.8	10.0	R2	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-046A-2	46.2	15.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-059A-2	59.4	20.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-075A-2	74.8	25.0	R4	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-088A-2	88.0	30.0	R5	Bx1-3	Bx12-3	Bx3R-3*	Bx1-4/Bx12-4/Bx3R-4	
ACH580-BDR-114A-2	114.0	40.0	R5	Bx1-3	Bx12-3	Bx3R-3*	Bx1-4/Bx12-4/Bx3R-4	
ACH580-BDR-143A-2	143.0	50.0	R6	Bx1-3	Bx12-3	Bx3R-4	Bx1-5/Bx12-4/Bx3R-4	
ACH580-BDR-169A-2	169.0	60.0	R7	Bx1-3	Bx12-3	Bx3R-4	Bx1-5/Bx12-4/Bx3R-4	
ACH580-BDR-211A-2	211.0	75.0	R7	Bx1-3	Bx12-3	Bx3R-5	Bx1-5*/Bx12-5*/Bx3R-5	
ACH580-BDR-273A-2	273.0	100.0	R8	Contact Factory				
<b><math>U_1 = 440 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>								
ACH580-BDR-02A1-4	2.1	1.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-03A0-4	3.0	1.5	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-03A5-4	3.5	2.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-04A8-4	4.8	3.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-07A6-4	7.6	5.0	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-012A-4	12.0	7.5	R1	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-014A-4	14.0	10.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-023A-4	23.0	15.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1	
ACH580-BDR-027A-4	27.0	20.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-034A-4	34.0	25.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-044A-4	44.0	30.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-052A-4	52.0	40.0	R4	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-065A-4	65.0	50.0	R4	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-077A-4	77.0	60.0	R4	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2	
ACH580-BDR-096A-4	96.0	75.0	R5	Bx1-3	Bx12-3	Bx3R-3	BX1-4/BX12-4/Bx3R-4	
ACH580-BDR-124A-4	124.0	100.0	R6	Bx1-3	Bx12-3	Bx3R-4	BX1-5/BX12-4/Bx3R-4	
ACH580-BDR-156A-4	156.0	125.0	R7	Bx1-3	Bx12-3	Bx3R-4	BX1-5/BX12-4/Bx3R-4	
ACH580-BDR-180A-4	180.0	150.0	R7	Bx1-3	Bx12-3	Bx3R-4	BX1-5/BX12-4/Bx3R-4	
ACH580-BDR-240A-4	240.0	200.0	R8	Bx1-3	Bx12-3	Bx3R-5	BX1-6/BX12-6/Bx3R-5	
ACH580-BDR-302A-4	302.0	250.0	R9	Bx1-7	Bx12-7	Bx3R-6	BX1-7/BX12-7/Bx3R-6	
ACH580-BDR-361A-4	361.0	300.0	R9	Bx1-7	Bx12-7	Bx3R-6	BX1-7/BX12-7/Bx3R-6	
ACH580-BDR-414A-4	414.0	350.0	R9	Bx1-7	Bx12-7	Bx3R-6	BX1-7/BX12-7/Bx3R-6	

\* Increases one size with E213 and F267

## Ratings, types and voltages

ACH580-BDR, E-Clipse bypass drive with non-fused disconnect switch

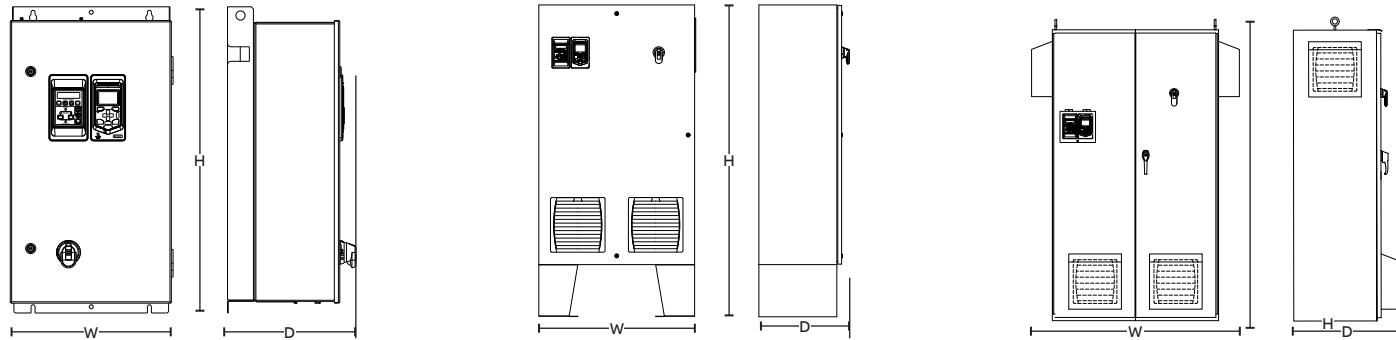
Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)	Dim Ref for +E213
	Type 1	Type 12 (+B056)		Type 3R (+B058)			
	Current A	Power HP		Dim Ref	Dim Ref	Dim Ref	
<b><math>U_1 = 500 \text{ to } 600V</math>. Power ratings are valid at nominal output voltage <math>U_n = 575 \text{ V } 60 \text{ Hz}</math></b>							
ACH580-BDR-02A7-6	2.7	2.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1
ACH580-BDR-03A9-6	3.9	3.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1
ACH580-BDR-06A1-6	6.1	5.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1
ACH580-BDR-09A0-6	9.0	7.5	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1
ACH580-BDR-011A-6	11.0	10.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1
ACH580-BDR-017A-6	17.0	15.0	R2	Bx1-1	Bx12-1	Bx3R-1	Bx1-1/Bx12-1/Bx3R-1
ACH580-BDR-022A-6	22.0	20.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2
ACH580-BDR-027A-6	27.0	25.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2
ACH580-BDR-032A-6	32.0	30.0	R3	Bx1-2	Bx12-2	Bx3R-2	Bx1-2/Bx12-2/Bx3R-2
ACH580-BDR-041A-6	41.0	40.0	R5	Bx1-3	Bx12-3	Bx3R-3	Bx3R-3 <sup>2</sup>
ACH580-BDR-052A-6	52.0	50.0	R5	Bx1-3	Bx12-3	Bx3R-3	Bx3R-3 <sup>2</sup>
ACH580-BDR-062A-6	62.0	60.0	R5	Bx1-3	Bx12-3	Bx3R-3	Bx3R-3 <sup>2</sup>
ACH580-BDR-077A-6	77.0	75.0	R5	Bx1-3	Bx12-3	Bx3R-3	Bx3R-3 <sup>2</sup>
ACH580-BDR-099A-6	99.0	100.0	R7	Bx1-3	Bx12-3	Bx3R-4	Bx3R-4 <sup>2</sup>
ACH580-BDR-125A-6	125.0	125.0	R7	Bx1-3	Bx12-3	Bx3R-4	Bx3R-4 <sup>2</sup>
ACH580-BDR-144A-6	144.0	150.0	R8	Bx1-3	Bx12-3	Bx3R-4	Bx3R-4 <sup>2</sup>

\* Increases one size with E213 and F267

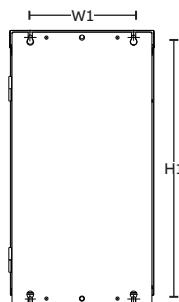
<sup>2)</sup> E213 for Type 3R only, contact factory for Type 1 or 12 for this rating.

## Dimensions

### ACH580-BCR and ACH580-BDR



#### Mounting Dimensions



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives UL (NEMA) Type 1</b>												
Bx1-1	33.16	842	17.63	447	13.90	353	84.0	38.1	31.89	810	12.60	320
Bx1-2	40.60	1030	20.70	526	15.30	388	139.0	63.0	39.30	998	15.70	400
Bx1-3	47.72	1212	28.24	717	19.04	484	448.0	203.2	46.26	1175	23.62	600
Bx1-4	61.90	1571	19.30	490	19.00	482	200.0	91.7	60.88	1546	10.00	254
Bx1-5	73.40	1865	34.80	883	20.40	518	740.0	335.7	61.38	1559	26.00	660
Bx1-6	78.00	1981	32.00	813	27.30	693	865.0	392.4	Free standing			
Bx1-7	84.00	2134	48.00	1219	27.30	693	1400.0	635.0				
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives UL (NEMA) Type 12</b>												
Bx12-1	33.16	842	17.63	448	13.90	353	84.00	38.0	31.89	810	12.60	320
Bx12-2	40.60	1030	20.70	526	15.30	388	139.0	63.0	39.30	998	15.70	400
Bx12-3	54.18	1376	28.24	717	19.04	484	448.0	203.2	46.26	1175	23.62	600
Bx12-4	48.00	1219	36.00	914	21.00	553	380.0	172.4	46.50	1181	34.50	876
Bx12-5	72.00	1829	36.00	914	20.90	531	740.0	335.7	58.60	1488	34.50	876
Bx12-6	78.00	1981	32.00	813	27.30	693	865.0	392.4	Free standing			
Bx12-7	84.00	2134	48.00	1219	27.30	693	1400.0	635.0				
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives UL (NEMA) Type 3R</b>												
Bx3R-1	33.40	847	17.70	449	14.00	355	83.8	38.0	31.90	810	12.60	320
Bx3R-2	40.71	1034	20.71	526	15.43	392	193.0	87.5	39.30	998	15.70	400
Bx3R-3	39.40	1001	30.00	762	15.87	403	205.0	93.0	34.50	876	28.50	724
Bx3R-4	51.00	1295	36.00	914	20.37	517	390.0	176.9	46.50	1181	34.50	876
Bx3R-5	78.00	1981	44.00	1118	31.25	794	750.0	335.7	Free standing			
Bx3R-6	84.00	2134	60.00	1524	31.25	794	880.0	399.2				

\* ABB recommends the use of the included foot mount kit. If wall mounting is required, see configurator for mounting dimensions.

## Ratings, types and voltages

ACH580-BCR, E-Clipse bypass drive with input harmonic filter with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)
<b>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</b>						
ACH580-BCR-04A6-2+E211	4.6	1.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-06A6-2+E211	6.6	1.5	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-07A5-2+E211	7.5	2.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-10A6-2+E211	10.6	3.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-017A-2+E211	16.7	5.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-024A-2+E211	24.2	7.5	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-031A-2+E211	30.8	10.0	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-046A-2+E211	46.2	15.0	R3	Cx1-23	Cx12-24	CX3R-24
ACH580-BCR-059A-2+E211	59.4	20.0	R3	Cx1-23	Cx12-24	CX3R-24
ACH580-BCR-075A-2+E211	74.8	25.0	R4	Cx1-24	Cx12-24	CX3R-24
ACH580-BCR-088A-2+E211	88.0	30.0	R5	Cx1-24	Cx12-24	CX3R-24
ACH580-BCR-114A-2+E211	114.0	40.0	R5	Cx1-24	Cx12-24	CX3R-25
ACH580-BCR-143A-2+E211	143.0	50.0	R6	Cx1-24	Cx12-25	CX3R-25
ACH580-BCR-169A-2+E211	169.0	60.0	R7	Cx1-27	Cx12-27	CX3R-27
ACH580-BCR-211A-2+E211	211.0	75.0	R7	Cx1-27	Cx12-27	CX3R-27
ACH580-BCR-273A-2+E211	273.0	100.0	R8	Contact Factory		
<b>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</b>						
ACH580-BCR-02A1-4+E211	2.1	1.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-03A0-4+E211	3.0	1.5	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-03A5-4+E211	3.5	2.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-04A8-4+E211	4.8	3.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-07A6-4+E211	7.6	5.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-012A-4+E211	12.0	7.5	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-014A-4+E211	14.0	10.0	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-023A-4+E211	23.0	15.0	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-BCR-027A-4+E211	27.0	20.0	R3	Cx1-23	Cx12-23	CX3R-23
ACH580-BCR-034A-4+E211	34.0	25.0	R3	Cx1-23	Cx12-23	CX3R-23
ACH580-BCR-044A-4+E211	44.0	30.0	R3	Cx1-23	Cx12-24	CX3R-24
ACH580-BCR-052A-4+E211	52.0	40.0	R4	Cx1-24	Cx12-24	CX3R-24
ACH580-BCR-065A-4+E211	65.0	50.0	R4	Cx1-24	Cx12-24	CX3R-24
ACH580-BCR-077A-4+E211	77.0	60.0	R4	Cx1-24	Cx12-24	CX3R-24
ACH580-BCR-096A-4+E211	96.0	75.0	R5	Cx1-24	Cx12-24	CX3R-24
ACH580-BCR-124A-4+E211	124.0	100.0	R6	Cx1-24	Cx12-25	CX3R-25
ACH580-BCR-156A-4+E211	156.0	125.0	R7	Cx1-27	Cx12-27	CX3R-27
ACH580-BCR-180A-4+E211	180.0	150.0	R7	Cx1-27	Cx12-27	CX3R-27
ACH580-BCR-240A-4+E211	240.0	200.0	R8	Cx1-29	Cx12-29	CX3R-29
ACH580-BCR-302A-4+E211	302.0	250.0	R9	Cx1-31	Cx12-31	CX3R-32
ACH580-BCR-361A-4+E211	361.0	300.0	R9	Cx1-31	Cx12-31	CX3R-32
ACH580-BCR-414A-4+E211	414.0	350.0	R9	Cx1-31	Cx12-31	CX3R-32

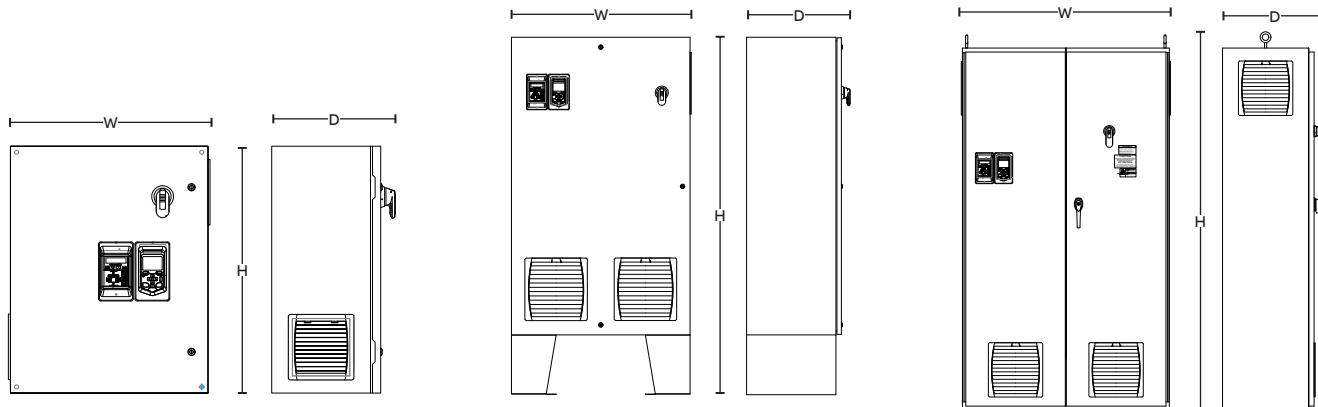
## Ratings, types and voltages

ACH580-BDR, E-Clipse bypass drive with input harmonic filter with non-fused disconnect switch

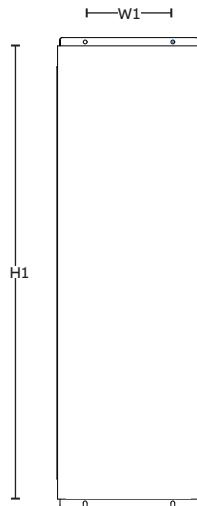
Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)
<b>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</b>						
ACH580-BDR-04A6-2+E211	4.6	1.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-06A6-2+E211	6.6	1.5	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-07A5-2+E211	7.5	2.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-10A6-2+E211	10.6	3.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-017A-2+E211	16.7	5.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-024A-2+E211	24.2	7.5	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-031A-2+E211	30.8	10.0	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-046A-2+E211	46.2	15.0	R3	Cx1-23	Cx12-24	CX3R-24
ACH580-BDR-059A-2+E211	59.4	20.0	R3	Cx1-23	Cx12-24	CX3R-24
ACH580-BDR-075A-2+E211	74.8	25.0	R4	Cx1-24	Cx12-24	CX3R-24
ACH580-BDR-088A-2+E211	88.0	30.0	R5	Cx1-24	Cx12-24	CX3R-24
ACH580-BDR-114A-2+E211	114.0	40.0	R5	Cx1-24	Cx12-24	CX3R-25
ACH580-BDR-143A-2+E211	143.0	50.0	R6	Cx1-24	Cx12-25	CX3R-25
ACH580-BDR-169A-2+E211	169.0	60.0	R7	Cx1-27	Cx12-27	CX3R-27
ACH580-BDR-211A-2+E211	211.0	75.0	R7	Cx1-27	Cx12-27	CX3R-27
ACH580-BDR-273A-2+E211	273.0	100.0	R8	Contact Factory		
<b>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</b>						
ACH580-BDR-02A1-4+E211	2.1	1.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-03A0-4+E211	3.0	1.5	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-03A5-4+E211	3.5	2.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-04A8-4+E211	4.8	3.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-07A6-4+E211	7.6	5.0	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-012A-4+E211	12.0	7.5	R1	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-014A-4+E211	14.0	10.0	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-023A-4+E211	23.0	15.0	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-BDR-027A-4+E211	27.0	20.0	R3	Cx1-23	Cx12-23	CX3R-23
ACH580-BDR-034A-4+E211	34.0	25.0	R3	Cx1-23	Cx12-23	CX3R-23
ACH580-BDR-044A-4+E211	44.0	30.0	R3	Cx1-23	Cx12-24	CX3R-24
ACH580-BDR-052A-4+E211	52.0	40.0	R4	Cx1-24	Cx12-24	CX3R-24
ACH580-BDR-065A-4+E211	65.0	50.0	R4	Cx1-24	Cx12-24	CX3R-24
ACH580-BDR-077A-4+E211	77.0	60.0	R4	Cx1-24	Cx12-24	CX3R-24
ACH580-BDR-096A-4+E211	96.0	75.0	R5	Cx1-24	Cx12-24	CX3R-24
ACH580-BDR-124A-4+E211	124.0	100.0	R6	Cx1-24	Cx12-25	CX3R-25
ACH580-BDR-156A-4+E211	156.0	125.0	R7	Cx1-27	Cx12-27	CX3R-27
ACH580-BDR-180A-4+E211	180.0	150.0	R7	Cx1-27	Cx12-27	CX3R-27
ACH580-BDR-240A-4+E211	240.0	200.0	R8	Cx1-29	Cx12-29	CX3R-29
ACH580-BDR-302A-4+E211	302.0	250.0	R9	Cx1-31	Cx12-31	CX3R-32
ACH580-BDR-361A-4+E211	361.0	300.0	R9	Cx1-31	Cx12-31	CX3R-32
ACH580-BDR-414A-4+E211	414.0	350.0	R9	Cx1-31	Cx12-31	CX3R-32

## Dimensions

ACH580-BCR and ACH580-BDR with input harmonic filter (+E211)



### Mounting Dimensions



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives &amp; input harmonic filter, UL (NEMA) Type 1</b>												
CX1-22	53.44	1357	16.30	414	14.36	365	135.0	61.2	52.44	1332	10.00	254
CX1-23	61.87	1571	19.31	490	18.98	482	200.0	90.7	60.88	1546	10.00	254
CX1-24	73.44	1865	34.75	883	20.40	518	400.0	181.4	Free standing			
Cx1-27	84.00	2134	36.00	914	23.30	592	1100.0	499.0				
Cx1-29	84.00	2134	48.00	1219	23.30	592	1200.0	544.0				
Cx1-31	84.00	2134	60.00	1524	23.30	592	1400.0	635.0				
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives &amp; input harmonic filter, UL (NEMA) Type 12</b>												
Cx12-23	36.00	914	30.00	762	15.00	381	170.0	77.1	34.50	876	28.50	724
Cx12-24	48.00	1219	36.00	914	21.00	533	380.0	172.4	Free standing			
Cx12-25	72.00	1829	36.00	914	20.90	531	570.0	258.6				
Cx12-27	84.00	2134	36.00	914	23.30	592	750.0	340.0				
Cx12-29	84.00	2134	48.00	1219	23.30	592	1200.0	544.0				
Cx12-31	84.00	2134	60.00	1524	23.30	592	1400.0	635.0				

\* ABB recommends the use of the included foot mount kit. If wall mounting is required, see configurator for mounting dimensions.

## Ratings, types and voltages

ACH580-BCR, E-Clipse bypass drive with special enclosure with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 4 (+B057)	Type 4x* (+B063 +C165)	Type 3RXSS* (+B058 +C165)
<b>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</b>						
ACH580-BCR-04A6-2	4.6	1.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-06A6-2	6.6	1.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-07A5-2	7.5	2.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-10A6-2	10.6	3.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-017A-2	16.7	5.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-024A-2	24.2	7.5	R2	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-031A-2	30.8	10.0	R2	CX4-11	CX4X-11	CX3RX-12
ACH580-BCR-046A-2	46.2	15.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BCR-059A-2	59.4	20.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BCR-075A-2	74.8	25.0	R4	CX4-12	CX4X-12	CX3RX-13
ACH580-BCR-088A-2	88.0	30.0	R5	CX4-12	CX4X-12	CX3RX-13
ACH580-BCR-114A-2	114.0	40.0	R5	CX4-13	CX4X-13	CX3RX-13
ACH580-BCR-143A-2	143.0	50.0	R6	CX4-15	CX4X-15	CX3RX-14
ACH580-BCR-169A-2	169.0	60.0	R7	CX4-16	CX4X-16	CX3RX-14
ACH580-BCR-211A-2	211.0	75.0	R7	CX4-18	CX4X-18	CX3RX-15
ACH580-BCR-273A-2	273.0	100.0	R8	Contact Factory		
<b>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</b>						
ACH580-BCR-02A1-4	2.1	1.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-03A0-4	3.0	1.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-03A5-4	3.5	2.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-04A8-4	4.8	3.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-07A6-4	7.6	5.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-012A-4	12.0	7.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-014A-4	14.0	10.0	R2	CX4-10	CX4X-10	CX3RX-11
ACH580-BCR-023A-4	23.0	15.0	R2	CX4-11	CX4X-11	CX3RX-11
ACH580-BCR-027A-4	27.0	20.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BCR-034A-4	34.0	25.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BCR-044A-4	44.0	30.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BCR-052A-4	52.0	40.0	R4	CX4-13	CX4X-13	CX3RX-13
ACH580-BCR-065A-4	65.0	50.0	R4	CX4-13	CX4X-13	CX3RX-13
ACH580-BCR-077A-4	77.0	60.0	R4	CX4-14	CX4X-14	CX3RX-13
ACH580-BCR-096A-4	96.0	75.0	R5	CX4-14	CX4X-14	CX3RX-13
ACH580-BCR-124A-4	124.0	100.0	R6	CX4-16	CX4X-16	CX3RX-14
ACH580-BCR-156A-4	156.0	125.0	R7	CX4-17	CX4X-17	CX3RX-14
ACH580-BCR-180A-4	180.0	150.0	R7	CX4-19	CX4X-19	CX3RX-14
ACH580-BCR-240A-4	240.0	200.0	R8	CX4-20	CX4X-20	CX3RX-15

\* The ABB design uses 304 stainless steel enclosures. For Drive packages in harsh environments such as coastal areas, ABB recommends 316 stainless steel as a custom option.

## Ratings, types and voltages

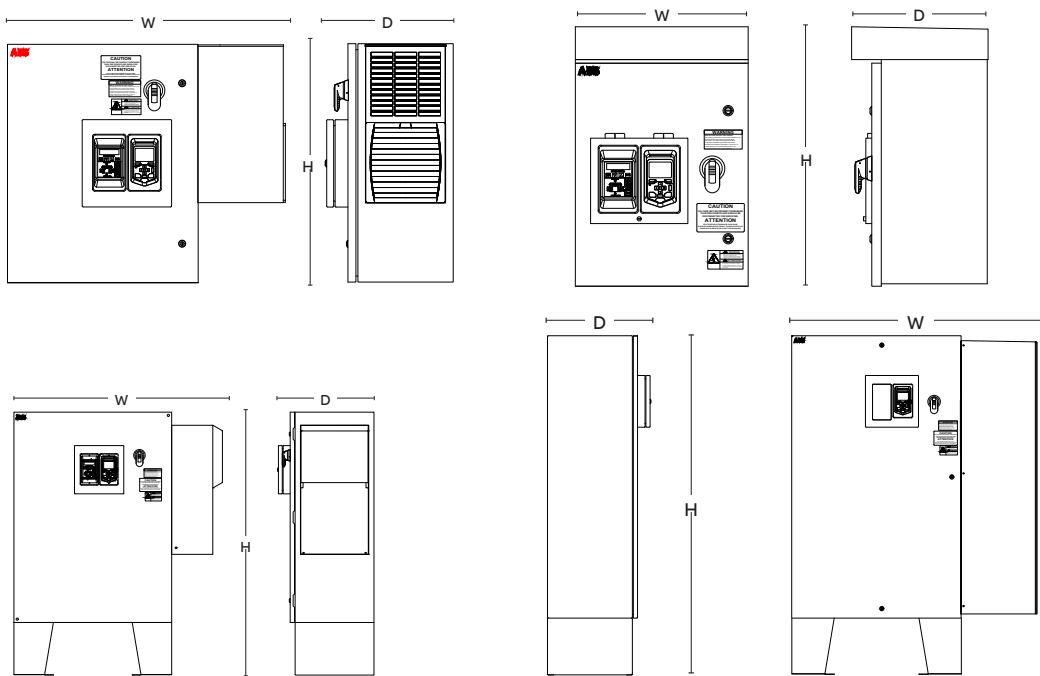
ACH580-BDR, E-Clipse bypass drive with special enclosure with non-fused disconnect switch

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 4 (+B057)	Type 4x* (+B063 +C165)	Type 3RXSS* (+B058 +C165)
	Dim Ref	Dim Ref	Dim Ref			
<b>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</b>						
ACH580-BDR-04A6-2	4.6	1.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-06A6-2	6.6	1.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-07A5-2	7.5	2.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-10A6-2	10.6	3.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-017A-2	16.7	5.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-024A-2	24.2	7.5	R2	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-031A-2	30.8	10.0	R2	CX4-11	CX4X-11	CX3RX-12
ACH580-BDR-046A-2	46.2	15.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BDR-059A-2	59.4	20.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BDR-075A-2	74.8	25.0	R4	CX4-12	CX4X-12	CX3RX-13
ACH580-BDR-088A-2	88.0	30.0	R5	CX4-12	CX4X-12	CX3RX-13
ACH580-BDR-114A-2	114.0	40.0	R5	CX4-13	CX4X-13	CX3RX-13
ACH580-BDR-143A-2	143.0	50.0	R6	CX4-15	CX4X-15	CX3RX-14
ACH580-BDR-169A-2	169.0	60.0	R7	CX4-16	CX4X-16	CX3RX-14
ACH580-BDR-211A-2	211.0	75.0	R7	CX4-18	CX4X-18	CX3RX-15
ACH580-BDR-273A-2	273.0	100.0	R8	Contact Factory		
<b>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</b>						
ACH580-BDR-02A1-4	2.1	1.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-03A0-4	3.0	1.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-03A5-4	3.5	2.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-04A8-4	4.8	3.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-07A6-4	7.6	5.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-012A-4	12.0	7.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-014A-4	14.0	10.0	R2	CX4-10	CX4X-10	CX3RX-11
ACH580-BDR-023A-4	23.0	15.0	R2	CX4-11	CX4X-11	CX3RX-11
ACH580-BDR-027A-4	27.0	20.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BDR-034A-4	34.0	25.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BDR-044A-4	44.0	30.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-BDR-052A-4	52.0	40.0	R4	CX4-13	CX4X-13	CX3RX-13
ACH580-BDR-065A-4	65.0	50.0	R4	CX4-13	CX4X-13	CX3RX-13
ACH580-BDR-077A-4	77.0	60.0	R4	CX4-14	CX4X-14	CX3RX-13
ACH580-BDR-096A-4	96.0	75.0	R5	CX4-14	CX4X-14	CX3RX-13
ACH580-BDR-124A-4	124.0	100.0	R6	CX4-16	CX4X-16	CX3RX-14
ACH580-BDR-156A-4	156.0	125.0	R7	CX4-17	CX4X-17	CX3RX-14
ACH580-BDR-180A-4	180.0	150.0	R7	CX4-19	CX4X-19	CX3RX-14
ACH580-BDR-240A-4	240.0	200.0	R8	CX4-20	CX4X-20	CX3RX-15

\* The ABB design uses 304 stainless steel enclosures. For Drive packages in harsh environments such as coastal areas, ABB recommends 316 stainless steel as a custom option.

## Dimensions

ACH580-BCR and ACH580-BDR with special enclosure  
(+B058+C165, +B057, +B063+C165)



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight	
	in	mm	in	mm	in	mm	lb	kg
CX4-10	24	610	25.5	648	15.9	404	120	55
CX4-11	30	762	34.8	884	15.9	404	185	84
CX4-12	36	914	40.8	1036	17.8	452	285	130
CX4-13	36	914	41.6	1057	21.8	554	340	155
CX4-14	36	914	44.6	1133	17.8	452	340	155
CX4-15	60	1524	47.6	1209	21.8	554	415	189
CX4-16	60	1524	50.6	1285	21.8	554	450	205
CX4-17	60	1524	48.8	1240	21.8	554	500	227
CX4-18	72	1829	50.6	1285	21.8	554	575	261
CX4-19	72	1829	50.4	1280	21.8	554	625	284
CX4-20	72	1829	52.1	1323	21.8	554	660	300

## Ratings, types and voltages

ACH580-BCR, enclosed with soft start E-Clipse bypass drive with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA) Type 1	UL (NEMA) Type 12 (+B056)	UL (NEMA) Type 3R (+B058)
	Current A	Power HP			Dim Ref	
<b><math>U_1 = 200 \text{ to } 240V</math>. Power ratings are valid at nominal output voltage <math>U_N = 208/230 \text{ V } 60 \text{ Hz}</math></b>						
ACH580-BCR-04A6-2+G390	4.6	1.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-06A6-2+G390	6.6	1.5	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-07A5-2+G390	7.5	2.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-10A6-2+G390	10.6	3.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-017A-2+G390	16.7	5.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-024A-2+G390	24.2	7.5	R2	CX1-21	CX12-22	CX3R-22
ACH580-BCR-031A-2+G390	30.8	10.0	R2	CX1-22	CX12-22	CX3R-22
ACH580-BCR-046A-2+G390	46.2	15.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BCR-059A-2+G390	59.4	20.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BCR-075A-2+G390	74.8	25.0	R4	CX1-23	CX12-23	CX3R-23
ACH580-BCR-088A-2+G390	88.0	30.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-BCR-114A-2+G390	114.0	40.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-BCR-143A-2+G390	143.0	50.0	R6	CX1-24	CX12-25	CX3R-25
ACH580-BCR-169A-2+G390	169.0	60.0	R7	CX1-24	CX12-25	CX3R-25
ACH580-BCR-211A-2+G390	211.0	75.0	R7	CX1-27	CX12-27	CX3R-27
ACH580-BCR-273A-2+G390	273.0	100.0	R8	Contact Factory		
<b><math>U_1 = 440 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>						
ACH580-BCR-02A1-4+G390	2.1	1.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-03A0-4+G390	3.0	1.5	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-03A5-4+G390	3.5	2.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-04A8-4+G390	4.8	3.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-07A6-4+G390	7.6	5.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-012A-4+G390	12.0	7.5	R1	CX1-21	CX12-22	CX3R-22
ACH580-BCR-014A-4+G390	14.0	10.0	R2	CX1-21	CX12-22	CX3R-22
ACH580-BCR-023A-4+G390	23.0	15.0	R2	CX1-21	CX12-22	CX3R-22
ACH580-BCR-027A-4+G390	27.0	20.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BCR-034A-4+G390	34.0	25.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BCR-044A-4+G390	44.0	30.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BCR-052A-4+G390	52.0	40.0	R4	CX1-22	CX12-23	CX3R-23
ACH580-BCR-065A-4+G390	65.0	50.0	R4	CX1-22	CX12-23	CX3R-23
ACH580-BCR-077A-4+G390	77.0	60.0	R4	CX1-23	CX12-23	CX3R-23
ACH580-BCR-096A-4+G390	96.0	75.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-BCR-124A-4+G390	124.0	100.0	R6	CX1-24	CX12-24	CX3R-24
ACH580-BCR-156A-4+G390	156.0	125.0	R7	CX1-24	CX12-25	CX3R-25
ACH580-BCR-180A-4+G390	180.0	150.0	R7	CX1-27	CX12-27	CX3R-27
ACH580-BCR-240A-4+G390	240.0	200.0	R8	CX1-27	CX12-27	CX3R-27
ACH580-BCR-302A-4+G390	302.0	250.0	R9	CX1-31	CX12-31	CX3R-31
ACH580-BCR-361A-4+G390	361.0	300.0	R9	CX1-31	CX12-31	CX3R-31
ACH580-BCR-414A-4+G390	414.0	350.0	R9	CX1-31	CX12-31	CX3R-31

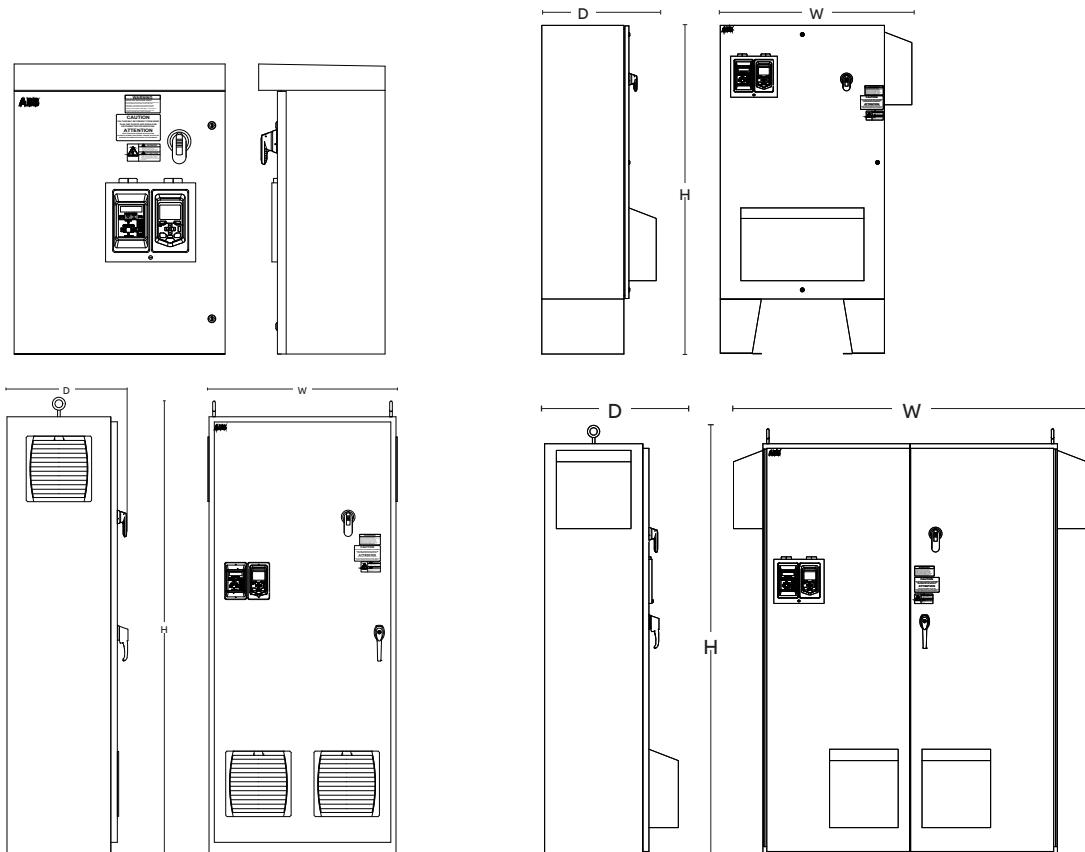
## Ratings, types and voltages

ACH580-BDR, enclosed with soft start E-Clipse bypass drive with non-fused disconnect switch

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)
<b>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</b>						
ACH580-BDR-04A6-2+G390	4.6	1.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-06A6-2+G390	6.6	1.5	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-07A5-2+G390	7.5	2.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-10A6-2+G390	10.6	3.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-017A-2+G390	16.7	5.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-024A-2+G390	24.2	7.5	R2	CX1-21	CX12-22	CX3R-22
ACH580-BDR-031A-2+G390	30.8	10.0	R2	CX1-22	CX12-22	CX3R-22
ACH580-BDR-046A-2+G390	46.2	15.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BDR-059A-2+G390	59.4	20.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BDR-075A-2+G390	74.8	25.0	R4	CX1-23	CX12-23	CX3R-23
ACH580-BDR-088A-2+G390	88.0	30.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-BDR-114A-2+G390	114.0	40.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-BDR-143A-2+G390	143.0	50.0	R6	CX1-24	CX12-25	CX3R-25
ACH580-BDR-169A-2+G390	169.0	60.0	R7	CX1-24	CX12-25	CX3R-25
ACH580-BDR-211A-2+G390	211.0	75.0	R7	CX1-27	CX12-27	CX3R-27
ACH580-BDR-273A-2+G390	273.0	100.0	R8	Contact Factory		
<b>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</b>						
ACH580-BDR-02A1-4+G390	2.1	1.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-03A0-4+G390	3.0	1.5	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-03A5-4+G390	3.5	2.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-04A8-4+G390	4.8	3.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-07A6-4+G390	7.6	5.0	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-012A-4+G390	12.0	7.5	R1	CX1-21	CX12-22	CX3R-22
ACH580-BDR-014A-4+G390	14.0	10.0	R2	CX1-21	CX12-22	CX3R-22
ACH580-BDR-023A-4+G390	23.0	15.0	R2	CX1-21	CX12-22	CX3R-22
ACH580-BDR-027A-4+G390	27.0	20.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BDR-034A-4+G390	34.0	25.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BDR-044A-4+G390	44.0	30.0	R3	CX1-22	CX12-23	CX3R-23
ACH580-BDR-052A-4+G390	52.0	40.0	R4	CX1-22	CX12-23	CX3R-23
ACH580-BDR-065A-4+G390	65.0	50.0	R4	CX1-22	CX12-23	CX3R-23
ACH580-BDR-077A-4+G390	77.0	60.0	R4	CX1-23	CX12-23	CX3R-23
ACH580-BDR-096A-4+G390	96.0	75.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-BDR-124A-4+G390	124.0	100.0	R6	CX1-24	CX12-24	CX3R-24
ACH580-BDR-156A-4+G390	156.0	125.0	R7	CX1-24	CX12-25	CX3R-25
ACH580-BDR-180A-4+G390	180.0	150.0	R7	CX1-27	CX12-27	CX3R-27
ACH580-BDR-240A-4+G390	240.0	200.0	R8	CX1-27	CX12-27	CX3R-27
ACH580-BDR-302A-4+G390	302.0	250.0	R9	CX1-31	CX12-31	CX3R-31
ACH580-BDR-361A-4+G390	361.0	300.0	R9	CX1-31	CX12-31	CX3R-31
ACH580-BDR-414A-4+G390	414.0	350.0	R9	CX1-31	CX12-31	CX3R-31

## Dimensions

ACH580-BCR and ACH580-BDR with soft starter (+G390)



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives &amp; soft starter, UL (NEMA) Type 1</b>												
CX1-21	36.5	927	13.7	348	13.3	338	75	34	35.5	902	8	203
CX1-22	53.4	1357	16.3	414	14.4	365	135	61	52.4	1332	10	254
CX1-23	61.9	1571	19.3	490	19	482	200	91	60.9	1546	10	154
CX1-24	73.4	1865	34.8	883	20.4	518	400	182	61.4	1559	26	660
CX1-27	84	2134	36	914	23.3	592	1100	500	Freestanding			
CX1-31	84	2134	60	1524	23.3	592	1400	636				
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives &amp; soft starter, UL (NEMA) Type 1</b>												
CX12-22	30	762	24	610	15	381	110	50	28.5	724	22.5	572
CX12-23	36	914	30	762	15	381	170	77	34.5	876	28.5	724
CX12-24	48	1219	36	914	21	533	380	173	46.5	1181	34.5	876
CX12-25	72	1829	36	914	20.9	531	570	259	58.6	1488	34.5	876
CX12-27	84	2134	36	914	23.3	592	750	341	Freestanding			
CX12-31	84	2134	60	1524	23.3	592	1400	636				
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives &amp; soft starter, UL (NEMA) Type 1</b>												
CX3R-22	33	838	24	610	14.4	366	130	59	28.2	724	22.5	572
CX3R-23	39.4	1001	30	762	15.9	404	190	86	34.5	876	28.5	724
CX3R-24	51	1295	36	914	20.4	518	400	182	46.5	1181	34.5	876
CX3R-25	72	1829	42	1067	25.1	638	475	216	58.6	1488	34.5	876
CX3R-27	84	2134	48	1219	27.3	693	600	273	Freestanding			
CX3R-31	84	2134	72	1829	27.3	693	900	409				

## Ratings, types and voltages

ACH580-BCR, E-Clipse bypass drive with manual motor protectors with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA) Type 1		UL (NEMA) Type 12 (+B056)		UL (NEMA) Type 3R (+B058)	
	Current A	Power HP		Dim Ref	Max # of MMPs	Dim Ref	Max # of MMPs	Dim Ref	Max # of MMPs
<b><i>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</i></b>									
ACH580-BCR-04A6-2+xG405+M6xx	4.6	1.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-06A6-2+xG405+M6xx	6.6	1.5	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-07A5-2+xG405+M6xx	7.5	2.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-10A6-2+xG405+M6xx	10.6	3.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-017A-2+xG405+M6xx	16.7	5.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-024A-2+xG405+M6xx	24.2	7.5	R2	Cx1-21	3	Cx12-22	3	CX3R-22	3
ACH580-BCR-031A-2+xG405+M6xx	30.8	10.0	R2	Cx1-21	3	Cx12-22	3	CX3R-22	3
ACH580-BCR-046A-2+xG405+M6xx	46.2	15.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BCR-059A-2+xG405+M6xx	59.4	20.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BCR-075A-2+xG405+M6xx	74.8	25.0	R4	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BCR-088A-2+xG405+M6xx	88.0	30.0	R5	Cx1-23	7	Cx12-24	15	CX3R-24	15
ACH580-BCR-114A-2+xG405+M6xx	114.0	40.0	R5	Cx1-23	7	Cx12-24	8	CX3R-24	8
ACH580-BCR-143A-2+xG405+M6xx	143.0	50.0	R6	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BCR-169A-2+xG405+M6xx	169.0	60.0	R7	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BCR-211A-2+xG405+M6xx	211.0	75.0	R7	Cx1-24	12	Cx12-25	6	CX3R-25	6
ACH580-BCR-273A-2+xG405+M6xx	273.0	100.0	R8	Contact Factory					
<b><i>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</i></b>									
ACH580-BCR-02A1-4+xG405+M6xx	2.1	1.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-03A0-4+xG405+M6xx	3.0	1.5	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-03A5-4+xG405+M6xx	3.5	2.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-04A8-4+xG405+M6xx	4.8	3.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-07A6-4+xG405+M6xx	7.6	5.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-012A-4+xG405+M6xx	12.0	7.5	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-014A-4+xG405+M6xx	14.0	10.0	R2	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BCR-023A-4+xG405+M6xx	23.0	15.0	R2	Cx1-21	3	Cx12-22	3	CX3R-22	3
ACH580-BCR-027A-4+xG405+M6xx	27.0	20.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BCR-034A-4+xG405+M6xx	34.0	25.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BCR-044A-4+xG405+M6xx	44.0	30.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BCR-052A-4+xG405+M6xx	52.0	40.0	R4	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BCR-065A-4+xG405+M6xx	65.0	50.0	R4	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BCR-077A-4+xG405+M6xx	77.0	60.0	R4	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BCR-096A-4+xG405+M6xx	96.0	75.0	R5	Cx1-23	4	Cx12-24	15	CX3R-24	15
ACH580-BCR-124A-4+xG405+M6xx	124.0	100.0	R6	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BCR-156A-4+xG405+M6xx	156.0	125.0	R7	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BCR-180A-4+xG405+M6xx	180.0	150.0	R7	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BCR-240A-4+xG405+M6xx	240.0	200.0	R8	Cx1-24	6	Cx12-25	6	CX3R-25	6

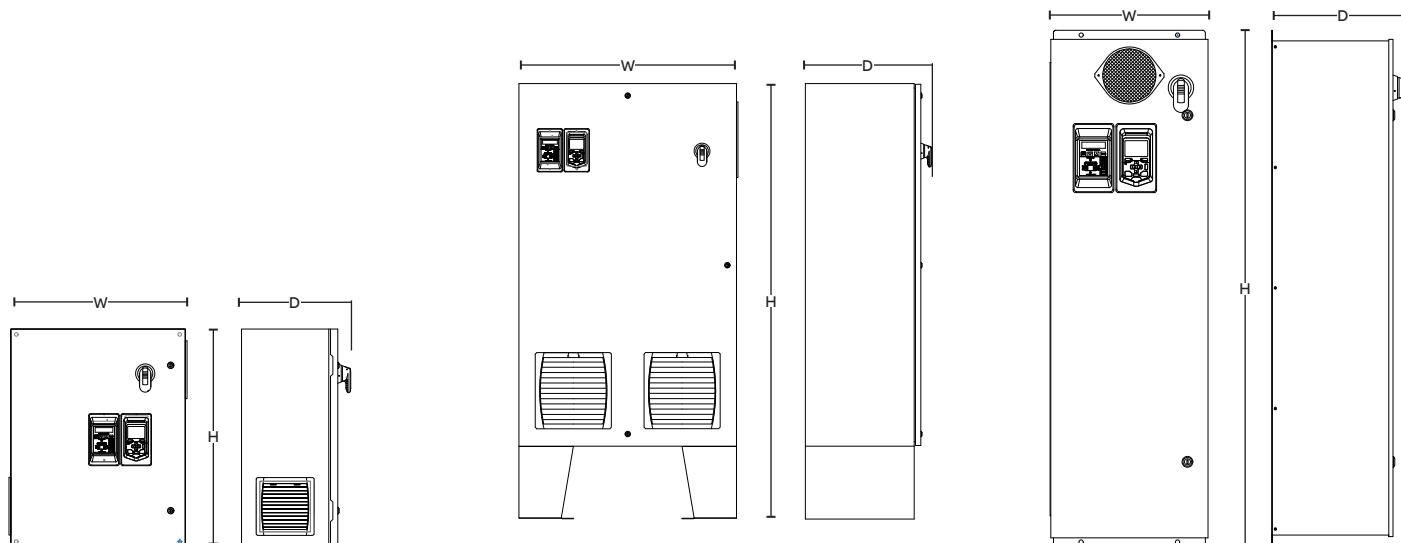
## Ratings, types and voltages

ACH580-BDR, E-Clipse bypass drive with manual motor protectors with non-fused disconnect switch

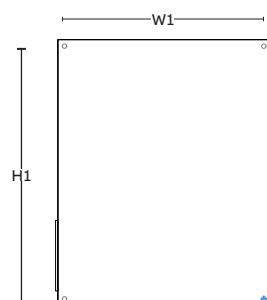
Type code	Output Ratings		Frame Size	UL (NEMA) Type 1		UL (NEMA) Type 12 (+B056)		UL (NEMA) Type 3R (+B058)	
	Current A	Power HP		Dim Ref	Max # of MMPs	Dim Ref	Max # of MMPs	Dim Ref	Max # of MMPs
<b><math>U_1 = 200 \text{ to } 240V</math>. Power ratings are valid at nominal output voltage <math>U_N = 208/230 \text{ V } 60 \text{ Hz}</math></b>									
ACH580-BDR-04A6-2+xG405+M6xx	4.6	1.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-06A6-2+xG405+M6xx	6.6	1.5	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-07A5-2+xG405+M6xx	7.5	2.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-10A6-2+xG405+M6xx	10.6	3.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-017A-2+xG405+M6xx	16.7	5.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-024A-2+xG405+M6xx	24.2	7.5	R2	Cx1-21	3	Cx12-22	3	CX3R-22	3
ACH580-BDR-031A-2+xG405+M6xx	30.8	10.0	R2	Cx1-21	3	Cx12-22	3	CX3R-22	3
ACH580-BDR-046A-2+xG405+M6xx	46.2	15.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BDR-059A-2+xG405+M6xx	59.4	20.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BDR-075A-2+xG405+M6xx	74.8	25.0	R4	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BDR-088A-2+xG405+M6xx	88.0	30.0	R5	Cx1-23	7	Cx12-24	15	CX3R-24	15
ACH580-BDR-114A-2+xG405+M6xx	114.0	40.0	R5	Cx1-23	7	Cx12-24	8	CX3R-24	8
ACH580-BDR-143A-2+xG405+M6xx	143.0	50.0	R6	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BDR-169A-2+xG405+M6xx	169.0	60.0	R7	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BDR-211A-2+xG405+M6xx	211.0	75.0	R7	Cx1-24	12	Cx12-25	6	CX3R-25	6
ACH580-BDR-273A-2+xG405+M6xx	273.0	100.0	R8	Contact Factory					
<b><math>U_1 = 440 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>									
ACH580-BDR-02A1-4+xG405+M6xx	2.1	1.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-03A0-4+xG405+M6xx	3.0	1.5	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-03A5-4+xG405+M6xx	3.5	2.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-04A8-4+xG405+M6xx	4.8	3.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-07A6-4+xG405+M6xx	7.6	5.0	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-012A-4+xG405+M6xx	12.0	7.5	R1	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-014A-4+xG405+M6xx	14.0	10.0	R2	Cx1-21	4	Cx12-22	4	CX3R-22	4
ACH580-BDR-023A-4+xG405+M6xx	23.0	15.0	R2	Cx1-21	3	Cx12-22	3	CX3R-22	3
ACH580-BDR-027A-4+xG405+M6xx	27.0	20.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BDR-034A-4+xG405+M6xx	34.0	25.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BDR-044A-4+xG405+M6xx	44.0	30.0	R3	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BDR-052A-4+xG405+M6xx	52.0	40.0	R4	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BDR-065A-4+xG405+M6xx	65.0	50.0	R4	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BDR-077A-4+xG405+M6xx	77.0	60.0	R4	Cx1-22	7	Cx12-23	5	CX3R-23	5
ACH580-BDR-096A-4+xG405+M6xx	96.0	75.0	R5	Cx1-23	4	Cx12-24	15	CX3R-24	15
ACH580-BDR-124A-4+xG405+M6xx	124.0	100.0	R6	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BDR-156A-4+xG405+M6xx	156.0	125.0	R7	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BDR-180A-4+xG405+M6xx	180.0	150.0	R7	Cx1-24	12	Cx12-24	8	CX3R-24	8
ACH580-BDR-240A-4+xG405+M6xx	240.0	200.0	R8	Cx1-24	6	Cx12-25	6	CX3R-25	6

## Dimensions

ACH580-BCR and ACH580-BDR with manual motor protectors (+xG405+Mxxx)



### Mounting Dimensions



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives &amp; manual motor protectors, UL (NEMA) Type 1</b>												
Cx1-21	36.50	927	13.70	348	13.30	338	75.0	34.0	35.50	902	8.00	203
Cx1-22	53.40	1357	16.30	414	14.40	365	135.0	61.0	52.44	1332	10.00	254
Cx1-23	61.90	1571	19.30	490	19.00	482	200.0	91.0	60.88	1546	10.00	254
Cx1-24	73.40	1865	34.80	883	20.40	518	400.0	181.0	Free standing			
<b>ACH580-BCR and ACH580-BDR, E-Clipse bypass drives &amp; manual motor protectors, UL (NEMA) Type 12</b>												
Cx12-22	30.00	762	24.00	610	15.10	383	110.0	50.0	28.50	724	22.50	572
Cx12-23	36.00	914	30.00	762	15.00	381	170.0	77.0	34.50	876	28.50	724
Cx12-24	48.00	1219	36.00	914	21.00	533	380.0	172.0	Free standing			
Cx12-25	72.00	1829	36.00	914	20.90	531	570.0	259.0				

\* ABB recommends the use of the included foot mount kit. If wall mounting is required, see configurator for mounting dimensions.

## Ratings, types and voltages

ACH580-PCR, packaged drive with disconnect means with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)	AC Line Reactor (+E213)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)	Dim Ref
<b><math>U_1 = 200 \text{ to } 240V</math>. Power ratings are valid at nominal output voltage <math>U_N = 208/230 \text{ V } 60 \text{ Hz}</math></b>							
ACH580-PCR-04A6-2	4.6	1.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-06A6-2	6.6	1.5	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-07A5-2	7.5	2.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-10A6-2	10.6	3.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-017A-2	16.7	5.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-024A-2	24.2	7.5	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-031A-2	30.8	10.0	R2	Px1-2	Px12-2	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-046A-2	46.2	15.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-059A-2	59.4	20.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-075A-2	74.8	25.0	R4	Px1-4	Px12-4	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-088A-2	88.0	30.0	R5	PxB1-3	PxB12-3	PxB3R-3	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PCR-114A-2	114.0	40.0	R5	PxB1-3	PxB12-3	PxB3R-3	PxB1-4 / PxB12-4 / PxB3R-4
ACH580-PCR-143A-2	143.0	50.0	R6	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PCR-169A-2	169.0	60.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PCR-211A-2	211.0	75.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PCR-273A-2	273.0	100.0	R8	PxB1-3	PxB12-3	PxB3R-4	PxB1-5 / PxB12-5 / PxB3R-4
<b><math>U_1 = 380 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>							
ACH580-PCR-02A1-4	2.1	1.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-03A0-4	3.0	1.5	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-03A5-4	3.5	2.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-04A8-4	4.8	3.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-07A6-4	7.6	5.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-012A-4	12.0	7.5	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-014A-4	14.0	10.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-023A-4	23.0	15.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-027A-4	27.0	20.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-034A-4	34.0	25.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-044A-4	44.0	30.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-052A-4	52.0	40.0	R4	Px1-4	Px12-4	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-065A-4	65.0	50.0	R4	Px1-4	Px12-4	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-077A-4	77.0	60.0	R4	Px1-4	Px12-4	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-096A-4	96.0	75.0	R5	PxB1-3	PxB12-3	PxB3R-3	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PCR-124A-4	124.0	100.0	R6	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PCR-156A-4	156.0	125.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PCR-180A-4	180.0	150.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PCR-240A-4	240.0	200.0	R8	PxB1-3	PxB12-3	PxB3R-4	PxB1-5 / PxB12-5 / PxB3R-4
ACH580-PCR-302A-4	302.0	250.0	R9	PxB1-6	PxB12-6	PxB3R-5	PxB1-6 / PxB12-6 / PxB3R-5
ACH580-PCR-361A-4	361.0	300.0	R9	PxB1-6	PxB12-6	PxB3R-5	PxB1-6 / PxB12-6 / PxB3R-5
ACH580-PCR-414A-4	414.0	350.0	R9	PxB1-6	PxB12-6	PxB3R-5	PxB1-6 / PxB12-6 / PxB3R-5

## Ratings, types and voltages

ACH580-PCR, packaged drive with disconnect means with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)	AC Line Reactor (+E213)
	Current	Power		Type 1	Type 12 (+B056)	Type 3R (+B058)	
	A	HP	Dim Ref	Dim Ref	Dim Ref	Dim Ref	Dim Ref
<b>U<sub>1</sub> = 500 to 600V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 575 V 60 Hz</b>							
ACH580-PCR-02A7-6	2.7	2.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-03A9-6	3.9	3.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-06A1-6	6.1	5.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-09A0-6	9.0	7.5	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-011A-6	11.0	10.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-017A-6	17.0	15.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PCR-022A-6	22.0	20.0	R3	Px1-4	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-027A-6	27.0	25.0	R3	Px1-4	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-032A-6	32.0	30.0	R3	Px1-4	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PCR-041A-6	41.0	40.0	R5	Px1-5	PxB12-3	PxB3R-3	PxB3R-3 <sup>2)</sup>
ACH580-PCR-052A-6	52.0	50.0	R5	Px1-5	PxB12-3	PxB3R-3	PxB3R-3 <sup>2)</sup>
ACH580-PCR-062A-6	62.0	60.0	R5	Px1-5	PxB12-3	PxB3R-3	PxB3R-3 <sup>2)</sup>
ACH580-PCR-077A-6	77.0	75.0	R5	Px1-5	PxB12-3	PxB3R-3	PxB3R-3 <sup>2)</sup>
ACH580-PCR-099A-6	99.0	100.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB3R-4 <sup>2)</sup>
ACH580-PCR-125A-6	125.0	125.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB3R-4 <sup>2)</sup>
ACH580-PCR-144A-6	144.0	150.0	R8	PxB1-3	PxB12-3	PxB3R-4	PxB3R-4 <sup>2)</sup>

<sup>1)</sup> See page 1-1

<sup>2)</sup>E213 for Type 3R only, contact factory for Type 1 or 12 for this rating.

## Ratings, types and voltages

ACH580-PDR, packaged drive with disconnect means with non-fused disconnect switch

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)	AC Line Reactor (+E213)
	Current	Power		Type 1	Type 12 (+B056)	Type 3R (+B058)	
	A	HP	Dim Ref	Dim Ref	Dim Ref	Dim Ref	Dim Ref
<b><math>U_1 = 200 \text{ to } 240V</math>. Power ratings are valid at nominal output voltage <math>U_N = 208/230 \text{ V } 60 \text{ Hz}</math></b>							
ACH580-PDR-04A6-2	4.6	1.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-06A6-2	6.6	1.5	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-07A5-2	7.5	2.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-10A6-2	10.6	3.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-017A-2	16.7	5.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-024A-2	24.2	7.5	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-031A-2	30.8	10.0	R2	Px1-2	Px12-2	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-046A-2	46.2	15.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-059A-2	59.4	20.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-075A-2	74.8	25.0	R4	Px1-4	Px12-4	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-088A-2	88.0	30.0	R5	PxB1-3	PxB12-3	PxB3R-3	PxB1-4 / PxB12-5 / PxB3R-3
ACH580-PDR-114A-2	114.0	40.0	R5	PxB1-3	PxB12-3	PxB3R-3	PxB1-4 / PxB12-4 / PxB3R-3
ACH580-PDR-143A-2	143.0	50.0	R6	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PDR-169A-2	169.0	60.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PDR-211A-2	211.0	75.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PDR-273A-2	273.0	100.0	R8	PxB1-3	PxB12-3	PxB3R-4	PxB1-5 / PxB12-5 / PxB3R-4
<b><math>U_1 = 380 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>							
ACH580-PDR-02A1-4	2.1	1.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-03A0-4	3.0	1.5	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-03A5-4	3.5	2.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-04A8-4	4.8	3.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-07A6-4	7.6	5.0	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-012A-4	12.0	7.5	R1	Px1-1	Px12-1	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-014A-4	14.0	10.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-023A-4	23.0	15.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-027A-4	27.0	20.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-034A-4	34.0	25.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-044A-4	44.0	30.0	R3	Px1-3	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-052A-4	52.0	40.0	R4	Px1-4	Px12-4	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-065A-4	65.0	50.0	R4	Px1-4	Px12-4	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-077A-4	77.0	60.0	R4	Px1-4	Px12-4	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-096A-4	96.0	75.0	R5	PxB1-3	PxB12-3	PxB3R-3	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PDR-124A-4	124.0	100.0	R6	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PDR-156A-4	156.0	125.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PDR-180A-4	180.0	150.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB1-4 / PxB12-5 / PxB3R-4
ACH580-PDR-240A-4	240.0	200.0	R8	PxB1-3	PxB12-3	PxB3R-4	PxB1-5 / PxB12-5 / PxB3R-4
ACH580-PDR-302A-4	302.0	250.0	R9	PxB1-6	PxB12-6	PxB3R-5	PxB1-6 / PxB12-6 / PxB3R-5
ACH580-PDR-361A-4	361.0	300.0	R9	PxB1-6	PxB12-6	PxB3R-5	PxB1-6 / PxB12-6 / PxB3R-5
ACH580-PDR-414A-4	414.0	350.0	R9	PxB1-6	PxB12-6	PxB3R-5	PxB1-6 / PxB12-6 / PxB3R-5

## Ratings, types and voltages

ACH580-PDR, packaged drive with disconnect means with non-fused disconnect switch

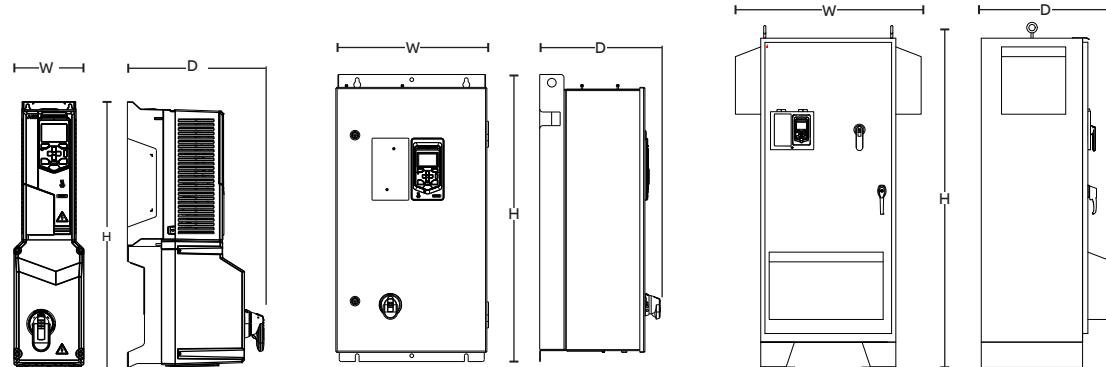
Type code	Output Ratings		Frame Size	UL (NEMA) Type 1	UL (NEMA) Type 12 (+B056)	UL (NEMA) Type 3R (+B058)	AC Line Reactor (+E213)
	Current A	Power HP					
<b>U<sub>1</sub> = 500 to 600V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 575 V 60 Hz</b>							
ACH580-PDR-02A7-6	2.7	2.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-03A9-6	3.9	3.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-06A1-6	6.1	5.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-09A0-6	9.0	7.5	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-011A-6	11.0	10.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-017A-6	17.0	15.0	R2	Px1-2	Px12-2	PxB3R-1	PxB1-1 / PxB12-1 / PxB3R-1
ACH580-PDR-022A-6	22.0	20.0	R3	Px1-4	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-027A-6	27.0	25.0	R3	Px1-4	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-032A-6	32.0	30.0	R3	Px1-4	Px12-3	PxB3R-2	PxB1-2 / PxB12-2 / PxB3R-2
ACH580-PDR-041A-6	41.0	40.0	R5	Px1-5	PxB12-3	PxB3R-3	PxB3R-3 <sup>2)</sup>
ACH580-PDR-052A-6	52.0	50.0	R5	Px1-5	PxB12-3	PxB3R-3	PxB3R-3 <sup>2)</sup>
ACH580-PDR-062A-6	62.0	60.0	R5	Px1-5	PxB12-3	PxB3R-3	PxB3R-3 <sup>2)</sup>
ACH580-PDR-077A-6	77.0	75.0	R5	Px1-5	PxB12-3	PxB3R-3	PxB3R-3 <sup>2)</sup>
ACH580-PDR-099A-6	99.0	100.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB3R-4 <sup>2)</sup>
ACH580-PDR-125A-6	125.0	125.0	R7	PxB1-3	PxB12-3	PxB3R-4	PxB3R-4 <sup>2)</sup>
ACH580-PDR-144A-6	144.0	150.0	R8	PxB1-3	PxB12-3	PxB3R-4	PxB3R-4 <sup>2)</sup>

<sup>1)</sup> See page 1-1

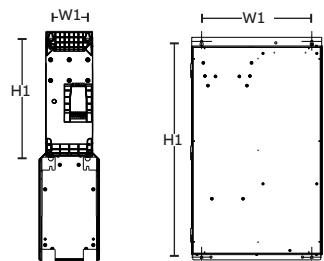
<sup>2)</sup>E213 for Type 3R only, contact factory for Type 1 or 12 for this rating.

## Dimensions

### ACH580-PCR and ACH580-PDR



#### Mounting Dimensions



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580-PCR and ACH580-PDR, packaged drive with disconnect means, UL (NEMA) Type 1</b>												
Px1-1	24.6	625	6.34	161	12.42	316	18.1	8.2	12.48	317	<b>3.86</b>	<b>98</b>
Px1-2	28.49	725	6.34	161	12.63	321	22	10	16.42	417	3.86	98
Px1-3	34.86	885	8.39	213	13.22	336	39	17.7	18.75	476	6.30	160
Px1-4	40.61	1032	8.39	213	14.26	362	60	27.2	24.49	622	6.30	160
Px1-5	56.82	1443	8.35	212	13.34	338	117	53	55.70	141	6.30	160
PxB1-1	33.16	842	17.63	448	13.9	353	77	35	31.89	810	12.60	320
PxB1-2	40.6	1030	20.71	526	15.3	388	122	55.3	39.30	998	15.70	400
PxB1-3	47.72	1212	28.24	717	19.04	484	359	163	46.26	1175	23.62	600
PxB1-4	61.9	1571	19.3	490	19.0	482	335	152	60.88	1546	10.00	254
PxB1-5	73.4	1864	34.75	883	20.4	518	443	201	61.38	1559	26.00	660
PxB1-6	78	1981	32	813	27.3	693	765	347	Free standing			
<b>ACH580-PCR and ACH580-PDR, packaged drive with disconnect means, UL (NEMA) Type 12</b>												
Px12-1	26.5	673	6.5	164	12.4	316	18.1	8.2	12.48	317	3.86	98
Px12-2	30.22	768	6.5	164	12.64	321	22	10	16.42	417	3.86	98
Px12-3	36.51	927	8.39	213	13.22	336	39	17.7	18.75	476	6.3	160
Px12-4	42.54	1081	8.39	213	14.26	362	60	27.2	24.49	622	6.3	160
PxB12-1	33.16	842	17.63	448	13.9	353	77	35	31.89	810	12.6	320
PxB12-2	40.6	1030	20.71	526	15.3	388	122	55.3	39.3	998	15.7	400
PxB12-5	48	1219	36	914	21	533	443	201	46.5	1181	34.5	876
PxB12-6	78	1981	32	813	27.3	693	765	347	Free standing			
<b>ACH580-PCR and ACH580-PDR, packaged drive with disconnect means, UL (NEMA) Type 3R</b>												
PxB3R-1	33.35	847	17.7	449	13.98	355	77	35	31.9	810	12.6	320
PxB3R-2	40.71	1034	20.71	526	15.4	392	176	79.8	39.3	998	15.7	400
PxB3R-3	39.4	1001	30	762	14.37	365	235	107	34.5	876	28.5	724
PxB3R-4	51	1295	36	914	20.37	517	443	201	46.5	1181	34.5	876
PxB3R-5	78	1981	44	1118	31.25	794	720	327	Free standing			

\* ABB recommends the use of the included foot mount kit. If wall mounting is required, see configurator for mounting dimensions.

## Ratings, types and voltages

ACH580-PCR, packaged drive with redundant drive with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA) Type 1		UL (NEMA) Type 12 (+B056)		UL (NEMA) Type 3R (+B058)	
	Current	Power		Dim Ref	Max. # of MMPs	Dim Ref	Max. # of MMPs	Dim Ref	Max. # of MMPs
	A	HP							
<b>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</b>									
ACH580-PCR-04A6-2+C170	4.6	1.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-06A6-2+C170	6.6	1.5	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-07A5-2+C170	7.5	2.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-10A6-2+C170	10.6	3.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-017A-2+C170	16.7	5.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-024A-2+C170	24.2	7.5	R2	Rx1-12	8	Rx12-12	4	RX3R-12	4
ACH580-PCR-031A-2+C170	30.8	10.0	R2	Rx1-12	8	Rx12-12	4	RX3R-12	4
ACH580-PCR-046A-2+C170	46.2	15.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PCR-059A-2+C170	59.4	20.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PCR-075A-2+C170	74.8	25.0	R4	Rx1-13	9	Rx12-13	10	RX3R-13	10
ACH580-PCR-088A-2+C170	88.0	30.0	R5	Rx1-14	18	Rx12-13	10	RX3R-13	10
ACH580-PCR-114A-2+C170	114.0	40.0	R5	Rx1-14	18	Rx12-13	10	RX3R-13	10
ACH580-PCR-143A-2+C170	143.0	50.0	R6	Rx1-14	18	Rx12-14	17	RX3R-14	17
ACH580-PCR-169A-2+C170	169.0	60.0	R7	Rx1-15	17	Rx12-15	17	RX3R-15	17
ACH580-PCR-211A-2+C170	211.0	75.0	R7	Rx1-15	17	Rx12-15	17	RX3R-15	17
ACH580-PCR-273A-2+C170	273.0	100.0	R8	Rx1-15	17	Rx12-15	17	RX3R-15	17
<b>U<sub>1</sub> = 380 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</b>									
ACH580-PCR-02A1-4+C170	2.1	1.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-03A0-4+C170	3.0	1.5	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-03A5-4+C170	3.5	2.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-04A8-4+C170	4.8	3.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-07A6-4+C170	7.6	5.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-012A-4+C170	12.0	7.5	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PCR-014A-4+C170	14.0	10.0	R2	Rx1-12	8	Rx12-12	4	RX3R-12	4
ACH580-PCR-023A-4+C170	23.0	15.0	R2	Rx1-12	8	Rx12-12	4	RX3R-12	4
ACH580-PCR-027A-4+C170	27.0	20.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PCR-034A-4+C170	34.0	25.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PCR-044A-4+C170	44.0	30.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PCR-052A-4+C170	52.0	40.0	R4	Rx1-13	9	Rx12-13	10	RX3R-13	10
ACH580-PCR-065A-4+C170	65.0	50.0	R4	Rx1-13	9	Rx12-13	10	RX3R-13	10
ACH580-PCR-077A-4+C170	77.0	60.0	R4	Rx1-13	9	Rx12-13	10	RX3R-13	10
ACH580-PCR-096A-4+C170	96.0	75.0	R5	Rx1-14	18	Rx12-13	10	RX3R-13	10
ACH580-PCR-124A-4+C170	124.0	100.0	R6	Rx1-14	18	Rx12-14	17	RX3R-14	17
ACH580-PCR-156A-4+C170	156.0	125.0	R7	Rx1-15	17	Rx12-15	17	RX3R-15	17
ACH580-PCR-180A-4+C170	180.0	150.0	R7	Rx1-15	17	Rx12-15	17	RX3R-15	17
ACH580-PCR-240A-4+C170	240.0	200.0	R8	Rx1-15	17	Rx12-15	17	RX3R-15	17

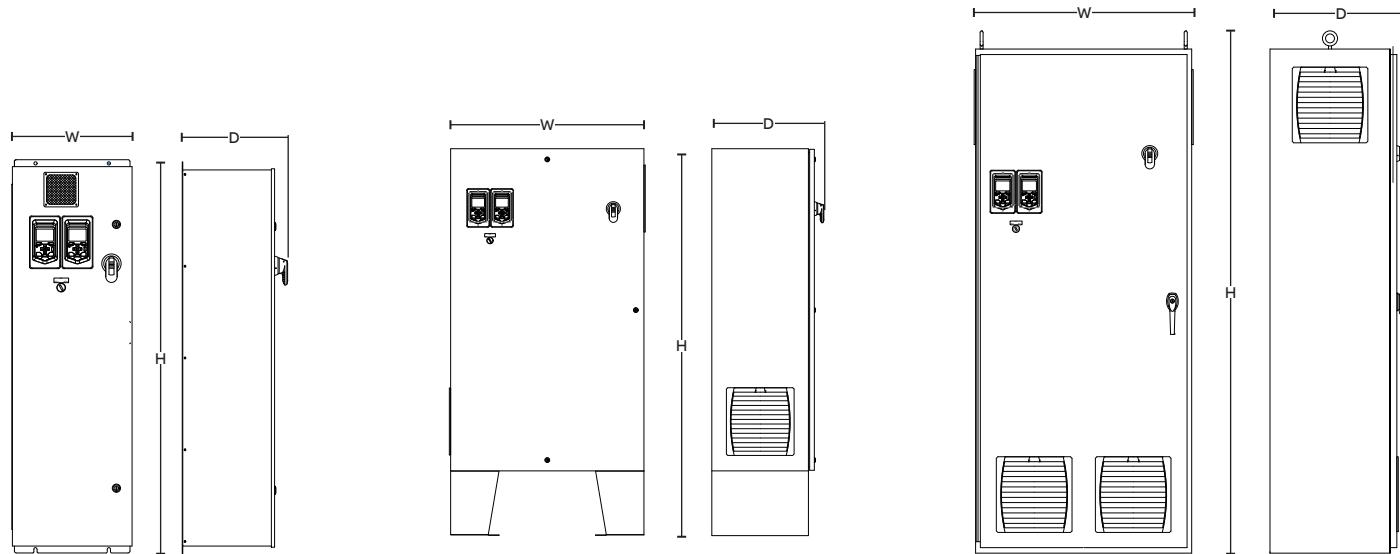
## Ratings, types and voltages

ACH580-PDR, packaged drive with redundant drive with non-fused disconnect switch

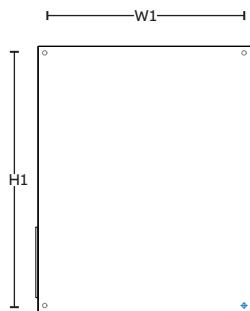
Type code	Output Ratings		Frame Size	UL (NEMA) Type 1		UL (NEMA) Type 12 (+B056)		UL (NEMA) Type 3R (+B058)	
	Current	Power		Dim Ref	Max. # of MMPs	Dim Ref	Max. # of MMPs	Dim Ref	Max. # of MMPs
	A	HP							
<b><math>U_1 = 200 \text{ to } 240V</math>. Power ratings are valid at nominal output voltage <math>U_N = 208/230 \text{ V } 60 \text{ Hz}</math></b>									
ACH580-PDR-04A6-2+C170	4.6	1.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-06A6-2+C170	6.6	1.5	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-07A5-2+C170	7.5	2.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-10A6-2+C170	10.6	3.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-017A-2+C170	16.7	5.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-024A-2+C170	24.2	7.5	R2	Rx1-12	8	Rx12-12	4	RX3R-12	4
ACH580-PDR-031A-2+C170	30.8	10.0	R2	Rx1-12	8	Rx12-12	4	RX3R-12	4
ACH580-PDR-046A-2+C170	46.2	15.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PDR-059A-2+C170	59.4	20.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PDR-075A-2+C170	74.8	25.0	R4	Rx1-13	9	Rx12-13	10	RX3R-13	10
ACH580-PDR-088A-2+C170	88.0	30.0	R5	Rx1-14	18	Rx12-13	10	RX3R-13	10
ACH580-PDR-114A-2+C170	114.0	40.0	R5	Rx1-14	18	Rx12-13	10	RX3R-13	10
ACH580-PDR-143A-2+C170	143.0	50.0	R6	Rx1-14	18	Rx12-14	17	RX3R-14	17
ACH580-PDR-169A-2+C170	169.0	60.0	R7	Rx1-15	17	Rx12-15	17	RX3R-15	17
ACH580-PDR-211A-2+C170	211.0	75.0	R7	Rx1-15	17	Rx12-15	17	RX3R-15	17
ACH580-PDR-273A-2+C170	273.0	100.0	R8	Rx1-15	17	Rx12-15	17	RX3R-15	17
<b><math>U_1 = 380 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>									
ACH580-PDR-02A1-4+C170	2.1	1.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-03A0-4+C170	3.0	1.5	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-03A5-4+C170	3.5	2.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-04A8-4+C170	4.8	3.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-07A6-4+C170	7.6	5.0	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-012A-4+C170	12.0	7.5	R1	Rx1-12	8	Rx12-11	4	RX3R-11	4
ACH580-PDR-014A-4+C170	14.0	10.0	R2	Rx1-12	8	Rx12-12	4	RX3R-12	4
ACH580-PDR-023A-4+C170	23.0	15.0	R2	Rx1-12	8	Rx12-12	4	RX3R-12	4
ACH580-PDR-027A-4+C170	27.0	20.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PDR-034A-4+C170	34.0	25.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PDR-044A-4+C170	44.0	30.0	R3	Rx1-13	9	Rx12-12	4	RX3R-12	4
ACH580-PDR-052A-4+C170	52.0	40.0	R4	Rx1-13	9	Rx12-13	10	RX3R-13	10
ACH580-PDR-065A-4+C170	65.0	50.0	R4	Rx1-13	9	Rx12-13	10	RX3R-13	10
ACH580-PDR-077A-4+C170	77.0	60.0	R4	Rx1-13	9	Rx12-13	10	RX3R-13	10
ACH580-PDR-096A-4+C170	96.0	75.0	R5	Rx1-14	18	Rx12-13	10	RX3R-13	10
ACH580-PDR-124A-4+C170	124.0	100.0	R6	Rx1-14	18	Rx12-14	17	RX3R-14	17
ACH580-PDR-156A-4+C170	156.0	125.0	R7	Rx1-15	17	Rx12-15	17	RX3R-15	17
ACH580-PDR-180A-4+C170	180.0	150.0	R7	Rx1-15	17	Rx12-15	17	RX3R-15	17
ACH580-PDR-240A-4+C170	240.0	200.0	R8	Rx1-15	17	Rx12-15	17	RX3R-15	17

## Dimensions

ACH580-PCR and ACH580-PDR with redundant drive



### Mounting Dimensions



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580-PCR and ACH580-PDR redundant drive with disconnect means, UL (NEMA) Type 1</b>												
Rx1-12	53.44	1357	16.3	414	14.36	365	125	57	52.4	1332	10	254
Rx1-13	61.87	1571	19.31	490	18.98	482	250	113	60.9	1546	10	254
Rx1-14	73.44	1865	34.75	883	20.4	518	375	170	Free standing		Free standing	
Rx1-15	84	2134	36	914	22.9	582	775	352				
<b>ACH580-PCR and ACH580-PDR redundant drive with disconnect means, UL (NEMA) Type 12</b>												
Rx12-11	30	762	24	610	15.08	383	125	57	28.5	724	22.5	572
Rx12-12	36	914	30	762	15.08	383	175	79	34.5	876	28.5	724
Rx12-13	48	1219	36	914	21	533	350	159	46.5	1181	34.5	876
Rx12-14	72	1829	36	914	20.9	531	375	170	Free standing		Free standing	
Rx12-15	84	2134	36	914	22.9	582	775	352				
<b>ACH580-PCR and ACH580-PDR redundant drive with disconnect means, UL (NEMA) Type 3R</b>												
RX3R-11	33	838	24	610	14.4	366	125	57	28.5	724	22.5	572
RX3R-12	39	991	30	762	14.4	365	185	84	34.5	876	28.5	724
RX3R-13	51	1295	36	914	20.4	518	350	159	46.5	1181	34.5	876
RX3R-14	72	1829	42	1067	25.1	638	530	241	58.6	1488	34.5	876
RX3R-15	84	2134	48	1219	27.3	692	775	352	N/A			
RX3R-16	84	2134	52	1321	27.3	692	825	375				

\* ABB recommends the use of the included foot mount kit. If wall mounting is required, see configurator for mounting dimensions.

## Ratings, types and voltages

ACH580-PCR, packaged drive with input harmonic filter with circuit breaker

Type code	Output Ratings <sup>1)</sup>		Frame Size	UL (NEMA) Type 1	UL (NEMA) Type 12 (+B056)	UL (NEMA) Type 3R (+B058)
	Current A	Power HP				
<b>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</b>						
ACH580-PCR-04A6-2+E211	4.6	1.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-06A6-2+E211	6.6	1.5	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-07A5-2+E211	7.5	2.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-10A6-2+E211	10.6	3.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-017A-2+E211	16.7	5.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-024A-2+E211	24.2	7.5	R2	CX1-22	CX12-23	CX3R-23
ACH580-PCR-031A-2+E211	30.8	10.0	R2	CX1-22	CX12-23	CX3R-23
ACH580-PCR-046A-2+E211	46.2	15.0	R3	CX1-23	CX12-23	CX3R-23
ACH580-PCR-059A-2+E211	59.4	20.0	R3	CX1-23	CX12-23	CX3R-23
ACH580-PCR-075A-2+E211	74.8	25.0	R4	CX1-23	CX12-24	CX3R-24
ACH580-PCR-088A-2+E211	88.0	30.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-PCR-114A-2+E211	114.0	40.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-PCR-143A-2+E211	143.0	50.0	R6	CX1-24	CX12-25	CX3R-25
ACH580-PCR-169A-2+E211	169.0	60.0	R7	CX1-24	CX12-27	CX3R-27
ACH580-PCR-211A-2+E211	211.0	75.0	R7	CX1-27	CX12-27	CX3R-27
ACH580-PCR-273A-2+E211	273.0	100.0	R8	CX1-27	CX12-27	CX3R-27
<b>U<sub>1</sub> = 380 to 480V. Power ratings are valid at nominal output voltage UN = 460 V 60 Hz</b>						
ACH580-PCR-02A1-4+E211	2.1	1.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-03A0-4+E211	3.0	1.5	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-03A5-4+E211	3.5	2.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-04A8-4+E211	4.8	3.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-07A6-4+E211	7.6	5.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-012A-4+E211	12.0	7.5	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-014A-4+E211	14.0	10.0	R2	CX1-22	CX12-23	CX3R-23
ACH580-PCR-023A-4+E211	23.0	15.0	R2	CX1-22	CX12-23	CX3R-23
ACH580-PCR-027A-4+E211	27.0	20.0	R3	CX1-23	CX12-23	CX3R-23
ACH580-PCR-034A-4+E211	34.0	25.0	R3	CX1-23	CX12-23	CX3R-23
ACH580-PCR-044A-4+E211	44.0	30.0	R3	CX1-23	CX12-23	CX3R-23
ACH580-PCR-052A-4+E211	52.0	40.0	R4	CX1-23	CX12-24	CX3R-24
ACH580-PCR-065A-4+E211	65.0	50.0	R4	CX1-23	CX12-24	CX3R-24
ACH580-PCR-077A-4+E211	77.0	60.0	R4	CX1-23	CX12-24	CX3R-24
ACH580-PCR-096A-4+E211	96.0	75.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-PCR-124A-4+E211	124.0	100.0	R6	CX1-24	CX12-24	CX3R-24
ACH580-PCR-156A-4+E211	156.0	125.0	R7	CX1-24	CX12-25	CX3R-25
ACH580-PCR-180A-4+E211	180.0	150.0	R7	CX1-24	CX12-25	CX3R-27
ACH580-PCR-240A-4+E211	240.0	200.0	R8	CX1-27	CX12-27	CX3R-27
ACH580-PCR-302A-4+E211	302.0	250.0	R9	CX1-30	CX12-30	CX3R-30
ACH580-PCR-361A-4+E211	361.0	300.0	R9	CX1-30	CX12-30	CX3R-30
ACH580-PCR-414A-4+E211	414.0	350.0	R9	CX1-30	CX12-30	CX3R-30

1) See notes and definitions on page 1

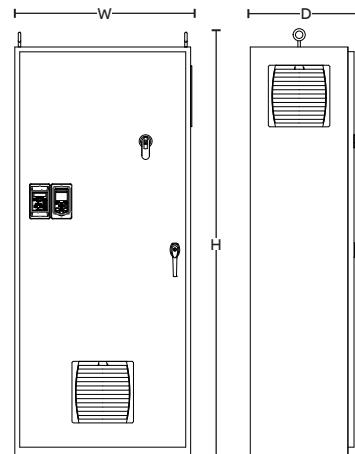
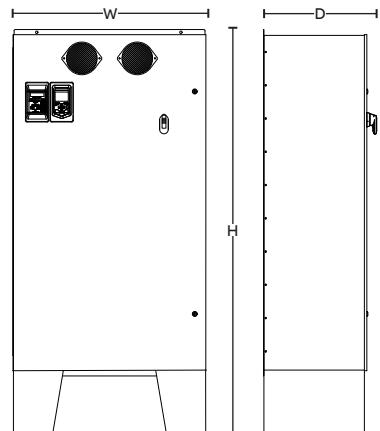
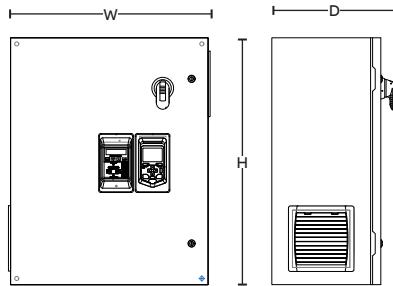
## Ratings, types and voltages

ACH580-PDR, packaged drive with input harmonic filter with non-fused disconnect switch

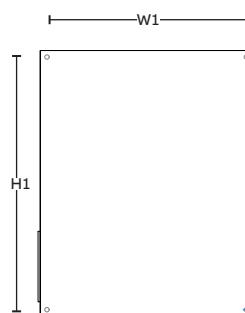
Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)
<b>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</b>						
ACH580-PDR-04A6-2+E211	4.6	1.0	R1	Cx1-22	Cx12-22	CX3R-23
ACH580-PDR-06A6-2+E211	6.6	1.5	R1	Cx1-22	Cx12-22	CX3R-23
ACH580-PDR-07A5-2+E211	7.5	2.0	R1	Cx1-22	Cx12-22	CX3R-23
ACH580-PDR-10A6-2+E211	10.6	3.0	R1	Cx1-22	Cx12-22	CX3R-23
ACH580-PDR-017A-2+E211	16.7	5.0	R1	Cx1-22	Cx12-22	CX3R-23
ACH580-PDR-024A-2+E211	24.2	7.5	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-PDR-031A-2+E211	30.8	10.0	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-PDR-046A-2+E211	46.2	15.0	R3	Cx1-23	Cx12-23	CX3R-24
ACH580-PDR-059A-2+E211	59.4	20.0	R3	Cx1-23	Cx12-23	CX3R-24
ACH580-PDR-075A-2+E211	74.8	25.0	R4	Cx1-23	Cx12-24	CX3R-24
ACH580-PDR-088A-2+E211	88.0	30.0	R5	Cx1-24	Cx12-24	CX3R-24
ACH580-PDR-114A-2+E211	114.0	40.0	R5	Cx1-24	Cx12-24	CX3R-25
ACH580-PDR-143A-2+E211	143.0	50.0	R6	Cx1-24	Cx12-25	CX3R-25
ACH580-PDR-169A-2+E211	169.0	60.0	R7	Cx1-24	Cx12-27	CX3R-27
ACH580-PDR-211A-2+E211	211.0	75.0	R7	Cx1-27	Cx12-27	CX3R-27
ACH580-PDR-273A-2+E211	273.0	100.0	R8	Cx1-27	Cx12-27	CX3R-29
<b>U<sub>1</sub> = 380 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</b>						
ACH580-PDR-02A1-4+E211	2.1	1.0	R1	Cx1-22	Cx12-22	CX3R-22
ACH580-PDR-03A0-4+E211	3.0	1.5	R1	Cx1-22	Cx12-22	CX3R-22
ACH580-PDR-03A5-4+E211	3.5	2.0	R1	Cx1-22	Cx12-22	CX3R-22
ACH580-PDR-04A8-4+E211	4.8	3.0	R1	Cx1-22	Cx12-22	CX3R-22
ACH580-PDR-07A6-4+E211	7.6	5.0	R1	Cx1-22	Cx12-22	CX3R-22
ACH580-PDR-012A-4+E211	12.0	7.5	R1	Cx1-22	Cx12-22	CX3R-22
ACH580-PDR-014A-4+E211	14.0	10.0	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-PDR-023A-4+E211	23.0	15.0	R2	Cx1-22	Cx12-23	CX3R-23
ACH580-PDR-027A-4+E211	27.0	20.0	R3	Cx1-23	Cx12-23	CX3R-23
ACH580-PDR-034A-4+E211	34.0	25.0	R3	Cx1-23	Cx12-23	CX3R-23
ACH580-PDR-044A-4+E211	44.0	30.0	R3	Cx1-23	Cx12-23	CX3R-23
ACH580-PDR-052A-4+E211	52.0	40.0	R4	Cx1-23	Cx12-24	CX3R-24
ACH580-PDR-065A-4+E211	65.0	50.0	R4	Cx1-23	Cx12-24	CX3R-24
ACH580-PDR-077A-4+E211	77.0	60.0	R4	Cx1-23	Cx12-24	CX3R-24
ACH580-PDR-096A-4+E211	96.0	75.0	R5	Cx1-24	Cx12-24	CX3R-24
ACH580-PDR-124A-4+E211	124.0	100.0	R6	Cx1-24	Cx12-24	CX3R-24
ACH580-PDR-156A-4+E211	156.0	125.0	R7	Cx1-25	Cx12-25	CX3R-25
ACH580-PDR-180A-4+E211	180.0	150.0	R7	Cx1-25	Cx12-25	CX3R-27
ACH580-PDR-240A-4+E211	240.0	200.0	R8	Cx1-27	Cx12-27	CX3R-27
ACH580-PDR-302A-4+E211	302.0	250.0	R9	Cx1-30	Cx12-30	CX3R-30
ACH580-PDR-361A-4+E211	361.0	300.0	R9	Cx1-30	Cx12-30	CX3R-30
ACH580-PDR-414A-4+E211	414.0	350.0	R9	Cx1-30	Cx12-30	CX3R-30

## Dimensions

ACH580-PCR and ACH580-PDR with input harmonic filter



**Mounting Dimensions**



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions					
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm		
<b>ACH580-PCR and ACH580-PDR, drive with input disconnect and input harmonic filter, UL (NEMA) Type 1</b>														
Cx1-22	53.44	1357	16.3	414	14.36	365	135	61.2	52.44	1332	10	254		
Cx1-23	61.87	1571	19.31	490	18.98	482	200	90.7	60.88	1546	10	254		
Cx1-24	73.44	1865	34.75	883	20.4	518	400	181.4	Free standing		Free standing			
Cx1-25	72	1829	36	914	20.9	531	570	258.6						
Cx1-27	84	2134	36	914	23.3	592	1100	499						
Cx1-30	84	2134	48	1219	27.3	693	1300	590						
<b>ACH580-PCR and ACH580-PDR, drive with input disconnect and input harmonic filter, UL (NEMA) Type 12</b>														
Cx12-22	30	762	24	610	15.08	383	110	49.9	28.5	724	22.5	572		
Cx12-23	36	914	30	762	15	381	170	77.1	34.5	876	28.5	724		
Cx12-24	48	1219	36	914	21	533	380	172.4	Free standing		Free standing			
Cx12-25	72	1829	36	914	20.9	531	570	258.6						
Cx12-27	84	2134	36	914	23.3	592	750	340						
Cx12-30	84	2134	48	1219	27.3	693	1400	635						
<b>ACH580-PCR and ACH580-PDR, drive with input disconnect and input harmonic filter, UL (NEMA) Type 3R</b>														
CX3R-22	33	84	24	61	14.4	37	130	59	28.5	72	22.5	57		
CX3R-23	39.4	100	30	76	15.9	40	190	86	34.5	88	28.5	72		
CX3R-24	51	130	36	91	20.4	52	225	102	46.5	118	34.5	88		
CX3R-25	72	183	42	107	25.1	64	425	193	58.5	149	34.5	88		
CX3R-26	78	198	44	112	31.3	80	600	273	N/A		N/A			
CX3R-27	84	213	48	122	27.3	69	750	341						
CX3R-28	84	213	52	132	27.3	69	825	375						
CX3R-29	84	213	60	152	27.3	69	1050	477						
CX3R-30	84	213	68	173	35.3	90	1350	614						
CX3R-31	84	213	72	183	27.3	69	1425	648						
CX3R-32	84	213	80	203	31.3	80	1500	682						

\* ABB recommends the use of the included foot mount kit. If wall mounting is required, see configurator for mounting dimensions.

## Ratings, types and voltages

ACH580-PCR, packaged drive with special enclosure with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA) Type 4 (+B057)	UL (NEMA) Type 4X* (+B063 +C165)	UL (NEMA) Type 3RXSS* (+B058 +C165)
	Current A	Power HP				
<b>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</b>						
ACH580-PCR-04A6-2	4.6	1.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-06A6-2	6.6	1.5	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-07A5-2	7.5	2.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-10A6-2	10.6	3.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-017A-2	16.7	5.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PCR-024A-2	24.2	7.5	R2	CX1-22	CX12-23	CX3R-23
ACH580-PCR-031A-2	30.8	10.0	R2	CX1-22	CX12-23	CX3R-23
ACH580-PCR-046A-2	46.2	15.0	R3	CX1-23	CX12-23	CX3R-23
ACH580-PCR-059A-2	59.4	20.0	R3	CX1-23	CX12-23	CX3R-23
ACH580-PCR-075A-2	74.8	25.0	R4	CX1-23	CX12-24	CX3R-24
ACH580-PCR-088A-2	88.0	30.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-PCR-114A-2	114.0	40.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-PCR-143A-2	143.0	50.0	R6	CX1-24	CX12-25	CX3R-25
ACH580-PCR-169A-2	169.0	60.0	R7	CX1-24	CX12-27	CX3R-27
ACH580-PCR-211A-2	211.0	75.0	R7	CX1-27	CX12-27	CX3R-27
ACH580-PCR-273A-2	273.0	100.0	R8	CX1-27	CX12-27	CX3R-27
<b>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</b>						
ACH580-PCR-02A1-4	2.1	1.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PCR-03A0-4	3.0	1.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PCR-03A5-4	3.5	2.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PCR-04A8-4	4.8	3.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PCR-07A6-4	7.6	5.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PCR-012A-4	12.0	7.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PCR-014A-4	14.0	10.0	R2	CX4-10	CX4X-10	CX3RX-11
ACH580-PCR-023A-4	23.0	15.0	R2	CX4-11	CX4X-11	CX3RX-11
ACH580-PCR-027A-4	27.0	20.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-PCR-034A-4	34.0	25.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-PCR-044A-4	44.0	30.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-PCR-052A-4	52.0	40.0	R4	CX4-13	CX4X-13	CX3RX-13
ACH580-PCR-065A-4	65.0	50.0	R4	CX4-13	CX4X-13	CX3RX-13
ACH580-PCR-077A-4	77.0	60.0	R4	CX4-14	CX4X-14	CX3RX-13
ACH580-PCR-096A-4	96.0	75.0	R5	CX4-14	CX4X-14	CX3RX-13
ACH580-PCR-124A-4	124.0	100.0	R6	CX4-16	CX4X-16	CX3RX-14
ACH580-PCR-156A-4	156.0	125.0	R7	CX4-17	CX4X-17	CX3RX-14
ACH580-PCR-180A-4	180.0	150.0	R7	CX4-19	CX4X-19	CX3RX-14
ACH580-PCR-240A-4	240.0	200.0	R8	CX4-20	CX4X-20	CX3RX-15

\* The ABB design uses 304 stainless steel enclosures. For Drive packages in harsh environments such as coastal areas, ABB recommends 316 stainless steel as a custom option.

## Ratings, types and voltages

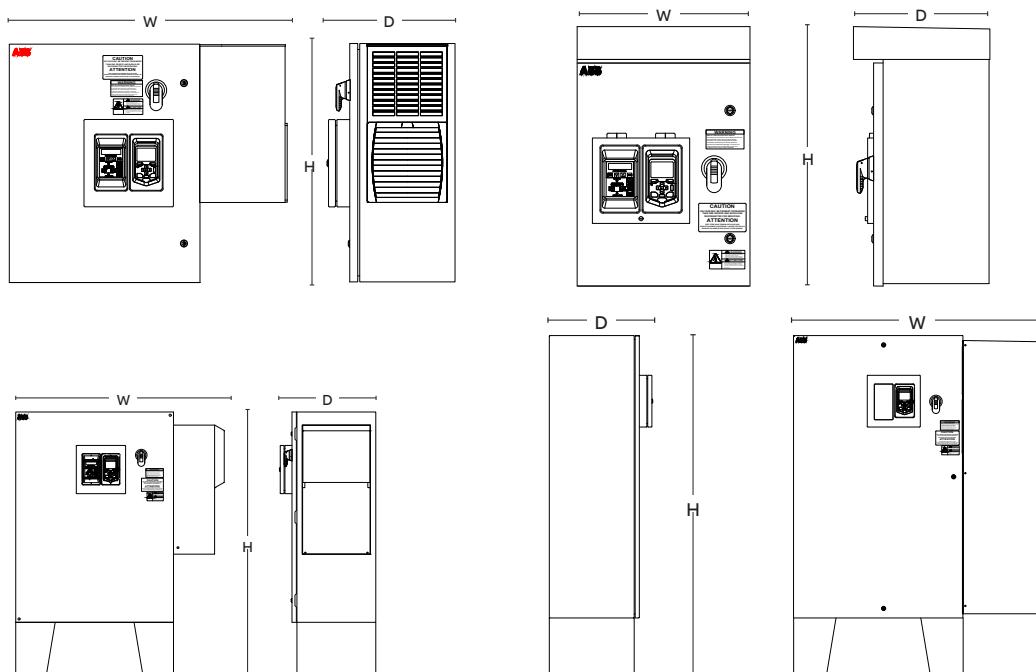
ACH580-PDR, packaged drive with special enclosure with non-fused disconnect switch

Type code	Output Ratings		Frame Size	UL (NEMA) Type 4 (+B057)	UL (NEMA) Type 4x* (+B063 +C165)	UL (NEMA) Type 3RXSS* (+B058 +C165)
	Current A	Power HP		Dim Ref	Dim Ref	Dim Ref
<b><math>U_1 = 200 \text{ to } 240\text{V}</math>. Power ratings are valid at nominal output voltage <math>U_N = 208/230\text{ V } 60\text{ Hz}</math></b>						
ACH580-PDR-04A6-2	4.6	1.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PDR-06A6-2	6.6	1.5	R1	CX1-22	CX12-22	CX3R-22
ACH580-PDR-07A5-2	7.5	2.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PDR-10A6-2	10.6	3.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PDR-017A-2	16.7	5.0	R1	CX1-22	CX12-22	CX3R-22
ACH580-PDR-024A-2	24.2	7.5	R2	CX1-22	CX12-23	CX3R-23
ACH580-PDR-031A-2	30.8	10.0	R2	CX1-22	CX12-23	CX3R-23
ACH580-PDR-046A-2	46.2	15.0	R3	CX1-23	CX12-23	CX3R-23
ACH580-PDR-059A-2	59.4	20.0	R3	CX1-23	CX12-23	CX3R-23
ACH580-PDR-075A-2	74.8	25.0	R4	CX1-23	CX12-24	CX3R-24
ACH580-PDR-088A-2	88.0	30.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-PDR-114A-2	114.0	40.0	R5	CX1-24	CX12-24	CX3R-24
ACH580-PDR-143A-2	143.0	50.0	R6	CX1-24	CX12-25	CX3R-25
ACH580-PDR-169A-2	169.0	60.0	R7	CX1-24	CX12-27	CX3R-27
ACH580-PDR-211A-2	211.0	75.0	R7	CX1-27	CX12-27	CX3R-27
ACH580-PDR-273A-2	273.0	100.0	R8	CX1-27	CX12-27	CX3R-27
<b><math>U_1 = 440 \text{ to } 480\text{V}</math>. Power ratings are valid at nominal output voltage <math>U_N = 460\text{ V } 60\text{ Hz}</math></b>						
ACH580-PDR-02A1-4	2.1	1.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PDR-03A0-4	3.0	1.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PDR-03A5-4	3.5	2.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PDR-04A8-4	4.8	3.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PDR-07A6-4	7.6	5.0	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PDR-012A-4	12.0	7.5	R1	CX4-10	CX4X-10	CX3RX-11
ACH580-PDR-014A-4	14.0	10.0	R2	CX4-10	CX4X-10	CX3RX-11
ACH580-PDR-023A-4	23.0	15.0	R2	CX4-11	CX4X-11	CX3RX-11
ACH580-PDR-027A-4	27.0	20.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-PDR-034A-4	34.0	25.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-PDR-044A-4	44.0	30.0	R3	CX4-11	CX4X-11	CX3RX-12
ACH580-PDR-052A-4	52.0	40.0	R4	CX4-13	CX4X-13	CX3RX-13
ACH580-PDR-065A-4	65.0	50.0	R4	CX4-13	CX4X-13	CX3RX-13
ACH580-PDR-077A-4	77.0	60.0	R4	CX4-14	CX4X-14	CX3RX-13
ACH580-PDR-096A-4	96.0	75.0	R5	CX4-14	CX4X-14	CX3RX-13
ACH580-PDR-124A-4	124.0	100.0	R6	CX4-16	CX4X-16	CX3RX-14
ACH580-PDR-156A-4	156.0	125.0	R7	CX4-17	CX4X-17	CX3RX-14
ACH580-PDR-180A-4	180.0	150.0	R7	CX4-19	CX4X-19	CX3RX-14
ACH580-PDR-240A-4	240.0	200.0	R8	CX4-20	CX4X-20	CX3RX-15

\* The ABB design uses 304 stainless steel enclosures. For Drive packages in harsh environments such as coastal areas, ABB recommends 316 stainless steel as a custom option.

## Dimensions

### ACH580-PCR and ACH580-PDR with special enclosure



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580-PCR and ACH580-PDR, drive with Special Enclosures</b>												
CX4-10	24	610	25.5	648	15.9	404	120	55	22.5	572	16.5	419
CX4-11	30	762	34.8	884	15.9	404	185	84	28.5	724	22.5	572
CX4-12	36	914	40.8	1036	17.8	452	285	130	34.5	876	28.5	724
CX4-13	36	914	41.6	1057	21.8	554	340	155	34.5	876	28.5	724
CX4-14	36	914	44.6	1133	17.8	452	340	155	34.5	876	28.5	724
CX4-15	60	1524	47.6	1209	21.8	554	415	189	46.5	1181	34.5	876
CX4-16	60	1524	50.6	1285	21.8	554	450	205	46.5	1181	34.5	876
CX4-17	60	1524	48.8	1240	21.8	554	500	227	46.5	1181	34.5	876
CX4-18	72	1829	50.6	1285	21.8	554	575	261	58.5	1486	34.5	876
CX4-19	72	1829	50.4	1280	21.8	554	625	284	58.5	1486	34.5	876
CX4-20	72	1829	52.1	1323	21.8	554	660	300	58.5	1486	34.5	876
<b>ACH580-PCR and ACH580-PDR, drive with Special Enclosures Type 4x</b>												
CX4X-10	24	610	25.5	648	15.9	404	120	55	22.5	572	16.5	419
CX4X-11	30	762	34.8	884	15.9	404	185	84	28.5	724	22.5	572
CX4X-12	36	914	40.8	1036	17.8	452	285	130	34.5	876	28.5	724
CX4X-13	36	914	41.6	1057	21.8	554	340	155	34.5	876	28.5	724
CX4X-14	36	914	44.6	1133	17.8	452	340	155	34.5	876	28.5	724
CX4X-15	60	1524	47.6	1209	21.8	554	415	189	46.5	1181	34.5	876
CX4X-16	60	1524	50.6	1285	21.8	554	450	205	46.5	1181	34.5	876
CX4X-17	60	1524	48.8	1240	21.8	554	500	227	46.5	1181	34.5	876
CX4X-18	72	1829	50.6	1285	21.8	554	575	261	58.5	1486	34.5	876
CX4X-19	72	1829	50.4	1280	21.8	554	625	284	58.5	1486	34.5	876
CX4X-20	72	1829	52.1	1323	21.8	554	660	300	58.5	1486	34.5	876
<b>ACH580-PCR and ACH580-PDR, drive with Special Enclosures Type 3Rx</b>												
CX3RX-11	27.3	693	18.2	462	14.4	366	80	36	22.5	572	16.5	419
CX3RX-12	33	838	24	610	14.4	366	125	57	28.5	724	22.5	572
CX3RX-13	39.4	1001	30	762	15.9	404	190	86	34.5	876	28.5	724
CX3RX-14	51	1295	36	914	20.4	518	400	182	46.5	1181	34.5	876
CX3RX-15	72	1829	42	1067	25.1	638	485	220	58.5	1486	34.5	876

## Ratings, types and voltages

ACH580-PCR, packaged drive with manual motor protectors with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA) Type 1		UL (NEMA) Type 12 (+B056)		UL (NEMA) Type 3R (+B058)	
	Current A	Power HP		Dim Ref	Max # of MMPs	Dim Ref	Max # of MMPs	Dim Ref	Max # of MMPs
<b><i>U<sub>1</sub> = 200 to 240V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 208/230 V 60 Hz</i></b>									
ACH580-PCR-04A6-2+xG405+M6xx	4.6	1.0	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4
ACH580-PCR-06A6-2+xG405+M6xx	6.6	1.5	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4
ACH580-PCR-07A5-2+xG405+M6xx	7.5	2.0	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4
ACH580-PCR-10A6-2+xG405+M6xx	10.6	3.0	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4
ACH580-PCR-017A-2+xG405+M6xx	16.7	5.0	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4
ACH580-PCR-024A-2+xG405+M6xx	24.2	7.5	R2	Cx1-21	9	Cx12-21	3	CX3R-21	4
ACH580-PCR-031A-2+xG405+M6xx	30.8	10.0	R2	Cx1-21	9	Cx12-22	10	CX3R-21	10
ACH580-PCR-046A-2+xG405+M6xx	46.2	15.0	R3	Cx1-22	12	Cx12-22	10	CX3R-22	10
ACH580-PCR-059A-2+xG405+M6xx	59.4	20.0	R3	Cx1-22	12	Cx12-22	10	CX3R-22	10
ACH580-PCR-075A-2+xG405+M6xx	74.8	25.0	R4	Cx1-22	12	Cx12-23	9	CX3R-23	9
ACH580-PCR-088A-2+xG405+M6xx	88.0	30.0	R5	Cx1-23	12	Cx12-24	16	CX3R-23	16
ACH580-PCR-114A-2+xG405+M6xx	114.0	40.0	R5	Cx1-23	12	Cx12-24	16	CX3R-23	16
ACH580-PCR-143A-2+xG405+M6xx	143.0	50.0	R6	Cx1-23	9	Cx12-24	16	CX3R-24	16
ACH580-PCR-169A-2+xG405+M6xx	169.0	60.0	R7	Cx1-23	9	Cx12-24	16	CX3R-24	16
ACH580-PCR-211A-2+xG405+M6xx	211.0	75.0	R7	Cx1-24	15	Cx12-24	12	CX3R-24	12
ACH580-PCR-273A-2+xG405+M6xx	273.0	100.0	R8	Cx1-24	15	Cx12-24	12	CX3R-24	12
<b><i>U<sub>1</sub> = 380 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</i></b>									
ACH580-PCR-02A1-4+xG405+M6xx	2.1	1.0	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4
ACH580-PCR-03A0-4+xG405+M6xx	3.0	1.5	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4
ACH580-PCR-03A5-4+xG405+M6xx	3.5	2.0	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4
ACH580-PCR-04A8-4+xG405+M6xx	4.8	3.0	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4
ACH580-PCR-07A6-4+xG405+M6xx	7.6	5.0	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4
ACH580-PCR-012A-4+xG405+M6xx	12.0	7.5	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4
ACH580-PCR-014A-4+xG405+M6xx	14.0	10.0	R2	Cx1-21	9	Cx12-21	3	CX3R-22	4
ACH580-PCR-023A-4+xG405+M6xx	23.0	15.0	R2	Cx1-21	9	Cx12-21	3	CX3R-22	4
ACH580-PCR-027A-4+xG405+M6xx	27.0	20.0	R3	Cx1-22	12	Cx12-22	10	CX3R-23	10
ACH580-PCR-034A-4+xG405+M6xx	34.0	25.0	R3	Cx1-22	12	Cx12-22	10	CX3R-23	10
ACH580-PCR-044A-4+xG405+M6xx	44.0	30.0	R3	Cx1-22	12	Cx12-22	10	CX3R-23	10
ACH580-PCR-052A-4+xG405+M6xx	52.0	40.0	R4	Cx1-22	12	Cx12-23	9	CX3R-23	9
ACH580-PCR-065A-4+xG405+M6xx	65.0	50.0	R4	Cx1-22	12	Cx12-23	9	CX3R-23	9
ACH580-PCR-077A-4+xG405+M6xx	77.0	60.0	R4	Cx1-22	12	Cx12-23	9	CX3R-23	9
ACH580-PCR-096A-4+xG405+M6xx	96.0	75.0	R5	Cx1-23	12	Cx12-24	16	CX3R-24	16
ACH580-PCR-124A-4+xG405+M6xx	124.0	100.0	R6	Cx1-23	9	Cx12-24	16	CX3R-24	16
ACH580-PCR-156A-4+xG405+M6xx	156.0	125.0	R7	Cx1-23	9	Cx12-24	16	CX3R-24	16
ACH580-PCR-180A-4+xG405+M6xx	180.0	150.0	R7	Cx1-23	9	Cx12-24	16	CX3R-24	16
ACH580-PCR-240A-4+xG405+M6xx	240.0	200.0	R8	Cx1-24	15	Cx12-24	12	CX3R-25	12

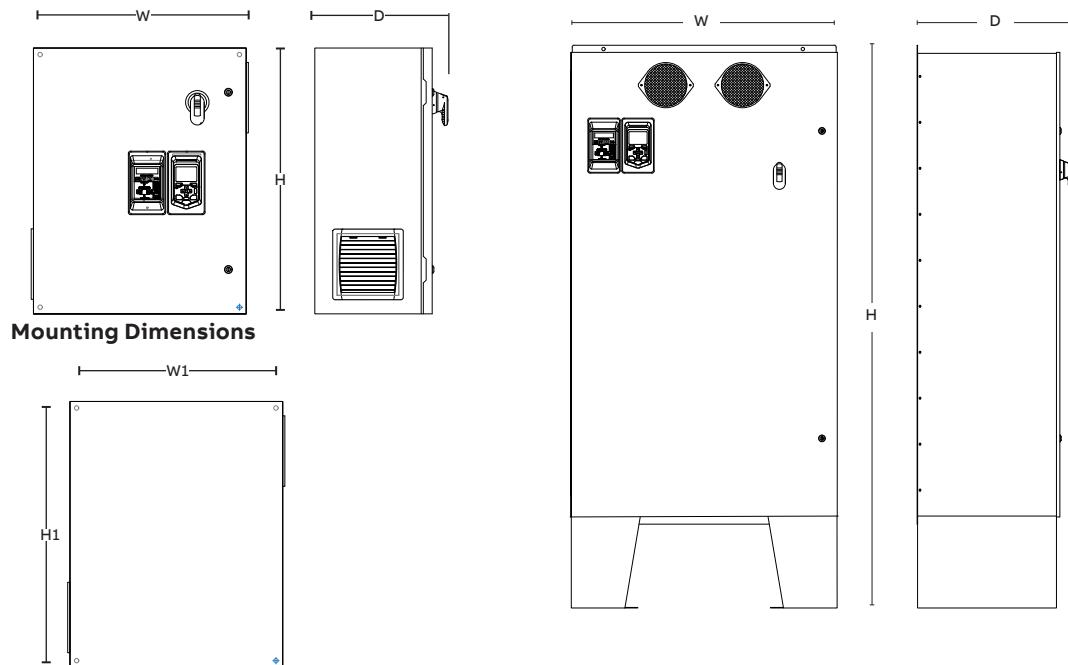
## Ratings, types and voltages

ACH580-PDR, packaged drive with manual motor protectors with non-fused disconnect switch

Type code	Output Ratings		Frame Size	UL (NEMA) Type 1		UL (NEMA) Type 12 (+B056)		UL (NEMA) Type 3R (+B058)		
	Current A	Power HP		Dim Ref	Max # of MMPs	Dim Ref	Max # of MMPs	Dim Ref	Max # of MMPs	
<b><math>U_1 = 200 \text{ to } 240V</math>. Power ratings are valid at nominal output voltage <math>U_N = 208/230 \text{ V } 60 \text{ Hz}</math></b>										
ACH580-PDR-04A6-2+xG405+M6xx	4.6	1.0	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4	
ACH580-PDR-06A6-2+xG405+M6xx	6.6	1.5	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4	
ACH580-PDR-07A5-2+xG405+M6xx	7.5	2.0	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4	
ACH580-PDR-10A6-2+xG405+M6xx	10.6	3.0	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4	
ACH580-PDR-017A-2+xG405+M6xx	16.7	5.0	R1	Cx1-21	9	Cx12-21	3	CX3R-21	4	
ACH580-PDR-024A-2+xG405+M6xx	24.2	7.5	R2	Cx1-21	9	Cx12-21	3	CX3R-21	4	
ACH580-PDR-031A-2+xG405+M6xx	30.8	10.0	R2	Cx1-21	9	Cx12-22	10	CX3R-21	10	
ACH580-PDR-046A-2+xG405+M6xx	46.2	15.0	R3	Cx1-22	12	Cx12-22	10	CX3R-22	10	
ACH580-PDR-059A-2+xG405+M6xx	59.4	20.0	R3	Cx1-22	12	Cx12-22	10	CX3R-22	10	
ACH580-PDR-075A-2+xG405+M6xx	74.8	25.0	R4	Cx1-22	12	Cx12-23	9	CX3R-23	9	
ACH580-PDR-088A-2+xG405+M6xx	88.0	30.0	R5	Cx1-23	12	Cx12-24	16	CX3R-23	16	
ACH580-PDR-114A-2+xG405+M6xx	114.0	40.0	R5	Cx1-23	12	Cx12-24	16	CX3R-23	16	
ACH580-PDR-143A-2+xG405+M6xx	143.0	50.0	R6	Cx1-23	9	Cx12-24	16	CX3R-24	16	
ACH580-PDR-169A-2+xG405+M6xx	169.0	60.0	R7	Cx1-23	9	Cx12-24	16	CX3R-24	16	
ACH580-PDR-211A-2+xG405+M6xx	211.0	75.0	R7	Cx1-24	15	Cx12-24	12	CX3R-24	12	
ACH580-PDR-273A-2+xG405+M6xx	273.0	100.0	R8	Cx1-24	15	Cx12-24	12	CX3R-24	12	
<b><math>U_1 = 380 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>										
ACH580-PDR-02A1-4+xG405+M6xx	2.1	1.0	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4	
ACH580-PDR-03A0-4+xG405+M6xx	3.0	1.5	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4	
ACH580-PDR-03A5-4+xG405+M6xx	3.5	2.0	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4	
ACH580-PDR-04A8-4+xG405+M6xx	4.8	3.0	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4	
ACH580-PDR-07A6-4+xG405+M6xx	7.6	5.0	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4	
ACH580-PDR-012A-4+xG405+M6xx	12.0	7.5	R1	Cx1-21	9	Cx12-21	3	CX3R-22	4	
ACH580-PDR-014A-4+xG405+M6xx	14.0	10.0	R2	Cx1-21	9	Cx12-21	3	CX3R-22	4	
ACH580-PDR-023A-4+xG405+M6xx	23.0	15.0	R2	Cx1-21	9	Cx12-21	3	CX3R-22	4	
ACH580-PDR-027A-4+xG405+M6xx	27.0	20.0	R3	Cx1-22	12	Cx12-22	10	CX3R-23	10	
ACH580-PDR-034A-4+xG405+M6xx	34.0	25.0	R3	Cx1-22	12	Cx12-22	10	CX3R-23	10	
ACH580-PDR-044A-4+xG405+M6xx	44.0	30.0	R3	Cx1-22	12	Cx12-22	10	CX3R-23	10	
ACH580-PDR-052A-4+xG405+M6xx	52.0	40.0	R4	Cx1-22	12	Cx12-23	9	CX3R-23	9	
ACH580-PDR-065A-4+xG405+M6xx	65.0	50.0	R4	Cx1-22	12	Cx12-23	9	CX3R-23	9	
ACH580-PDR-077A-4+xG405+M6xx	77.0	60.0	R4	Cx1-22	12	Cx12-23	9	CX3R-23	9	
ACH580-PDR-096A-4+xG405+M6xx	96.0	75.0	R5	Cx1-23	12	Cx12-24	16	CX3R-24	16	
ACH580-PDR-124A-4+xG405+M6xx	124.0	100.0	R6	Cx1-23	9	Cx12-24	16	CX3R-24	16	
ACH580-PDR-156A-4+xG405+M6xx	156.0	125.0	R7	Cx1-23	9	Cx12-24	16	CX3R-24	16	
ACH580-PDR-180A-4+xG405+M6xx	180.0	150.0	R7	Cx1-23	9	Cx12-24	16	CX3R-24	16	
ACH580-PDR-240A-4+xG405+M6xx	240.0	200.0	R8	Cx1-24	15	Cx12-24	12	CX3R-25	12	

## Dimensions

ACH580-PCR and ACH580-PDR with manual motor protectors



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580-PCR and ACH580-PDR, drive with input disconnect and manual motor protectors, UL (NEMA) Type 1</b>												
Cx1-21	36.5	927	13.7	348	13.32	338	75	34	35.5	902	8	203
Cx1-22	53.44	1357	16.3	414	14.36	365	135	61.2	52.44	1332	10	254
Cx1-23	61.87	1571	19.31	490	18.98	482	200	90.7	60.88	1546	10	254
Cx1-24	73.44	1865	34.75	883	20.4	518	400	181.4	Free standing		Free standing	
<b>ACH580-PCR and ACH580-PDR, drive with input disconnect and manual motor protectors, UL (NEMA) Type 12</b>												
Cx12-21	24	610	18	457	15	381	70	31.8	22.5	572	16.5	419
Cx12-22	30	762	24	610	15.08	383	110	49.9	28.5	724	22.5	572
Cx12-23	36	914	30	762	15	381	170	77.1	34.5	876	28.5	724
Cx12-24	48	1219	36	914	21	533	380	172.4	Free standing		Free standing	
<b>ACH580-PCR and ACH580-PDR, drive with input disconnect and manual motor protectors, UL (NEMA) Type 3R</b>												
CX3R-21	27.3	693	18.2	462	14.4	366	85	39	22.5	572	16.5	419
CX3R-22	33	838	24	610	14.4	366	130	59	28.5	724	22.5	572
CX3R-23	39.4	1001	30	762	15.9	404	190	86	34.5	876	28.5	724
CX3R-24	51	1295	36	914	20.4	518	400	182	46.5	1181	34.5	876
CX3R-25	72	1829	42	1067	25.1	638	475	216	58.6	1488	34.5	876

\* ABB recommends the use of the included foot mount kit. If wall mounting is required, see configurator for mounting dimensions.

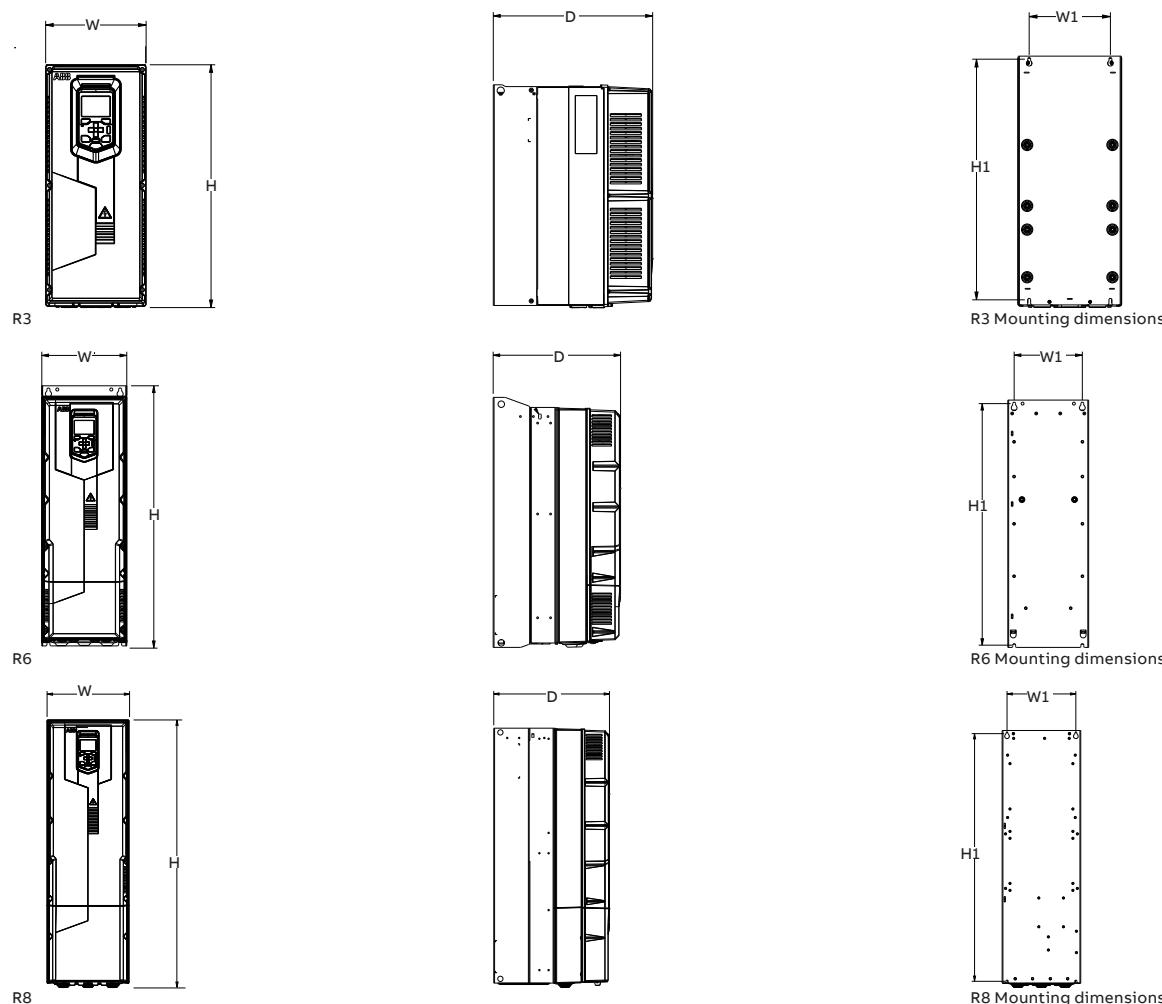
# Ratings, types and voltages

## ACH580-31, Ultra-Low Harmonic drives

Type code	Output Ratings <sup>1)</sup>		Frame Size	UL (NEMA) Type 1	UL (NEMA) Type 12 (+B056)
	Current	Power		Dim Ref	List Price
	A	HP			
<b>U<sub>1</sub> = 208/230V. Power ratings are valid at nominal output voltage 208 V 60 Hz</b>					
ACH580-31-017A-2	16.7	5	R3	31-1-R3	31-12-R3
ACH580-31-024A-2	24.2	7.5	R3	31-1-R3	31-12-R3
ACH580-31-031A-2	30.8	10	R6	31-1-R6	31-12-R6
ACH580-31-046A-2	46.2	15	R6	31-1-R6	31-12-R6
ACH580-31-059A-2	59.4	20	R6	31-1-R6	31-12-R6
ACH580-31-075A-2	74.8	25	R6	31-1-R6	31-12-R6
ACH580-31-088A-2	88	30	R6	31-1-R6	31-12-R6
ACH580-31-114A-2	114	40	R8	31-1-R8	31-12-R8
ACH580-31-143A-2	143	50	R8	31-1-R8	31-12-R8
ACH580-31-169A-2	169	60	R8	31-1-R8	31-12-R8
ACH580-31-211A-2	211	75	R8	31-1-R8	31-12-R8
<b>U<sub>1</sub> = 380 to 480 V. Power ratings are valid at nominal output voltage 460 V 60 Hz</b>					
ACH580-31-07A6-4	7.6	5.0	R3	31-1-R3	31-12-R3
ACH580-31-012A-4	12.0	7.5	R3	31-1-R3	31-12-R3
ACH580-31-014A-4	14.0	10.0	R3	31-1-R3	31-12-R3
ACH580-31-023A-4	23.0	15.0	R3	31-1-R3	31-12-R3
ACH580-31-027A-4	27.0	20.0	R6	31-1-R6	31-12-R6
ACH580-31-034A-4	34.0	25.0	R6	31-1-R6	31-12-R6
ACH580-31-044A-4	44.0	30.0	R6	31-1-R6	31-12-R6
ACH580-31-052A-4	52.0	40.0	R6	31-1-R6	31-12-R6
ACH580-31-065A-4	65.0	50.0	R6	31-1-R6	31-12-R6
ACH580-31-077A-4	77.0	60.0	R6	31-1-R6	31-12-R6
ACH580-31-096A-4	96.0	75.0	R8	31-1-R8	31-12-R8
ACH580-31-124A-4	124.0	100.0	R8	31-1-R8	31-12-R8
ACH580-31-156A-4	156.0	125.0	R8	31-1-R8	31-12-R8
ACH580-31-180A-4	180.0	150.0	R8	31-1-R8	31-12-R8

## Dimensions

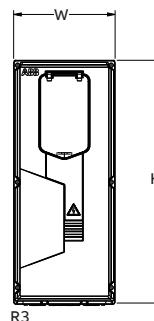
### ACH580-31 Type 1



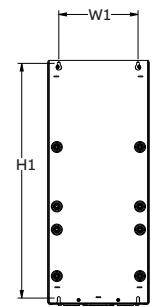
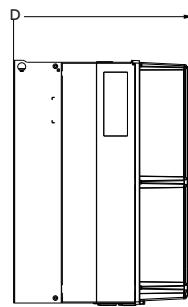
Dim Ref	Height (H1, H4)		Width (W)		Depth (D)		Weight		Mounting Dimensions					
									Height (H1)		Width (W1)		Width (W2)	
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm	in	mm
<b>ACH580-31, Ultra-Low Harmonic drive, UL (NEMA) Type 1</b>														
31-1-R3	19.49	495	8.07	205	13.74	349	47.0	21.3	18.66	474	6.30	160	---	---
31-1-R6	30.35	771	9.92	252	15.44	392	134.5	61.0	29.65	753	8.37	212	6.30	160
31-1-R8	38.01	965	11.81	300	17.23	438	247.0	112.0	37.20	945	10.33	262	---	---

## Dimensions

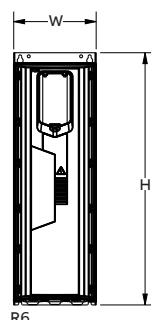
### ACH580-31 Type 12



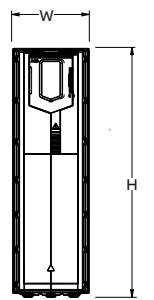
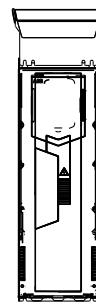
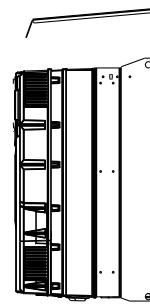
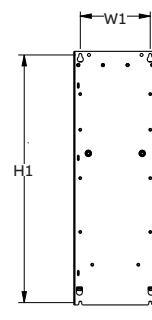
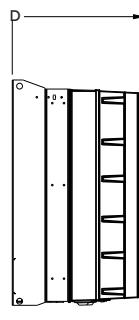
R3



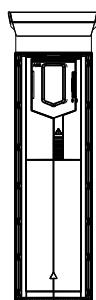
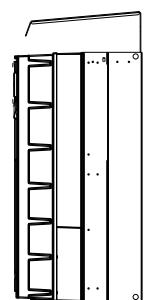
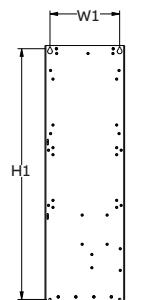
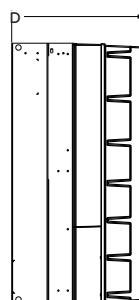
R3 mounting dimensions



R6



R8



R8 with hood

Dim Ref	Height (H1, H4)		Height (H5)		Width (W)		Width (W <sup>H</sup> )		Depth (D)		Weight		Mounting Dimensions					
	in	mm	in	mm	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm	in	mm
<b>ACH580-31, Ultra-Low Harmonic drive, UL (NEMA) Type 12</b>																		
31-12-R3	19.49	495	---	---	8.07	205	---	---	14.17	360	51.4	23.3	18.66	474	6.30	160	---	---
31-12-R6	30.35	771	36.56	929	9.92	252	11.46	291	17.65	448	138.9	63.0	29.65	753	8.37	212	6.30	160
31-12-R8	38.01	965	44.22	1123	11.81	300	13.80	350	19.53	496	260.0	118.0	37.20	945	10.33	262	---	---

## Ratings, types and voltages

ACH580-3BCR, enclosed Ultra-Low Harmonic drive with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)
<b>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</b>						
ACH580-3BCR-07A6-4	7.6	5.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BCR-012A-4	12.0	7.5	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BCR-014A-4	14.0	10.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BCR-023A-4	23.0	15.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BCR-027A-4	27.0	20.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-034A-4	34.0	25.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-044A-4	44.0	30.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-052A-4	52.0	40.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-065A-4	65.0	50.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-077A-4	77.0	60.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-096A-4	96.0	75.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BCR-124A-4	124.0	100.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BCR-156A-4	156.0	125.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BCR-180A-4	180.0	150.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BCR-240A-4	240.0	200.0	R11	Bx1-41	Bx12-41	Bx3R-41
ACH580-3BCR-302A-4	302.0	250.0	R11	Bx1-41	Bx12-41	Bx3R-41
ACH580-3BCR-361A-4	361.0	300.0	R11	Bx1-41	Bx12-41	Bx3R-41
ACH580-3BCR-414A-4	414.0	350.0	R11	Bx1-41	Bx12-41	Bx3R-41
ACH580-3BCR-477A-4	477.0	400.0	R11	Bx1-41	Bx12-41	Bx3R-41

208/230 VAC packages are available as engineered-to-order. Please consult factory

## Ratings, types and voltages

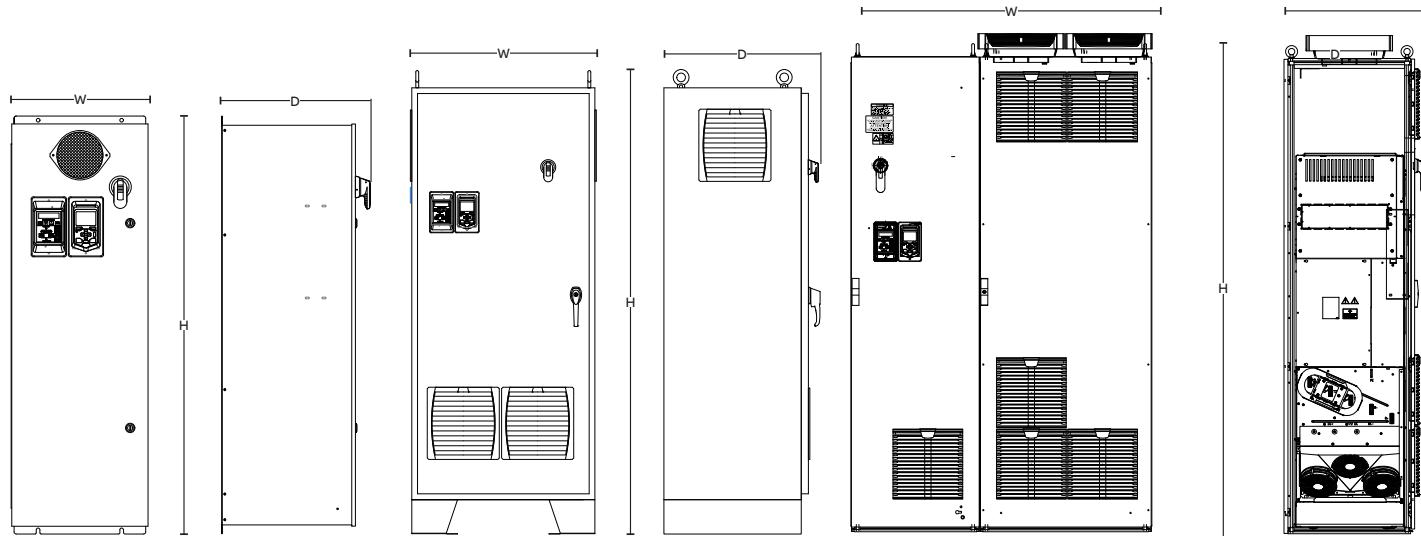
ACH580-3BDR, enclosed Ultra-Low Harmonic drive with non-fused disconnect

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)
<b><math>U_1 = 440 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>						
ACH580-3BDR-07A6-4	7.6	5.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BDR-012A-4	12.0	7.5	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BDR-014A-4	14.0	10.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BDR-023A-4	23.0	15.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BDR-027A-4	27.0	20.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-034A-4	34.0	25.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-044A-4	44.0	30.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-052A-4	52.0	40.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-065A-4	65.0	50.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-077A-4	77.0	60.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-096A-4	96.0	75.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BDR-124A-4	124.0	100.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BDR-156A-4	156.0	125.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BDR-180A-4	180.0	150.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BDR-240A-4	240.0	200.0	R11	Bx1-41	Bx12-41	Bx3R-41
ACH580-3BDR-302A-4	302.0	250.0	R11	Bx1-41	Bx12-41	Bx3R-41
ACH580-3BDR-361A-4	361.0	300.0	R11	Bx1-41	Bx12-41	Bx3R-41
ACH580-3BDR-414A-4	414.0	350.0	R11	Bx1-41	Bx12-41	Bx3R-41
ACH580-3BDR-477A-4	477.0	400.0	R11	Bx1-41	Bx12-41	Bx3R-41

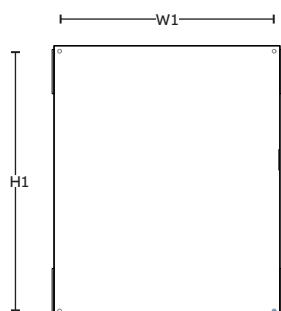
208/230 VAC packages are available as engineered-to-order. Please consult factory

## Dimensions

ACH580-3BxR, enclosed Ultra-Low Harmonic drive



### Mounting Dimensions



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580 BCR and BDR, ultra-low harmonic E-Clipse bypass drive, UL (NEMA) Type 1</b>												
Bx1-31	50.00	1270	16.3	414	17.80	452	150	68	49.00	1245	10.00	254
Bx1-32	61.90	1572	19.3	490	19.00	483	225	102	60.90	1547	10.00	254
Bx1-33	73.40	1864	35.0	889	20.40	518	500	227	Free standing		Free standing	
Bx1-41	90	2309	55.0	1397	25	630	1690	770	Free standing		Free standing	
<b>ACH580 BCR and BDR, ultra-low harmonic E-Clipse bypass drive, UL (NEMA) Type 12</b>												
Bx12-31	36.00	914	30.0	762	19.00	483	225	102	37.00	940	6.00	152
Bx12-32	48.00	1219	36.0	914	21.00	533	350	159	50.00	1270	8.00	203
Bx12-33	78.00	1981	32.0	813	27.30	693	575	261	Free standing		Free standing	
Bx12-41	90	2309	55.0	1397	25	630	1690	770	Free standing		Free standing	
<b>ACH580 BCR and BDR, ultra-low harmonic E-Clipse bypass drive, UL (NEMA) Type 3R</b>												
Bx3R-31	33	838	24.0	610	19.1	485	150	68	28.5	724	22.5	572
Bx3R-32	51	1295	36.0	914	20.4	518	380	173	46.5	1181	34.5	876
Bx3R-35	72	1829	42.0	1067	25.1	638	600	273	58.6	1488	34.5	876
Bx3R-41	90	2286	48.0	1220	28	712	1670	760	Free standing		Free standing	

\* ABB recommends the use of the included foot mount kit. If wall mounting is required, see configurator for mounting dimensions.

## Ratings, types and voltages

ACH580-3BCR, enclosed with soft start Ultra-Low Harmonic drive with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA) Type 1	UL (NEMA) Type 12 (+B056)	UL (NEMA) Type 3R (+B058)
	Current A	Power HP			Dim Ref	
<b><math>U_1 = 440</math> to <math>480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460</math> V 60 Hz</b>						
ACH580-3BCR-07A6-4+G390	7.6	5.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BCR-012A-4+G390	12.0	7.5	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BCR-014A-4+G390	14.0	10.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BCR-023A-4+G390	23.0	15.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BCR-027A-4+G390	27.0	20.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-034A-4+G390	34.0	25.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-044A-4+G390	44.0	30.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-052A-4+G390	52.0	40.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-065A-4+G390	65.0	50.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-077A-4+G390	77.0	60.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BCR-096A-4+G390	96.0	75.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BCR-124A-4+G390	124.0	100.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BCR-156A-4+G390	156.0	125.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BCR-180A-4+G390	180.0	150.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BCR-240A-4+G390	240.0	200.0	R11	Contact Factory		
ACH580-3BCR-302A-4+G390	302.0	250.0	R11			
ACH580-3BCR-361A-4+G390	361.0	300.0	R11			
ACH580-3BCR-414A-4+G390	414.0	350.0	R11			
ACH580-3BCR-477A-4+G390	477.0	400.0	R11			

208/230 VAC packages are available as engineered-to-order. Please consult factory

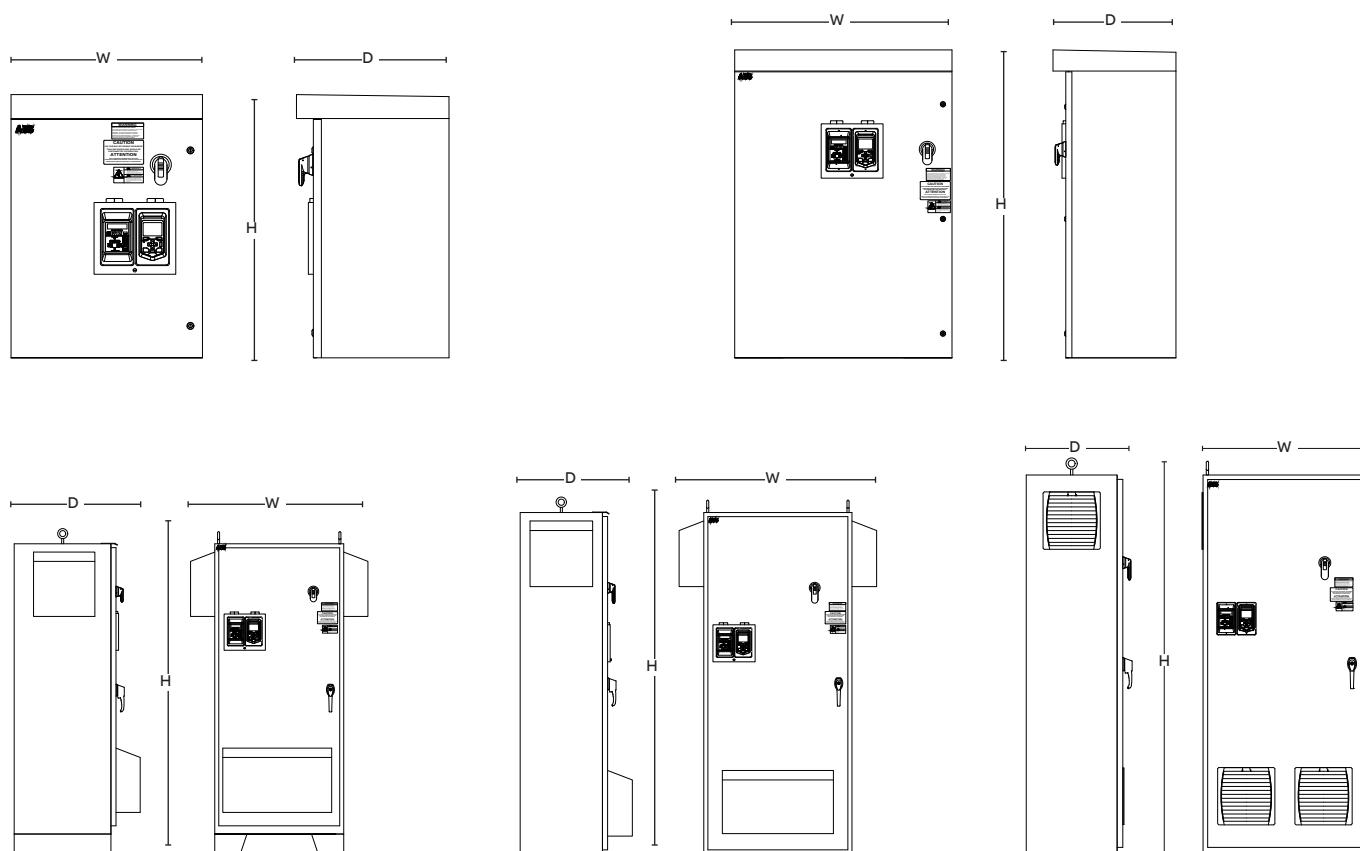
## Ratings, types and voltages

ACH580-3BDR, enclosed with soft start Ultra-Low Harmonic drive with non-fused disconnect

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)
	Dim Ref	Dim Ref	Dim Ref			
<b><i>U<sub>1</sub> = 440 to 480V. Power ratings are valid at nominal output voltage U<sub>N</sub> = 460 V 60 Hz</i></b>						
ACH580-3BDR-07A6-4+G390	7.6	5.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BDR-012A-4+G390	12.0	7.5	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BDR-014A-4+G390	14.0	10.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BDR-023A-4+G390	23.0	15.0	R3	Bx1-31	Bx12-31	Bx3R-31
ACH580-3BDR-027A-4+G390	27.0	20.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-034A-4+G390	34.0	25.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-044A-4+G390	44.0	30.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-052A-4+G390	52.0	40.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-065A-4+G390	65.0	50.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-077A-4+G390	77.0	60.0	R6	Bx1-32	Bx12-32	Bx3R-32
ACH580-3BDR-096A-4+G390	96.0	75.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BDR-124A-4+G390	124.0	100.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BDR-156A-4+G390	156.0	125.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BDR-180A-4+G390	180.0	150.0	R8	Bx1-33	Bx12-33	Bx3R-35
ACH580-3BDR-240A-4+G390	240.0	200.0	R11	Contact Factory		
ACH580-3BDR-302A-4+G390	302.0	250.0	R11			
ACH580-3BDR-361A-4+G390	361.0	300.0	R11			
ACH580-3BDR-414A-4+G390	414.0	350.0	R11			
ACH580-3BDR-477A-4+G390	477.0	400.0	R11			

## Dimensions

ACH580-3BxR, enclosed Ultra-Low Harmonic drive with softstarter (+G390)



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580 BCR and BDR, Ultra-Low Harmonic E-Clipse bypass drive and soft starter, UL (NEMA) Type 1</b>												
BX1-31	50	1270	16.3	414	17.8	452	150	68	49	1245	10	254
BX1-32	61.9	1571	19.3	490	19	482	225	102	60.9	1546	10	254
BX1-33	73.4	1865	35	889	20.4	518	500	227	61.4	1559	26	660
BX1-34	84	2134	36	914	23.3	592	1100	500	Free standing			
<b>ACH580 BCR and BDR, Ultra-Low Harmonic E-Clipse bypass drive and soft starter, UL (NEMA) Type 12</b>												
BX12-31	30	762	24	610	18.9	480	215	98	28.5	724	22.5	572
BX12-32	48	1219	36	914	21	533	350	159	46.5	1181	34.5	876
BX12-33	78	1981	32	813	27.3	693	575	261	Free standing			
BX12-34	84	2134	36	914	23.3	592	1100	500				
<b>ACH580 BCR and BDR, Ultra-Low Harmonic E-Clipse bypass drive and soft starter, UL (NEMA) Type 3R</b>												
BX3R-31	33	838	24	610	19.1	485	125	57	28.5	724	22.5	572
BX3R-32	51	1295	36	914	20.4	518	390	177	46.5	1181	34.5	876
BX3R-33	78	1981	44	1118	31.3	795	620	282	Free standing			
BX3R-34	84	2134	48	1219	27.3	692	1100	500				

## Ratings, types and voltages

ACH580-3PCR, packaged Ultra-Low Harmonic drive with circuit breaker

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)
<b><math>U_1 = 440 \text{ to } 480 \text{V}</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>						
ACH580-3PCR-07A6-4	7.6	5.0	R3	PxB1-31	PxB12-31	PxB3R-31
ACH580-3PCR-012A-4	12.0	7.5	R3	PxB1-31	PxB12-31	PxB3R-31
ACH580-3PCR-014A-4	14.0	10.0	R3	PxB1-31	PxB12-31	PxB3R-31
ACH580-3PCR-023A-4	23.0	15.0	R3	PxB1-31	PxB12-31	PxB3R-31
ACH580-3PCR-027A-4	27.0	20.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PCR-034A-4	34.0	25.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PCR-044A-4	44.0	30.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PCR-052A-4	52.0	40.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PCR-065A-4	65.0	50.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PCR-077A-4	77.0	60.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PCR-096A-4	96.0	75.0	R8	PxB1-33	PxB12-33	PxB3R-35
ACH580-3PCR-124A-4	124.0	100.0	R8	PxB1-33	PxB12-33	PxB3R-35
ACH580-3PCR-156A-4	156.0	125.0	R8	PxB1-33	PxB12-33	PxB3R-35
ACH580-3PCR-180A-4	180.0	150.0	R8	PxB1-33	PxB12-33	PxB3R-35
ACH580-3PCR-240A-4	240.0	200.0	R11	PxB1-41	PxB12-41	PxB3R-41
ACH580-3PCR-302A-4	302.0	250.0	R11	PxB1-41	PxB12-41	PxB3R-41
ACH580-3PCR-361A-4	361.0	300.0	R11	PxB1-41	PxB12-41	PxB3R-41
ACH580-3PCR-414A-4	414.0	350.0	R11	PxB1-41	PxB12-41	PxB3R-41
ACH580-3PCR-477A-4	477.0	400.0	R11	PxB1-41	PxB12-41	PxB3R-41

208/230 VAC packages are available as engineered-to-order. Please consult factory

## Ratings, types and voltages

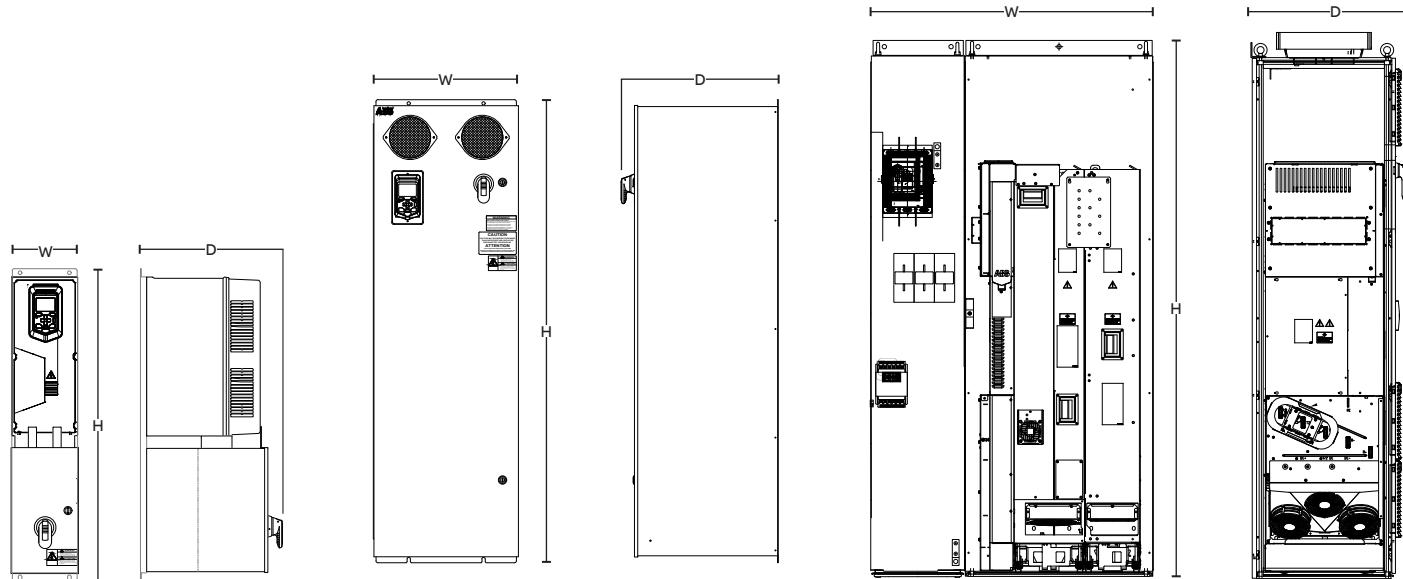
ACH580-3PDR, packaged Ultra-Low Harmonic drive with non-fused disconnect

Type code	Output Ratings		Frame Size	UL (NEMA)	UL (NEMA)	UL (NEMA)
	Current A	Power HP		Type 1	Type 12 (+B056)	Type 3R (+B058)
<b><math>U_1 = 440 \text{ to } 480V</math>. Power ratings are valid at nominal output voltage <math>U_N = 460 \text{ V } 60 \text{ Hz}</math></b>						
ACH580-3PDR-07A6-4	7.6	5.0	R3	PxB1-31	PxB12-31	PxB3R-31
ACH580-3PDR-012A-4	12.0	7.5	R3	PxB1-31	PxB12-31	PxB3R-31
ACH580-3PDR-014A-4	14.0	10.0	R3	PxB1-31	PxB12-31	PxB3R-31
ACH580-3PDR-023A-4	23.0	15.0	R3	PxB1-31	PxB12-31	PxB3R-31
ACH580-3PDR-027A-4	27.0	20.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PDR-034A-4	34.0	25.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PDR-044A-4	44.0	30.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PDR-052A-4	52.0	40.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PDR-065A-4	65.0	50.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PDR-077A-4	77.0	60.0	R6	PxB1-32	PxB12-32	PxB3R-32
ACH580-3PDR-096A-4	96.0	75.0	R8	PxB1-33	PxB12-33	PxB3R-35
ACH580-3PDR-124A-4	124.0	100.0	R8	PxB1-33	PxB12-33	PxB3R-35
ACH580-3PDR-156A-4	156.0	125.0	R8	PxB1-33	PxB12-33	PxB3R-35
ACH580-3PDR-180A-4	180.0	150.0	R8	PxB1-33	PxB12-33	PxB3R-35
ACH580-3PDR-240A-4	240.0	200.0	R11	PxB1-41	PxB12-41	PxB3R-41
ACH580-3PDR-302A-4	302.0	250.0	R11	PxB1-41	PxB12-41	PxB3R-42
ACH580-3PDR-361A-4	361.0	300.0	R11	PxB1-41	PxB12-41	PxB3R-43
ACH580-3PDR-414A-4	414.0	350.0	R11	PxB1-41	PxB12-41	PxB3R-44
ACH580-3PDR-477A-4	477.0	400.0	R11	PxB1-41	PxB12-41	PxB3R-45

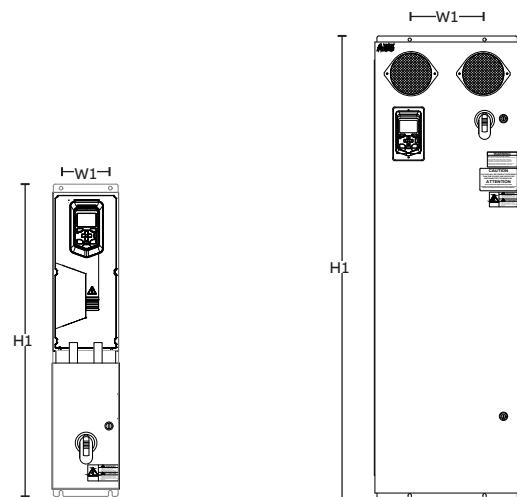
208/230 VAC packages are available as engineered-to-order. Please consult factory

## Dimensions

ACH580-3PxR, packaged Ultra-Low Harmonic drive



**Mounting Dimensions**



Dim Ref	Height (H)		Width (W)		Depth (D)		Weight		Mounting Dimensions			
	in	mm	in	mm	in	mm	lb	kg	in	mm	in	mm
<b>ACH580 PCR and PDR, ultra-low harmonic packaged drive, UL (NEMA) Type 1</b>												
PxB1-31	38.0	965	8.0	203	17.3	439	80	36	37.0	940	6	152
PxB1-32	51.0	1295	10.0	254	18.8	477	200	91	50.0	1270	8	203
PxB1-33	61.9	1571	19.3	490	21.0	532	400	182	60.9	1546	10	254
PxB1-41	90.0	2309	55.0	1397	25.0	630	1510	680	Free standing		Free standing	
<b>ACH580 BCR and BDR, ultra-low harmonic packaged drive, UL (NEMA) Type 12</b>												
PxB12-31	30.0	762	24.0	610	18.0	457	190	86	28.5	724	22.5	572
PxB12-32	48.0	1219	36.0	914	21.0	533	320	145	46.5	1181	34.5	876
PxB12-33	78.0	1981	32.0	813	27.3	693	525	239	Free standing		Free standing	
PxB12-41	90.0	2309	55.0	1397	25.0	630	1510	680	Free standing		Free standing	
<b>ACH580 BCR and BDR, ultra-low harmonic packaged drive, UL (NEMA) Type 3R</b>												
PxB3R-31	33.0	838	24.0	610	19.1	485	140	64	28.5	724	22.5	572
PxB3R-32	51.0	1295	36.0	914	20.4	518	355	161	46.5	1181	34.5	876
PxB3R-35	72.0	1829	42.0	1067	25.1	638	565	257	58.6	1488	34.5	876
PxB3R-41	90.0	2286	48.0	1220	28.0	712	1690	760	Free standing		Free standing	

\* ABB recommends the use of the included foot mount kit. If wall mounting is required, see configurator for mounting dimensions.

# Construction compatibility

## Descriptions

Constructions													Option	Option Code	Description
O1	VxR	VDR	BCR	BDR	PCR	PDR	31	3BCR	3BDR	3PCR	3PDR				
•	•	•	•	•	•	•	•	•	•	•	•	UL (NEMA) Type 1	-	Indoor use primarily to provide a degree of protection against limited amounts of falling dirt.	
•		•	•	•	•	•	•	•	•	•	•	UL (NEMA) Type 12	+B056	Indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping non-corrosive liquids. Does not protect against contamination from salt-laden air	
		•	•	•	•		•	•	•	•	•	UL (NEMA) Type 3R	+B058	Either indoor or outdoor use to provide a degree of protection against falling dirt, rain, sleet, and snow; and that will be undamaged by the external formation of ice on the enclosure.	
		•	•	•	•		✓	✓	✓	✓	✓	UL (NEMA) Type 3R Stainless Steel	+B058+C165	Either indoor or outdoor use to provide a degree of protection against falling dirt, rain, sleet, and snow; and that will be undamaged by the external formation of ice on the enclosure. Enclosure is made of stainless steel grade 304. Internal heating strips and cooling fans regulate the internal temperature of the enclosure.	
		•	•	•	•		✓	✓	✓	✓	✓	UL (NEMA) Type 4	+B057	Either indoor or outdoor use to provide a degree of protection against falling dirt, windblown dust, rain, sleet, snow, splashing water, and hose-directed water; and that will be undamaged by the external formation of ice on the enclosure. Enclosure is made of powder coated galvanized steel. An air conditioner is mounted on the side of the enclosure for cooling of the VFD.	
•		•	•	•	•		✓	✓	✓	✓	✓	UL (NEMA) Type 4X	+B063+C165 +B066 (01 only)	Either indoor or outdoor use to provide a degree of protection against falling dirt, windblown dust, rain, sleet, snow, splashing water, and hose-directed water; and that will be undamaged by the external formation of ice on the enclosure. Enclosure is made of stainless steel grade 304. A stainless steel air conditioner made of 304 grade steel is mounted on the side of the enclosure for cooling of the VFD.	
		•	•	•	•		•	•				Isolation Switch	+F267	Provides a means to manually disconnect power to the drive.	
		•	•	•	•							Line Reactor	+E213	A line reactor provides additional line side impedance for power conditioning. In some applications the line reactor will prevent nuisance drive trips and slightly reduce overall harmonic current.	
		•	•	•	•							Passive Filter	+E211	A passive harmonic filter (inductive-capacitive) style is installed and wired in series with the drive. For power factor control, the contactor drops out the tuning reactor and capacitors during light loading. This filter is designed to limit current distortion to less than 5%.	
		•	•				•	•				Softstart Bypass	+G390	The Softstarter is installed in the bypass circuit ahead of the Bypass Contactor power contacts. Softstarter operation is initiated by means of a control circuit interlock contact on the Bypass Contactor. Softstarter UP-TO-SPEED and FAULT signals (contact closures) are available at the Softstarter terminal block.	
				•	•		✓	✓				Redundant	+C170	The redundant drive control option has two drives installed into a single enclosure to act as a backup for critical applications. The control scheme automatically switches from selected Lead Drive to secondary drive upon a fault on the selected Lead Drive. Each drive equipped with Drive Fuses and electrically interlocked drive output contactors.	
				•	•		✓	✓	✓	✓	✓	MMPs	+xG405+M6xx	Control multiple motors with a single drive. Size the drive based on the combined power rating of all of the loads that will be controlled by the drive. ABB Manual Motor Protectors (MMPs) are sized based on each individual load are installed on the output of the VFD.	

Adding these options may change the dimensions of the enclosure.

Contact ABB for available configuration requirements.

- Available option
- ✓ Contact factory for additional information.



---

## Tools and options

## Tools

Enjoy the easiness offered by the cold configuration tool and Drive composer PC tool. These tools lighten your workload, especially if there are many drives. The cold configurator tool provides a quick way to parametrize unpowered drives even in their boxes, and the Drive composer PC tool offers advanced means, for example, for commissioning and monitoring.



### Safe configuration for unpowered drives

The CCA-01 cold configuration adapter provides a serial communication interface for unpowered drives. With the adapter, safe isolation of both serial communication and control board power supply is possible. The power supply is taken from a PC USB port.



### PC tools

The Drive composer PC tool offers fast and harmonized setup, commissioning, monitoring, and the capability to create adaptive block programs. The free version of the tool provides startup and maintenance capabilities and gathers all drive information, such as parameter loggers, faults, and backups into a support diagnostics file. Drive composer pro provides additional features such as custom parameter windows, graphical control diagrams of the drive's configuration, and improved monitoring and diagnostics.



### Shared features of the ABB all-compatible drives portfolio

#### Drivetune smartphone app

- The Drivetune smartphone app together with the Bluetooth-enabled control panel allows you to set up and commission the drive remotely from a safe and comfortable location, using the same primary settings menu that is available on the control panel on the drive.

#### Same PC tools for ABB all-compatible drives

- Drive composer entry available for free at [www.abb.com](http://www.abb.com)
- Same parameter structure makes the all-compatible platform easy to use

#### Connectivity

- ABB's F-series fieldbus adapters can be used throughout the all-compatible platform
- Fieldbus settings are made easy with the Primary Settings menu
- Bluetooth connectivity to Apple and Android devices

## EtherNet/IP™ Gateway

Easy to use, powerful gateway for Ethernet/IP networks

Type number: VFD-GATEWAY

Part number: 3AUA0000235813



When you need to connect between different networks in your Variable Frequency Drive (VFD) installation, a fast and easy to set up gateway reduces your programming and start-up time.

ABB's Ethernet/IP Gateway provides software-free setup via a web browser interface and gives the flexibility of connecting up to five (5) ABB VFDs or DC drives to one gateway.

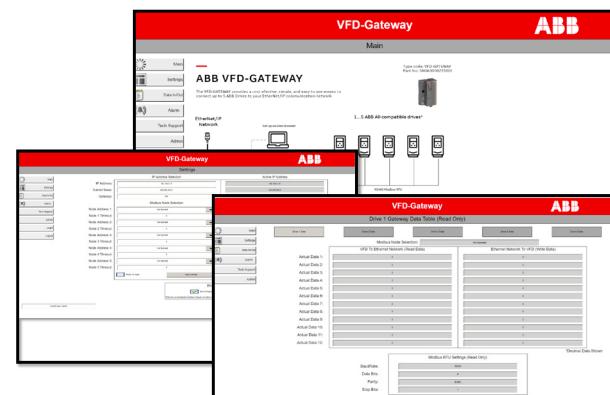
### Standard features

- Allows connection between an EtherNet/IP network and ABB VFDs using Modbus RTU:
  - Supports EtherNet/IP
  - Supports ABB Drives Profile
- One EtherNet/IP node can be connected from 1 up to five (5) ABB VFDs reducing cost
- Full support for:
  - ACS380, ACS480, ACS580, ACQ580, ACH580 (7 words in/out)
  - ACS880 (12 words in/out)
  - DCS880 DC drive (12 words in/out)
- Limited support for ACH580 E-Clipse bypass (9 words in/3 words out)
- Limited support for ACS355 (9 words in/3 words out)
- Fixed Modbus RTU baud rate for quicker set up of the VFD.
- Access to drive parameters through Read/Write
- Drive Parameters are organized in a data block that allows Ethernet/IP access for easy read and write either individually or as a whole
- Security features based on IEC 62443
- Requires user supplied 24VDC (340mA)

### VFD-GATEWAY configuration via web browser

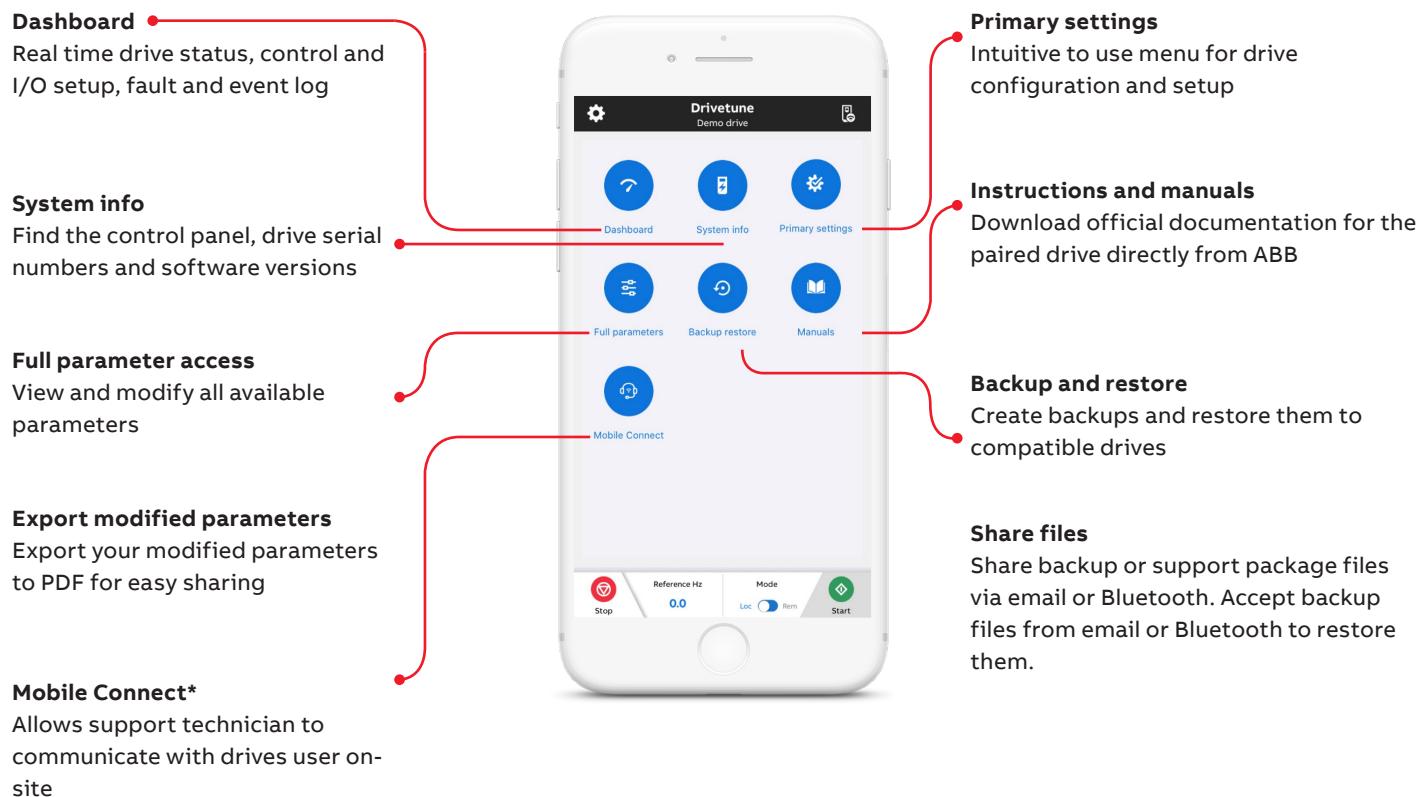
- The VFD-GATEWAY is configured using a standard web browser on a PC/Laptop, to open a setup web-page which is embedded on the VFD-GATEWAY.
- The embedded web page does not require any additional software.
- This allows you to set:
  - VFD-GATEWAY Ethernet/IP address
  - Number of VFD nodes
  - Type of VFD drive at node
  - Diagnostic information to aide in troubleshooting

#### Web configuration screens



## DriveTune

### Enabling wireless connection



### Shared features of the ABB all-compatible drives portfolio



Convenient access to start up, commission and troubleshoot your drives in a remote location.



Optimize performance via troubleshooting features.



Instant access to your drive status, backups and configuration.



Enables operation via your phone within 246 feet, allowing you to stay out of the danger zone.

## Mobile Connect

### Mobile Connect for Drives

ABB Ability™ Mobile Connect for drives is a cloud-based software working with the ABB Drivetune mobile app. Drivetune enables remote communication with on-site drives and users, assisting with commissioning and troubleshooting. Chats, sharing of images and backups via smartphone makes the technical support process quick and efficient.



—  
**Superior support via innovative digital tools**



—  
**Easy connectivity for high-quality support**



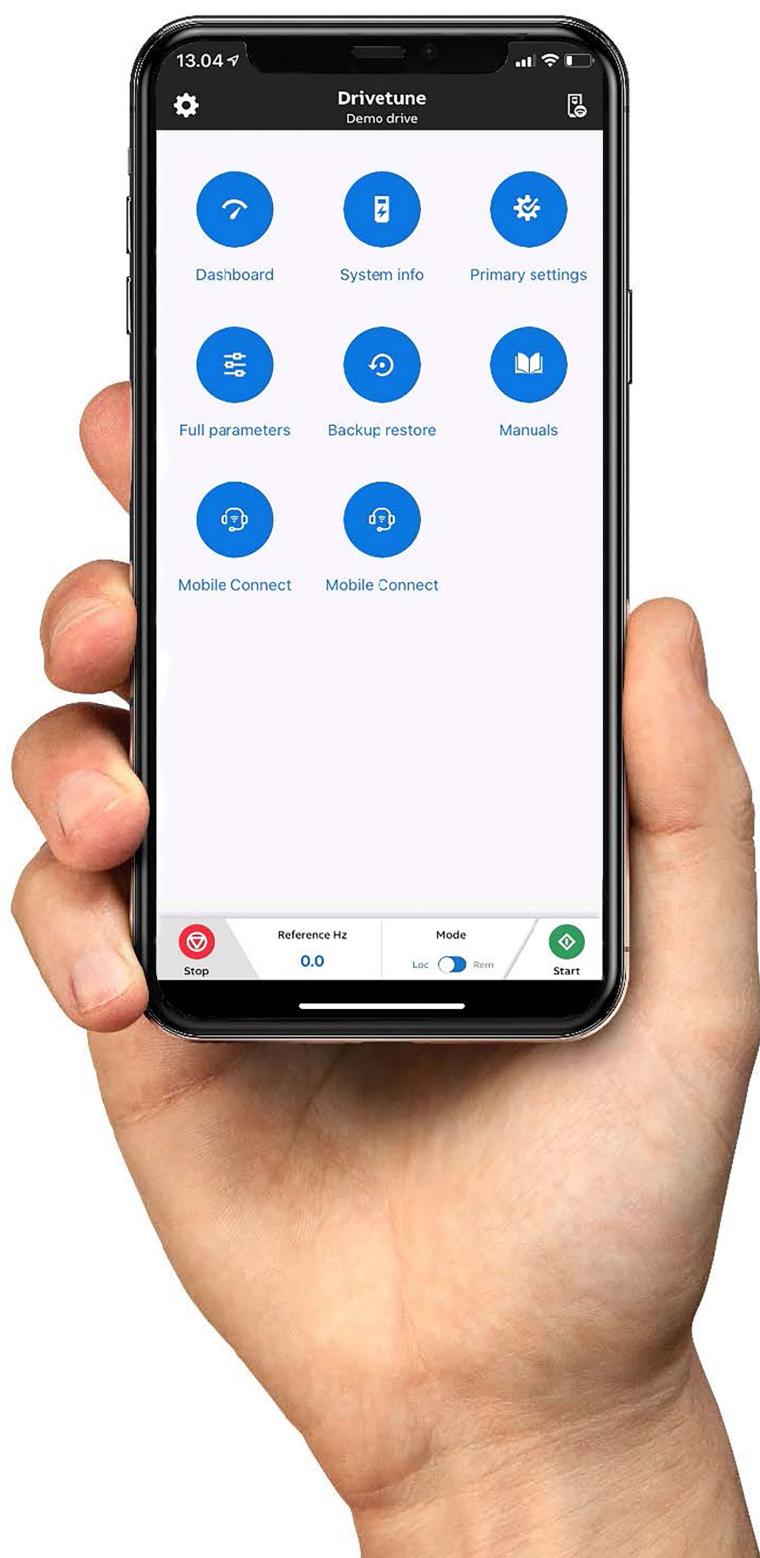
—  
**Better productivity and prioritizing**



—  
**Solve issues faster, for increased uptime**

#### Mobile device with Drivetune installed

The ABB drive experts will guide the on-site user through the technical support session. My ABB account credentials are required.



# Options

## Field and factory option kits

Name	Field Kit Part No.	Description	Installed Option Code
<b>Input / Output Option Modules</b>			
<b>"C" type Field Bus Adapter for use with all configurations</b>			
115/230V digital input (6xDI and 2xRO)	CHDI-01-KIT	The CHDI-01 is an optional digital input extension module that expands the inputs of the drive control board. It provides 6 inputs at 115/230V and 2 additional relay outputs.	+L512
			
External 24V DC/AC and digital I/O extension (2xRO and 1xDO)	CMOD-01-KIT	External 24VDC/AC as standard in CCU-24 control board (Frames R6- R9)	+L501
			
Bipolar analog I/O extension (3 analog inputs, 2 analog outputs)	CAIO-01	The CAIO-01 is an optional analog extension module that provides bipolar analog I/O extension with 3 analog inputs, 2 analog outputs.	+L525
			
<b>Field Bus Adapters</b>			
DeviceNet adapter	FDNA-01-KIT	The FDNA-01 DeviceNet adapter module enables connection of a drive to a DeviceNet network. The drive is considered a follower in the DeviceNet network. The FDNA-01 module is a device acting as a Group 2 only follower realizing the Predefined Master Follower Connection Set functionality. The Off-line Connection Set functionality and Unconnected Message Manager (UCMM) are not supported.	+K451
			
LonWorks adapter	FLON-01-KIT	The FLON-01 LonWorks adapter module enables connection of a drive to a LonWorks network.	+K452
			
Profibus DP adapter	FPBA-01-KIT	The FPBA-01 PROFIBUS DP adapter module enables connection of a drive to a PROFIBUS network. The drive is considered a follower on the PROFIBUS network. The FPBA-01 module supports the PROFIBUS DP-V0 and DP-V1 distributed I/O system protocols according to IEC 61158, IEC 61784 and EN 50170 standards. The module uses parameter/process data objects (PPOs) in cyclic communication and supports standard telegrams 1 and 2.	+K454
			

## Options

### Field and factory option kits

Name	Field Kit Part No.	Description	Installed Option Code
BACnet/IP (2-Port)	FBIP-21-KIT	The FBIP-21 Ethernet 2 port adapter module enables the connection of a drive to an Ethernet network via a BACnet/IP protocol. The supported topologies are star through a switch or router and daisy chain. The FBIP-21 supports 10 Mbps or 100 Mbps and automatically detects the data transfer rate used in the network.	+K465
EtherNet adapter (2-Port)	FENA-21-KIT	The FENA-21 Ethernet adapter module enables the connection of a drive to an Ethernet network, utilizing twisted pair as the physical media in either a star or daisy chain topology. In addition, FENA-21 supports the Modbus/TCP, Ethernet IP and Profinet IO communication protocols; 10 Mbit/s and 100 Mbit/s data transfer rates, and; automatically detects the data transfer rate used in the network. The module's minimum RPI is 1 ms.	+K475
EtherNet/IP Adapter (2-Port)	FEIP-21-KIT	The FEIP-21 Ethernet adapter supports the Ethernet/IP protocol and has an integrated Ethernet switch that can be used in star or ring configuration on an Ethernet network. The module supports monitor only and control connection modes to use with automation equipment. It uses twisted pair as the physical media in star or daisy chain called Device Level Ring (DLR) topology, supports data transfer rates of 10 and 100 Mbit/s, has a 5 ms minimum RPI, and automatically detects the network's rate. Drive Composer Pro software can be used with this adapter for start-up or maintenance on ABB's common architecture drives.	+K490
Modbus/TCP Adapter (2-Port)	FMBT-21-KIT	The FMBT-21 Ethernet adapter supports the Modbus protocol called Modbus TCP/IP, a simple and vendor neutral communication protocol. The adapter has an integrated Ethernet switch that can be used in star configuration or daisy chain on an Ethernet network. The FMBT-21 also supports the Modbus/UDP communication protocol and uses twisted pair as the physical media in a star topology. The adapter supports data transfer rates of 10 and 100 Mbit/s, has a 5 ms minimum RPI, and automatically detects the network's rate. Drive Composer Pro software can be used with this adapter for start-up or maintenance on ABB's common architecture drives.	+K491
Ethernet/IP protocol gateway	VFD-GATEWAY	The VFD-GATEWAY supports the Ethernet/IP protocol to allow drive data access to and from up to 5 ABB drives. It uses a standard ethernet cable on the gateway EtherNet port and serial communications via RS485 using the Modbus RTU protocol to the integral serial port on select ABB drives*. The VFD-GATEWAY is customer DIN rail mountable separate from the drive. The Gateway provides software-free setup via a web browser interface. (Cables and power supply not included.) *ACH580, ACS880, and ACH580 E-Clipse Bypass with limited support * Note: installation by others, may not fit in existing packages	

## Options

### Field and factory option kits

Name	Field Kit Part No.	Description	Installed Option Code
<b>Control Panel and Accessories</b>			
Control panel (Hand-Off-Auto)	ACH-AP-H	ACH580 Hand-Off-Auto control panel (Hand-Off-Auto) Functionality	STD
			
Bluetooth control panel (Hand-Off-Auto)	ACH-AP-W	ACH580 Wireless Bluetooth control panel (Hand-Off-Auto) Functionality	+J429
			
Blank control panel cover	CDUM-01	ACH580 Blank cover for control panel Blank control panel cover. Option valid for -01, -31, Px (R1-R4 Type 1 and Type 12 only)	+J424
			
Panel bus adapter	CDPI-01 -KIT	The CDPI-01 communication adapter module can be used to connect a remote control panel to the drive, or to connect the control panel or a PC to several drives on a panel bus. The panel bus can have a maximum of 32 nodes. The control panel/PC is the master, while the drives equipped with the communication adapter are followers.	---
			
Control panel mounting platform (surface mounted, requires also panel bus adapter on the drive)	DPMP-02	Control panel mounting kit – Surface mounted to the electrical enclosure door. (This kit also requires the CDPI-01 panel bus adapter )	---
			

## Options

### Field and factory option kits

Name	Field Kit Part No.	Description	Installed Option Code
Door mounting Kit ( Surface mount) [Contains DPMP-02 & CDPI-01]	DPMP-EXT	Control panel mounting kit – Surface mounted to the electrical enclosure door. (This kit also includes the CDPI-01 panel bus adapter )	---
			
HVAC Cabinet mounting panel kit	DPMP-06-EXT-H	Allows remote mounting of the ACH-AP-H or ACH-AP-W control panel on a larger enclosure or remotely. The kit contains one piece of the DPMP-06 door mounting piece and one piece of the CDPI-01 drive mounting adapter and a 3m connection cable. The control panel must be purchased separately. For use with ACH580-01 ,ACH580-31 and ACH580-34 VFD's only. Through door mounting.	---
			
HVAC Cabinet Mount Panel	DPMP-07-H	Allows remote mounting of the ACH-AP-H or ACH-AP-W control panel on a larger enclosure or remotely. The kit contains one piece of the DPMP-07 door mounting piece. The control panel must be purchased separately. Through door mounting.	---
			
Door mounting Kit rated for use with UL/ NEMA 3R,4 and 4X Enclosures ( Surface mount) R1-R5 Frame, Does not Include CDPI-01	DPMP-04	This control panel holder kit is rated for use with Type 3R, Type 4, or 4X rated enclosures made with UV resistant materials . This Surface mounted control panel holder does require the CDPI-01 Panel bus adapter to be ordered separately. The DPMP-04 comes with the cable to attach the Control Panel to the CDPI-01 Panel bus adapter (Not Included) DPMP-04 is suitable for use with frames R1-R5	---
			
Door mounting Kit rated for use with UL/ NEMA 3R,4 and 4X Enclosures ( Surface mount) R6-R9 Frames. Does not include CDPI-01	DPMP-05	This control panel holder kit is rated for use with Type 3R, Type 4, or 4X rated enclosures made with UV resistant materials . This Surface mounted control panel holder does require the CDPI-01 Panel bus adapter to be ordered separately. The DPMP-05 comes with the cable to attach the Control Panel to the CDPI-01 Panel bus adapter (Not Included) DPMP-05 is suitable for use with frames R6-R9	---
			

# Options

## Field and factory option kits

Name	Field Kit Part No.	Description	Installed Option Code
<b>Programming and Maintenance Tools</b>			
Drive composer pro	DCPT-01-KIT	Drive composer pro software 2.x (Windows 7/Windows 8/Windows 10) and mini USB cable are used to view and set drive parameters, and to monitor and tune process performance. In addition to this, the pro version allows for safety configuration (FSO/FSE), ability to connect to multiple drives via Ethernet based adapter (one-wire EtherNet/IP, Modbus/TCP, PROFINET) or RS485 panel bus, and much more.	---
Cold configuration tool	CCA-01	Programming tool for unpowered drives, includes cable for connection to PC	---
USB to RJ45 Adapter (PC to Drive Connection)	BCBL-01	Programming cable for programing drives, includes cable for connection to PC. Requires Drive Composer	---
ACH580-01 democase, with travel case	---	ACH580-01 Democase with travel case.	---
ACH580 E-Clipse Democase	---	The ACH580-01 and E-Clipse bypass demo unit supports ACH580 drive only mode as well as ACH580 + E-Clipse bypass operation. Contains an ACH580-01 unit, bypass control unit, lockable input disconnect, a front I/O and PID simulation panel, and durable travel case with wheels.	---
<b>Flange Mounting Kit for ACH580-01, UL Type 1 Drives</b>			
R1 Frame	FMK-A/B-R1 580	Flange mounting kit for the ACH580-01 drives allows mounting the drive with the heatsink external to a 3rd party enclosure. The kit is delivered as a separate kit and includes a drip shield (to keep heatsink side as IP55).	---
R2 Frame	FMK-A/B-R2 580		---
R3 Frame	FMK-A/B-R3 580		---
R4 Frame	FMK-A/B-R4 580		---
R5 Frame	FMK-A/B-R5 580		---
R6 Frame	FMK-A/B-R6 580/880		---
R7 Frame	FMK-A/B-R7 580/880		---
R8 Frame	FMK-A/B-R8 580/880		---
R9 Frame	FMK-A/B-R9 580/880		---
<b>Flange Mounting Kit for ACH580-31, UL Type 1 Drives</b>			
R3 Frame	FMK-R3 580-31/880-X1	Flange mounting kit for the ACH580-31 drives allows mounting the drive with the heatsink external to a 3rd party enclosure. The kit is delivered as a separate kit and includes a drip shield (to keep heatsink side as IP55).	---
R6 Frame	FMK-R6 580-31/880-X1		---
R8 Frame	FMK-R8 580-31/880-X1		---
<b>Mobile Connect</b>			
Mobile connect single seat	NB_MOBILE_CON_IW	ABB Ability™ Mobile Connect for drives allows each seat holding remote service provider to communicate with on-site drives & users helping them easily commission and troubleshoot drives.	---
Mobile connect two seat	NB_MOBILE_CON_IW2		---
Mobile connect five seat	NB_MOBILE_CON_IW5		---

\* For flange kit installation follow the procedure in ABB doc number 3AXD50000349821. Please note +C135 plus code is not available for purchase, kits must be purchased separately.

## Options

### Field and factory option kits

Name	Field Kit Part No.	Installed Option Code	Option valid for						
			-01	-BxR	-PxR	-VxR	-31	-3BxR	-3PxR
<b>Input / Output Option Modules</b>									
<b>"C" type Field Bus Adapter for use will all configurations</b>									
115/230V digital input (6xDI and 2xRO)	CHDI-01-KIT	+L512	✓	✓	✓	✓	✓	✓	✓
External 24V DC/AC and digital I/O extension (2xRO and 1xDO)	CMOD-01-KIT	+L501	✓	✓	✓	✓	✓	✓	✓
Bipolar analog I/O extension	CAIO-01	+L525	✓	✓	✓	✓	✓	✓	✓
<b>Field Bus Adapters</b>									
DeviceNet adapter	FDNA-01-KIT	+K451	✓	✓	✓	✓	✓	✓	✓
LonWorks adapter	FLON-01-KIT	+K452	✓	✓	✓	✓	✓	✓	✓
Profibus DP adapter	FPBA-01-KIT	+K454	✓		✓		✓		✓
BACnet/IP	FBIP-21-KIT	+K465	✓	✓	✓	✓	✓	✓	✓
EtherNet adapter	FENA-21-KIT	+K475	✓	✓	✓	✓	✓	✓	✓
EtherNet/IP adapter	FEIP-21-KIT	+K490	✓	✓	✓	✓	✓	✓	✓
Modbus adapter	FMBT-21-KIT	+K491	✓		✓	✓	✓		✓
Ethernet/IP protocol gateway	VFD-GATEWAY**	---	✓	✓	✓	✓	✓	✓	✓
<b>Control Panel and Accessories</b>									
Control panel (Hand-Off-Auto)	ACH-AP-H	STD	✓	✓	✓	✓	✓	✓	✓
No Control Panel		+0J400	✓				✓		
Bluetooth control (Hand-Off-Auto)	ACH-AP-W	+J429	✓	✓	✓	✓	✓	✓	✓
Blank control panel cover.	CDUM-01	+J424	✓	✓	✓	✓	✓	✓	✓
Option valid for -01, PxR (R1-R4 Type 1 and Type 12 only)									
Panel bus adapter	CDPI-01-KIT	---	✓	✓	✓	✓	✓	✓	✓
Control panel mounting platform (surface mounted, requires also panel bus adapter on the drive)	DPMP-02	---		✓			✓	✓	✓
Door mounting Kit ( Surface mount) [Contains DPMP-02 & CDPI-01]	DPMP-EXT	---	✓	✓	✓	✓	✓	✓	✓
HVAC Cabinet mounting panel kit	DPMP-06-EXT-H	---	✓	✓	✓	✓	✓	✓	✓
HVAC Cabinet Mount Panel	DPMP-07-H	---	✓	✓	✓	✓	✓	✓	✓
Outdoor 3R,4 or 4X Panel cabinet door mounting kit (Surface mount ) R1 - R5 Frames , Includes cable: Must also order CDPI-01 .	DPMP-04	---	✓				✓		
Outdoor 3R, 4 or 4X Panel cabinet door mounting kit (Surface mount ) R6 - R9 Frames Includes Cable	DPMP-05	---		✓			✓		
<b>Programming and Maintenance Tools</b>									
Drive composer pro	DCPT-01-KIT	---	✓	✓	✓	✓	✓	✓	✓
Cold configurator tool	CCA-01	---	✓	✓	✓	✓	✓	✓	✓
USB to RJ45 Adapter (PC to Drive Connection)	BCBL-01		✓	✓	✓	✓	✓	✓	✓
ACH580-01 democase, with travel case	ACH580-01 Democase	---	✓						
ACH580 E-Clipse Democase	ACH580 E-Clipse Democase	---		✓					
<b>Construction Options</b>									
Assembled in USA (R1 Frame)		---		+P918		✓			
Assembled in USA (R2 Frame)		---		+P918		✓			
Assembled in USA (R3 Frame)		---		+P918		✓			
<b>Flange Mounting Kit for NEMA 1 Drives</b>									
UL (NEMA) Type 1 ACH580 (R1 Frame)	FMK-A/B-R1 580	---		✓					
UL (NEMA) Type 1 ACH580 (R2 Frame)	FMK-A/B-R2 580	---		✓					
UL (NEMA) Type 1 ACH580 (R3 Frame)	FMK-A/B-R3 580	---		✓					
UL (NEMA) Type 1 ACH580 (R4 Frame)	FMK-A/B-R4 580	---		✓					
UL (NEMA) Type 1 ACH580 (R5 Frame)	FMK-A/B-R5 580	---		✓					
UL (NEMA) Type 1 ACH580 (R6 Frame)	FMK-A/B-R6 580/880	---		✓					
UL (NEMA) Type 1 ACH580 (R7 Frame)	FMK-A/B-R7 580/880	---		✓					
UL (NEMA) Type 1 ACH580 (R8 Frame)	FMK-A/B-R8 580/880	---		✓					
UL (NEMA) Type 1 ACH580 (R9 Frame)	FMK-A/B-R9 580/880	---		✓					
UL (NEMA) Type 1 ACH580-31 (R3 Frame)	FMK-R3 580-31/880-X1	---					✓		
UL (NEMA) Type 1 ACH580-31 (R6 Frame)	FMK-R6 580-31/880-X1	---					✓		
UL (NEMA) Type 1 ACH580-31 (R8 Frame)	FMK-R8 580-31/880-X1	---					✓		
<b>Mobile connect</b>									
Ability Mobile Connect 1 Year License - Single Seat***	NB_MOBILE_CON_IW	---	✓	✓	✓	✓	✓	✓	✓
Ability Mobile Connect 1 Year License - Two Seat***	NB_MOBILE_CON_IW2	---	✓	✓	✓	✓	✓	✓	✓
Ability Mobile Connect 1 Year License - Five Seat***	NB_MOBILE_CON_IW5	---	✓	✓	✓	✓	✓	✓	✓

\* For flange kit installation follow the procedure in ABB doc number 3AXD50000349821. Please note +C135 plus code is not available for purchase, kits must be purchased separately.

\*\* Note: installation by others, may not fit in existing packages

---

# Motors Contents

<b>2-2</b>	<b>HVAC motors</b>
<b>2-3</b>	<b>Critical Cooling</b>
<b>2-8</b>	<b>Inverter Duty</b>
<b>2-16</b>	<b>EC Titanium™</b>
<b>2-26</b>	<b>General purpose HVAC</b>
<b>2-30</b>	<b>Chiller/cooling tower</b>
<b>2-35</b>	<b>Definite purpose HVAC</b>
<b>2-40</b>	<b>Pump motors</b>
<b>2-63</b>	<b>NEMA quick reference chart</b>
<b>2-64</b>	<b>IEC Low Voltage Motors (&lt;1,000 VAC)</b>
<b>2-65</b>	<b>Process Performance</b>
<b>2-71</b>	<b>Synchronous reluctance motors</b>
<b>2-72</b>	<b>Customized solutions for special applications</b>
<b>2-73</b>	<b>Catalog notes</b>
<b>2-76</b>	<b>Abbreviations</b>

## HVAC motors



### **Key features:**

- Dynamically balanced rotor to reduce noise and increase bearing life
- Color coded and numbered leads for ease of connectivity
- Bar code spec number for easy identification

Baldor-Reliance® HVAC motors are specifically engineered with industry-driven designs to keep your air handling systems running smoothly, quietly, and efficiently, which means better system reliability and performance, with less maintenance.

- Low noise vibration dampening bases
- Baldor-Reliance motors meet or exceed all efficiency requirements for US, Canada and Mexico regulations



ABB IEC low voltage motors are designed to meet the demands of commercial applications in the HVAC industry. Customized, build-to-order solutions, as well as process performance motors that are in stock; ABB has the motor for your HVAC applications.

### **Key features:**

- True IEC design and dimensions
- Conduit box with terminal block easier, faster connections
- QR code for one-step motor data retrieval

- ABB IEC motors meet or exceed all efficiency requirements for the US, Canada, and Mexico
- Available in efficiencies up to IE5 (Ultra-Premium Efficiency)

## Critical Cooling

Three phase, TEAO, with hybrid ceramic bearings  
1 - 30 Hp



**IP54**



### Features:

- Robust cast iron frame construction
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2
- Sealed Hybrid Ceramic bearings to protect against shaft currents
- Designed for longevity with a 5 year warranty

### Applications:

- Direct drive applications
- Air handling
- Fans
- HVAC systems
- Variable speed applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
1	1800	143T	HBAO3581T	HB3	11.44	58	86.5	230/460	2.9
2	3600	145T	HBAO3586T	HB3	11.44	64	86.5	230/460	5.4
	1800	145T	HBAO3587T	HB3	11.44	64	86.5	230/460	5.7
3	3600	182T	HBAO3660T	HB3	13.89	95	89.5	230/460	7.5
	1800	182T	HBAO3661T	HB3	13.89	100	89.5	230/460	8.4
5	3600	184T	HBAO3663T	HB3	13.89	105	90.2	230/460	12
	1800	184T	HBAO3665T	HB3	13.89	120	90.2	230/460	13.7
7.5	3600	213T	HBAO3769T	HB3	16.88	173	91	230/460	19
	1800	213T	HBAO3770T	HB3	16.88	198	91.7	230/460	19
10	3600	215T	HBAO3771T	HB3	16.88	203	91.7	230/460	24
	1800	215T	HBAO3774T	HB3	16.88	231	92.4	230/460	26.3
15	3600	254T	HBAO2394T	HB3	20.75	239	91.7	230/460	34.4
	1800	254T	HBAO2333T	HB3	20.75	268	92.4	230/460	36.2
20	3600	256T	HBAO4106T	HB3	23	293	91	230/460	23
	1800	256T	HBAO2334T	HB3	23	293	93	230/460	24
25	3600	284T	HBAO4118T	HB3	25.63	378	91.7	230/460	29
	1800	286T	HBAO4103T	HB3	25.63	378	93.6	230/460	30
30	3600	286T	HBAO4108T	HB3	25.63	410	91.7	230/460	34
	1800	286T	HBAO4104T	HB3	25.63	410	93.6	230/460	38

Cast iron frame

Red catalog number indicates NEW product.

## Critical Cooling

Three phase, TEFC, foot mounted, with hybrid ceramic bearings  
1 - 30 Hp


**IP54**

**Features:**

- Robust cast iron frame construction
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2
- Sealed Hybrid Ceramic bearings to protect against shaft currents
- Designed for longevity with a 5 year warranty

**Applications:**

- Direct drive applications
- Air handling
- Fans
- HVAC systems
- Variable speed applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>230/460 volt</b>									
1	1800	143T	HBEM3546T	HB3	12.31	30	85.5	230/460	1.5
	1800	143T	HBEM3581T	HB3	12.54	55	85.5	230/460	1.5
	1200	145T	HBEM3556T	HB3	13.31	43	82.5	230/460	1.8
	1200	145T	HBEM3582T	HB3	12.54	56	82.5	230/460	1.7
1 1/2	1800	145T	HBEM3554T	HB3	13.31	42	86.5	230/460	2.2
	1800	145T	HBEM3584T	HB3	12.54	61	86.5	230/460	2.3
	1200	182T	HBEM3607T	HB3	16.54	76	87.5	230/460	2.4
	1200	182T	HBEM3667T	HB3	15.24	99	87.5	230/460	2.5
2	1800	145T	HBEM3558T	HB3	13.31	42	86.5	230/460	2.9
	1800	145T	HBEM3587T	HB3	12.54	62	86.5	230/460	2.9
	1200	184T	HBEM3614T	HB3	18.04	94	88.5	230/460	3.5
	1200	184T	HBEM3664T	HB3	15.24	123	88.5	230/460	3.15
3	1800	182T	HBEM3611T	HB3	16.54	74	89.5	230/460	4.2
	1800	182T	HBEM3661T	HB3	15.24	105	89.5	230/460	4.1
	1200	213T	HBEM3704T	HB3	19.01	135	89.5	230/460	4.6
	1200	213T	HBEM3764T	HB3	18.45	211	89.5	230/460	4.5
5	1800	184T	HBEM3615T	HB3	18.04	92	89.5	230/460	6.7
	1800	184T	HBEM3665T	HB3	15.24	115	89.5	230/460	6.6
	1200	215T	HBEM3708T	HB3	19.76	154	89.5	230/460	7.3
	1200	215T	HBEM3768T	HB3	18.45	198	89.5	230/460	7.4
7 1/2	1800	213T	HBEM3710T	HB3	19.01	129	91.7	230/460	9.4
	1800	213T	HBEM3770T	HB3	18.45	193	91.7	230/460	9.5
	1200	254T	HBEM2276T	HB3	23.3	281	91	230/460	11
10	1800	215T	HBEM3714T	HB3	20.51	156	91.7	230/460	12
	1800	215T	HBEM3774T	HB3	18.45	232	91.7	230/460	12.2
	1200	256T	HBEM2332T	HB3	23.3	322	91	230/460	14.1
15	1800	254T	HBEM2333T	HB3	23.3	270	92.4	230/460	18.1
	1200	284T	HBEM4100T	HB3	27.76	369	91.7	230/460	21
20	1800	256T	HBEM2334T	HB3	23.3	295	93	230/460	24
	1200	286T	HBEM4102T	HB3	27.76	393	91.7	230/460	27
25	1800	284T	HBEM4103T	HB3	27.76	400	93.6	230/460	30
30	1800	286T	HBEM4104T	HB3	27.76	410	93.6	230/460	38

Cast iron frame

Red catalog number indicates NEW product.

\*IP54 when drain fitting kit #HA5027A03 is installed in the weep holes (48 thru 256T frame motors only)

## Critical Cooling

Three phase, TEFC, with hybrid ceramic bearings (IE5+)  
1 - 20 Hp



**IP54**



### Features:

- IE5+ Motor Efficiency
- FASR - Magnet Assisted Synchronous Reluctance Rotor
- Sealed Hybrid Ceramic Bearings to protect against shaft currents
- For inverter use only per NEMA MG1 Part 31.4.4.2
- 1.5 Service Factor design
- Designed for longevity with 5 year warranty

### Applications:

- Direct drive applications
- Air handling
- HVAC systems
- Variable speed applications

Hp	Base Speed RPM	C.H. Speed RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
5	1800	4000	143T	TEFC <a href="#">ECC101M0H5DF4</a>	EC1	15.54	64	93.0%	230/460	10.4/5.2
5	1800	4000	182T	TEFC <a href="#">ECC101M0H5EF4</a>	EC1	16.54	68	93.7%	230/460	10.5/5.3
7.5	1800	4000	184T	TEFC <a href="#">ECC101M0H7EF4</a>	EC1	18.04	92	94.0%	230/460	17.5/8.8
7.5	1800	3000	213T	TEFC <a href="#">ECC101M0H7FF4</a>	EC1	17.89	105	94.0%	230/460	17.4/8.7
10	1800	3000	213T	TEFC <a href="#">ECC101M0H10FF4</a>	EC1	19.02	123	94.8%	230/460	22.0/11.0
15	1800	3000	215T	TEFC <a href="#">ECC101M0H15FF4</a>	EC1	21.96	168	95.6%	230/460	34.8/17.4
20	1800	3000	215T	TEFC <a href="#">ECC101M4H20FF4</a>	EC1	23.51	218	95.9%	460	21.6

Red catalog number indicates NEW product.

## Critical cooling

Highest reliability with lifetime motor bearing protection



**BALDOR • RELIANCE**

Baldor-Reliance® Critical Cooling motors are ideal for variable speed applications where downtime is not an option. Specially designed hybrid ceramic bearings offer a lifetime warranty against motor bearing failure caused by shaft currents.

### Features:

- Lifetime warranty on motor bearings against shaft currents caused by VFDs
- TEAO and TEFC enclosures
- Hybrid ceramic ball bearings on both motor ends
- IP54 ingress protection
- Turndown ratio 20:1 variable torque
- Induction rotor for NEMA Premium® efficiency (IE3) or ultra premium efficiency (IE5+)
- NEMA Design A
- Multi-color leads for ease of connections
- Suitable for inverter use per MG1 Part 31.4.4.2
- Designed for longevity with 5-year warranty

### Applications:

The Baldor-Reliance Critical Cooling motor is best suited for direct drive or belt-driven HVAC applications that utilize VFDs. Ideal for applications where stable temperature control and continuous operation are critical such as data centers, clean rooms, hospitals, and other commercial and industrial buildings.



**Lifetime warranty**  
against bearing failure  
from shaft currents

## Critical cooling

Energy efficient and reliable

Critical cooling motors are offered in two different rotor designs:  
(1) Induction rotor that meets NEMA Premium® efficiency (IE3)  
levels and (2) Ferrite Assisted Synchronous Reluctance, or FASR  
rotor, that is ultrapremium and achieves (IE5+) efficiency levels.

1



2



## Inverter Duty

Three phase, TEFC, foot mounted, with internal Baldor-Reliance® shaft grounding brush

1 - 50 Hp



### Features:

- Class H insulation for increased protection on inverter use
- Internal grounding brush for bearing current mitigation on drive end retainer ring
- Designed for longevity with 3 year warranty
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- Fans
- Pumps
- Blowers
- Unit handling
- HVAC systems
- Variable speed applications
- General purpose applications

	Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Foot mounted</b>										
	1	1800	143T	EM3546T-BG	HV3	13.31	38	85.5	230/460	1.5
		1800	143T	<b>EM3581T-BG</b>	HV3	12.54	55	85.5	230/460	1.5
		1200	145T	<b>EM3582T-BG</b>	HV3	12.54	56	82.5	230/460	1.7
1 1/2	3600	143T	<b>EM3583T-BG</b>	HV3	12.54	56	84	230/460	1.9	
	1800	145T	EM3554T-BG	HV3	13.31	41	86.5	230/460	2.2	
	1800	145T	<b>EM3584T-BG</b>	HV3	12.54	61	86.5	230/460	2.3	
	1200	182T	<b>EM3667T-BG</b>	HV3	15.24	99	87.5	230/460	2.5	
2	3600	145T	EM3555T-BG	HV3	13.31	41	85.5	230/460	2.5	
	3600	145T	<b>EM3586T-BG</b>	HV3	12.54	62	85.5	230/460	2.5	
	1800	145T	EM3558T-BG	HV3	13.31	45	86.5	230/460	2.9	
	1800	145T	<b>EM3587T-BG</b>	HV3	12.54	62	86.5	230/460	2.9	
	1200	184T	<b>EM3664T-BG</b>	HV3	15.24	123	88.5	230/460	3.15	
3	3600	145T	EM3559T-BG	HV3	14.19	50	86.5	230/460	3.6	
	3600	182T	<b>EM3660T-BG</b>	HV3	15.24	58	86.5	230/460	3.8	
	1800	182T	EM3611T-BG	HV3	16.54	70	89.5	230/460	4.2	
	1800	182T	<b>EM3661T-BG</b>	HV3	15.24	105	89.5	230/460	4.1	
	1200	213T	EM3704T-BG	HV3	19.01	132	89.5	230/460	4.6	
	1200	213T	<b>EM3764T-BG</b>	HV3	18.45	211	89.5	230/460	4.5	
5	3600	184T	EM3613T-BG	HV3	16.54	74	88.5	230/460	5.9	
	3600	184T	<b>EM3663T-BG</b>	HV3	15.24	99	88.5	230/460	5.8	
	1800	184T	EM3615T-BG	HV3	18.04	93	89.5	230/460	6.7	
	1800	184T	<b>EM3665T-BG</b>	HV3	15.24	115	89.5	230/460	6.6	
	1200	215T	EM3708T-BG	HV3	19.76	154	89.5	230/460	7.3	
	1200	215T	<b>EM3768T-BG</b>	HV3	18.45	198	89.5	230/460	7.4	
7 1/2	3600	213T	EM3709T-BG	HV3	17.89	121	89.5	230/460	9	
	3600	213T	<b>EM3769T-BG</b>	HV3	18.45	169	89.5	230/460	9	
	1800	213T	EM3710T-BG	HV3	19.01	127	91.7	230/460	9.4	
	1800	213T	<b>EM3770T-BG</b>	HV3	18.45	193	91.7	230/460	9.5	
	1200	254T	EM2276T-BG	HV3	23.3	310	91	230/460	11	

Cast iron frame

\* IP54 when drain fitting kit #HA5027A03 is installed in the weep holes (48 thru 256T frame motors only)

Red catalog number indicates NEW product.

**Inverter Duty, Three phase, TEFC, foot mounted, with internal Baldor-Reliance® shaft grounding brush**

<b>Hp</b>	<b>NEMA RPM</b>	<b>Catalog Frame</b>	<b>Disc. Number</b>	<b>"C" Sym.</b>	<b>“C” Dim.</b>	<b>Aprx. Wt. (lb)</b>	<b>Full Load Efficiency</b>	<b>Voltage</b>	<b>Full Load Amps</b>
10	3600	215T	EM3711T-BG	HV3	17.89	118	90.2	230/460	11.8
	3600	215T	EM3771T-BG	HV3	18.45	164	90.2	230/460	11.8
	1800	215T	EM3714T-BG	HV3	20.51	165	91.7	230/460	12
	1800	215T	EM3774T-BG	HV3	18.45	232	91.7	230/460	12.2
	1200	256T	EM2332T-BG	HV3	23.3	322	91	230/460	14.1
	15	3600	254T	EM2394T-BG	HV3	23.3	253	91	230/460
	1800	254T	EM2333T-BG	HV3	23.3	274	92.4	230/460	18.1
	1200	284T	EM4100T-BG	HV3	27.76	372	91.7	230/460	21
20	1800	256T	EM2334T-BG	HV3	23.3	290	93	230/460	24
	1200	286T	EM4102T-BG	HV3	27.76	406	91.7	230/460	27
25	1800	284T	EM4103T-BG	HV3	27.76	420	93.6	230/460	30
	1200	324T	EM4111T-BG	HV3	30.39	475	93	230/460	32
30	1800	286T	EM4104T-BG	HV3	27.76	437	93.6	230/460	38
40	1800	324T	EM4110T-BG	HV3	30.28	578	94.1	230/460	48
50	1800	326T	EM4115T-BG	HV3	30.28	641	94.5	230/460	58
<b>C-Face, foot mounted</b>									
1/2	1800	56C	CEM3538-BG	HV3	12.23	33	82.5	208-230/460	0.8
3/4	1800	56C	CEM3542-BG	HV3	12.23	37	84	208-230/460	1.1
1	1800	143TC	CEM3546T-BG	HV3	13.29	38	85.5	230/460	1.5
1 1/2	1800	145TC	CEM3554T-BG	HV3	13.29	41	86.5	230/460	2.2
2	1800	145TC	CEM3558T-BG	HV3	13.29	45	86.5	230/460	2.9
3	1800	182TC	CEM3611T-BG	HV3	16.55	70	89.5	230/460	4.2
5	1800	184TC	CEM3615T-BG	HV3	18.05	93	89.5	230/460	6.7

 Cast iron frame

\* IP54 when drain fitting kit #HA5027A03 is installed in the weep holes (48 thru 256T frame motors only)

Red catalog number indicates NEW product.

## Inverter Duty

Three phase, TEFC, C-face, foot mounted, with internal AEGIS® bearing protection ring  
1 - 100 Hp



IP44\*


**Features:**

- Class H insulation for increased protection on inverter use
- Internal grounding brush for bearing current mitigation
- Designed for longevity with 3 year warranty
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2

**Applications:**

- Fans
- Pumps
- Blowers
- Unit handling
- HVAC systems
- Variable speed applications
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>230/460 volt</b>									
1	3600	56C	CEM3545-G	HV3	12.23	32	77	230/460	1.4
	1800	143TC	CEM3546T-G	HV3	13.29	30	85.5	230/460	1.5
	1200	145TC	CEM3556T-G	HV3	13.29	43	82.5	230/460	1.8
1 1/2	3600	143TC	CEM3550T-G	HV3	13.29	36	84	230/460	1.9
	1800	145TC	CEM3554T-G	HV3	13.29	42	86.5	230/460	2.2
	1200	182TC	CEM3607T-G	HV3	16.54	76	87.5	230/460	2.4
2	3600	145TC	CEM3555T-G	HV3	13.29	46	85.5	230/460	2.5
	1800	145TC	CEM3558T-G	HV3	14.17	42	86.5	230/460	2.9
	1200	184TC	CEM3614T-G	HV3	18.05	94	88.5	230/460	3.5
3	3600	145TC	CEM3559T-G	HV3	14.17	53	86.5	230/460	3.6
	182TC	CEM3610T-G	HV3		15.16	50	86.5	230/460	3.6
	1800	182TC	CEM3611T-G	HV3	16.55	74	89.5	230/460	4.2
	1200	213TC	CEM3704T-G	HV3	19.76	135	89.5	230/460	4.6
5	3600	184TC	CEM3613T-G	HV3	16.55	76	88.5	230/460	5.9
	1800	184TC	CEM3615T-G	HV3	18.05	92	89.5	230/460	6.7
	1200	215TC	CEM3708T-G	HV3	19.20	154	89.5	230/460	7.3
7 1/2	3600	213TC	CEM3709T-G	HV3	18.63	133	89.5	230/460	9
	1800	213TC	CEM3710T-G	HV3	19.76	129	91.7	230/460	9.4
	1200	254TC	CEM2276T-G	HV3	23.30	281	91	230/460	11
10	3600	215TC	CEM3711T-G	HV3	18.63	118	90.2	230/460	11.8
	1800	215TC	CEM3714T-G	HV3	21.26	156	91.7	230/460	12
	1200	256TC	CEM2332T-G	HV3	23.30	322	91	230/460	14.1
15	3600	254TC	CEM2394T-G	HV3	23.78	239	91	230/460	17.5
	1800	254TC	CEM2333T-G	HV3	23.78	270	92.4	230/460	18.1
	1200	284TC	CEM4100T-G	HV3	27.76	369	91.7	230/460	21
20	3600	256TC	CEM4106T-G	HV3	23.78	261	91	230/460	23
	1800	256TC	CEM2334T-G	HV3	23.78	295	93	230/460	24
	1200	286TC	CEM4102T-G	HV3	27.76	393	91.7	230/460	27
25	3600	284TSC	CEM4107T-G	HV3	26.39	323	91.7	230/460	29
	1800	284TC	CEM4103T-G	HV3	27.76	400	93.6	230/460	30
	1200	324TC	CEM4111T-G	HV3	30.39	507	93	230/460	32
30	3600	286TSC	CEM4108T-G	HV3	26.39	336	91.7	230/460	34
	1800	286TC	CEM4104T-G	HV3	27.76	410	93.6	230/460	38
	1200	326TC	CEM4117T-G	HV3	30.28	604	93	230/460	39
40	3600	324TSC	CEM4109T-G	HV3	28.78	532	92.4	230/460	46
	1800	324TC	CEM4110T-G	HV3	30.28	596	94.1	230/460	48

Cast iron frame

\* IP54 when drain fitting kit #HA5027A03 is installed in the weep holes (48 thru 256T frame motors only)  
Red catalog number indicates NEW product.

**Inverter Duty, Three phase, TEFC, C-face, foot mounted, with internal AEGIS® bearing protection ring**

Hp	RPM	NEMA Frame	Catalog Number	Disc.	"C"	Aprx.	Full Load	Full Load
				Sym.	Dim.	Wt. (lb)	Efficiency	Voltage
50	3600	326TSC	CEM4114T-G	HV3	28.78	584	93	230/460 56
	1800	326TC	CEM4115T-G	HV3	30.28	648	94.5	230/460 58
60	3600	364TSC	CEM4310T-G	HV3	31.36	900	95	230/460 66.3
	1800	364TC	CEM4314T-G	HV3	33.48	907	95	230/460 68
75	3600	365TSC	CEM4313T-G	HV3	31.36	966	94.5	230/460 81.9
	1800	365TC	CEM4316T-G	HV3	33.48	956	95.4	230/460 85.9
100	1800	405TC	CEM4400T-G	HV3	38.20	1214	95.4	230/460 112

Cast iron frame

\* IP54 when drain fitting kit #HA5027A03 is installed in the weep holes (48 thru 256T frame motors only)

Red catalog number indicates NEW product.

## Inverter Duty

Three phase, ODP, C-Face, foot mounted with internal AEGIS® bearing protection ring

1 - 100 Hp



IP22



### Features:

- Class H insulation for increased protection on inverter use
- Internal grounding ring for bearing current mitigation
- Designed for longevity with 3 year warranty
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- Fans
- Pumps
- Blowers
- Unit handling
- HVAC systems
- Variable speed applications
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>230/460 volt</b>									
1	3600	56C	CEM31115-G	HV3	11.75	37	78.5	230/460	1.6
	1800	143TC	CEM3116T-G	HV3	11.12	34	85.5	230/460	1.5
	1200	145TC	CEM3156T-G	HV3	11.62	40	82.5	230/460	1.8
1 1/2	3600	143TC	CEM3120T-G	HV3	11.12	34	84	230/460	2
	1800	145TC	CEM3154T-G	HV3	11.62	38	86.5	230/460	2.2
	1200	182TC	CEM3207T-G	HV3	15.00	67	86.5	230/460	2.5
2	3600	143TC	CEM3155T-G	HV3	11.62	41	85.5	230/460	2.5
	1800	145TC	CEM3157T-G	HV3	12.12	41	86.5	230/460	2.9
	1200	184TC	CEM3215T-G	HV3	16.50	79	87.5	230/460	3.4
3	3600	145TC	CEM3158T-G	HV3	13.00	51	85.5	230/460	3.8
	1800	182TC	CEM3211T-G	HV3	15.00	72	89.5	230/460	4.2
	1200	213TC	CEM3305T-G	HV3	16.32	131	88.5	230/460	4.5
5	3600	182TC	CEM3212T-G	HV3	13.62	63	86.5	230/460	6
	1800	184TC	CEM3218T-G	HV3	16.50	84	89.5	230/460	6.6
	1200	215TC	CEM3309T-G	HV3	17.45	141	89.5	230/460	7.4
7 1/2	3600	184TC	CEM3219T-G	HV3	15.00	75	88.5	230/460	8.6
	1800	213TC	CEM3311T-G	HV3	16.32	130	91	230/460	9.7
	1200	254TC	CEM2506T-G	HV3	23.19	243	90.2	230/460	11
10	3600	213TC	CEM3312T-G	HV3	16.32	121	89.5	230/460	12
	1800	215TC	CEM3313T-G	HV3	17.45	148	91.7	230/460	12.5
	1200	256TC	CEM2511T-G	HV3	23.19	255	91.7	230/460	14.3
15	3600	215TC	CEM3314T-G	HV3	16.32	131	90.2	230/460	17.5
	1800	254TC	CEM2513T-G	HV3	21.69	251	93	230/460	17.7
	1200	284TC	CEM2524T-G	HV3	23.81	280	91.7	230/460	20.5
20	3600	254TC	CEM2514T-G	HV3	21.69	185	91	230/460	23.5
	1800	256TC	CEM2515T-G	HV3	21.69	250	93	230/460	24
	1200	286TC	CEM2528T-G	HV3	23.81	299	92.4	230/460	27
25	3600	256TC	CEM2516T-G	HV3	21.69	233	91.7	230/460	28
	1800	284TC	CEM2531T-G	HV3	25.06	314	93.6	230/460	30
	1200	324TC	CEM2532T-G	HV3	27.69	384	93	230/460	34
30	3600	284TSC	CEM2534T-G	HV3	22.44	320	91.7	230/460	35
	1800	286TC	CEM2535T-G	HV3	25.06	340	94.1	230/460	35
	1200	326TC	CEM2536T-G	HV3	28.69	457	93.6	230/460	38

\* IP54 when drain fitting kit #HA5027A03 is installed in the weep holes (48 thru 256T frame motors only)

Red catalog number indicates NEW product.

**Inverter Duty three phase, ODP, C-Face, foot mounted, with internal AEGIS® bearing protection ring**

<b>Hp</b>	<b>NEMA</b>	<b>Catalog Number</b>	<b>Disc. Sym.</b>	<b>"C" Dim.</b>	<b>Aprx. Wt. (lb)</b>	<b>Full Load Efficiency</b>	<b>Voltage</b>	<b>Full Load Amps</b>
40	3600	286TSC	<b>CEM2538T-G</b>	HV3	22.44	328	92.4	230/460 46
	1800	324TC	<b>CEM2539T-G</b>	HV3	27.19	392	94.1	230/460 49
50	3600	324TSC	<b>CEM2542T-G</b>	HV3	25.69	392	93	230/460 56
	1800	326TC	<b>CEM2543T-G</b>	HV3	27.69	497	94.5	230/460 57
60	3600	326TSC	<b>CEM2546T-G</b>	HV3	30.69	616	95	230/460 68
	1800	364TC	<b>CEM2547T-G</b>	HV3	30.69	565	95	230/460 68
75	3600	364TSC	<b>CEM2549T-G</b>	HV3	33.72	750	95	230/460 87
	1800	365TC	<b>CEM2551T-G</b>	HV3	33.72	597	95	230/460 85
100	3600	365TSC	<b>CEM2550T-4G</b>	HV3	36.97	898	95.4	460 115
	1800	404TC	<b>CEM2555T-4G</b>	HV3	36.97	898	95.4	460 115

\* IP54 when drain fitting kit #HA5027A03 is installed in the weep holes (48 thru 256T frame motors only)

Red catalog number indicates NEW product.

## Inverter Duty

Three phase, ODP, foot mounted with internal AEGIS® bearing protection ring  
1 - 100 Hp



IP22


**Features:**

- Class H insulation for increased protection on inverter use
- Internal grounding ring for bearing current mitigation on DE retainer ring
- Designed for longevity with 3 year warranty
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2

**Applications:**

- Fans
- Pumps
- Blowers
- Unit handling
- HVAC systems
- Variable speed applications
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>230/460 volt</b>									
1	3600	56	EM31115-G	HV3	11.75	27	77	230/460	1.6
	1800	143T	EM3116T-G	HV3	11.12	34	85.5	230/460	1.5
	1200	145T	EM3156T-G	HV3	11.62	40	82.5	230/460	1.8
1 1/2	3600	143T	EM3120T-G	HV3	11.12	34	84	230/460	2
	1800	145T	EM3154T-G	HV3	11.62	38	86.5	230/460	2.2
	1200	182T	EM3207T-G	HV3	15	67	86.5	230/460	2.5
2	3600	143T	EM3155T-G	HV3	11.62	41	85.5	230/460	2.5
	1800	145T	EM3157T-G	HV3	12.12	41	86.5	230/460	2.9
	1200	184T	EM3215T-G	HV3	16.5	79	87.5	230/460	3.4
3	3600	145T	EM3158T-G	HV3	13	46	85.5	230/460	3.8
	1800	182T	EM3211T-G	HV3	15	72	89.5	230/460	4.2
	1200	213T	EM3305T-G	HV3	16.32	110	88.5	230/460	4.5
5	3600	182T	EM3212T-G	HV3	13.62	63	86.5	230/460	6
	1800	184T	EM3218T-G	HV3	16.5	84	89.5	230/460	6.6
	1200	215T	EM3309T-G	HV3	17.45	141	89.5	230/460	7.4
7 1/2	3600	184T	EM3219T-G	HV3	15	75	88.5	230/460	8.6
	1800	213T	EM3311T-G	HV3	16.32	115	91	230/460	9.7
	1200	254T	EM2506T-G	HV3	23.19	243	90.2	230/460	11
10	3600	213T	EM3312T-G	HV3	16.32	113	89.5	230/460	12
	1800	215T	EM3313T-G	HV3	17.45	127	91.7	230/460	12.5
	1200	256T	EM2511T-G	HV3	23.19	255	91.7	230/460	14.3
15	3600	215T	EM3314T-G	HV3	16.32	126	90.2	230/460	17.5
	1800	254T	EM2513T-G	HV3	21.69	210	93	230/460	17.7
	1200	284T	EM2524T-G	HV3	23.81	280	91.7	230/460	20.5
20	3600	254T	EM2514T-G	HV3	21.69	195	91	230/460	23.5
	1800	256T	EM2515T-G	HV3	21.69	227	93	230/460	23.5
	1200	286T	EM2528T-G	HV3	23.81	299	92.4	230/460	27
25	3600	256T	EM2516T-G	HV3	21.69	212	91.7	230/460	28
	1800	284T	EM2531T-G	HV3	25.06	314	93.6	230/460	30
	1200	324T	EM2532T-G	HV3	27.69	384	93	230/460	34
30	3600	284TS	EM2534T-G	HV3	22.44	310	91.7	230/460	35
	1800	286T	EM2535T-G	HV3	25.06	340	94.1	230/460	35
	1200	326T	EM2536T-G	HV3	28.69	457	93.6	230/460	38
40	3600	286TS	EM2538T-G	HV3	22.44	328	92.4	230/460	46
	1800	324T	EM2539T-G	HV3	27.19	392	94.1	230/460	49
	1200	364T	EM2540T-G	HV3	30.69	606	94.1	230/460	51
50	3600	324TS	EM2542T-G	HV3	25.69	392	93	230/460	56
	1800	326T	EM2543T-G	HV3	27.69	473	94.5	230/460	57

**Inverter Duty three phase, ODP, foot mounted, with internal AEGIS® bearing protection ring**

<b>Hp</b>	<b>RPM</b>	<b>NEMA Frame</b>	<b>Catalog Number</b>	<b>Disc. Sym.</b>	<b>"C" Dim.</b>	<b>Aprx. Wt. (lb)</b>	<b>Full Load Efficiency</b>	<b>Voltage</b>	<b>Full Load Amps</b>
60	1800	364T	EM2547T-G	HV3	30.69	616	95	230/460	68
75	1800	365T	EM2551T-G	HV3	33.72	750	95	230/460	87
100	1800	404T	EM2555T-4G	HV3	36.97	898	95.4	460	115
<b>208 volt</b>									
1	1800	143T	EM3116T-8G	HV3	11.12	38	85.5	208	3.5
1 1/2	1800	145T	EM3154T-8G	HV3	11.62	37	86.5	208	5.1
2	1800	145T	EM3157T-8G	HV3	12.12	43	86.5	208	6.5
3	1800	182T	EM3211T-8G	HV3	15	74	89.5	208	9.7
5	1800	184T	EM3218T-8G	HV3	16.5	92	89.5	208	15.3
7 1/2	1800	213T	EM3311T-8G	HV3	16.32	120	91	208	22.2
10	1800	215T	EM3313T-8G	HV3	17.45	132	91.7	208	29.5
15	1800	254T	EM2513T-8G	HV3	21.69	234	93	208	40.7
20	1800	256T	EM2515T-8G	HV3	21.69	250	93	208	54.3
25	1800	284T	EM2531T-8G	HV3	25.06	330	93.6	208	70
30	1800	286T	EM2535T-8G	HV3	25.06	340	94.1	208	81
40	1800	324T	EM2539T-8G	HV3	27.19	390	94.1	208	109
<b>575 volt</b>									
1	1800	143T	EM3116T-5G	HV3	11.12	38	85.5	575	1.2
1 1/2	1800	145T	EM3154T-5G	HV3	11.62	37	86.5	575	1.8
2	1800	145T	EM3157T-5G	HV3	12.12	43	86.5	575	2.3
3	1800	182T	EM3211T-5G	HV3	15	74	89.5	575	3.4
5	1800	184T	EM3218T-5G	HV3	16.5	92	89.5	575	5.3
7 1/2	1800	213T	EM3311T-5G	HV3	16.32	114	91	575	7.8
10	1800	215T	EM3313T-5G	HV3	17.45	132	91.7	575	10
15	1800	254T	EM2513T-5G	HV3	21.69	210	93	575	14.1
20	1800	256T	EM2515T-5G	HV3	21.69	250	93	575	18.9
25	1800	284T	EM2531T-5G	HV3	25.06	328	93.6	575	24.5
30	1800	286T	EM2535T-5G	HV3	25.06	340	94.1	575	28
40	1800	324T	EM2539T-5G	HV3	27.19	400	94.1	575	40

## EC Titanium™

Three phase, totally enclosed  
1 - 20 Hp



### Features:

- IE5+ motor efficiency
- FASR - Ferrite Assisted Synchronous Reluctance Rotor
- Class F insulation with Class B motor temperature rise
- Internal grounding brush for bearing current mitigation
- For inverter use only per NEMA MG1 Part 31.4.4.2
- Designed for longevity with 3 year warranty



**IP54**

### Applications:

- Fans
- Pumps
- Blowers
- Unit handling
- HVAC systems
- Variable speed applications
- General purpose applications
- Compressors

Hp	Base Speed RPM	C.H. Speed Type	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Apxr. Wt. (lb)	Full Load Eff.	Voltage	Full Load Amps
<b>EC Titanium Motor, Inverter Duty, three phase, totally enclosed</b>										
1	1800	4000	143T	TEFC <a href="#">ECS101M0H1DF4</a>	EC1	12.29	28	89.30%	230/460	2.3/1.2
2	1800	4000	145T	TEFC <a href="#">ECS101M0H2DF4</a>	EC1	12.29	35	90.70%	230/460	4.5/2.3
3	1800	4000	145T	TEFC <a href="#">ECS101M0H3DF4</a>	EC1	13.29	44	91.40%	230/460	7.0/3.5
		4000	182T	TEFC <a href="#">ECS101M0H3EF4</a>	EC1	16.54	59	92.80%	230/460	7.3/3.7
5	1800	4000	145T	TEFC <a href="#">ECS101M0H5DF4</a>	EC1	15.54	64	93.00%	230/460	10.4/5.2
		4000	184T	TEFC <a href="#">ECS101M0H5EF4</a>	EC1	16.54	68	93.70%	230/460	10.5/5.3
7 1/2	1800	4000	184T	TEFC <a href="#">ECS101M0H7EF4</a>	EC1	18.04	92	94.00%	230/460	17.5/8.8
		3000	213T	TEFC <a href="#">ECS101M0H7FF4</a>	EC1	17.89	105	94.00%	230/460	17.4/8.7
10	1800	3000	213T	TEFC <a href="#">ECS101M0H10FF4</a>	EC1	19.02	123	94.80%	230/460	22.0/11.0
15	1800	3000	215T	TEFC <a href="#">ECS101M0H15FF4</a>	EC1	21.96	168	95.60%	230/460	34.8/17.4
20	1800	3000	215T	TEFC <a href="#">ECS101M4H20FF4</a>	EC1	23.51	218	95.90%	460	21.6
<b>EC Titanium Motor, Inverter Duty, three phase, totally enclosed, C-Face, foot mounted</b>										
1	1800	4000	143TC	TEFC <a href="#">ECS101M0H1DB4</a>	EC1	12.29	28	89.30%	230/460	2.3/1.2
2	1800	4000	143TC	TEFC <a href="#">ECS101M0H2DB4</a>	EC1	12.29	35	90.70%	230/460	4.5/2.3
3	1800	4000	145TC	TEFC <a href="#">ECS101M0H3DB4</a>	EC1	13.29	44	91.40%	230/460	7.0/3.5
		4000	182TC	TEFC <a href="#">ECS101M0H3EB4</a>	EC1	16.54	59	92.80%	230/460	7.3/3.7
5	1800	4000	143TC	TEFC <a href="#">ECS101M0H5DB4</a>	EC1	15.54	64	93.00%	230/460	10.4/5.2
		4000	182TC	TEFC <a href="#">ECS101M0H5EB4</a>	EC1	16.54	68	93.70%	230/460	10.5/5.3
7 1/2	1800	4000	184TC	TEFC <a href="#">ECS101M0H7EB4</a>	EC1	18.04	92	94.00%	230/460	17.5/8.8
		3000	213TC	TEFC <a href="#">ECS101M0H7FB4</a>	EC1	17.89	105	94.00%	230/460	17.4/8.7
10	1800	3000	213TC	TEFC <a href="#">ECS101M0H10FB4</a>	EC1	19.02	123	94.80%	230/460	22.0/11.0
15	1800	3000	215TC	TEFC <a href="#">ECS101M0H15FB4</a>	EC1	21.96	168	95.60%	230/460	34.8/17.4
20	1800	3000	215TC	TEFC <a href="#">ECS101M4H20FB4</a>	EC1	23.51	218	95.90%	460	21.6
<b>EC Titanium Motor, Inverter Duty, three phase, totally enclosed, C-Face, footless</b>										
1	1800	4000	143TC	TEFC <a href="#">ECS101M0H1DC4</a>	EC1	12.29	28	89.30%	230/460	2.3/1.2
2	1800	4000	143TC	TEFC <a href="#">ECS101M0H2DC4</a>	EC1	12.29	35	90.70%	230/460	4.5/2.3
3	1800	4000	145TC	TEFC <a href="#">ECS101M0H3DC4</a>	EC1	13.29	44	91.40%	230/460	7.0/3.5
		4000	182TC	TEFC <a href="#">ECS101M0H3EC4</a>	EC1	16.54	59	92.80%	230/460	7.3/3.7
5	1800	4000	143TC	TEFC <a href="#">ECS101M0H5DC4</a>	EC1	15.54	64	93.00%	230/460	10.4/5.2
		4000	182TC	TEFC <a href="#">ECS101M0H5EC4</a>	EC1	16.54	68	93.70%	230/460	10.5/5.3
7 1/2	1800	4000	184TC	TEFC <a href="#">ECS101M0H7EC4</a>	EC1	18.04	92	94.00%	230/460	17.5/8.8
		3000	213TC	TEFC <a href="#">ECS101M0H7FC4</a>	EC1	17.89	105	94.00%	230/460	17.4/8.7
10	1800	3000	213TC	TEFC <a href="#">ECS101M0H10FC4</a>	EC1	19.02	123	94.80%	230/460	22.0/11.0
15	1800	3000	215TC	TEFC <a href="#">ECS101M0H15FC4</a>	EC1	21.96	168	95.60%	230/460	34.8/17.4
20	1800	3000	215TC	TEFC <a href="#">ECS101M4H20FC4</a>	EC1	23.51	218	95.90%	460	21.6

Red catalog number indicates NEW product.

For EC Titanium Mod Express®, contact your local sales office.

## EC Titanium™

Top mount integrated drive motor, three phase, totally enclosed  
1 - 10 Hp



IP54



### Features:

- Permanent Magnet PWM AC Drive Control
- IP54 Gasket Plastic Cover Enclosure
- Built-in ABB Ability and Bluetooth communications
- Serial Modbus RJ45 Interface
- 2 Digital Inputs, 2 Configurable Inputs (Analog or Digital)
- 1 Relay Output
- IE5+ Motor Efficiency
- Class F Insulation with Class B Motor temperature
- Internal grounding brush for bearing current mitigation
- Motor rated for inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- Fans
- Pumps
- Blowers
- Unit handling
- HVAC systems
- Variable speed applications
- General purpose applications
- Compressors

Base Hp	C.H. Speed RPM	Speed Type	NEMA Frame	Enclosure	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Eff.	Motor Input Voltage	Drive Module (b)	Drive Output Amps				
<b>EC Titanium, Top Mount Integrated Drive Motor, three phase, totally enclosed</b>																
<b>1-phase 100V...115V AC (+/-10%) - 3 Phase 230V Output</b>																
1	1800	4000	143T	TEFC	ECS100T1H1DF4	EC2	12.37	35	89.30%	115	2.4	ECI1A3P2	3.2			
<b>1-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>																
1	1800	4000	143T	TEFC	ECS100T8H1DF4	EC2	12.37	35	89.30%	230	2.4	ECI8A7P0	7			
2	1800	4000	145T	TEFC	ECS100T8H2DF4	EC2	12.37	41	90.70%	230	4.4	ECI8A7P0	7			
<b>3-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>																
1	1800	4000	143T	TEFC	ECS100T2H1DF4	EC2	12.37	35	89.30%	230	2.4	ECI2A4P3	4.3			
2	1800	4000	145T	TEFC	ECS100T2H2DF4	EC2	12.37	41	90.70%	230	4.3	ECI2A7P0	7			
3	1800	4000	182T	TEFC	ECS100T2H3EF4	EC2	16.71	66	92.80%	230	7.3	ECI2A10P5	10.5			
5	1800	4000	184T	TEFC	ECS100T2H5EF4	EC2	16.71	77	93.70%	230	10.5	ECI2A10P5	10.5			
<b>3-phase 380...480V AC (+/-10%) - 3 Phase 460V Output</b>																
1	1800	4000	143T	TEFC	ECS100T4H1DF4	EC2	12.37	35	89.30%	460	1.2	ECI4A2P2	2.2			
2	1800	4000	145T	TEFC	ECS100T4H2DF4	EC2	12.37	41	90.70%	460	2.2	ECI4A2P2	2.2			
3	1800	4000	145T	TEFC	ECS100T4H3DF4	EC2	13.37	47	91.40%	460	3.5	ECI4A4P1	4.1			
3	1800	4000	182T	TEFC	ECS100T4H3EF4	EC2	16.71	66	92.80%	460	3.7	ECI4A4P1	4.1			
5	1800	4000	184T	TEFC	ECS100T4H5EF4	EC2	16.71	77	93.70%	460	5.3	ECI4A5P8	5.8			
7 1/2	1800	4000	184T	TEFC	ECS100T4H7EF4	EC2	18.21	106	94.00%	460	8.8	ECI4A9P5	9.5			
					3000	213T	TEFC	ECS100T4H7FF4	EC2	18.1	111	94.70%	460	8.6	ECI4A9P5	9.5
10	1800	3000	215T	TEFC	ECS100T4H10FF4	EC2	19.23	132	94.80%	460	11	ECI4A12P0	12			
<b>EC Titanium, Top Mount Integrated Drive Motor, three phase, totally enclosed, C-Face, foot mounted</b>																
<b>1-phase 100V...115V AC (+/-10%) - 3 Phase 230V Output</b>																
1	1800	4000	143TC	TEFC	ECS100T1H1DB4	EC2	12.37	36	89.30%	115	2.4	ECI1A3P2	3.2			
<b>1-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>																
1	1800	4000	143TC	TEFC	ECS100T8H1DB4	EC2	12.37	35	89.30%	230	2.4	ECI8A7P0	7			
2	1800	4000	145TC	TEFC	ECS100T8H2DB4	EC2	13.37	41	90.70%	230	4.4	ECI8A7P0	7			

Red catalog number indicates NEW product.  
For EC Titanium Mod Express®, contact your local sales office.

**EC Titanium™, top mount integrated drive motor, three phase, totally enclosed**

Hp	Base C.H.					Disc.	"C"	Aprx. Wt. (lb)	Full Load Eff.	Motor Input Voltage	Drive Module (b)	Drive Output Amps
	Speed	Speed	NEMA	Enclosure	Catalog Number							
<b>3-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100T2H1DB4	EC2	12.37	35	89.30%	230	2.4	ECI2A4P3 4.3
2	1800	4000	145TC	TEFC	ECS100T2H2DB4	EC2	13.37	41	90.70%	230	4.3	ECI2A7P0 7
3	1800	4000	182TC	TEFC	ECS100T2H3EB4	EC2	16.71	66	92.80%	230	7.3	ECI2A10P5 10.5
5	1800	4000	184TC	TEFC	ECS100T2H5EB4	EC2	16.71	77	93.70%	230	10.5	ECI2A10P5 10.5
<b>3-phase 380...480V AC (+/-10%) - 3 Phase 460V Output</b>												
1	1800	4000	143TC	TEFC	ECS100T4H1DB4	EC2	12.37	35	89.30%	460	1.2	ECI4A2P2 2.2
2	1800	4000	145TC	TEFC	ECS100T4H2DB4	EC2	13.37	41	90.70%	460	2.2	ECI4A2P2 2.2
3	1800	4000	145TC	TEFC	ECS100T4H3DB4	EC2	13.37	47	91.40%	460	3.5	ECI4A4P1 4.1
		4000	182TC	TEFC	ECS100T4H3EB4	EC2	16.71	67	92.80%	460	3.7	ECI4A4P1 4.1
5	1800	4000	184TC	TEFC	ECS100T4H5EB4	EC2	16.71	77	93.70%	460	5.3	ECI4A5P8 5.8
7 1/2	1800	4000	184TC	TEFC	ECS100T4H7EB4	EC2	18.21	106	94.00%	460	8.8	ECI4A9P5 9.5
		3000	213TC	TEFC	ECS100T4H7FB4	EC2	18.1	111	94.70%	460	8.6	ECI4A9P5 9.5
10	1800	3000	215TC	TEFC	ECS100T4H10FB4	EC2	19.23	132	94.80%	460	11	ECI4A12P0 12
<b>EC Titanium, Top Mount Integrated Drive Motor, three phase, totally enclosed, C-Face, footless</b>												
<b>1-phase 100V...115V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100T1H1DC4	EC2	12.37	36	89.30%	115	2.4	ECI1A3P2 3.2
<b>1-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100T8H1DC4	EC2	12.37	35	89.30%	230	2.4	ECI8A7P0 7
2	1800	4000	145TC	TEFC	ECS100T8H2DC4	EC2	13.37	41	90.70%	230	4.4	ECI8A7P0 7
<b>3-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100T2H1DC4	EC2	12.37	35	89.30%	230	2.4	ECI2A4P3 4.3
2	1800	4000	145TC	TEFC	ECS100T2H2DC4	EC2	13.37	41	90.70%	230	4.3	ECI2A7P0 7
3	1800	4000	182TC	TEFC	ECS100T2H3EC4	EC2	16.71	66	92.80%	230	7.3	ECI2A10P5 10.5
5	1800	4000	184TC	TEFC	ECS100T2H5EC4	EC2	16.71	77	93.70%	230	10.5	ECI2A10P5 10.5
<b>3-phase 380...480V AC (+/-10%) - 3 Phase 460V Output</b>												
1	1800	4000	143TC	TEFC	ECS100T4H1DC4	EC2	12.37	35	89.30%	460	1.2	ECI4A2P2 2.2
2	1800	4000	145TC	TEFC	ECS100T4H2DC4	EC2	13.37	41	90.70%	460	2.2	ECI4A2P2 2.2
3	1800	4000	145TC	TEFC	ECS100T4H3DC4	EC2	13.37	47	91.40%	460	3.5	ECI4A4P1 4.1
		4000	182TC	TEFC	ECS100T4H3EC4	EC2	16.71	67	92.80%	460	3.7	ECI4A4P1 4.1
5	1800	4000	184TC	TEFC	ECS100T4H5EC4	EC2	16.71	77	93.70%	460	5.3	ECI4A5P8 5.8
7 1/2	1800	4000	184TC	TEFC	ECS100T4H7EC4	EC2	18.21	106	94.00%	460	8.8	ECI4A9P5 9.5
		3000	213TC	TEFC	ECS100T4H7FC4	EC2	18.1	111	94.70%	460	8.6	ECI4A9P5 9.5
10	1800	3000	215TC	TEFC	ECS100T4H10FC4	EC2	19.23	132	94.80%	460	11	ECI4A12P0 12

Red catalog number indicates NEW product.

For EC Titanium Mod Express®, contact your local sales office.

## EC Titanium™

Axial mount integrated drive motor, three phase, totally enclosed

1 - 7.5 Hp



**IP54**



### Features:

- Permanent Magnet PWM AC Drive Control
- IP54 Gasket Plastic Cover Enclosure
- Built-in ABB Ability and Bluetooth communications
- Serial Modbus RJ45 Interface
- 2 Digital Inputs, 2 Configurable Inputs (Analog or Digital)
- 1 Relay Output
- IE5+ Motor Efficiency
- Class F Insulation with Class B Motor temperature
- Internal grounding brush for bearing current mitigation
- Motor rated for inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- Fans
- Pumps
- Blowers
- Unit handling
- HVAC systems
- Variable speed applications
- General purpose applications
- Compressors

Base Hp	C.H. Speed RPM	NEMA Type	Enclosure Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Eff.	Motor Amps	Drive Input Voltage (b)	Drive Module	Drive Output Amps
<b>EC Titanium, Axial Mount Integrated Drive Motor, three phase, totally enclosed</b>												
<b>1-phase 100V...115V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143T	TEFC	ECS100A1H1DF4	EC3	16.71	35	89.30%	2.4	115	ECI1A3P2 3.2
<b>1-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143T	TEFC	ECS100A8H1DF4	EC3	16.71	35	89.30%	2.4	230	ECI8A7P0 7
2	1800	4000	145T	TEFC	ECS100A8H2DF4	EC3	16.71	38	90.70%	4.4	230	ECI8A7P0 7
<b>3-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143T	TEFC	ECS100A2H1DF4	EC3	16.71	35	89.30%	2.4	230	ECI2A4P3 4.3
2	1800	4000	145T	TEFC	ECS100A2H2DF4	EC3	16.71	38	90.70%	4.3	230	ECI2A7P0 7
3	1800	4000	182T	TEFC	ECS100A2H3EF4	EC3	22.25	66	92.80%	7.3	230	ECI2A10P5 10.5
5	1800	4000	184T	TEFC	ECS100A2H5EF4	EC3	22.25	76	93.70%	10.5	230	ECI2A10P5 10.5
<b>3-phase 380...480V AC (+/-10%) - 3 Phase 460V Output</b>												
1	1800	4000	143T	TEFC	ECS100A4H1DF4	EC3	16.71	35	89.30%	1.2	460	ECI4A2P2 2.2
2	1800	4000	145T	TEFC	ECS100A4H2DF4	EC3	16.71	38	90.70%	2.2	460	ECI4A2P2 2.2
3	1800	4000	145T	TEFC	ECS100A4H3DF4	EC3	16.71	46	91.40%	3.5	460	ECI4A4P1 4.1
	4000	4000	182T	TEFC	ECS100A4H3EF4	EC3	22.25	66	92.80%	3.7	460	ECI4A4P1 4.1
5	1800	4000	182T	TEFC	ECS100A4H5EF4	EC3	22.25	76	93.70%	5.3	460	ECI4A5P8 5.8
7 1/2	1800	4000	184T	TEFC	ECS100A4H7EF4	EC3	23.76	101	94.00%	8.8	460	ECI4A9P5 9.5
<b>EC Titanium, Axial Mount Integrated Drive Motor, three phase, totally enclosed, C-Face, foot mounted</b>												
<b>1-phase 100V...115V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100A1H1DB4	EC3	16.71	36	89.30%	2.4	115	ECI1A3P2 3.2
<b>1-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100A8H1DB4	EC3	16.71	35	89.30%	2.4	230	ECI8A7P0 7
2	1800	4000	145TC	TEFC	ECS100A8H2DB4	EC3	16.71	41	90.70%	4.4	230	ECI8A7P0 7

(b) Integrated Drive Model – available as a renewal parts replacement assembly

Red catalog number indicates NEW product.

For EC Titanium Mod Express®, contact your local sales office.

**EC Titanium™, axial mount integrated drive motor, three phase, totally enclosed**

Hp	Base C.H.			Catalog Number	Aprx. "C"			Full Load Eff.	Motor Input Amps	Drive Input Voltage	Drive Module (b)	Drive Output Amps
	Speed RPM	Speed Type	NEMA Frame		Disc. Sym.	Dim.	(lb)					
<b>3-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100A2H1DB4	EC3	16.71	35	89.30%	2.4	230	ECI2A4P3 4.3
2	1800	4000	145TC	TEFC	ECS100A2H2DB4	EC3	16.71	41	90.70%	4.3	230	ECI2A7P0 7
3	1800	4000	182TC	TEFC	ECS100A2H3EB4	EC3	22.25	66	92.80%	7.3	230	ECI2A10P5 10.5
5	1800	4000	184TC	TEFC	ECS100A2H5EB4	EC3	22.25	77	93.70%	10.5	230	ECI2A10P5 10.5
<b>3-phase 380...480V AC (+/-10%) - 3 Phase 460V Output</b>												
1	1800	4000	143TC	TEFC	ECS100A4H1DB4	EC3	16.71	35	89.30%	1.2	460	ECI4A2P2 2.2
2	1800	4000	145TC	TEFC	ECS100A4H2DB4	EC3	16.71	41	90.70%	2.2	460	ECI4A2P2 2.2
3	1800	4000	145TC	TEFC	ECS100A4H3DB4	EC3	16.71	47	91.40%	3.5	460	ECI4A4P1 4.1
		4000	182TC	TEFC	ECS100A4H3EB4	EC3	22.25	67	92.80%	3.7	460	ECI4A4P1 4.1
5	1800	4000	184TC	TEFC	ECS100A4H5EB4	EC3	22.25	77	93.70%	5.3	460	ECI4A5P8 5.8
7 1/2	1800	4000	184TC	TEFC	ECS100A4H7EB4	EC3	23.76	106	94.00%	8.8	460	ECI4A9P5 9.5
<b>EC Titanium, Axial Mount Integrated Drive Motor, three phase, totally enclosed, C-Face, footless</b>												
<b>1-phase 100V...115V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100A1H1DC4	EC3	16.71	36	89.30%	2.4	115	ECI1A3P2 3.2
<b>1-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100A8H1DC4	EC3	16.71	35	89.30%	2.4	230	ECI8A7P0 7
2	1800	4000	145TC	TEFC	ECS100A8H2DC4	EC3	16.71	41	90.70%	4.4	230	ECI8A7P0 7
<b>3-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143TC	TEFC	ECS100A2H1DC4	EC3	16.71	35	89.30%	2.4	230	ECI2A4P3 4.3
2	1800	4000	145TC	TEFC	ECS100A2H2DC4	EC3	16.71	41	90.70%	4.3	230	ECI2A7P0 7
3	1800	4000	182TC	TEFC	ECS100A2H3EC4	EC3	22.25	66	92.80%	7.3	230	ECI2A10P5 10.5
5	1800	4000	184TC	TEFC	ECS100A2H5EC4	EC3	22.25	77	93.70%	10.5	230	ECI2A10P5 10.5
<b>3-phase 380...480V AC (+/-10%) - 3 Phase 460V Output</b>												
1	1800	4000	143TC	TEFC	ECS100A4H1DC4	EC3	16.71	35	89.30%	1.2	460	ECI4A2P2 2.2
2	1800	4000	145TC	TEFC	ECS100A4H2DC4	EC3	16.71	41	90.70%	2.2	460	ECI4A2P2 2.2
3	1800	4000	145TC	TEFC	ECS100A4H3DC4	EC3	16.71	47	91.40%	3.5	460	ECI4A4P1 4.1
		4000	182TC	TEFC	ECS100A4H3EC4	EC3	22.25	67	92.80%	3.7	460	ECI4A4P1 4.1
5	1800	4000	184TC	TEFC	ECS100A4H5EC4	EC3	22.25	77	93.70%	5.3	460	ECI4A5P8 5.8
7 1/2	1800	4000	184TC	TEFC	ECS100A4H7EC4	EC3	23.76	106	94.00%	8.8	460	ECI4A9P5 9.5

(b) Integrated Drive Model – available as a renewal parts replacement assembly

Red catalog number indicates NEW product.

For EC Titanium Mod Express®, contact your local sales office.

## EC Titanium™

Plenum use, aluminum housing and fan cover, non-bluetooth drive

1 - 10 Hp



IP54



### Features:

- IP54 Gasket Aluminum Cover Enclosure and Fan Cover
- Non-Bluetooth Drive
- Serial Modbus RJ45 Interface
- 2 Digital Inputs, 2 Configurable Inputs (Analog or Digital)
- 1 Relay Output
- IE5+ Motor Efficiency
- Class F Insulation with Class B Motor temperature
- Internal grounding brush for bearing current mitigation
- Motor rated for inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- Fans
- Pumps
- Blowers
- Unit handling
- HVAC systems
- Variable speed applications
- General purpose applications

Base Hp	C.H. Speed RPM	NEMA Type	Enclosure Frame	Catalog Number	Disc. Sym.	"C" Dim.	Apxr. Wt. (lb)	Full Load Eff.	Motor Input Amps	Drive Input Voltage	Drive Module (b)	Drive Output Amps
<b>EC Titanium, Top Mount Integrated Drive Motor, three phase, totally enclosed, 1 to 10 Hp</b>												
<b>1-phase 100V...115V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143T	TEFC	ECS101T1H1DF4	EC2	16.71	36	89.30%	2.4	115	ECIN1A3P2 3.2
<b>1-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143T	TEFC	ECS101T8H1DF4	EC2	16.71	35	89.30%	2.4	230	ECIN8A7P0 7
2	1800	4000	145T	TEFC	ECS101T8H2DF4	EC2	16.71	41	90.70%	4.4	230	ECIN8A7P0 7
<b>3-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143T	TEFC	ECS101T2H1DF4	EC2	16.71	35	89.30%	2.4	230	ECIN2A4P3 4.3
2	1800	4000	145T	TEFC	ECS101T2H2DF4	EC2	16.71	41	90.70%	4.3	230	ECIN2A7P0 7
3	1800	4000	182T	TEFC	ECS101T2H3EF4	EC2	22.25	66	92.80%	7.3	230	ECIN2A10P5 10.5
5	1800	4000	184T	TEFC	ECS101T2H5EF4	EC2	22.25	77	93.70%	10.5	230	ECIN2A10P5 10.5
<b>3-phase 380...480V AC (+/-10%) - 3 Phase 460V Output</b>												
1	1800	4000	143T	TEFC	ECS101T4H1DF4	EC2	16.71	35	89.30%	1.2	460	ECIN4A2P2 2.2
2	1800	4000	145T	TEFC	ECS101T4H2DF4	EC2	16.71	41	90.70%	2.2	460	ECIN4A2P2 2.2
3	1800	4000	145T	TEFC	ECS101T4H3DF4	EC2	16.71	47	91.40%	3.5	460	ECIN4A4P1 4.1
		4000	182T	TEFC	ECS101T4H3EF4	EC2	22.25	67	92.80%	3.7	460	ECIN4A4P1 4.1
5	1800	4000	184T	TEFC	ECS101T4H5EF4	EC2	22.25	77	93.70%	5.3	460	ECIN4A5P8 5.8
7 1/2	1800	4000	184T	TEFC	ECS101T4H7EF4	EC2	23.76	106	94.00%	8.8	460	ECIN4A9P5 9.5
		3000	213T	TEFC	ECS101T4H7FF4	EC2	18.1	111	94.70%	8.6	460	ECIN4A9P5 9.5
10	1800	3000	215T	TEFC	ECS101T4H10FF4	EC2	19.23	132	94.80%	11	460	ECIN4A12P0 12
<b>EC Titanium, Axial Mount Integrated Drive Motor, three phase, totally enclosed, 1 to 7 1/2 Hp</b>												
<b>1-phase 100V...115V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143T	TEFC	ECS101A1H1DB4	EC3	16.71	36	89.30%	2.4	115	ECIN1A3P2 3.2
<b>1-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>												
1	1800	4000	143T	TEFC	ECS101A8H1DB4	EC3	16.71	35	89.30%	2.4	230	ECIN8A7P0 7
2	1800	4000	145T	TEFC	ECS101A8H2DB4	EC3	16.71	41	90.70%	4.4	230	ECIN8A7P0 7

(b) Integrated Drive Model – available as a renewal parts replacement assembly

Red catalog number indicates NEW product.

For EC Titanium Mod Express®, contact your local sales office.

**EC Titanium™, plenum use, aluminum housing and fan cover, non-bluetootn drive**

Hp	Base	C.H.	NEMA	Enclosure	Catalog	Disc.	"C"	Aprx.	Full	Motor	Drive	Drive	Drive								
	Speed	Speed									RPM	Type	Frame	Number	Sym.	Dim.	Wt.	Load	Input	Input	Module
<b>3-phase 208...240V AC (+/-10%) - 3 Phase 230V Output</b>																					
1	1800	4000	143T	TEFC	ECS101A2H1DB4	EC3	16.71	35	89.30%	2.4	230	ECIN2A4P3	4.3								
2	1800	4000	145T	TEFC	ECS101A2H2DB4	EC3	16.71	41	90.70%	4.3	230	ECIN2A7P0	7								
3	1800	4000	182T	TEFC	ECS101A2H3EB4	EC3	22.25	66	92.80%	7.3	230	ECIN2A10P5	10.5								
5	1800	4000	184T	TEFC	ECS101A2H5EB4	EC3	22.25	77	93.70%	10.5	230	ECIN2A10P5	10.5								
<b>3-phase 380...480V AC (+/-10%) - 3 Phase 460V Output</b>																					
1	1800	4000	143T	TEFC	ECS101A4H1DB4	EC3	16.71	35	89.30%	1.2	460	ECIN4A2P2	2.2								
2	1800	4000	145T	TEFC	ECS101A4H2DB4	EC3	16.71	41	90.70%	2.2	460	ECIN4A2P2	2.2								
3	1800	4000	145T	TEFC	ECS101A4H3DB4	EC3	16.71	47	91.40%	3.5	460	ECIN4A4P1	4.1								
		4000	182T	TEFC	ECS101A4H3EB4	EC3	22.25	67	92.80%	3.7	460	ECIN4A4P1	4.1								
5	1800	4000	184T	TEFC	ECS101A4H5EB4	EC3	22.25	77	93.70%	5.3	460	ECIN4A5P8	5.8								
7 1/2	1800	4000	184T	TEFC	ECS101A4H7EB4	EC3	23.76	106	94.00%	8.8	460	ECIN4A9P5	9.5								

(b) Integrated Drive Model – available as a renewal parts replacement assembly

Red catalog number indicates NEW product.

For EC Titanium Mod Express®, contact your local sales office.

---

## EC Titanium

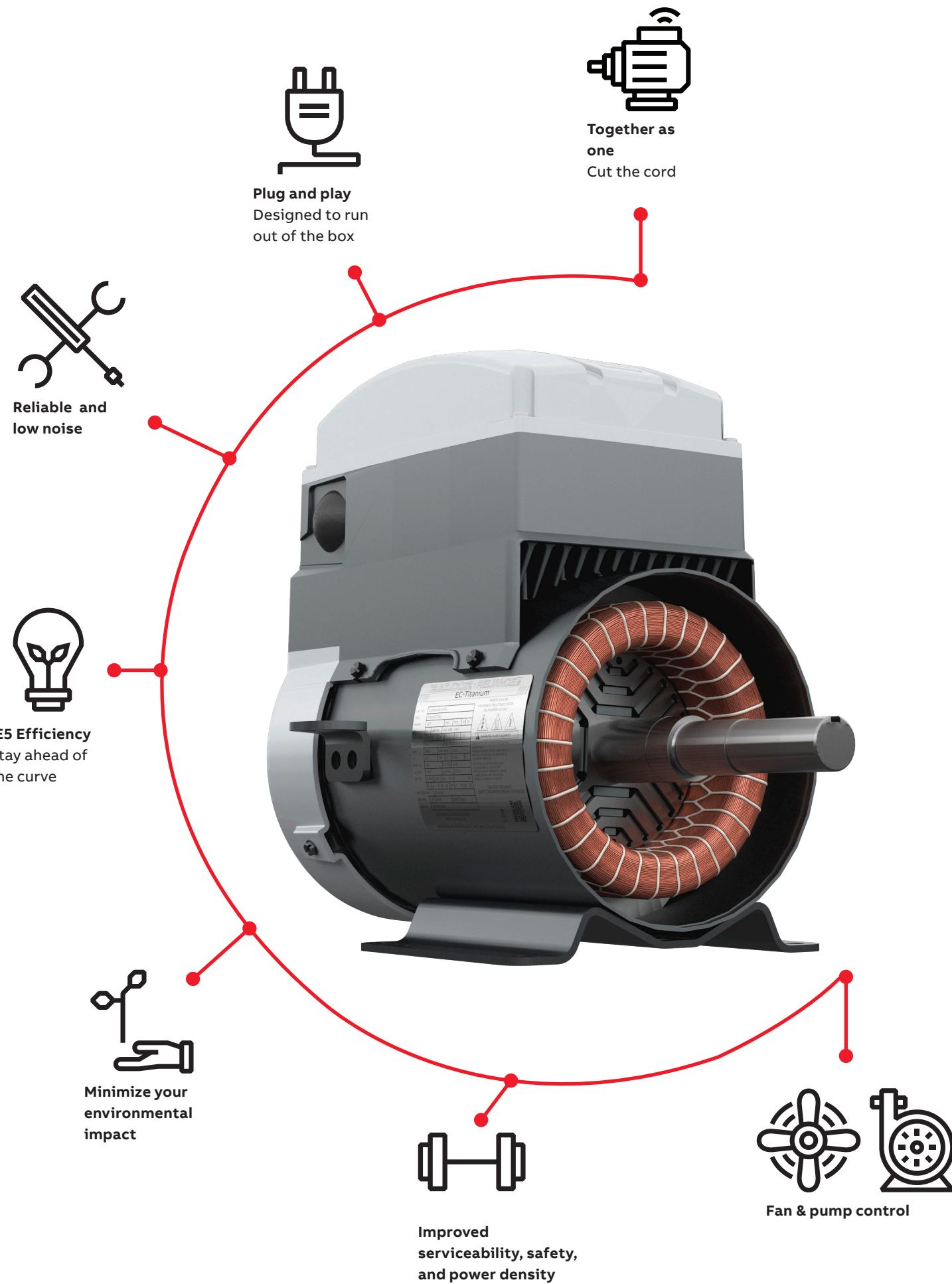
Beyond EC efficiency and performance is here

Introducing the Baldor-Reliance® EC Titanium™ integrated motor-drive. FASR™ (Ferrite Assisted Synchronous Reluctance) motors are extremely efficient, especially at reduced speeds, compared to traditional AC induction motors. EC, or Electronically Commutated motors, have traditionally been used to meet the high efficiency requirements. However, as efficiency regulations tighten, more may be required. Our solution incorporates permanent magnet design into a synchronous reluctance rotor technology to achieve IE5+ ultra premium efficiency at rated design while maintaining performance across varying speed and load conditions. Equipment incorporating this technology can therefore achieve optimal performance no matter the operating point.

---

**Get a glimpse into achieving the next level of energy efficiency**





## General purpose HVAC

Three phase, ODP, foot mounted  
1 - 100 Hp

**IP22**



### Features:

- External provisions for bearing current mitigation
- Designed for longevity with 3 year warranty
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- Fans
- Pumps
- Blowers
- Air handling
- HVAC systems
- Variable speed applications
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>230/460 volt</b>									
1	1800	143T	EHM3116T	HV3	11.12	35	85.5	230/460	1.5
1 1/2	1800	145T	EHM3154T	HV3	11.62	37	86.5	230/460	2.2
2	1800	145T	EHM3157T	HV3	12.13	41	86.5	230/460	2.9
3	1800	182T	EHM3211T	HV3	15.00	72	89.5	230/460	4.2
	1200	213T	EHM3305T	HV3	16.32	114	88.5	230/460	4.5
5	1800	184T	EHM3218T	HV3	16.50	85	89.5	230/460	6.6
	1200	215T	EHM3309T	HV3	17.45	141	89.5	230/460	7.4
7 1/2	1800	213T	EHM3311T	HV3	16.32	115	91	230/460	9.7
	1200	254T	EHM2506T	HV3	23.19	248	90.2	230/460	11
10	1800	215T	EHM3313T	HV3	17.45	127	91.7	230/460	12.5
	1200	256T	EHM2511T	HV3	23.19	260	91.7	230/460	14.3
15	1800	254T	EHM2523T	HV3	21.69	212	93	230/460	17.7
	1200	284T	EHM2524T	HV3	23.81	285	91.7	230/460	20.5
20	1800	256T	EHM2515T	HV3	21.69	225	93	230/460	23.5
	1200	286T	EHM2528T	HV3	23.81	375	92.4	230/460	27
25	1800	284T	EHM2531T	HV3	25.06	345	93.6	230/460	30
	1200	324T	EHM2532T	HV3	27.69	393	93	230/460	34
30	1800	286T	EHM2535T	HV3	25.06	339	94.1	230/460	35
	1200	326T	EHM2536T	HV3	28.69	482	93.6	230/460	38
40	1800	324T	EHM2539T	HV3	27.19	433	94.1	230/460	49
50	1800	326T	EHM2543T	HV3	27.69	469	94.5	230/460	57
60	1800	364T	EHM2547T	HV3	29.94	582	95	230/460	68
75	1800	365T	EHM2551T	HV3	33.72	752	95	230/460	87
100	1800	404T	EHM2555T	HV3	36.97	911	95.4	230/460	113
<b>230/460 volt, F2 mounting</b>									
2	1800	145T	EHFM3157T	HV3	12.13	49	86.5	230/460	2.9
3	1800	182T	EHFM3211T	HV3	15.00	68	89.5	230/460	4.2
5	1800	184T	EHFM3218T	HV3	16.50	82	89.5	230/460	6.6
7 1/2	1800	213T	EHFM3311T	HV3	16.32	115	91	230/460	9.7
10	1800	215T	EHFM3313T	HV3	17.45	127	91.7	230/460	12.5
15	1800	254T	EHFM2523T	HV3	21.69	212	93	230/460	17.7
20	1800	256T	EHFM2515T	HV3	21.69	227	93	230/460	23.5
25	1800	284T	EHFM2531T	HV3	25.06	301	93.6	230/460	30
30	1800	286T	EHFM2535T	HV3	25.06	328	94.1	230/460	35
40	1800	324T	EHFM2539T	HV3	27.19	429	94.1	230/460	49
50	1800	326T	EHFM2543T	HV3	27.69	466	94.5	230/460	57

**General purpose HVAC, three phase, ODP, foot mounted**

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>208 volt</b>									
1	1800	143T	EHM3116T-8	HV3	11.12	34	85.5	208	3.5
1 1/2	1800	145T	EHM3154T-8	HV3	11.62	38	86.5	208	5.1
2	1800	145T	EHM3157T-8	HV3	12.13	41	86.5	208	6.5
3	1800	182T	EHM3211T-8	HV3	15.00	71	89.5	208	9.7
5	1800	184T	EHM3218T-8	HV3	16.50	85	89.5	208	15.3
7 1/2	1800	213T	EHM3311T-8	HV3	16.32	115	91	208	22.2
10	1800	215T	EHM3313T-8	HV3	17.45	120	91.7	208	29.5
15	1800	254T	EHFM2523T-8	HV3	21.69	211	93	208	40.7
		254T	EHM2523T-8	HV3	21.69	210	93	208	40.7
20	1800	256T	EHM2515T-8	HV3	21.69	226	93	208	54.3
25	1800	284T	EHM2531T-8	HV3	25.06	369	93.6	208	70
30	1800	286T	EHM2535T-8	HV3	25.06	331	94.1	208	81
40	1800	324T	EHM2539T-8	HV3	26.69	434	94.1	208	108
50	1800	326T	EHM2543T-8	HV3	27.69	459	94.5	208	132

## General purpose HVAC

Three phase, TEFC, foot mounted  
1 - 50 Hp



### Features:

- External provisions for bearing current mitigation
- Designed for longevity with 3 year warranty
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- Fans
- Pumps
- Blowers
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>230/460 volt</b>									
1	1800	143T	EHM3546T	HV3	12.31	37	85.5	230/460	1.5
1 1/2	1800	145T	EHM3554T	HV3	13.29	44	86.5	230/460	2.2
2	1800	145T	EHM3558T	HV3	13.29	46	86.5	230/460	2.9
3	1800	182T	EHM3611T	HV3	16.54	73	89.5	230/460	4.2
5	1800	184T	EHM3615T	HV3	18.04	93	89.5	230/460	6.7
	1200	215T	EHM3708T	HV3	19.78	154	89.5	230/460	7.3
7 1/2	1800	213T	EHM3710T	HV3	19.03	128	91.7	230/460	9.4
	1200	254T	EHM2276T	HV3	23.28	294	91	230/460	11
10	1800	215T	EHM3714T	HV3	20.53	165	91.7	230/460	12
	1200	256T	EHM2332T	HV3	23.28	290	91	230/460	14.1
15	1800	254T	EHM2333T	HV3	23.28	250	92.4	230/460	18.1
	1200	284T	EHM4100T	HV3	27.76	400	91.7	230/460	21
20	1800	256T	EHM2334T	HV3	23.28	288	93	230/460	24
	1200	286T	EHM4102T	HV3	27.76	457	91.7	230/460	27
25	1800	284T	EHM4103T	HV3	27.76	430	93.6	230/460	30
	1200	324T	EHM4111T	HV3	30.39	465	93	230/460	32
30	1800	286T	EHM4104T	HV3	27.76	423	93.6	230/460	38
40	1800	324T	EHM4110T	HV3	30.28	612	94.1	230/460	48
50	1800	326T	EHM4115T	HV3	30.28	622	94.5	230/460	58
<b>575 volt</b>									
1	1800	143T	EHM3546T-5	HV3	12.31	37	85.5	575	1.2
1 1/2	1800	145T	EHM3554T-5	HV3	13.29	44	86.5	575	1.8
2	1800	145T	EHM3558T-5	HV3	13.29	47	86.5	575	2.3
3	1800	182T	EHM3611T-5	HV3	16.54	74	89.5	575	3.3
5	1800	184T	EHM3615T-5	HV3	18.04	92	89.5	575	5.3
7 1/2	1800	213T	EHM3710T-5	HV3	19.03	127	91.7	575	7.6
10	1800	215T	EHM3714T-5	HV3	20.53	165	91.7	575	9.6
15	1800	254T	EHM2333T-5	HV3	23.28	255	92.4	575	14.6
20	1800	256T	EHM2334T-5	HV3	23.28	286	93	575	19.2
25	1800	284T	EHM4103T-5	HV3	27.76	397	93.6	575	24
30	1800	286T	EHM4104T-5	HV3	27.76	395	93.6	575	29
40	1800	324T	EHM4110T-5	HV3	30.28	575	94.1	575	39
50	1800	326T	EHM4115T-5	HV3	30.28	622	94.5	575	50

Cast iron frame

\* IP54 when Drain Fitting Kit #HA5027A03 is installed in the weep holes (48 - 256T frame motors only)

## General purpose HVAC

Three phase, TEAO, foot mounted  
1/4 - 10 Hp

**IP44\***



### Features:

- 36" long leads for ease of connectivity
- Oversized ball bearings for large overhung load from shaft mounted fans
- Locked drive end bearing to allow mounting in any configuration

### Applications:

- Fans
- Pumps
- Blowers
- Condensers
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
1/4	1800	48	AOM3454	HV3	9.63	18	64	230/460	0.7
	1200	48	AOM3455	HV3	9.63	19	68	230/460	0.7
1/3	1800	48	AOM3458	HV3	9.63	18	68	230/460	0.9
	1200	56	AOM3535	HV3	10.25	22	70	208-230/460	0.9
1/2	1800	56	AOM3538	HV3	10.25	25	70	208-230/460	1.1
	1200	56	AOM3539	HV3	10.88	24	72	208-230/460	1.2
3/4	1800	56	AOM3542	HV3	10.25	23	72	208-230/460	1.6
	1200	56	AOM3543	HV3	11.75	31	77	208-230/460	1.5
1	1800	143T	AOM3546T	HV3	11.81	33	75.5	208-230/460	1.8
	1200	145T	AOM3556T	HV3	11.12	35	78.5	208-230/460	1.9
	900	182T	AOM3617T	HV3	13.62	62	74	208-230/460	2.2
1 1/2	1800	145T	AOM3554T	HV3	11.12	34	81.5	208-230/460	2.3
	1200	182T	AOM3607T	HV3	13.62	50	78.5	208-230/460	2.5
2	1800	145T	AOM3558T	HV3	12.12	38	82.5	208-230/460	3
	1200	184T	AOM3614T	HV3	15.00	63	81.5	208-230/460	3.4
	900	213T	AOM3702T	HV3	16.32	97	82.5	208-230/460	3.5
3	1800	182T	AOM3611T	HV3	13.62	59	85.5	208-230/460	4.5
	1200	213T	AOM3704T	HV3	16.32	92	84	208-230/460	4.8
	900	215T	AOM3705T	HV3	17.44	113	86.5	208-230/460	5.2
5	1800	184T	AOM3615T	HV3	15.00	71	87.5	208-230/460	6.8
	1200	215T	AOM3708T	HV3	16.32	115	86.5	208-230/460	7.6
	900	254T	AOM25904T	HV3	19.63	208	82.5	230/460	8.9
7 1/2	1800	213T	AOM3710T	HV3	16.32	106	87.5	208-230/460	10.9
10	1800	215T	AOM3714T	HV3	17.45	126	89.5	208-230/460	13.5

\* IP54 when Drain Fitting Kit #HA5027A03 is installed in the weep holes (48 thru 256T frame motors only)

# Chiller/cooling tower

Three phase, TEAO

3 - 60 Hp

**IP55**



## Features:

- Severe duty construction for harsh environments
- Corrosion resistant epoxy finish
- Multiple lifting provisions for ease of installation
- Strategically placed drains for optimal moisture removal
- Four barrier shaft sealing system on drive end
- Lipped conduit lid for increased ingress protection

## Applications:

- Cooling towers
- Chillers
- Fans
- Pumps
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps	Airflow Ft/Min
3	1800	213T	ECTM3611T-57	HV3	16.32	116	87.5	230/380-415	4.8	1200
	1200	213T	ECTM3704T	HV3	17.45	140	89.5	230/460	4.6	1200
5	1800	213T	ECTM3615T-57	HV3	17.45	134	88.5	230/380-415	7.4	1200
	184T	CTM3665T		HV3	13.68	100	87.5	208-230/460	6.9	1200
	184T	ECTM3665T		HV3	13.68	108	89.5	208-230/460	6.6	1200
	1200	213T	ECTM3708T	HV3	18.95	185	89.5	230/460	7.2	1200
7 1/2	215T	CTM3768T		HV3	19.54	206	87.5	208-230/460	7.5	1200
	215T	ECTM3768T		HV3	19.54	227	90.2	230/460	7.3	1200
	1800	213T	CTM3770T	HV3	19.54	164	89.5	208-230/460	10.3	1500
10	213T	ECTM3770T		HV3	19.54	170	91.7	208-230/460	9.5	1500
	1200	254T	CTM2276T	HV3	22.16	179	89.5	208-230/460	10.9	1500
	254T	ECTM2276T		HV3	23.00	290	91	230/460	11	1500
12	1800	215T	CTM3774T	HV3	19.54	170	89.5	208-230/460	13	1500
	215T	ECTM3774T		HV3	19.54	231	91.7	208-230/460	12.2	1500
	1200	256T	CTM2332T	HV3	23.00	275	89.5	230/460	14.4	1500
	256T	ECTM2332T		HV3	23.00	297	91	230/460	14.4	1500
15	1800	254T	CTM2333T	HV3	22.16	236	91	208-230/460	18.5	1500
	254T	ECTM2333T		HV3	23.00	278	92.4	230/460	18.1	1500
	1200	284T	ECTM4100T	HV3	25.63	345	91.7	230/460	20	1500
20	1800	256T	CTM2334T	HV3	23.91	245	91	230/460	25	1500
	256T	ECTM2334T		HV3	23.00	293	93	230/460	24	1500
25	1800	284T	CTM4103T	HV3	25.78	343	92.4	230/460	29	1500
	284T	ECTM4103T		HV3	25.63	378	93.6	230/460	30	1500
30	1800	286T	CTM4104T	HV3	25.78	363	92.4	230/460	36	1500
	286T	ECTM4104T		HV3	25.63	410	93.6	230/460	38	1500
40	1800	324T	CTM4110T	HV3	28.38	529	93	230/460	47	2000
	324T	ECTM4110T		HV3	28.38	553	94.1	230/460	48	1500
50	1800	326T	ECTM4115T	HV3	28.38	598	94.5	230/460	58	2000
60	1800	364T	ECTM4314T	HV3	29.70	835	95	230/460	68	2000

Cast iron frame

## Chiller/cooling tower

Three phase, two speed, TEFC  
10 - 60 Hp

**IP55**



### Features:

- Multi speed electrical design
- Severe duty construction for harsh environments
- Corrosion resistant epoxy finish
- Lead lugs for ease of connectivity

### Applications:

- Cooling towers
- Chillers
- Fans
- Pumps
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load		
							Efficiency (b)	Voltage	Full Load Amps
10/2.5	1800/900	215T	CTM1760T	HV3	19.32	210	89.5	460	14.3
15/3.75	1800/900	254T	CTM1761T	HV3	24.78	290	90.2	460	18.1
20/5	1800/900	256T	CTM1762T	HV3	24.78	299	91	460	23.6
25/6.25	1800/900	284T	CTM1763T	HV3	27.93	342	91.7	460	32
30/7.5	1800/900	286T	CTM1764T	HV3	27.93	333	91.7	460	36
40/10	1800/900	324T	CTM1765T	HV3	30.28	619	92.4	460	48
50/12.5	1800/900	326T	CTM1766T	HV3	30.28	657	90.2	460	63
60/15	1800/900	364T	CTM1767T	HV3	33.44	836	93	460	69.6

(b) Full load efficiency is at 1800 RPM and low speed efficiency is not published.

Cast iron frame

## Chiller/cooling tower

Three phase, TEAO, with internal AEGIS® shaft grounding ring

3 - 60 Hp



IP55



### Features:

- Robust cast iron or rolled steel frame construction
- IP55 ingress protection
- Multicolor leads, for ease of connections
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2
- Space heaters
- Internal AEGIS® Bearing Protection Ring installed
- Designed for longevity with a 3 year warranty

### Applications:

- Cooling towers
- Chillers
- Fans
- Pumps
- Air handling
- HVAC systems

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps	Airflow Ft/Min
3	1800	184	ECTM3611T-G-AO	HV3	16.32	116	87.5	230/380-415	4.8	1200
	1200	213T	ECTM3704T-G-AO	HV3	17.45	140	89.5	230/460	4.6	1200
5	1800	184T	ECTM3615T-G-AO	HV3	17.45	134	88.5	230/380-415	7.4	1200
		184T	ECTM3665T-G-AO	HV3	13.68	100	87.5	208-230/460	6.9	1200
	1200	213T	ECTM3708T-G-AO	HV3	18.95	185	89.5	230/460	7.2	1200
		215T	ECTM3768T-G-AO	HV3	19.54	206	87.5	208-230/460	7.5	1200
7 1/2	1800	213T	ECTM3770T-G-AO	HV3	19.54	164	89.5	208-230/460	10.3	1500
	1200	254T	ECTM2276T-G-AO	HV3	22.16	179	89.5	208-230/460	10.9	1500
10	1800	215T	ECTM3774T-G-AO	HV3	19.54	170	89.5	208-230/460	13	1500
	1200	256T	ECTM2332T-G-AO	HV3	23	275	89.5	230/460	14.4	1500
15	1800	254T	ECTM2333T-G-AO	HV3	22.16	236	91	208-230/460	18.5	1500
	1200	284T	ECTM4100T-G-AO	HV3	25.63	345	91.7	230/460	20	1500
20	1800	256T	ECTM2334T-G-AO	HV3	23.91	245	91	230/460	25	1500
25	1800	284T	ECTM4103T-G-AO	HV3	25.78	343	92.4	230/460	29	1500
30	1800	286T	ECTM4104T-G-AO	HV3	25.78	363	92.4	230/460	36	1500
40	1800	324T	ECTM4110T-G-AO	HV3	28.38	529	93	230/460	47	2000
50	1800	326T	ECTM4115T-G-AO	HV3	28.38	598	94.5	230/460	58	2000
60	1800	364T	ECTM4314T-G-AO	HV3	29.7	835	95	230/460	68	2000

Cast iron frame

Red catalog number indicates NEW product.

## Chiller/cooling tower

Three phase, TEFC, with internal AEGIS® shaft grounding ring

1 - 100 Hp



IP55



### Features:

- Robust cast iron frame construction
- IP55 ingress protection
- Multicolor leads, for ease of connections
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2
- Space heaters
- Internal AEGIS® Bearing Protection Ring installed
- Designed for longevity with a 3 year warranty

### Applications:

- Cooling towers
- Chillers
- Fans
- Pumps
- Air handling
- HVAC systems

		NEMA	Catalog	Mult.	"C"	Aprx.	Full Load		Full Load
Hp	RPM	Frame	Number	Sym.	Dim.	Wt. (lb)	Efficiency (b)	Voltage	Amps
1	1800	143T	ECTM3581T-G	HV3	12.54	55	85.5	230/460	1.5
	1200	145T	ECTM3582T-G	HV3	12.54	56	82.5	230/460	1.7
1.5	1800	145T	ECTM3584T-G	HV3	12.54	61	86.5	230/460	2.3
	1200	182T	ECTM3667T-G	HV3	15.24	99	87.5	230/460	2.5
2	1800	145T	ECTM3587T-G	HV3	12.54	62	86.5	230/460	2.9
	1200	184T	ECTM3664T-G	HV3	15.24	123	88.5	230/460	3.15
3	1800	182T	ECTM3661T-G	HV3	15.24	105	89.5	230/460	4.1
	1200	213T	ECTM3764T-G	HV3	18.45	173	89.5	230/460	4.5
5	1800	184T	ECTM3665T-G	HV3	15.24	107	89.5	230/460	6.6
	1200	215T	ECTM3768T-G	HV3	18.45	195	89.5	230/460	7.4
7.5	1800	213T	ECTM3770T-G	HV3	18.45	170	91.7	230/460	9.5
	1200	254T	ECTM2276T-G	HV3	23.28	278	91	230/460	11
10	1800	215T	ECTM3774T-G	HV3	18.45	232	91.7	230/460	12.2
	1200	256T	ECTM2332T-G	HV3	23.28	290	91	230/460	14.1
15	1800	254T	ECTM2333T-G	HV3	23.28	270	92.4	230/460	18.1
	1200	284T	ECTM4100T-G	HV3	27.76	391	91.7	230/460	21
20	1800	256T	ECTM2334T-G	HV3	23.30	289	93	230/460	24
	1200	286T	ECTM4102T-G	HV3	27.76	399	91.7	230/460	27
25	1800	284T	ECTM4103T-G	HV3	27.76	388	93.6	230/460	30
	1200	324T	ECTM4111T-G	HV3	30.39	445	93	230/460	32
30	1800	286T	ECTM4104T-G	HV3	27.76	430	93.6	230/460	38
	1200	326T	ECTM4117T-G	HV3	30.28	604	93	230/460	39
40	1800	324T	ECTM4110T-G	HV3	30.28	570	94.1	230/460	48
	1200	364T	ECTM4308T-G	HV3	33.48	899	94.1	230/460	49.4
50	1800	326T	ECTM4115T-G	HV3	30.28	650	94.5	230/460	58
	1200	365T	ECTM4312T-G	HV3	33.48	902	94.1	230/460	61.7
60	1800	364T	ECTM4314T-G	HV3	33.44	912	95	230/460	67.8
	1200	404T	ECTM4403T-G	HV3	38.04	1187	95	230/460	69
75	1800	365T	ECTM4316T-G	HV3	33.48	955	95.4	230/460	84.9
	1200	405T	ECTM4404T-G	HV3	38.04	1229	94.5	230/460	86.8
100	1800	405T	ECTM4400T-4G	HV3	38.04	1203	95.4	230/460	112
	1200	444T	ECTM4409T-4G	HV3	44.75	1828	95	230/460	119

(b) Full load efficiency is at 1800 RPM and low speed efficiency is not published.

Cast iron frame

Red catalog number indicates NEW product.

## Chiller/cooling tower

Three phase, TEFC, 575V, with internal AEGIS® shaft grounding ring  
1 - 75 Hp



IP55



### Features:

- Robust cast iron frame construction
- IP55 ingress protection
- Multicolor leads, for ease of connections
- Suitable for inverter use per NEMA MG1 Part 31.4.4.2
- Space heaters
- Internal AEGIS® Bearing Protection Ring installed
- Designed for longevity with a 3 year warranty

### Applications:

- Cooling towers
- Chillers
- Fans
- Pumps
- Air handling
- HVAC systems

Hp	NEMA Frame	Catalog Number	Mult. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency (b)	Voltage	Full Load Amps	
1	1800	143T	<b>ECTM3581T-5G</b>	HV3	12.54	55	85.5	575	1.5
	1200	145T		HV3	12.54	56	82.5	575	1.7
1.5	1800	145T	<b>ECTM3584T-5G</b>	HV3	12.54	61	86.5	575	2.3
	1200	182T		HV3	15.24	99	87.5	575	2.5
2	1800	145T	<b>ECTM3587T-5G</b>	HV3	12.54	62	86.5	575	2.9
	1200	184T		HV3	15.24	123	88.5	575	3.15
3	1800	182T	<b>ECTM3661T-5G</b>	HV3	15.24	105	89.5	575	4.1
	1200	213T		HV3	18.45	173	89.5	575	4.5
5	1800	184T	<b>ECTM3665T-5G</b>	HV3	15.24	107	89.5	575	6.6
	1200	215T		HV3	18.45	195	89.5	575	7.4
7.5	1800	213T	<b>ECTM3764T-5G</b>	HV3	18.45	170	91.7	575	9.5
	1200	254T		HV3	23.28	278	91	575	11
10	1800	215T	<b>ECTM3774T-5G</b>	HV3	18.45	232	91.7	575	12.2
	1200	256T		HV3	23.28	290	91	575	14.1
15	1800	254T	<b>ECTM2333T-5G</b>	HV3	23.28	270	92.4	575	18.1
	1200	284T		HV3	27.76	391	91.7	575	21
20	1800	256T	<b>ECTM2334T-5G</b>	HV3	23.30	289	93	575	24
	1200	286T		HV3	27.76	399	91.7	575	27
25	1800	284T	<b>ECTM4103T-5G</b>	HV3	27.76	388	93.6	575	30
	1200	324T		HV3	30.39	445	93	575	32
30	1800	286T	<b>ECTM4104T-5G</b>	HV3	27.76	430	93.6	575	38
	1200	326T		HV3	30.28	604	93	575	39
40	1800	324T	<b>ECTM4110T-5G</b>	HV3	30.28	570	94.1	575	48
	1200	364T		HV3	33.48	899	94.1	575	49.4
50	1800	326T	<b>ECTM4115T-5G</b>	HV3	30.28	650	94.5	575	58
	1200	365T		HV3	33.48	902	94.1	575	61.7
60	1800	364T	<b>ECTM4314T-5G</b>	HV3	33.44	912	95	575	67.8
	1200	404T		HV3	38.04	1187	95	575	69
75	1800	365T	<b>ECTM4316T-5G</b>	HV3	33.48	955	95.4	575	84.9
	1200	405T		HV3	38.04	1229	94.5	575	86.8

(b) Full load efficiency is at 1800 RPM and low speed efficiency is not published.

Cast iron frame

Red catalog number indicates NEW product.

## Definite purpose HVAC

Condenser fan, three phase, ODP, “belly band” round body

1/2 - 1 1/2 Hp

**IP22**



### Features:

- 6" long shaft with flat and keyway
- Terminal panel for ease of connectivity
- Automatic thermal overload protection
- Lubed for life double shielded bearings

### Applications:

- Fans
- Pumps
- Blowers
- Condensers
- Air handling
- HVAC systems
- General purpose applications

<b>Hp</b>	<b>RPM</b>	<b>NEMA Frame</b>	<b>Catalog Number</b>	<b>Disc. Sym.</b>	<b>"C" Dim.</b>	<b>Aprx. Wt. (lb)</b>	<b>Full Load</b>		<b>Full Load Amps</b>
							<b>Efficiency</b>	<b>Voltage</b>	
1/2	1200	48YZ	CFM3036A	HV3	14.29	25	72	208-230/460	1.2
		56YZ	CFM3136A	HV3	15.30	28	70	208-230/460	1.2
3/4	1200	48YZ	CFM3046A	HV3	16.02	33	77	208-230/460	1.5
		56YZ	CFM3146A	HV3	15.55	33	75.5	208-230/460	1.4
1	1200	56YZ	CFM3156A	HV3	16.55	38	75.5	208-230/460	1.8
1 1/2	1200	56YZ	CFM3166A	HV3	17.43	48	76	208-230/460	2.5

Condenser fan, three phase, TEAO, “belly band” round body  
1/2 Hp

**IP44\***



### Features:

- Low temp grease for use in industrial freezers
- Terminal panel for ease of connectivity
- Automatic thermal overload protection
- Lubed for life double shielded bearings
- 60 and 50 Hz data included for connection at either frequency

### Applications:

- Industrial freezers/refrigeration
- Food processing plants
- Low temperature condensers

<b>Hp</b>	<b>RPM</b>	<b>NEMA Frame</b>	<b>Catalog Number</b>	<b>Disc. Sym.</b>	<b>"C" Dim.</b>	<b>Aprx. Wt. (lb)</b>	<b>Full Load</b>		<b>Full Load Amps</b>
							<b>Efficiency</b>	<b>Voltage</b>	
1/2	1200	56	M3539-TP	HV3	11.68	29	70	208-230/460	1.2

\* IP54 when Drain Fitting Kit #HA5027A03 is installed in the weep holes (48 - 256T frame motors only)

## Definite purpose HVAC

Fan and blower, single and three phase, ODP, resilient base

1/4 - 2 Hp

**IP22**



### Features:

- Resilient cushion base for low noise and reduced vibration
- Terminal panel for ease of connectivity
- Automatic thermal overload protection
- Lubed for life double shielded bearings

### Applications:

- Fans
- Pumps
- Blowers
- Condensers
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Apxr. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Single phase</b>									
1/4	1800	48	<b>ERL1203A</b>	HV1	10.34	20	68.5	115/230	1.3
1/3	1800	56	<b>ERL1206A</b>	HV1	10.96	24	72.4	115/230	1.7
1/2	3600	48	RL1209A	HV1	10.96	27	74	115/230	4.2
	1800	56	RL1304A	HV1	11.59	26	62	115/230	4.2
		56	RL1323A	HV1	10.97	24	62	115/230	4
3/4	3600	56	<b>ERL1306A</b>	HV1	11.59	26	76.2	115/230	3.3
	1800	56H	RL1307A	HV1	12.96	34	68	115/230	5.1
		56	RL1324A	HV1	12.47	31	71	115/230	5
1	3600	56H	<b>ERL1309A</b>	HV1	11.42	36	82	115/230	3.9
	1800	56H	RL1310A	HV1	12.04	34	68	115/230	6.5
1 1/2	3600	56H	ERL1313A	HV1	13.30	52	82	115/230	5.9
	1800	56H	ERL1319A	HV1	14.67	59	83.8	115/230	6.2
<b>Single phase, 277 volt</b>									
1/3	1800	56	RL1301A277	HV1	10.97	23	60	277	2.5
1/2	1800	56	RL1304A277	HV1	11.59	26	62	277	3.6
3/4	1800	56H	RL1307A277	HV1	12.47	34	66	277	4.2
1	1800	56H	RL1310A277	HV1	12.42	42	70	277	5.4
1 1/2	1800	56H	ERL1319A277	HV1	14.67	59	84	277	5.2
<b>Three phase</b>									
1/4	1800	48	ERM3003	HV3	10.34	21	69.5	230/460	0.5
1/3	1800	48	ERM3007	HV3	10.34	24	73.4	230/460	0.7
		56	ERM3104	HV3	10.97	24	73.4	230/460	0.7
1/2	3600	48	ERM3009	HV3	10.34	24	73.4	230/460	0.8
	1800	48	ERM3010	HV3	11.84	31	78.2	230/460	0.8
		56	ERM3108	HV3	11.97	31	78.2	230/460	0.8
3/4	3600	56	ERM3111	HV3	10.97	24	76.8	230/460	1.2
	1800	56	ERM3112	HV3	11.42	38	84	208-230/460	1.3
1	3600	56	ERM3115	HV3	12.47	27	77	230/460	1.6
	1800	56	ERM3116	HV3	11.42	37	83.5	230/460	1.45
1 1/2	3600	56H	ERM3120	HV3	11.42	34	84	208-230/460	2
	1800	56H	ERM3154	HV3	12.42	41	86.5	208-230/460	2.2
2	3600	56H	ERM3155	HV3	12.42	43	85.5	230/460	2.6
	1800	56H	ERM3157	HV3	12.42	43	86.5	208-230/460	2.9

Red catalog number indicates NEW product.

## Definite purpose HVAC

Three phase, ODP  
1/3 - 5 Hp

**IP22**



### Features:

- Terminal panel for ease of connectivity
- Automatic thermal overload protection
- Lubed for life double shielded bearings

### Applications:

- Fans
- Pumps
- Blowers
- Condensers
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Apx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Foot mounted</b>									
5	1800	184T	EHM3218TA	HV3	16.50	84	89.5	230/460	6.6
<b>Resilient base</b>									
1/3	1800	48	RM3007A	HV3	10.34	21	68	230/460	0.8
1/2	1800	56H	RM3108A	HV3	10.97	25	72	230/460	0.9
3/4	1800	56H	RM3112A	HV3	11.59	32	74	230/460	1.5
1	1800	56H	RM3116A	HV3	12.47	32	78.5	230/460	2
1 1/2	1800	56H	RM3154A	HV3	12.04	34	78.5	208-230/460	2.4
2	1800	56H	RM3157A	HV3	12.42	40	81.5	208-230/460	2.9
3	3600	145TY	ERM3158TA	HV3	13.64	48	85.5	230/460	3.8
5	3600	145TY	ERHM3162TA	HV3	15.02	60	86.5	230/460	6.1

(PSC) – direct drive fan, single phase, foot mounted,  
TEAO

1/4 - 1/2 Hp

**IP44\***



### Features:

- 1" extended through bolts for grille mounting
- Terminal panel for ease of connectivity
- Automatic thermal overload protection
- Lubed for life double shielded bearings
- Switchless design for increased reliability

### Applications:

- Fans
- Pumps
- Blowers
- Condensers
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Apx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
1/4	1800	48Z	PSC3413A	HV1	11.34	19	65.5	115/230	1.3
1/3	1800	48Z	PSC3416A	HV1	11.34	21	62	115/230	1.8
1/2	1800	48Z	PSC3524A	HV1	11.96	24	65	115/230	3

\* IP54 when Drain Fitting Kit #HA5027A03 is installed in the weep holes (48 - 256T frame motors only)

## Definite purpose HVAC

Direct drive fan, single and three phase, TEAO  
1/4 - 1 Hp

**IP54**



### Features:

- Resilient cushion base for low noise and reduced vibration
- 1" extended through bolts for grille mounting
- Terminal panel for ease of connectivity
- Automatic thermal overload protection
- Lubed for life double shielded bearings

### Applications:

- Fans
- Pumps
- Blowers
- Condensers
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Voltage	Full Load Amps	S.F.
<b>Single phase, permanent split capacitor</b>									
1/4	1800	48Z	CHC144A	HV1	11.35	21	115/230	1.4	1
	1200	48Z	CHC164A	HV1	11.35	22	115/230	1.5	1.15
1/3	1800	48Z	CHC244A	HV1	11.35	22	115/230	1.7	1.15
	1200	48Z	CHC264A	HV1	11.35	26	115/230	1.8	1.15
1/2	1800	56YZ	CHC345A	HV1	12.70	27	115/230	2.6	1.15
	1200	56YZ	CHC365A	HV1	13.58	31	115/230	3.2	1.15
3/4	1800	56YZ	CHC445A	HV1	13.58	35	115/230	3.7	1.15
1	1800	56	CHC545A	HV1	13.04	39	115/230	4.9	1
	1200	56	CHC565A	HV1	13.92	51	115/230	5.3	1
<b>Three phase</b>									
1/4	1200	48YZ	CHM164A	HV3	11.34	20	230/460	0.7	1.25
1/3	1200	48YZ	CHM264A	HV3	11.34	19	230/460	0.9	1.25
1/2	1800	48YZ	CHM344A	HV3	11.34	23	230/460	1.1	1.25
		56YZ	CHM345A	HV3	12.08	24	230/460	1.1	1.25
	1200	48YZ	CHM364A	HV3	11.96	25	230/460	1.2	1.25
		56YZ	CHM365A	HV3	12.70	28	230/460	1.2	1.25
3/4	1200	56YZ	CHM465A	HV3	13.58	34	208-230/460	1.5	1.15
1	1800	56YZ	CHM545A	HV3	13.58	34	208-230/460	1.7	1.15
	1200	56	CHM565A	HV3	13.04	40	208-230/460	1.8	1.15

## Definite purpose HVAC

Yoke/pedestal fan, single phase, PSC, TEAO  
1/4 - 1/2 Hp

**IP54**



### Features:

- Robust stamped steel pedestal mount
- 1" extended through bolts for grille mounting
- Terminal panel for ease of connectivity
- Automatic thermal overload protection
- Lubed for life double shielded bearings
- Switchless design for increased reliability

### Applications:

- Fans
- Pumps
- Blowers
- Condensers
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	Frame	Catalog Number	Disc. Sym.	Dim.	Aprx.		Full Load	
						Wt. (lb)	Voltage	Amps	S.F.
1/4	1800	48YZ	YPC144A	HV1	10.68	18	115	2.5	1
	1200	48YZ	YPC164A	HV1	10.68	22	115	2.8	1
1/3	1800	48YZ	YPC244A	HV1	10.68	21	115	3.4	1
	56YZ	YPC245A	HV1	10.68	21	115	3.4	1	
	1200	48YZ	YPC264A	HV1	10.68	22	115	3.5	1
1/2	1800	48YZ	YPC344A	HV1	10.68	22	115	5.1	1
	56YZ	YPC345A	HV1	10.68	24	115	5.1	1	
	1200	48YZ	YPC364A	HV1	11.31	27	115	5.4	1

Ventilation fan, three phase TEAO, C-Face, footless  
1/2 - 1 Hp

**IP44\***



### Features:

- Terminal panel for ease of connectivity
- Lubed for life double sealed bearings
- Locked DE bearing to allow mounting in any configuration

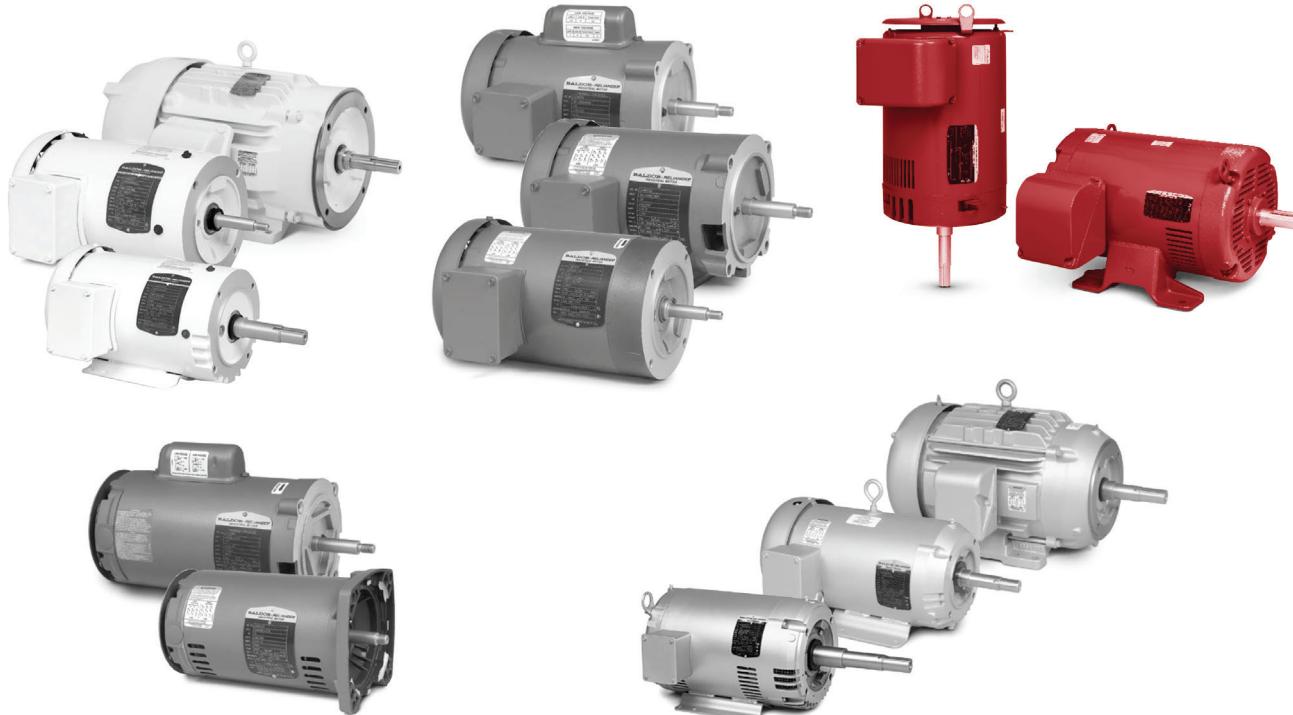
### Applications:

- Fans
- Pumps
- Blowers
- Condensers
- Air handling
- HVAC systems
- General purpose applications

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load		
							Efficiency	Voltage	Amps
1/2	900	56C	VAOM3560	HV3	12.68	50	64	208-230/460	1.6
1	900	56C	VAOM3527	HV3	14.93	57	74	208-230/460	3.2

\* IP54 when Drain Fitting Kit #HA5027A03 is installed in the weep holes (48 - 256T frame motors only)

# Pump motors



Baldor-Reliance® pump motors provide value by increasing reliability and reducing maintenance costs. Utilizing energy efficient designs, our pump motors meet NEMA Premium® efficiency and inverter ready with wide variable torque speed ranges.

## Key features:

- Baldor-Reliance motors meet or exceed all efficiency requirements for US, Canada and Mexico regulations
- Dynamically balanced rotor to reduce noise and increase bearing life
- Color coded and numbered leads for ease of connectivity

## Pump motor

Fire pump three phase, ODP, foot mounted  
10 - 300 Hp

**IP23**



### Features:

- 1.15 SF, 40°C ambient continuous
- NEMA Design B, 60 Hz
- 230/460 and 460 Volt models rated for 50 Hz at next lower Hp
- Dual voltage motors 20 Hp and larger have 12 leads, are suitable for wye-delta or across the line start on either voltage or part winding start on low voltage
- 460V motors have 12 leads and are suitable for wye-delta, across the line or part winding start
- UL file E481231
- Exterior red paint RAL3002

### Applications:

- UL listed Fire Pump motors installed per NFPA-20

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
10	3600	213T	FPM3312T	PF3	16.32	121	88.5	230/460	12
	1800	215T	FPM3313T	PF3	16.32	130	89.5	230/460	12.7
15	3600	215T	FPM3314T	PF3	16.32	131	89.5	230/460	17.7
	1800	254T	FPM2513T	PF3	21.69	205	91	230/460	17.5
20	3600	254T	FPM2514T	PF3	22.25	145	90.2	230/460	23
	1800	256T	FPM2515T	PF3	21.69	210	91	230/460	24
	3600	256T	FPM2516T	PF3	21.69	210	91	230/460	29
25	3600	256T	FPM2516T-2/4	PF3	21.69	206	91	200/400	34
	1800	284TS	FPM2531TS	PF3	23.56	236	92.4	230/460	29
	3600	284TS	FPM2531TS-2/4	PF3	23.56	236	92.4	200/400	34
	3600	284TS	FPM2534T	PF3	22.06	235	91	230/460	35
30	3600	284TS	FPM2534T-2/4	PF3	22.06	235	91	200/400	40
	1800	286TS	FPM2535TS	PF3	23.69	334	92.4	230/460	36
	3600	286TS	FPM2535TS-2/4	PF3	23.69	375	92.4	200/400	41
	3600	286TS	FPM2538T	PF3	23.56	280	91.7	230/460	45
40	3600	286TS	FPM2538T-2/4	PF3	23.56	254	91.7	200/400	52
	1800	324TS	FPM2539TS	PF3	24.69	400	93	230/460	49
	3600	324TS	FPM2539TS-2/4	PF3	24.69	380	93	200/400	56
	3600	324TS	FPM2542T	PF3	24.69	331	92.4	230/460	58
50	3600	324TS	FPM2542T-2/4	PF3	24.69	331	92.4	200/400	67
	1800	326TS	FPM2543TS	PF3	25.69	385	93	230/460	60
	3600	326TS	FPM2543TS-2/4	PF3	25.69	385	93	200/400	70
	3600	326TS	FPM2546T	PF3	25.69	385	93	230/460	68
60	3600	326TS	FPM2546T-2/4	PF3	25.69	385	93	200/400	78
	1800	364TS	FPM2547TS	PF3	25.81	480	93.6	230/460	72
	3600	364TS	FPM2547TS-2/4	PF3	27.94	480	93.6	200/400	83
	3600	364TS	FPM2549T	PF3	27.94	485	93	230/460	84
75	3600	364TS	FPM2549T-2/4	PF3	27.94	485	93	200/400	96
	1800	365TS	FPM2551TS	PF3	29.94	570	94.1	230/460	87
	3600	365TS	FPM2551TS-2/4	PF3	29.94	570	94.1	200/400	100
	3600	365TS	FPM2550T	PF3	28.94	533	93	230/460	113
100	3600	365TS	FPM2550T-2/4	PF3	28.94	533	93	200/400	130
	1800	404TS	FPM2555TS	PF3	31.85	597	94.1	230/460	117
	1800	404TS	FPM2555TS-2/4	PF3	31.85	597	94.1	200/400	135

Cast iron frame

**Pump motor, fire pump three phase, ODP, foot mounted**

Hp	RPM	NEMA Frame	Catalog Number	Disc.	"C"	Aprx.	Full Load		Full Load Amps
				Sym.	Dim.	Wt. (lb)	Efficiency	Voltage	
125	3600	404TS	FPM2554T-4	PF3	31.85	660	93.6	460	138
	1800	405TS	FPM2559TS-4	PF3	33.60	590	94.5	460	145
150	3600	405TS	FPM2556T-4	PF3	31.85	600	93.6	460	164
	1800	444TS	FPM2558TS-4	PF3	35.88	1579	95	460	167
200	3600	444TS	FPM2562T-4	PF3	35.88	1449	94.5	460	232
	1800	445TS	FPM2563TS-4	PF3	35.88	1718	95	460	224
250	3600	445TS	FPM2565T-4	PF3	35.88	1737	94.5	460	288
	1800	445TS	FPM2566TS-4	PF3	35.88	1844	95.4	460	272
300	3600	445TS	FPM2568T-4	PF3	35.88	1697	95	460	339
<b>575 volt</b>									
20	3600	254T	FPM2514T-5	PF3	22.25	145	90.2	575	18.5
	1800	256T	FPM2515T-5	PF3	21.69	231	91.0	575	19.6
25	3600	256T	FPM2516T-5	PF3	21.69	223	91.0	575	23
	1800	284TS	FPM2531TS-5	PF3	23.56	320	92.4	575	23
30	3600	284TS	FPM2534T-5	PF3	22.06	240	91.0	575	28
	1800	286TS	FPM2535TS-5	PF3	23.69	420	92.4	575	29
40	3600	286TS	FPM2538T-5	PF3	23.56	287	91.7	575	36
	1800	324TS	FPM2539TS-5	PF3	24.69	400	93.0	575	39
50	3600	324TS	FPM2542T-5	PF3	24.69	449	92.4	575	46
	1800	326TS	FPM2543TS-5	PF3	25.69	452	93.0	575	49
60	3600	326TS	FPM2546T-5	PF3	25.69	449	93.0	575	54
	1800	364TS	FPM2547TS-5	PF3	25.81	480	93.6	575	57
75	3600	364TS	FPM2549T-5	PF3	25.81	480	93.0	575	67
	1800	365TS	FPM2551TS-5	PF3	27.81	573	94.1	575	69
100	3600	365TS	FPM2550T-5	PF3	26.81	525	93.0	575	90
	1800	404TS	FPM2555TS-5	PF3	31.85	648	94.1	575	93

 Cast iron frame

## Pump motor

Fire pump, three phase, ODP, footless, close-coupled pump  
10 - 100 Hp

**IP23**



### Features:

- 1.15 SF, 40°C ambient continuous
- NEMA Design B, 60 Hz
- 230/460 Volt models rated for 50 Hz at next lower Hp
- Dual voltage motors 20 Hp and larger have 12 leads, are suitable for wye-delta or across the line start on either voltage or part winding start on low voltage
- Vertical lifting
- UL file E481231
- Exterior red paint RAL3002

### Applications:

- UL listed Fire Pump motors installed per NFPA-20

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
10	3600	213JP	VJPFPM3312T	PF3	24.41	121	88.5	230/460	12
		213JP	VJPFPM3312T-2/4	PF3	24.41	121	88.5	208/400	12
	1800	215JP	VJPFPM3313T	PF3	24.41	130	89.5	230/460	12.7
15	3600	215JP	VJPFPM3314T	PF3	24.41	131	89.5	230/460	17.7
		215JP	VJPFPM3314T-2/4	PF3	24.41	131	89.5	208/400	20.4
	1800	254JP	VJPFPM2513T	PF3	28.07	220	91	230/460	17.5
20	3600	254JP	VJPFPM2514T	PF3	27.66	145	90.2	230/460	23
		254JP	VJPFPM2514T-2/4	PF3	27.66	145	90.2	208/400	26.5
	1800	256JP	VJPFPM2515T	PF3	28.07	231	91	230/460	24
25	3600	256JP	VJPFPM2516T	PF3	28.07	221	91	230/460	29
		256JP	VJPFPM2516T-2/4	PF3	28.07	221	91	208/400	34
	1800	284JP	VJPFPM2531T	PF3	31.44	272	91.7	230/460	29
30	3600	284JP	VJPFPM2534T	PF3	29.23	235	91	230/460	35
		284JP	VJPFPM2534T-2/4	PF3	29.23	235	91	208/400	40
	1800	286JP	VJPFPM2535T	PF3	29.25	375	92.4	230/460	36
40	3600	286JP	VJPFPM2538T	PF3	31.44	263	91.7	230/460	45
		286JP	VJPFPM2538T-2/4	PF3	31.44	263	91.7	208/400	52
	1800	324JP	VJPFPM2539T	PF3	31.13	375	93	230/460	49
50	3600	324JP	VJPFPM2542T	PF3	31.13	331	92.4	230/460	58
		324JP	VJPFPM2542T-2/4	PF3	31.13	331	92.4	208/400	67
	1800	326JP	VJPFPM2543T	PF3	32.13	378	93	230/460	60
60	3600	326JP	VJPFPM2546T	PF3	32.13	385	93	230/460	68
		326JP	VJPFPM2546T-2/4	PF3	32.13	385	93	208/400	78
	1800	364JP	VJPFPM2547T	PF3	32.5	480	93.6	230/460	72
75	3600	364JP	VJPFPM2549T	PF3	32.5	472	93	230/460	84
		364JP	VJPFPM2549T-2/4	PF3	32.5	472	93	208/400	96
	1800	365JP	VJPFPM2551T	PF3	34.5	565	94.1	230/460	87
100	3600	365JP	VJPFPM2550T	PF3	33.5	523	93	230/460	113
		365JP	VJPFPM2550T-2/4	PF3	33.5	523	93	208/400	130

**Pump motor, fire pump, three phase, ODP, footless, close-coupled pump**

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Apxr. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>575 volt</b>									
20	3600	254JP	VJPFPM2514T-5	PF3	27.66	145	90.2	575	18.5
	1800	256JP	VJPFPM2515T-5	PF3	28.07	208	91	575	19.6
25	3600	256JP	VJPFPM2516T-5	PF3	28.07	219	91	575	23
	1800	284JP	VJPFPM2531T-5	PF3	31.44	322	92.4	575	23
30	3600	284JP	VJPFPM2534T-5	PF3	29.23	266	91	575	28
	1800	286JP	VJPFPM2535T-5	PF3	29.25	396	92.4	575	29
40	3600	286JP	VJPFPM2538T-5	PF3	31.44	303	91.7	575	36
	1800	324JP	VJPFPM2539T-5	PF3	31.13	530	93	575	39
50	3600	324JP	VJPFPM2542T-5	PF3	31.13	396	92.4	575	46
	1800	326JP	VJPFPM2543T-5	PF3	32.13	396	93	575	49
60	3600	326JP	VJPFPM2546T-5	PF3	32.13	380	93	575	54
	1800	364JP	VJPFPM2547T-5	PF3	32.5	475	93.6	575	57
75	3600	364JP	VJPFPM2549T-5	PF3	32.5	648	93	575	67
	1800	365JP	VJPFPM2551T-5	PF3	34.5	565	94.1	575	69
100	3600	365JP	VJPFPM2550T-5	PF3	33.5	523	93	575	90

## Pump motor

Jet pump, single phase, TEFC  
1/3 - 2 Hp

IP44



### Features:

- Automatic thermal overload protection
- Corrosion resistant stainless steel shaft extension
- Slotted opposite drive end shaft for easy installation
- Superior switch design provides optimized torque profiles
- Dynamically balanced rotor to reduce noise and increase bearing life

### Applications:

- HVAC pumps
- Swimming pool pumps
- General purpose pumps

Hp	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Foot mounted</b>								
1/3	1800	56J	CJL3501A	PJ1	11.84	23	60	115/230 3
1/2	1800	56J	CJL3504A	PJ1	12.47	28	68	115/230 3.7
3/4	1800	56J	CJL3507A	PJ1	12.97	35	74	115/230 4.1
1	3600	56J	CJL3509A	PJ1	13.74	39	66	115/230 6
1 1/2	3600	56J	CJL3513A	PJ1	13.74	47	70	115/230 8.3
2	3600	56J	CJL3515A	PJ1	14.62	51	74	115/230 11.5
<b>Footless</b>								
1/3	3600	56J	JL3405A	PJ1	11.85	19	60	115/230 3
	1800	56J	JL3501A	PJ1	11.85	22	60	115/230 3
1/2	3600	56J	JL3503A	PJ1	12.85	26	62	115/230 3.7
	1800	56J	JL3504A	PJ1	12.85	27	68	115/230 3.7
3/4	3600	56J	JL3506A	PJ1	12.85	29	66	115/230 5.4
	1800	56J	JL3507A	PJ1	12.97	33	74	115/230 4.1
1	3600	56J	JL3509A	PJ1	13.74	42	66	115/230 6
	1800	56J	JL3510A	PJ1	13.74	40	67	115/230 6.2
1 1/2	3600	56J	JL3513A	PJ1	13.74	45	70	115/230 8.3
	1800	56J	JL3514A	PJ1	14.62	51	75.5	115/230 8
2	3600	56J	JL3515A	PJ1	14.62	54	74	115/230 11.5
	1800	56J	JL3516A	PJ1	14.62	52	78	115/230 8.6

All threaded shaft, single phase motors are connected single rotation – CCW when viewing drive end.

All above ratings can be UL 1081 compliant through MOD Express®.

See M30A in the MOD Express program section of this catalog for more details.

## Pump Motor

Jet pump, single phase, ODP  
1/3 - 3 Hp

**IP23**



### Features:

- Automatic thermal overload protection
- Corrosion resistant stainless steel shaft extension
- Slotted opposite drive end shaft for easy installation
- Superior switch design provides optimized torque profiles
- Optimized airflow design providing higher horsepower in a smaller package

### Applications:

- HVAC pumps
- Swimming pool pumps
- General purpose pumps

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Foot mounted</b>									
1/3	3600	56J	CJL1205A	PJ1	11.91	23	58	115/230	3.1
	1800	56J	CJL1301A	PJ1	11.89	23	60	115/208-230	3
1/2	3600	56J	CJL1303A	PJ1	12.51	30	66	115/230	3.7
	1800	56J	CJL1304A	PJ1	12.14	25	62	115/230	4.2
3/4	3600	56J	CJL1306A	PJ1	13.39	30	69	115/230	5.5
	1800	56J	CJL1307A	PJ1	12.25	35	63	115/230	5.4
1	3600	56J	CJL1309A	PJ1	13.89	32	65	115/208-230	7
1 1/2	3600	56J	CJL1313A	PJ1	13.89	37	78.5	115/230	6.5
2	3600	56J	CJL1317A	PJ1	13.25	45	70	115/230	13
<b>Footless</b>									
1/3	3600	56J	JL1205A	PJ1	11.89	25	58	115/230	3.1
	1800	56J	JL1301A	PJ1	11.89	23	60	115/230	3
1/2	3600	56J	JL1303A	PJ1	12.51	26	66	115/230	3.7
	1800	56J	JL1304A	PJ1	12.14	25	62	115/230	4.2
3/4	3600	56J	JL1306A	PJ1	13.39	33	69	115/230	5.5
	1800	56J	JL1307A	PJ1	13.89	33	68	115/230	5.1
1	3600	56J	JL1309A	PJ1	13.89	32	65	115/230	7
1 1/2	3600	56J	JL1313A	PJ1	13.89	36	78.5	115/230	6.5
2	3600	56J	JL1317A	PJ1	13.25	45	70	115/230	13
3	3600	56J	JL1323A	PJ1	14.13	52	82.5	230	13

All threaded shaft, single phase motors are connected single rotation - CCW when viewing drive end.

All above ratings can be UL 1081 compliant through MOD Express®.

See M30A in the MOD Express program section of this catalog for more details.

## Pump motor

Jet pump, three phase, TEFC  
1/3 - 3 Hp

**IP44**



### Features:

- Corrosion resistant stainless steel shaft extension
- Slotted opposite drive end shaft for easy installation
- Dynamically balanced rotor to reduce noise and increase bearing life

### Applications:

- HVAC pumps
- Swimming pool pumps
- General purpose pumps

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Footless</b>									
1/3	3600	56J	JM3457	PJ3	11.84	19	62	230/460	0.8
	1800	56J	JM3458	PJ3	11.84	21	68	230/460	0.8
1/2	3600	56J	JM3460	PJ3	11.84	21	70	230/460	1.2
	1800	56J	JM3461	PJ3	11.84	23	74	230/460	1
3/4	3600	56J	JM3463	PJ3	11.84	23	74	208-230/460	1.5
	1800	56J	JM3542	PJ3	11.84	26	75.5	208-230/460	1.5
1	3600	56J	EJM3545	PJ3	12.47	27	77	230/460	1.6
	1800	56J	EJM3546	PJ3	13.74	37	85.5	230/460	1.7
1 1/2	3600	56J	EJM3550	PJ3	12.72	38	84	230/460	1.9
	1800	56J	EJM3554	PJ3	13.74	41	86.5	230/460	2.3
2	3600	56J	EJM3555	PJ3	13.74	41	85.5	230/460	2.5
	1800	56J	EJM3558	PJ3	14.62	48	86.5	230/460	2.9
3	3600	56J	EJM3559	PJ3	14.62	50	86.5	230/460	3.6
<b>Foot mounted</b>									
1/2	1800	56J	CJM3538	PJ3	11.84	23	74	230/460	1
3/4	1800	56J	CJM3542	PJ3	11.84	25	75.5	208-230/460	1.5
<b>575 volts</b>									
1/2	3600	56J	JM3460-5	PJ3	11.84	21	68	575	1
3/4	3600	56J	JM3463-5	PJ3	11.84	23	74	575	1.2
1	3600	56J	EJM3545-5	PJ3	12.47	27	77	575	1.2
2	3600	56J	EJM3555-5	PJ3	13.74	41	85.5	575	2
3	3600	56J	EJM3559-5	PJ3	14.62	50	86.5	575	2.9

All above ratings can be UL 1081 compliant through MOD Express®.  
See M30A in the MOD Express program section of this catalog for more details.

## Pump motor

Jet pump, three phase, ODP  
1/3 - 3 Hp

**IP23**



### Features:

- Corrosion resistant stainless steel shaft extension
- Slotted opposite drive end shaft for easy installation
- Dynamically balanced rotor to reduce noise and increase bearing life
- Optimized airflow design providing higher horsepower in a smaller package

### Applications:

- HVAC pumps
- Swimming pool pumps
- General purpose pumps

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Footless</b>									
1/3	3600	56J	JM3006	PJ3	11.72	19	62	230/460	0.8
1/2	3600	56J	JM3107	PJ3	11.72	21	70	230/460	1.2
	1800	56J	JM3108	PJ3	11.85	23	74	230/460	1
3/4	3600	56J	JM3111	PJ3	11.72	23	74	208-230/460	1.5
	1800	56J	JM3112	PJ3	12.34	27	75.5	208-230/460	1.5
1	3600	56J	JM3115	PJ3	12.34	32	77	230/460	1.6
	1800	56J	JM3116	PJ3	13.22	30	78.5	208-230/460	1.7
1 1/2	3600	56J	JM3120	PJ3	13.22	30	74	230/460	2.2
	1800	56J	JM3154	PJ3	13.72	34	77	208-230/460	2.8
2	3600	56J	JM3155	PJ3	13.72	35	82.5	230/460	2.7
3	3600	56J	JM3158	PJ3	13.72	42	80	208-230/460	4
<b>Foot mounted</b>									
1/3	1800	56J	CJM3104	PJ3	11.85	22	68	230/460	0.8
1/2	3600	56J	CJM3107	PJ3	11.72	22	70	230/460	1.2
	1800	56J	CJM3108	PJ3	11.72	24	74	230/460	1
3/4	3600	56J	CJM3111	PJ3	11.72	28	74	208-230/460	1.5
	1800	56J	CJM3112	PJ3	12.34	27	75.5	208-230/460	1.5
1	3600	56J	CJM3115	PJ3	12.34	29	77	230/460	1.6
1 1/2	3600	56J	CJM3120	PJ3	13.22	31	81.5	230/460	2
2	3600	56J	CJM3155	PJ3	13.72	34	82.5	230/460	2.7
3	3600	56J	CJM3158	PJ3	13.74	41	80	208-230/460	4

All above ratings can be UL 1081 compliant through MOD Express®.  
See M30A in the MOD Express program section of this catalog for more details.

## Pump motor

Washdown, jet pump, three phase, TEFC, C-Face  
3/4 - 3 Hp

**IP55**



### Features:

- 300 series stainless steel hardware and shaft extension
- Footless
- Neoprene gaskets
- Double sealed ball bearings
- Lip and V-Ring seal on drive end
- White epoxy, corrosion resistant finish
- Easy removable drain plugs

### Applications:

- Wet environment
- Pumps and wastewater

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Footless</b>									
3/4	3600	56J	JWDM3463	WDW	12.72	33	68	208-230/460	1.4
1	3600	56J	JEWDM3545	WDW	12.72	38	78.5	208-230/460	1.6
1 1/2	3600	56J	JEWDM3550	WDW	13.72	41	84	208-230/460	2
2	3600	56J	JEWDM3555	WDW	13.72	41	85.5	230/460	2.5
3	3600	56J	JEWDM3559	WDW	15.97	64	87.5	208-230/460	3.5
<b>Foot mounted</b>									
3/4	3600	56J	CJWDM3463	WDW	12.72	33	68	208-230/460	1.4
1	3600	56J	CJEWDM3545	WDW	12.72	38	78.5	208-230/460	1.6
1 1/2	3600	56J	CJEWDM3550	WDW	13.72	41	84	208-230/460	2
2	3600	56J	CJEWDM3555	WDW	13.72	41	85.5	230/460	2.5
3	3600	56J	CJEWDM3559	WDW	15.98	64	87.5	208-230/460	3.5

## Pump motor

Square flange pump, ODP  
1/2 - 2 Hp

**IP23**



**Features:**

- Corrosion resistant stainless steel shaft extension
- Dynamically balanced rotor to reduce noise and increase bearing life
- Heavy gauge steel design
- Safeguard drip cover

**Applications:**

- HVAC pumps
- General purpose pumps

Hp	NEMA	Catalog	Disc.	"C"	Aprx.	Full Load	Full Load	
	Frame	Number	Sym.	Dim.	Wt. (lb)	Efficiency	Voltage	Amps
<b>Single phase</b>								
1/2	3600	56Y	JSL325A	PJ1	11.35	24	70	115/230
3/4	3600	56Y	JSL425A	PJ1	11.97	26	62	115/230
1	3600	56Y	JSL525A	PJ1	12.72	30	70	115/230
1 1/2	3600	56YZ	JSL625A	PJ1	14.44	42	72	115/230
2	3600	56YZ	JSL725A	PJ1	14.44	47	74	115/230
<b>Three phase</b>								
1/2	3600	56YZ	JSM3107	PJ3	11.40	21	70	230/460
3/4	3600	56YZ	JSM3111	PJ3	11.40	24	74	208-230/460
1	3600	56YZ	JSM3115	PJ3	12.02	27	77	230/460
1 1/2	3600	56YZ	JSM3120	PJ3	12.77	31	81.5	230/460
2	3600	56YZ	JSM3155	PJ3	13.40	35	82.5	230/460

## Pump motor

Close-coupled pump, single phase  
3 - 10 Hp



### Features:

- Oversize ball bearings for the pump industry
- Locked drive end bearing to allow mounting in any configuration Lip and V-Ring seal on drive end
- Dynamically balanced rotor to reduce noise and increase bearing life
- Superior switch design provides
- Optimized torque profiles

### Applications:

- HVAC pumps
- General purpose pump

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Totally enclosed fan cooled, mechanical seal, Type JM</b>									
3	3600	182JM	JML3606T	PC1	18.06	79	76	115/230	14.5
5	3600	184JM	JML3608T	PC1	19.55	93	83	230	19.5
<b>Open drip proof, mechanical seal, Type JM</b>									
3	3600	182JM	JML1406T	PC1	16.5	69	78	115/208-230	14
	1800	184JM	JML1408T	PC1	16.5	80	78	115/230	16
5	3600	184JM	JML1409T	PC1	16.5	81	80	230	21.5
	1800	213JM	JML1508T	PC1	18.19	115	77	230	27
7 1/2	3600	213JM	JML1509T	PC1	18.19	116	81	230	37
	1800	215JM	JML1510T	PC1	19.31	142	85.5	230	31
10	3600	215JM	JML1511T	PC1	19.31	141	83	230	46
	1800	215JM	JML1512T	PC1	20.95	150	84	230	41
<b>Open drip proof, packed pump, Type JP</b>									
3	3600	182JP	JPL1406T	PC1	19.57	76	78	115/230	14
	1800	184JP	JPL1408T	PC1	19.57	87	78	115/230	16
5	3600	184JP	JPL1409T	PC1	19.57	88	80	230	21.5
	1800	213JP	JPL1508T	PC1	22.07	117	77	230	27
7 1/2	3600	213JP	JPL1509T	PC1	22.07	121	81	230	37
	1800	215JP	JPL1510T	PC1	23.19	143	85.5	230	31
10	3600	215JP	JPL1511T	PC1	23.19	148	83	230	46
	1800	215JP	JPL1512T	PC1	20.95	142	84	230	41
<b>Open drip proof, west coast fit, Type TCZ</b>									
3	3600	182TCZ	WCL1406T	PC1	19.69	81	78	115/230	14
	1800	184TCZ	WCL1408T	PC1	19.69	91	78	115/230	16
5	3600	184TCZ	WCL1409T	PC1	19.69	91	75	230	23
	1800	213TCZ	WCL1508T	PC1	21.25	116	77	230	27
7 1/2	3600	213TCZ	WCL1509T	PC1	21.25	117	81	230	37
10	3600	215TCZ	WCL1511T	PC1	22.38	143	83	230	46

\*\*ODP motors retain IP rating when mounted in horizontal position only.

## Pump motor

Close-coupled pump, Inverter Duty, three phase, foot mounted with internal AEGIS®

1 - 50 Hp



**TEFC**  
**IP44**

**ODP**  
**IP23**



### Features:

- Internal grounding brush for bearing current mitigation on drive end retainer ring
- Class H insulation for increased protection on Inverter use
- Oversize ball bearings for the pump industry
- Locked drive end bearing to allow mounting in any configuration
- Designed for longevity with a 3 year warranty on premium efficient motors
- Suitable for Inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- HVAC pumps
- General purpose pumps

Hp	NEMA RPM	Catalog Frame	Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Totally enclosed fan cooled</b>									
1	1800	143JM	EJMM3546T-G	PC3	15.41	37	85.5	230/460	1.5
1 1/2	3600	143JM	EJMM3550T-G	PC3	15.41	38	86.5	230/460	1.9
	1800	143JM	EJMM3554T-G	PC3	15.41	41	84	230/460	2.2
2	3600	145JM	EJMM3555T-G	PC3	15.41	41	85.5	230/460	2.5
	1800	145JM	EJMM3558T-G	PC3	15.41	45	86.5	230/460	2.9
3	3600	182JM	EJMM3610T-G	PC3	16.91	60	86.5	230/460	3.6
	1800	182JM	EJMM3611T-G	PC3	18.06	76	89.5	230/460	4.2
5	3600	184JM	EJMM3613T-G	PC3	18.06	81	88.5	230/460	5.9
	1800	184JM	EJMM3615T-G	PC3	19.56	93	89.5	230/460	6.7
7 1/2	3600	213JM	EJMM3709T-G	PC3	19.76	124	89.5	230/460	9
	1800	213JM	EJMM3710T-G	PC3	20.89	134	91.7	230/460	9.4
10	3600	215JM	EJMM3711T-G	PC3	19.76	124	90.2	230/460	11.8
	1800	215JM	EJMM3714T-G	PC3	22.38	165	91.7	230/460	12
15	3600	254JM	EJMM2394T-G	PC3	25.30	260	91	230/460	17.5
	1800	254JM	EJMM2333T-G	PC3	25.30	265	92.4	230/460	18.1
20	3600	256JM	EJMM4106T-G	PC3	25.30	274	91	230/460	23
	1800	256JM	EJMM2334T-G	PC3	25.30	308	93	230/460	24
25	3600	284JM	EJMM4107T-G	PC3	26.96	265	91.7	230/460	29
	1800	284JM	EJMM4103T-G	PC3	26.96	437	93.6	230/460	31
30	3600	286JM	EJMM4108T-G	PC3	26.96	299	91.7	230/460	34
	1800	286JM	EJMM4104T-G	PC3	28.64	437	93.6	230/460	38
40	3600	324JM	EJMM4109T-G	PC3	30.64	470	92.4	230/460	45
	1800	324JM	EJMM4110T-G	PC3	30.64	578	94.1	230/460	48
50	3600	326JM	EJMM4114T-G	PC3	30.65	575	93	230/460	56
	1800	326JM	EJMM4115T-G	PC3	30.65	700	94.5	230/460	58

Cast iron frame

\*\*ODP motors retain IP rating when mounted in horizontal position only.

Red catalog number indicates NEW product.

**Pump motor, close-coupled pump, Inverter Duty, three phase, foot mounted with internal AEGIS®**

<b>Hp</b>	<b>RPM</b>	<b>NEMA Frame</b>	<b>Catalog Number</b>	<b>Disc. Sym.</b>	<b>"C" Dim.</b>	<b>Aprx. Wt. (lb)</b>	<b>Full Load Efficiency</b>	<b>Voltage</b>	<b>Full Load Amps</b>
<b>Open drip proof</b>									
1	1800	143JM	EJMM3116T-G	PC3	13.75	37	85.5	230/460	1.5
1 1/2	1800	145JM	EJMM3154T-G	PC3	13.75	41	86.5	230/460	2.2
2	1800	145JM	EJMM3157T-G	PC3	14.25	44	86.5	230/460	2.9
3	3600	145JM	EJMM3158T-G	PC3	15.13	51	85.5	230/460	3.8
	1800	182JM	EJMM3211T-G	PC3	16.50	74	89.5	230/460	4.2
5	3600	182JM	EJMM3212T-G	PC3	15.12	64	86.5	230/460	6
	1800	184JM	EJMM3218T-G	PC3	18.00	88	89.5	230/460	6.6
7 1/2	3600	184JM	EJMM3219T-G	PC3	16.50	78	88.5	230/460	8.6
	1800	213JM	EJMM3311T-G	PC3	18.19	120	91	230/460	9.7
10	3600	213JM	EJMM3312T-G	PC3	18.19	121	89.5	230/460	12
	1800	215JM	EJMM3313T-G	PC3	19.31	132	91.7	230/460	12.5
15	3600	215JM	EJMM3314T-G	PC3	18.19	134	90.2	230/460	17.5
	1800	254JM	EJMM2513T-G	PC3	23.19	213	93	230/460	17.7
20	3600	254JM	<b>EJMM2514T-G</b>	PC3	23.19	185	91	230/460	23.5
	1800	256JM	<b>EJMM2515T-G</b>	PC3	24.69	255	93	230/460	24
25	3600	256JM	<b>EJMM2516T-G</b>	PC3	23.19	233	91.7	230/460	28
	1800	284JM	<b>EJMM2531T-G</b>	PC3	25.94	377	93.6	230/460	30
30	3600	284JM	<b>EJMM2534T-G</b>	PC3	24.69	320	91.7	230/460	35
	1800	286JM	<b>EJMM2535T-G</b>	PC3	26.94	378	94.1	230/460	36
40	3600	286JM	<b>EJMM2538T-G</b>	PC3	24.69	330	92.4	230/460	46
	1800	324JM	<b>EJMM2539T-G</b>	PC3	27.44	378	94.1	230/460	49
50	3600	324JM	<b>EJMM2542T-G</b>	PC3	27.44	375	93	230/460	56
	1800	326JM	EJMM2543T-G	PC3	27.94	497	94.5	230/460	57

 Cast iron frame

\*\*ODP motors retain IP rating when mounted in horizontal position only.

Red catalog number indicates **NEW** product.

## Pump motor

Close-coupled pump, Inverter Duty, three phase, TEFC  
1 - 50 Hp

**IP44**



### Features:

- Oversize ball bearings for the pump industry
- Locked drive end bearing to allow mounting in any configuration
- Oversize ball bearings for the pump industry
- Designed for longevity with a 3 year warranty on premium efficient motors
- Suitable for Inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- HVAC pumps
- General purpose pumps

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>230/460 volts</b>									
1	1800	143JM	EJMM3546T	PC3	15.43	40	85.5	230/460	1.5
1 1/2	3600	143JM	EJMM3550T	PC3	15.43	47	84	230/460	1.9
	1800	145JM	EJMM3554T	PC3	15.43	44	86.5	230/460	2.2
		145JP	EJPM3554T	PC3	18.5	41	86.5	230/460	2.2
2	3600	145JM	EJMM3555T	PC3	15.43	47	85.5	230/460	2.5
		145JP	EJPM3555T	PC3	18.49	41	85.5	230/460	2.5
	1800	145JM	EJMM3558T	PC3	15.43	50	86.5	230/460	2.9
		145JP	EJPM3558T	PC3	19.37	48	86.5	230/460	2.9
3	3600	145JM	EJMM3559T	PC3	16.31	54	86.5	230/460	3.6
		145JP	EJPM3559T	PC3	19.37	50	86.5	230/460	3.6
		182JM	EJMM3610T	PC3	16.81	56	86.5	230/460	3.6
		182JP	EJPM3610T	PC3	19.87	50	86.5	230/460	3.6
	1800	182JM	EJMM3611T	PC3	18.06	76	89.5	230/460	4.2
		182JP	EJPM3611T	PC3	21.11	70	89.5	230/460	4.2
5	3600	184JM	EJMM3613T	PC3	18.06	79	88.5	230/460	5.9
		184JP	EJPM3613T	PC3	21.11	81	88.5	230/460	5.6
	1800	184JM	EJMM3615T	PC3	19.56	93	89.5	230/460	6.7
		184JP	EJPM3615T	PC3	22.61	96	89.5	230/460	6.9
7 1/2	3600	184JM	EJMM3616T	PC3	19.56	101	89.5	230/460	8.4
		184JP	EJPM3616T	PC3	22.61	96	89.5	230/460	9.7
		213JM	EJMM3709T	PC3	19.76	125	89.5	230/460	9
		213JP	EJPM3709T	PC3	23.64	121	89.5	230/460	9
		213TCZ	EWCM3709T	PC3	23.45	96	89.5	230/460	9.7
	1800	213JM	EJMM3710T	PC3	20.88	134	91.7	230/460	9.4
		213JP	EJPM3710T	PC3	24.79	129	91.7	230/460	10.7
		213TCZ	EWCM3710T	PC3	23.95	129	91.7	230/460	10.7
10	3600	215JM	EJMM3711T	PC3	19.76	130	90.2	230/460	11.8
		215JP	EJPM3711T	PC3	23.64	118	90.2	230/460	11.8
		215TCZ	EWCM3711T	PC3	22.82	118	90.2	230/460	11.8
	1800	215JM	EJMM3714T	PC3	22.39	165	91.7	230/460	12
		215JP	EJPM3714T	PC3	26.29	165	91.7	230/460	12
		215TCZ	EWCM3714T	PC3	25.45	187	91.7	230/460	12.6

Cast iron frame

**Pump motor, close-coupled pump, Inverter Duty, three phase, TEFC**

<b>Hp</b>	<b>RPM</b>	<b>NEMA Frame</b>	<b>Catalog Number</b>	<b>Disc. Sym.</b>	<b>"C" Dim.</b>	<b>Aprx. Wt. (lb)</b>	<b>Full Load Efficiency</b>	<b>Voltage</b>	<b>Full Load Amps</b>
15	3600	215JM	EJMM3713T	PC3	22.39	169	91	230/460	17
		215JP	EJPM3713T	PC3	26.29	169	91	230/460	17
		215TCZ	EWCM3713T	PC3	25.45	169	91	230/460	17
		254JM	EJMM2394T	PC3	25.3	257	91	230/460	17.5
		254JP	EJPM2394T	PC3	28.16	260	91	230/460	17.8
	1800	254JM	EJMM2333T	PC3	25.3	265	92.4	230/460	18.5
		254JP	EJPM2333T	PC3	28.16	265	92.4	230/460	18.5
20	3600	256JM	EJMM4106T	PC3	25.3	281	91	230/460	23
		256JP	EJPM4106T	PC3	28.16	264	91	230/460	23
	1800	256JM	EJMM2334T	PC3	25.3	304	93	230/460	24
		256JP	EJPM2334T	PC3	28.16	300	93	230/460	24
25	3600	284JM	EJMM4107T	PC3	26.96	353	91.7	230/460	29
		284JP	EJPM4107T	PC3	29.84	349	91.7	230/460	29
	1800	284JM	EJMM4103T	PC3	28.64	387	93.6	230/460	30
		284JP	EJPM4103T	PC3	31.51	412	93.6	230/460	30
30	3600	286JM	EJMM4108T	PC3	28.64	406	91.7	230/460	33
		286JP	EJPM4108T	PC3	31.51	405	91.7	230/460	35
	1800	286JM	EJMM4104T	PC3	28.64	422	93.6	230/460	36
		286JP	EJPM4104T	PC3	31.51	452	93.6	230/460	36
40	3600	324JM	EJMM4109T	PC3	30.64	487	92.4	230/460	45
		324JP	EJPM4109T	PC3	33.51	498	92.4	230/460	45
	1800	324JM	EJMM4110T	PC3	30.65	586	94.1	230/460	48
		324JP	EJPM4110T	PC3	33.41	602	94.1	230/460	48
50	3600	326JM	EJMM4114T	PC3	30.65	595	93	230/460	56
		326JP	EJPM4114T	PC3	33.41	604	93	230/460	56
	1800	326JM	EJMM4115T	PC3	30.65	624	94.5	230/460	58
		326JP	EJPM4115T	PC3	33.41	646	94.5	230/460	58

**575 volts**

1	1800	143JM	EJMM3546T-5	PC3	15.43	38	85.5	575	1.2
1 1/2	3600	143JM	EJMM3550T-5	PC3	15.41	38	84	575	1.5
	1800	145JM	EJMM3554T-5	PC3	15.43	41	86.5	575	1.8
2	3600	145JM	EJMM3555T-5	PC3	15.41	41	85.5	575	2
	1800	145JM	EJMM3558T-5	PC3	15.43	45	86.5	575	2.3
3	3600	145JM	EJMM3559T-5	PC3	16.29	50	86.5	575	2.9
		182JM	EJMM3610T-5	PC3	16.69	63	86.5	575	2.9
	1800	182JM	EJMM3611T-5	PC3	18.06	70	89.5	575	3.3
5	3600	184JM	EJMM3613T-5	PC3	18.06	74	88.5	575	4.7
	1800	184JM	EJMM3615T-5	PC3	19.56	93	89.5	575	5.3
7 1/2	3600	184JM	EJMM3616T-5	PC3	19.56	96	89.5	575	6.8
	1800	213JM	EJMM3710T-5	PC3	20.88	127	91.7	575	7.6
10	3600	215JM	EJMM3711T-5	PC3	19.76	118	90.2	575	9.5
	1800	215JM	EJMM3714T-5	PC3	22.38	165	91.7	575	9.6
15	3600	215JM	EJMM3713T-5	PC3	22.38	169	91	575	13.4
		254JM	EJMM2394T-5	PC3	23.07	225	91	575	13.5
	1800	254JM	EJMM2333T-5	PC3	25.3	268	92.4	575	14.6

Cast iron frame

## Pump motor

Close-coupled pump, three phase, TEFC, footless  
1 - 20 Hp

**IP44**



### Features:

- Oversize ball bearings for the pump industry
- Locked drive end bearing to allow mounting in any configuration
- Designed for longevity with a 3 year warranty on premium efficient motors
- Suitable for Inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- HVAC pumps
- General purpose pumps

Hp	NEMA RPM	Frame Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>230/460 volts</b>								
1	1800	143JM	VEJMM3546T	PC3	14.43	38	85.5	230/460 1.5
1 1/2	1800	145JM	VEJMM3554T	PC3	15.43	45	86.5	230/460 2.2
2	1800	145JM	VEJMM3558T	PC3	15.43	44	86.5	230/460 2.9
3	1800	182JM	VEJMM3611T	PC3	18.05	74	89.5	230/460 4.2
5	1800	184JM	VEJMM3615T	PC3	19.55	90	89.5	230/460 6.7
	3600	213JM	VEJMM3709T	PC3	19.76	121	89.5	230/460 9
7 1/2	1800	213JM	VEJMM3710T	PC3	20.92	136	91.7	230/460 9.4
10	1800	215JM	VEJMM3714T	PC3	22.40	165	91.7	230/460 12
15	1800	254JM	VEJMM2333T	PC3	25.28	278	92.4	230/460 18.1
20	1800	256JM	VEJMM2334T	PC3	25.28	303	93	230/460 24
<b>575 volts</b>								
1	1800	143JM	VEJMM3546T-5	PC3	15.43	38	86.5	575 1.1
1 1/2	1800	145JM	VEJMM3554T-5	PC3	16.31	41	86.5	575 1.6
2	1800	145JM	VEJMM3558T-5	PC3	15.43	45	86.5	575 2.2
3	1800	182JM	VEJMM3611T-5	PC3	18.05	70	89.5	575 3.1
5	1800	184JM	VEJMM3615T-5	PC3	19.55	93	89.5	575 5.3
7 1/2	1800	213JM	VEJMM3710T-5	PC3	20.92	127	91.7	575 7.6
10	1800	215JM	VEJMM3714T-5	PC3	22.42	165	91.7	575 9.6
15	1800	254JM	VEJMM2333T-5	PC3	25.28	255	92.4	575 14.6
20	1800	256JM	VEJMM2334T-5	PC3	25.28	303	93	575 19.2

Cast iron frame

## Pump motor

Close-coupled pump, three phase, ODP  
1 - 75 Hp

**IP23**



### Features:

- Rodent screens to protect against trash debris
- Oversize ball bearings for the pump industry
- Locked drive end bearing to allow mounting in any configuration
- Designed for longevity with a 3 year warranty on premium efficient motors optimized torque profiles
- Suitable for Inverter use per NEMA MG1 Part 31.4.4.2

### Applications:

- HVAC pumps
- General purpose pump

Hp	RPM	NEMA Frame	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
<b>Foot mounted, 230/460</b>									
1	1800	143JM	EJMM3116T	PC3	13.75	38	85.5	230/460	1.5
		143JP	EJPM3116T	PC3	16.81	38	85.5	230/460	1.5
1 1/2	3600	143JM	EJMM3120T	PC3	13.75	34	84	230/460	2
	1800	145JM	EJMM3154T	PC3	13.75	38	86.5	230/460	2.2
		145JP	EJPM3154T	PC3	16.81	37	86.5	230/460	2.2
2	3600	145JM	EJMM3155T	PC3	13.75	44	85.5	230/460	2.5
	1800	145JM	EJMM3157T	PC3	14.25	44	86.5	230/460	2.9
		145JP	EJPM3157T	PC3	17.31	43	86.5	230/460	2.9
3	3600	145JM	EJMM3158T	PC3	15.13	49	85.5	230/460	3.8
		145JP	EJPM3158T	PC3	17.31	48	85.5	230/460	3.8
	1800	182JM	EJMM3211T	PC3	16.50	72	89.5	230/460	4.2
		182JP	EJPM3211T	PC3	19.56	74	89.5	230/460	4.2
5	3600	182JM	EJMM3212T	PC3	15.12	64	86.5	230/460	6
		182JP	EJPM3212T	PC3	18.18	63	86.5	230/460	6
	1800	182TCZ	EWCM3212T	PC3	18.32	63	86.5	230/460	6
		184JM	EJMM3218T	PC3	18.00	87	89.5	230/460	6.6
		184JP	EJPM3218T	PC3	21.06	92	89.5	230/460	6.6
	1200	215JM	EJMM3309T	PC3	19.31	141	89.5	230/460	7.4
7 1/2	3600	184JM	EJMM3219T	PC3	16.50	78	88.5	230/460	8.6
		184JP	EJPM3219T	PC3	19.56	77	88.5	230/460	8.6
	1800	184TCZ	EWCM3219T	PC3	19.69	77	88.5	230/460	8.6
		213JM	EJMM3311T	PC3	18.19	120	91	230/460	9.7
		213JP	EJPM3311T	PC3	20.94	130	91	230/460	9.3
	1200	254JM	EJMM2506T	PC3	24.69	248	90.2	230/460	11
10	3600	213JM	EJMM3312T	PC3	18.19	120	89.5	230/460	12
		213JP	EJPM3312T	PC3	22.07	122	89.5	230/460	12
	1800	213TCZ	EWCM3312T	PC3	21.25	121	89.5	230/460	12
		215JM	EJMM3313T	PC3	19.31	136	91.7	230/460	12.5
		215JP	EJPM3313T	PC3	23.20	138	91.7	230/460	12.5
	1200	256JM	EJMM2511T	PC3	24.69	255	91.7	230/460	14.3
15	3600	215JM	EJMM3314T	PC3	18.19	131	90.2	230/460	17.5
		215JP	EJPM3314T	PC3	22.07	134	90.2	230/460	17.5
	1800	215TCZ	EWCM3314T	PC3	21.25	131	90.2	230/460	17.5
		254JM	EJMM2513T	PC3	23.19	214	93	230/460	17.7
		254JP	EJPM2513T	PC3	26.06	219	93	230/460	17.7
	1200	284JM	EJMM2524T	PC3	24.69	300	91.7	230/460	20.5

\*\*ODP motors retain IP rating when mounted in horizontal position only.

**Pump motor, close-coupled pump, three phase, ODP**

<b>Hp</b>	<b>RPM</b>	<b>NEMA Frame</b>	<b>Catalog Number</b>	<b>Disc. Sym.</b>	<b>"C" Dim.</b>	<b>Apx. Wt. (lb)</b>	<b>Full Load Efficiency</b>	<b>Voltage</b>	<b>Full Load Amps</b>
20	3600	254JM	EJMM2514T	PC3	23.19	195	91	230/460	23.5
		254JP	EJPM2514T	PC3	26.06	220	91	230/460	23.5
	1800	256JM	EJMM2515T	PC3	23.19	248	93	230/460	23.5
		256JP	EJPM2515T	PC3	26.06	236	93	230/460	23.5
25	3600	256JM	EJMM2516T	PC3	23.19	219	91.7	230/460	28
		256JP	EJPM2516T	PC3	26.06	230	91.7	230/460	28
	1800	284JM	EJMM2531T	PC3	25.94	317	93.6	230/460	30
		284JP	EJPM2531T	PC3	28.81	335	93.6	230/460	30
30	3600	284JM	EJMM2534T	PC3	26.56	309	91.7	230/460	33
		284JP	EJPM2534T	PC3	29.44	310	91.7	230/460	33
	1800	286JM	EJMM2535T	PC3	25.94	359	94.1	230/460	35
		286JP	EJPM2535T	PC3	28.81	370	94.1	230/460	35
40	3600	286JM	EJMM2538T	PC3	26.56	328	92.4	230/460	45
		286JP	EJPM2538T	PC3	29.44	329	92.4	230/460	45
	1800	324JM	EJMM2539T	PC3	27.44	417	94.1	230/460	49
		324JP	EJPM2539T	PC3	30.31	378	94.1	230/460	47
50	3600	324JM	EJMM2542T	PC3	26.94	421	93	230/460	58
		324JP	EJPM2542T	PC3	29.81	424	93	230/460	58
	1800	326JM	EJMM2543T	PC3	27.94	491	94.5	230/460	57
		326JP	EJPM2543T	PC3	30.81	500	94.5	230/460	57
60	3600	326JM	EJMM2546T	PC3	26.94	472	93.6	230/460	68
	1800	364JP	EJPM2547T	PC3	33.19	565	95	230/460	68
75	1800	365JP	EJPM2551T	PC3	36.22	597	95	230/460	87
<b>Foot mounted, 575 volts</b>									
3	3600	145JM	EJMM3158T-5	PC3	14.25	48	85.5	575	3
	1800	182JM	EJMM3211T-5	PC3	16.50	74	89.5	575	3.1
5	3600	182JM	EJMM3212T-5	PC3	16.50	63	90.2	575	4.5
	1800	184JM	EJMM3218T-5	PC3	18.00	92	89.5	575	5.2
7 1/2	3600	184JM	EJMM3219T-5	PC3	16.50	77	88.5	575	6.9
	1800	213JM	EJMM3311T-5	PC3	18.19	120	91	575	7.4
10	3600	213JM	EJMM3312T-5	PC3	19.31	137	91.7	575	9.2
	1800	215JM	EJMM3313T-5	PC3	18.19	132	91.7	575	10
15	3600	215JM	EJMM3314T-5	PC3	19.31	131	90.2	575	14
<b>Footless, 230/460</b>									
1	1800	143JM	VEJMM3116T	PC3	14.43	37	85.5	230/460	1.5
1 1/2	1800	145JM	VEJMM3154T	PC3	15.43	43	86.5	230/460	2.2
2	1800	145JM	VEJMM3157T	PC3	15.43	46	86.5	230/460	2.9
3	3600	145JM	VEJMM3158T	PC3	14.25	48	85.5	230/460	3.8
	1800	184JM	VEJMM3211T	PC3	18.06	74	89.5	230/460	4.2
5	3600	182JM	VEJMM3212T	PC3	16.66	63	86.5	230/460	6
	1800	184JM	VEJMM3218T	PC3	19.56	84	89.5	230/460	6.6
7 1/2	3600	184JM	VEJMM3219T	PC3	18.04	77	88.5	230/460	8.6
	1800	213JM	VEJMM3311T	PC3	19.78	125	91	230/460	9.6
10	3600	213JM	VEJMM3312T	PC3	18.19	121	89.5	230/460	12
	1800	215JM	VEJMM3313T	PC3	22.41	165	91.7	230/460	12
15	3600	215JM	VEJMM3314T	PC3	18.69	131	90.2	230/460	17.5
<b>Footless, 575 volts</b>									
1	1800	143JM	VEJMM3116T-5	PC3	15.43	44.00	86.5	575	1.1
1 1/2	1800	145JM	VEJMM3154T-5	PC3	16.31	51.00	86.5	575	1.6
2	1800	145JM	VEJMM3157T-5	PC3	16.31	52.00	86.5	575	2.1
3	1800	182JM	VEJMM3211T-5	PC3	18.06	74.00	89.5	575	3.1
5	1800	184JM	VEJMM3218T-5	PC3	18.06	77.00	89.5	575	5.2

\*\*ODP motors retain IP rating when mounted in horizontal position only.

## Pump motor

White washdown, close-coupled pump, three phase, totally enclosed, foot mounted

1 - 20 Hp

IP55



### Features:

- Oversized, double sealed ball bearings
- Locked drive end bearing
- Neoprene gaskets
- Lip and V-Ring seal on drive end
- NEMA Premium® efficiency
- White epoxy, corrosion resistant finish
- 300 series stainless steel hardware and shaft extension

### Applications:

- Water pumps commercial and industrial
- Wet environment

<b>Hp</b>	<b>NEMA</b>			<b>Catalog Number</b>	<b>Disc. Sym.</b>	<b>"C" Dim.</b>	<b>Aprx. Wt. (lb)</b>	<b>Full Load</b>		<b>Full Load Amps</b>
	<b>RPM</b>	<b>Frame</b>	<b>Enclosure</b>					<b>Efficiency</b>	<b>Voltage</b>	
1	3600	143JM	TENV	JMEWDM3545T	WDW	15.41	35	84	230/460	1.4
	1800	143JM	TENV	JMEWDM3546T	WDW	14.25	39	85.5	230/460	1.5
1 1/2	3600	143JM	TENV	JMEWDM3550T	WDW	14.28	48	85.5	208-230/460	2
	1800	145JM	TENV	JMEWDM3554T	WDW	15.16	50	86.5	230/460	2.1
2	3600	145JM	TEFC	JMEWDM3555T	WDW	15.43	47	85.5	208-230/460	2.5
	1800	145JM	TEFC	JMEWDM3558T	WDW	16.34	48	86.5	230/460	2.9
3	3600	145JM	TEFC	JMEWDM3559T	WDW	16.31	50	86.5	230/460	3.6
	1800	182JM	TEFC	JMEWDM3611T	WDW	18.05	70	89.5	230/460	4.2
5	3600	184JM	TEFC	JMEWDM3613T	WDW	18.05	81	88.5	230/460	5.6
	1800	184JM	TEFC	JMEWDM3613T-5	WDW	18.05	74	88.5	575	4.7
7 1/2	3600	184JM	TEFC	JMEWDM3616T	WDW	19.55	96	89.5	230/460	8.4
	1800	213JM	TEFC	JMEWDM3710T	WDW	20.91	151	91.7	230/460	9.5
10	3600	215JM	TEFC	JMEWDM3711T	WDW	20.91	130	90.2	208-230/460	10.8
	1800	215JM	TEFC	JMEWDM3714T	WDW	22.41	165	91.7	230/460	12
15	3600	215JM	TEFC	JMEWDM3713T	WDW	21.64	169	91	230/460	17
	1800	254JM	TEFC	JMEWDM23933T	WDW	25.06	252	92.4	230/460	18
20	3600	256JM	TEFC	JMEWDM41906T	WDW	25.06	255	91	230/460	23
	1800	256JM	TEFC	JMEWDM23934T	WDW	25.06	275	93	230/460	24

Red catalog number indicates NEW product.

## Pump motor

Washdown features, close-coupled pump, three phase,  
totally enclosed, foot mounted,  
25 - 75 Hp

**IP55**



### Features:

- Oversized, double sealed ball bearings
- Locked drive end bearing
- Neoprene gaskets
- Lip and V-Ring seal on drive end
- NEMA Premium® efficiency
- White epoxy, corrosion resistant finish
- 300 series stainless steel hardware and shaft extension
- Rugged cast iron construction

### Applications:

- Water pumps commercial and industrial
- Wet environment

Hp	RPM	NEMA Frame	Enclosure	Catalog Number	Disc. Sym.	"C" Dim.	Aprx. Wt. (lb)	Full Load Efficiency	Voltage	Full Load Amps
25	3600	284JM	TEFC	JMEWDM4107T	WDW	28.44	446	91.7	230/460	30
	1800	284JM	TEFC	JMEWDM4103T	WDW	28.44	437	93.6	230/460	30
30	3600	286JM	TEFC	JMEWDM4108T	WDW	28.44	459	91.7	230/460	34
	1800	286JM	TEFC	JMEWDM4104T	WDW	28.44	460	93.6	230/460	36
40	3600	324JM	TEFC	JMEWDM4109T	WDW	30.53	587	92.4	230/460	47
	1800	324JM	TEFC	JMEWDM4110T	WDW	30.53	600	94.1	230/460	46
50	3600	326JM	TEFC	JMEWDM4114T	WDW	30.53	635	93	230/460	55
	1800	326JM	TEFC	JMEWDM4115T	WDW	30.53	700	94.5	230/460	57
60	3600	364TCZ	TEFC	JMEWDM4310T	WDW	33.11	999	93.6	230/460	66.1
	1800	364TCZ	TEFC	JMEWDM4314T	WDW	33.11	961	95	230/460	70
75	3600	365TCZ	TEFC	JMEWDM4313T	WDW	33.11	1005	94.5	230/460	80.7
	1800	365TCZ	TEFC	JMEWDM4316T	WDW	33.11	965	95.4	230/460	86

Cast iron frame

Red catalog number indicates NEW product.

## Pump motor

Food safe stainless steel, close-coupled, three phase,  
foot mounted, encapsulated,  
1 - 20 Hp

**IP69**



### Features:

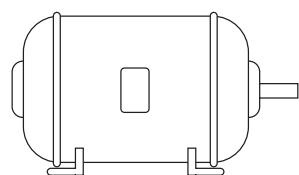
- Individually welded feet for ease of cleaning
- Rotatable, round conduit box
- Smooth heads on external drains & hardware
- O-ring sealed endplates & conduit box
- Encapsulated, color-coded leads
- No crevices for food to collect
- 300 series stainless steel
- Epoxy encapsulated windings
- Laser etched nameplate
- Removable condensate drains in each endplate
- Internal & external shaft sealing
- Class H insulation system, inverter ready
- 3 year warranty, NEMA Premium® efficiency

### Applications:

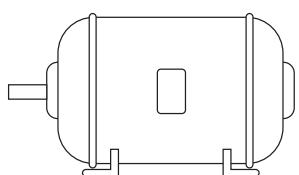
- Food processing
- High pressure washdown
- Caustic environment
- Pumps and wastewater
- Outdoors
- Sanitary washdown

<b>Hp</b>	<b>RPM</b>	<b>NEMA Frame</b>	<b>Enclosure</b>	<b>Catalog Number</b>	<b>Disc.</b>	<b>"C"</b>	<b>Aprx.</b>	<b>Full Load Efficiency</b>	<b>Voltage</b>	<b>Full Load Amps</b>
					<b>Sym.</b>	<b>Dim.</b>	<b>Wt. (lb)</b>			
1	1800	143JM	TENV	JMFSWDM3546T-E	WDF	14.97	37	85.5	230/460	1.5
1 1/2	3600	143JM	TENV	JMFSWDM3550T-E	WDF	15.85	50	85.5	230/460	1.8
	1800	145JM	TEFC	JMFSWDM3554T-E	WDF	16.15	45	86.5	230/460	2.2
2	3600	145JM	TEFC	JMFSWDM3555T-E	WDF	17.03	50	86.5	230/460	2.5
	1800	145JM	TEFC	JMFSWDM3558T-E	WDF	18.4	56	88.5	230/460	2.7
3	3600	145JM	TEFC	JMFSWDM3559T-E	WDF	18.4	61	86.5	230/460	3.7
	1800	182JM	TEFC	JMFSWDM3611T-E	WDF	19.72	83	89.5	230/460	4.2
5	3600	184JM	TEFC	JMFSWDM3613T-E	WDF	18.22	81	89.5	230/460	5.6
	1800	184JM	TEFC	JMFSWDM3615T-E	WDF	19.72	101	89.5	230/460	6.5
7 1/2	3600	213JM	TEFC	JMFSWDM3709T-E	WDF	20.62	131	91	230/460	8.3
	1800	213JM	TEFC	JMFSWDM3710T-E	WDF	21.81	139	91.7	230/460	9.5
10	3600	215JM	TEFC	JMFSWDM3711T-E	WDF	21.81	154	91.7	230/460	10.6
	1800	215JM	TEFC	JMFSWDM3714T-E	WDF	23.56	187	92.4	230/460	12.5
15	3600	215JM	TEFC	JMFSWDM3713T-E	WDF	23.56	187	91.7	230/460	17
	254JM	TEFC		JMFSWDM23994T-E	WDF	25.67	265	91	230/460	16.5
	1800	254JM	TEFC	JMFSWDM23933T-E	WDF	25.67	286	92.4	230/460	17.5
20	3600	256JM	TEFC	JMFSWDM41906T-E	WDF	26.67	300	91	230/460	21.5
	1800	256JM	TEFC	JMFSWDM23934T-E	WDF	26.67	295	93	230/460	23.4

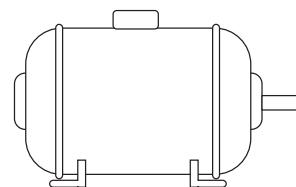
## Floor Mountings



Assembly F-1

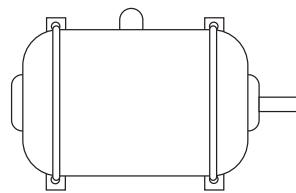


Assembly F-2

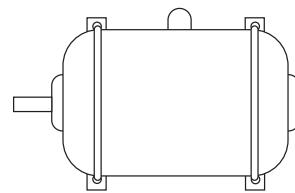


Assembly F-3

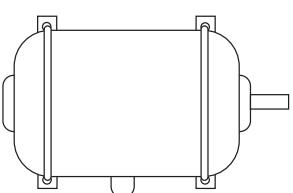
## Wall Mountings



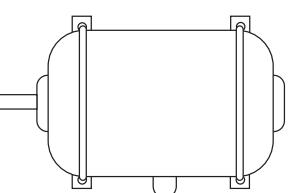
Assembly W-1



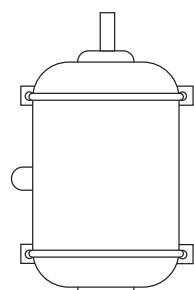
Assembly W-2



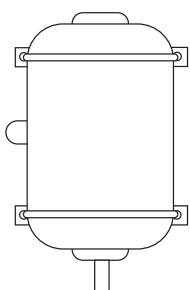
Assembly W-3



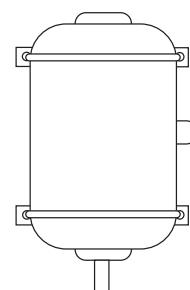
Assembly W-4



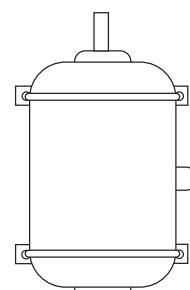
Assembly W-5



Assembly W-6

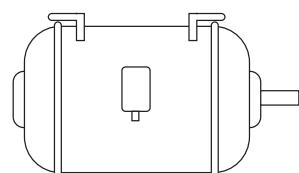


Assembly W-7

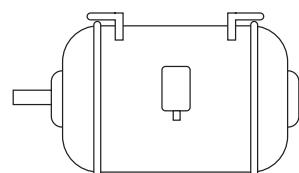


Assembly W-8

## Ceiling Mountings

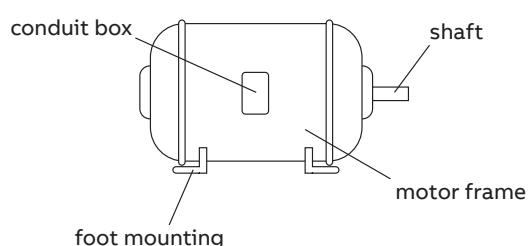


Assembly C-1



Assembly C-2

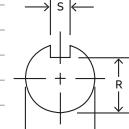
Note: For all NEMA mounting configurations, refer to NEMA MG 1-2016.



## NEMA quick reference chart

NEMA Frame	D	E	2F	H	N	O	P	U	V	AA	AB	AH	AJ	AK	BA	BB	BD	XO	TAP
42	2- $\frac{1}{2}$	1- $\frac{1}{4}$	1- $\frac{1}{16}$	$\frac{3}{32}$	1- $\frac{1}{2}$	5	4- $\frac{1}{16}$	$\frac{3}{8}$	1- $\frac{1}{8}$	$\frac{3}{8}$	4- $\frac{1}{32}$	1- $\frac{1}{16}$	3- $\frac{3}{4}$	3	2- $\frac{1}{16}$	$\frac{1}{8}$	4- $\frac{1}{8}$	1- $\frac{1}{16}$	$\frac{1}{4}$ -20
				Slot															
48	3	2- $\frac{1}{2}$	2- $\frac{3}{4}$	$\frac{1}{16}$	1- $\frac{7}{8}$	5- $\frac{1}{8}$	5- $\frac{1}{16}$	$\frac{1}{2}$	1- $\frac{1}{2}$	$\frac{1}{2}$	4- $\frac{3}{8}$	1- $\frac{1}{16}$	3- $\frac{3}{4}$	3	2- $\frac{1}{2}$	$\frac{1}{8}$	5- $\frac{1}{8}$	2- $\frac{1}{2}$	$\frac{1}{4}$ -20
				Slot															
56	3- $\frac{1}{2}$	2- $\frac{7}{16}$	3	$\frac{1}{16}$	2- $\frac{7}{16}$	6- $\frac{1}{8}$	6- $\frac{1}{8}$	$\frac{3}{8}$	1- $\frac{1}{8}$	$\frac{1}{2}$	5	2- $\frac{1}{16}$	5- $\frac{1}{8}$	4- $\frac{1}{2}$	2- $\frac{3}{4}$	$\frac{1}{8}$	6- $\frac{1}{2}$	2- $\frac{1}{2}$	$\frac{1}{8}$ -16
56H	5			Slot	2- $\frac{7}{16}$														
143T	3- $\frac{1}{2}$	2- $\frac{3}{4}$	4	$\frac{1}{16}$	2- $\frac{1}{2}$	6- $\frac{7}{8}$	6- $\frac{1}{8}$	$\frac{3}{8}$	2- $\frac{1}{4}$	$\frac{3}{8}$	5- $\frac{1}{4}$	2- $\frac{1}{8}$	5- $\frac{1}{8}$	4- $\frac{1}{2}$	2- $\frac{1}{4}$	$\frac{1}{8}$	6- $\frac{1}{2}$	2- $\frac{1}{2}$	$\frac{1}{8}$ -16
145T	5																		
182	4- $\frac{1}{2}$	3- $\frac{3}{4}$	4- $\frac{1}{2}$	$\frac{1}{16}$	2- $\frac{1}{16}$	8- $\frac{1}{16}$	7- $\frac{7}{8}$	$\frac{3}{8}$	2- $\frac{1}{4}$	$\frac{3}{8}$	5- $\frac{1}{4}$	2- $\frac{1}{8}$	5- $\frac{1}{8}$	4- $\frac{1}{2}$	2- $\frac{3}{4}$	$\frac{1}{8}$	6- $\frac{1}{2}$	2- $\frac{1}{2}$	$\frac{1}{8}$ -16
184		5- $\frac{1}{2}$			2- $\frac{1}{16}$														
182T		4- $\frac{1}{2}$			3- $\frac{1}{16}$														
184T		5- $\frac{1}{2}$			3- $\frac{1}{16}$														
213	5- $\frac{1}{4}$	4- $\frac{1}{4}$	5- $\frac{1}{2}$	$\frac{1}{16}$	3- $\frac{1}{2}$	10- $\frac{1}{4}$	9- $\frac{9}{16}$	1- $\frac{1}{8}$	3	1	7- $\frac{3}{8}$	2- $\frac{3}{4}$	7- $\frac{1}{4}$	8- $\frac{1}{2}$	3- $\frac{1}{2}$	$\frac{1}{4}$	9	2- $\frac{3}{4}$	$\frac{1}{2}$ -13
215	7		3- $\frac{1}{2}$						1- $\frac{1}{8}$	3									
213T	5- $\frac{1}{2}$		3- $\frac{1}{8}$						1- $\frac{1}{8}$	3- $\frac{1}{8}$									
215T	7		3- $\frac{1}{8}$						1- $\frac{1}{8}$	3- $\frac{1}{8}$									
254U	6- $\frac{1}{4}$	5	8- $\frac{1}{4}$	$\frac{1}{16}$	4- $\frac{1}{16}$	12- $\frac{1}{8}$	12- $\frac{15}{16}$	1- $\frac{1}{8}$	3- $\frac{3}{4}$	1	9- $\frac{9}{16}$	3- $\frac{1}{2}$	7- $\frac{1}{4}$	8- $\frac{1}{2}$	4- $\frac{1}{4}$	$\frac{1}{4}$	10	—	$\frac{1}{2}$ -13
256U		10			4- $\frac{1}{16}$														
254T		8- $\frac{1}{4}$			4- $\frac{1}{16}$														
256T		10			4- $\frac{1}{16}$														
284U	7	5- $\frac{1}{2}$	9- $\frac{1}{2}$	$\frac{1}{16}$	5- $\frac{1}{8}$	14- $\frac{1}{8}$	14- $\frac{1}{8}$	1- $\frac{1}{8}$	4- $\frac{7}{8}$	1- $\frac{1}{2}$	13- $\frac{1}{8}$	4- $\frac{5}{8}$	9	10- $\frac{1}{2}$	4- $\frac{3}{4}$	$\frac{1}{4}$	11- $\frac{1}{4}$	—	$\frac{1}{2}$ -13
286U		11			5- $\frac{1}{8}$														
284T		9- $\frac{1}{2}$			4- $\frac{1}{8}$														
286T		11			4- $\frac{1}{8}$														
284TS		9- $\frac{1}{2}$			3- $\frac{1}{16}$														
286TS		11			3- $\frac{1}{16}$														
324U	8	6- $\frac{1}{4}$	10- $\frac{1}{2}$	$\frac{1}{16}$	5- $\frac{1}{8}$	16- $\frac{1}{2}$	16- $\frac{1}{2}$	1- $\frac{1}{8}$	5- $\frac{1}{8}$	2	14- $\frac{1}{8}$	5- $\frac{3}{8}$	11	12- $\frac{1}{2}$	5- $\frac{1}{4}$	$\frac{1}{4}$	13- $\frac{3}{8}$	—	$\frac{1}{8}$ -11
326U		12			5- $\frac{1}{8}$														
324T		10- $\frac{1}{2}$			5- $\frac{1}{2}$														
326T		12			5- $\frac{1}{2}$														
324TS		10- $\frac{1}{2}$			3- $\frac{1}{16}$														
326TS		12			3- $\frac{1}{16}$														
364U	9	7	11- $\frac{1}{4}$		6- $\frac{3}{4}$														
365U		12- $\frac{1}{4}$			6- $\frac{3}{4}$														
364T		11- $\frac{1}{4}$	$\frac{1}{16}$	6- $\frac{3}{4}$	18- $\frac{1}{2}$	19- $\frac{1}{2}$	2- $\frac{3}{8}$	5- $\frac{7}{8}$	3	18- $\frac{1}{16}$	5- $\frac{9}{16}$								
365T		12- $\frac{1}{4}$			6- $\frac{3}{4}$														
364TS		11- $\frac{1}{4}$			4														
365TS		12- $\frac{1}{4}$			4														
404U	10	8	12- $\frac{1}{4}$		7- $\frac{3}{16}$														
405U			13- $\frac{1}{4}$		7- $\frac{3}{16}$														
404T			12- $\frac{1}{4}$	$\frac{1}{16}$	7- $\frac{3}{16}$	21- $\frac{5}{16}$	22- $\frac{1}{2}$	2- $\frac{1}{8}$	7- $\frac{1}{4}$	3	19- $\frac{5}{16}$	7							
405T			13- $\frac{1}{4}$		7- $\frac{3}{16}$														
404TS			12- $\frac{1}{4}$		4- $\frac{1}{2}$														
405TS			13- $\frac{1}{4}$		4- $\frac{1}{2}$														
444U	11	9	14- $\frac{1}{2}$		8- $\frac{1}{8}$	24.24	27.57	2- $\frac{1}{8}$	8- $\frac{3}{8}$	3	22.68	8- $\frac{1}{8}$	14	16	7- $\frac{1}{2}$	$\frac{1}{4}$	16- $\frac{3}{4}$	—	$\frac{1}{8}$ -11
445U			16- $\frac{1}{2}$		8- $\frac{1}{8}$	24.24	27.57	2- $\frac{1}{8}$	8- $\frac{3}{8}$	3	22.68	8- $\frac{1}{8}$							
444T			14- $\frac{1}{2}$		8- $\frac{1}{16}$	24.24	27.57	3- $\frac{1}{8}$	8- $\frac{3}{8}$	4	22.68	8- $\frac{1}{8}$							
445T			16- $\frac{1}{2}$		8- $\frac{1}{16}$	24.24	27.57	3- $\frac{1}{8}$	8- $\frac{3}{8}$	4	22.68	8- $\frac{1}{8}$							
447T		20	$\frac{13}{16}$		8- $\frac{1}{16}$	24.24	27.57	3- $\frac{1}{8}$	8- $\frac{3}{8}$	4	23.86	8- $\frac{1}{8}$							
449T		25			8- $\frac{1}{16}$	24.24	27.57	3- $\frac{1}{8}$	8- $\frac{3}{8}$	4	23.86	8- $\frac{1}{8}$							
444TS			14- $\frac{1}{2}$		4- $\frac{1}{16}$	24.24	27.57	2- $\frac{1}{8}$	4- $\frac{3}{8}$	4	22.68	4- $\frac{1}{2}$							
445TS			16- $\frac{1}{2}$		4- $\frac{1}{16}$	24.24	27.57	2- $\frac{1}{8}$	4- $\frac{3}{8}$	4	22.68	4- $\frac{1}{2}$							
447TS		20			4- $\frac{1}{16}$	24.24	27.57	2- $\frac{1}{8}$	4- $\frac{3}{8}$	4	23.86	4- $\frac{1}{2}$							
449TS		25			4- $\frac{1}{16}$	24.24	27.57	2- $\frac{1}{8}$	4- $\frac{3}{8}$	4	23.86	4- $\frac{1}{2}$							

NEMA Shaft Dimensions		Keyseat Dimensions		NEMA Shaft Dimensions	
(U)	(R)	(S)	(U)	(R)	(S)
$\frac{1}{8}$	$\frac{21}{64}$	FLAT	$1\frac{1}{8}$	$1\frac{1}{2}\frac{1}{32}$	$\frac{1}{2}$
$\frac{1}{4}$	$\frac{29}{64}$	FLAT	$2\frac{1}{8}$	$2\frac{1}{2}\frac{1}{32}$	$\frac{1}{2}$
$\frac{5}{16}$	$\frac{33}{64}$	$\frac{3}{16}$	$2\frac{3}{8}$	$2\frac{1}{16}$	$\frac{1}{8}$
$\frac{3}{8}$	$\frac{49}{64}$	$\frac{3}{8}$	$2\frac{1}{2}$	$2\frac{3}{16}$	$\frac{1}{8}$
$\frac{1}{2}$	$\frac{65}{64}$	$\frac{1}{4}$	$2\frac{1}{2}$	$2\frac{29}{64}$	$\frac{3}{16}$
$\frac{1}{2}$	$\frac{81}{64}$	$\frac{1}{8}$	$2\frac{1}{2}$	$2\frac{7}{16}$	$\frac{1}{8}$
$\frac{1}{2}$	$\frac{97}{64}$	$\frac{3}{16}$	$3\frac{1}{2}$	$3\frac{7}{16}$	$1$



Frame	NEMA frames prior to 1953					
D	E	F	N	U	V	BA

<tbl\_r cells="2" ix="1" maxcspan

## IEC Low Voltage Motors (<1,000 VAC)

Wide product portfolio for any industry, any application

### True IEC design and dimensions

- TEFC – M3AA/M3BP, frame 63 - 500 – cast aluminum up to 280, cast iron up to 500
  - Power range – 0.09 to 1,500 kW (0.16 to **2,000 Hp**)
- Water Jacketed – M3LP, frame 280 - 500 – cast iron/fabricated steel
  - Power range – 90 to 2,000 kW (120 to **2,600 Hp**)
- Square-laminate frame – HDP blower cooled, water cooled, or TEFC, frame 80 - 400
  - Power range – 2 to 2,000 kW (3 to **2,600 Hp**)
- SynRM technology – M3AL/M3BL, frame 132 - 315 – cast aluminum or cast iron – IE5 efficiency on VFD
  - Power range – 5.5 to 350 kW (7 to **470 Hp**)
- Permanent Magnet – M3B1/M3LJ air-cooled or water-cooled, frame 280 - 560
  - Power range – up to 2,500 kW (**3,300 Hp**)

### NEMA dimensions

- TEFC – M3BN, frame 449, 5000, and 586/7/8 – cast iron
  - 250 to **900 Hp**

### Safe area motors

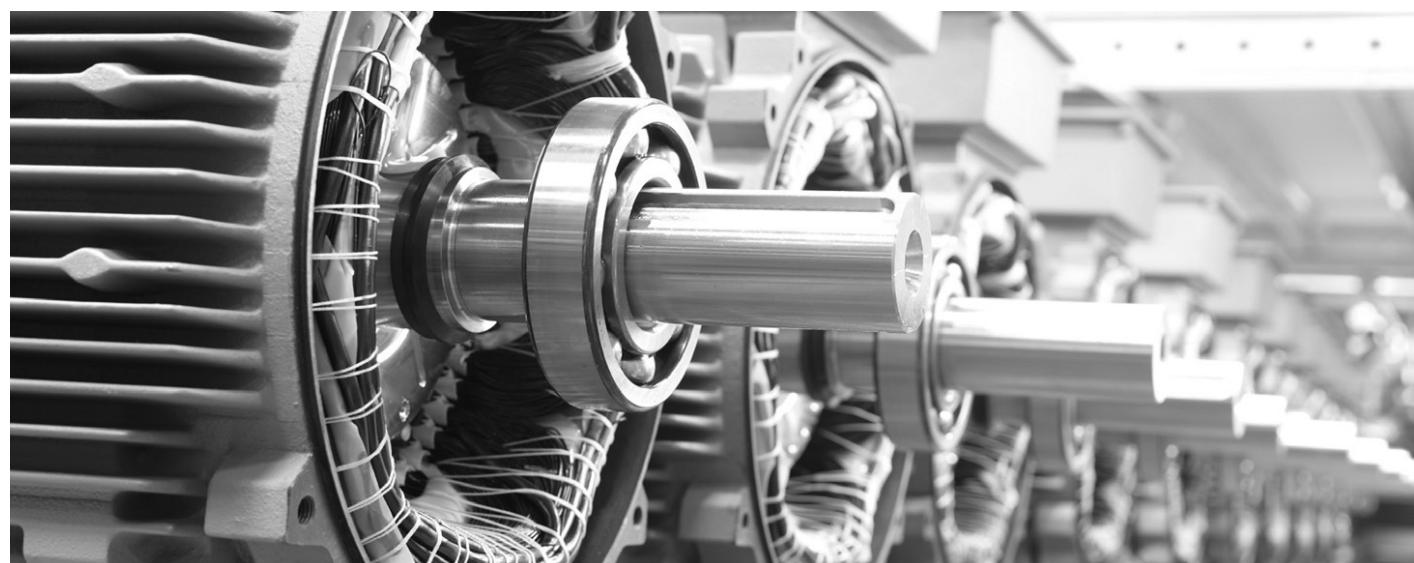
- Induction motors in aluminum and cast iron with efficiencies up to IE4
- Synchronous reluctance motors
- Permanent magnet motors
- High speed motors
- Water cooled motors

### Hazardous area motors

- Flameproof motors
- Flameproof mining motors
- Increased safety motors
- Non-sparking motors
- Dust ignition proof motors

### Industry and special applications

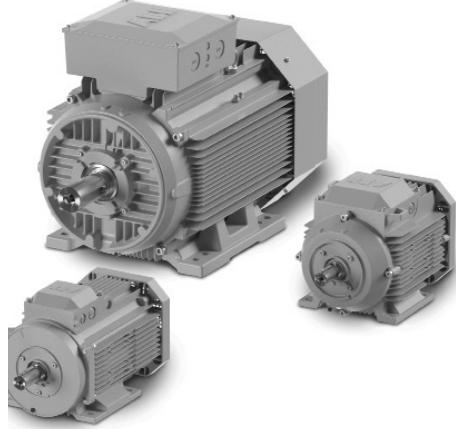
- Marine, mining, food & beverage, water, HVAC
- Food safe stainless motors
- Brake motors
- High ambient motors
- Square-laminate frame variable speed motors
- Roller table motors
- Smoke extraction motors
- E-mobility motors
- Smart sensor enabled motors



We have more to offer than just the IEC motors shown in this stock catalog. Contact your local sales office to discuss the full line of ABB custom IEC motors.

## Process Performance

IEC aluminum, three phase, 50/60 Hz, 400/460VY  
0.16-75 Hp



### Features:

- Durable cast aluminum construction (extruded aluminum in frame sizes 200 and above)
- Cast iron end shield standard on frame sizes 160 and up
- IE3 efficiency per IEC 60034-30-1 (2014) (80 frame and above) All motors are compliant with DOE and NRCAn.
- Complies with EU MEPS/EcoDesign Regulation (EU) 2019/1781 effective July 2021. CE marked.

### Applications:

- Pumps
- Compressors
- Fans
- Conveyors
- General machinery

kW // Hp*	RPM	IEC Frame	Catalog Number	ABB Product Code**	ABB Type Number	Disc. Sym.	"L" Dim. (in)	Aprx. Wt. (lb)	Voltage	Notes (a)
<b>IM B3 (1001), foot mounted</b>										
0.18 // 0.24	1500/1800	63	MM06184-S-AP	3GAA062312-ASF	M3AA 63B 4	IPP	8.43	10	230D/400Y,50Hz; 460Y,60Hz	
0.25 // 0.33	1500/1800	71	MM07254-S-AP	3GAA072311-ASE	M3AA 71A 4	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
0.37 // 0.5	3000/3600	71	MM07372-S-AP	3GAA071311-ASE	M3AA 71A 2	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	71	MM07374-S-AP	3GAA072312-ASE	M3AA 71B 4	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
0.55 // 0.73	3000/3600	71	MM07552-S-AP	3GAA071312-ASE	M3AA 71B 2	IPP	9.45	13	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	80	MM08554-S-AP	3GAA082311-ASE	M3AA 80A 4	IPP	10.45	19	230D/400Y,50Hz; 460Y,60Hz	
0.75 // 1	3000/3600	80	EMM08752-S-AP	3GAA081320-ASK	M3AA 80MB 2	IPP	10.45	21	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	80	EMM08754-S-AP	3GAA082350-ASK	M3AA 80ME 4	IPP	11.56	30	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	90	EMM09756-S-AP	3GAA093540-ASK	M3AA 90LD 6	IPP	13.05	42	230D/400Y,50Hz; 460Y,60Hz	
1.1 // 1.5	3000/3600	80	EMM08112-S-AP	3GAA081330-ASK	M3AA 80MC 2	IPP	10.45	23	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMM09114-S-AP	3GAA092530-ASK	M3AA 90LC 4	IPP	13.05	42	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	100	EMM10116-S-AP	3GAA103550-ASK	M3AA 100LE 6	IPP	13.05	77	230D/400Y,50Hz; 460Y,60Hz	
1.5 // 2	3000/3600	90	EMM09152-S-AP	3GAA091520-ASK	M3AA 90LB 2	IPP	13.05	37	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMM09154-S-AP	3GAA092540-ASK	M3AA 90LD 4	IPP	13.05	42	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	100	EMM10156-S-AP	3GAA103560-ASK	M3AA 100LF 6	IPP	17.01	77	230D/400Y,50Hz; 460Y,60Hz	
2.2 // 3	3000/3600	90	EMM09222-S-AP	3GAA091530-ASK	M3AA 90LC 2	IPP	13.05	44	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMM10224-S-AP	3GAA102550-ASK	M3AA 100LE 4	IPP	17.01	79	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	112	EMM11226-S-AP	3GAA113330-ASK	M3AA 112MC 6	IPP	16.97	95	230D/400Y,50Hz; 460Y,60Hz	
3 // 4	3000/3600	100	EMM10032-S-AP	3GAA101530-ASK	M3AA 100LC 2	IPP	17.01	62	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMM10034-S-AP	3GAA102560-ASK	M3AA 100LF 4	IPP	17.01	79	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMM13036-S-AP	3GAA133330-ASK	M3AA 132MC 6	IPP	19.17	145	230D/400Y,50Hz; 460Y,60Hz	
4 // 5.3	3000/3600	112	EMM11042-S-AP	3GAA111320-ASK	M3AA 112MB 2	IPP	16.97	84	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	112	EMM11044-S-AP	3GAA112320-ASK	M3AA 112MB 4	IPP	16.97	97	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMM13046-S-AP	3GAA133340-ASK	M3AA 132MD 6	IPP	19.17	148	230D/400Y,50Hz; 460Y,60Hz	
5.5 // 7.3	3000/3600	132	EMM13552-S-AP	3GAA131120-ASK	M3AA 132SB 2	IPP	19.17	128	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	132	EMM13554-S-AP	3GAA132320-ASK	M3AA 132MB 4	IPP	19.17	150	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMM13556-S-AP	3GAA133350-ASK	M3AA 132ME 6	IPP	19.17	139	230D/400Y,50Hz; 460Y,60Hz	
7.5 // 10	3000/3600	132	EMM13752-S-AP	3GAA131130-ASK	M3AA 132SC 2	IPP	19.17	139	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	132	EMM13754-S-AP	3GAA132330-ASK	M3AA 132MC 4	IPP	19.17	150	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	160	EMM16756-S-AP	3GAA163410-ASK	M3AA 160MLA 6	IPP	22.99	275	230D/400Y,50Hz; 460Y,60Hz	

(a) See notes on inside back flap.

\* Motors are stamped with kW only.

\*\* Included variant codes are not shown in Product Code, please contact local sales office.

Motors are suitable for use at 230VD, 60Hz

3 year warranty

## Process Performance, IEC aluminum, three phase

kW // Hp*	RPM	IEC Frame	Catalog Number	ABB Product Code**	ABB Type Number	Disc. Sym.	"L" Dim. (in)	Apx. Wt. (lb)	Voltage	Notes (a)
<b>IM B3 (1001), foot mounted (continued)</b>										
11 // 14.7	3000/3600	160	EMM16112-S-AP	3GAA161410-ASK	M3AA 160MLA 2	IPP	22.99	234	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	160	EMM16114-S-AP	3GAA162410-ASK	M3AA 160MLA 4	IPP	22.99	277	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	160	EMM16116-S-AP	3GAA163420-ASK	M3AA 160MLB 6	IPP	26.81	306	230D/400Y,50Hz; 460Y,60Hz	
15 // 20	3000/3600	160	EMM16152-S-AP	3GAA161420-ASK	M3AA 160MLB 2	IPP	22.99	271	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	160	EMM16154-S-AP	3GAA162420-ASK	M3AA 160MLB 4	IPP	26.81	308	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	180	EMM18156-S-AP	3GAA183410-ASK	M3AA 180MLA 6	IPP	28.58	385	230D/400Y,50Hz; 460Y,60Hz	
18.5 // 24.6	3000/3600	160	EMM16182-S-AP	3GAA161430-ASK	M3AA 160MLC 2	IPP	26.81	302	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	180	EMM18184-S-AP	3GAA182410-ASK	M3AA 180MLA 4	IPP	28.58	389	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	200	EMM20186-S-AP	3GAA203410-ASK	M3AA 200MLA 6	IPP	32.32	502	230D/400Y,50Hz; 460Y,60Hz	
22 // 29.3	3000/3600	180	EMM18222-S-AP	3GAA181410-ASK	M3AA 180MLA 2	IPP	28.58	387	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	180	EMM18224-S-AP	3GAA182420-ASK	M3AA 180MLB 4	IPP	28.58	387	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	200	EMM20226-S-AP	3GAA203420-ASK	M3AA 200MLB 6	IPP	32.32	539	230D/400Y,50Hz; 460Y,60Hz	
30 // 40	3000/3600	200	EMM20302-S-AP	3GAA201410-ASK	M3AA 200MLA 2	IPP	32.32	518	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	200	EMM20304-S-AP	3GAA202410-ASK	M3AA 200MLA 4	IPP	32.32	542	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	225	EMM22306-S-AP	3GAA223210-ASK	M3AA 225SMA 6	IPP	34.65	705	230D/400Y,50Hz; 460Y,60Hz	
37 // 49.3	3000/3600	200	EMM20372-S-AP	3GAA201420-ASK	M3AA 200MLB 2	IPP	32.32	531	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	225	EMM22374-S-AP	3GAA222210-ASK	M3AA 225SMA 4	IPP	34.65	694	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	250	EMM25376-S-AP	3GAA253210-ASK	M3AA 250SMA 6	IPP	34.80	809	230D/400Y,50Hz; 460Y,60Hz	
45 // 60	3000/3600	225	EMM22452-S-AP	3GAA221210-ASK	M3AA 225SMA 2	IPP	33.46	719	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	225	EMM22454-S-AP	3GAA222220-ASK	M3AA 225SMB 4	IPP	34.65	696	230D/400Y,50Hz; 460Y,60Hz	
55 // 73.3	3000/3600	250	EMM25552-S-AP	3GAA251210-ASK	M3AA 250SMA 2	IPP	34.80	773	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	250	EMM25554-S-AP	3GAA252210-ASK	M3AA 250SMA 4	IPP	34.80	828	230D/400Y,50Hz; 460Y,60Hz	
<b>IM B5 (3001), flange mounted, footless</b>										
0.12 // 0.16	1500/1800	63	MVM06124D-S-AP	3GAA062311-BSF	M3AA 63A 4	IPP	8.43	9	230D/400Y,50Hz; 460Y,60Hz	
0.18 // 0.25	3000/3600	63	MVM06182D-S-AP	3GAA061311-BSF	M3AA 63A 2	IPP	8.43	9	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	63	MVM06184D-S-AP	3GAA062312-BSF	M3AA 63B 4	IPP	8.43	10	230D/400Y,50Hz; 460Y,60Hz	
0.25 // 0.33	3000/3600	63	MVM06252D-S-AP	3GAA061312-BSF	M3AA 63B 2	IPP	8.43	10	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	71	MVM07254D-S-AP	3GAA072311-BSE	M3AA 71A 4	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
0.37 // 0.5	3000/3600	71	MVM07372D-S-AP	3GAA071311-BSE	M3AA 71A 2	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	71	MVM07374D-S-AP	3GAA072312-BSE	M3AA 71B 4	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
0.55 // 0.75	3000/3600	71	MVM07552D-S-AP	3GAA071312-BSE	M3AA 71B 2	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	80	MVM08554D-S-AP	3GAA082311-BSE	M3AA 80A 4	IPP	10.45	19	230D/400Y,50Hz; 460Y,60Hz	
0.75 // 1	3000/3600	80	EMVM08752D-S-AP	3GAA081320-BSK	M3AA 80MB 2	IPP	10.45	21	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	80	EMVM08754D-S-AP	3GAA082350-BSK	M3AA 80ME 4	IPP	11.56	30	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	90	EMVM09756D-S-AP	3GAA093540-BSK	M3AA 90LD 6	IPP	13.05	42	230D/400Y,50Hz; 460Y,60Hz	
1.1 // 1.5	3000/3600	80	EMVM08112D-S-AP	3GAA081330-BSK	M3AA 80MC 2	IPP	10.45	23	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	100	EMVM10116D-S-AP	3GAA103550-BSK	M3AA 100LE 6	IPP	17.01	77	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMVM09114D-S-AP	3GAA092530-BSK	M3AA 90LC 4	IPP	13.05	77	230D/400Y,50Hz; 460Y,60Hz	
1.5 // 2	3000/3600	90	EMVM09152D-S-AP	3GAA091520-BSK	M3AA 90LB 2	IPP	13.05	37	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMVM09154D-S-AP	3GAA092540-BSK	M3AA 90LD 4	IPP	13.05	42	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	100	EMVM10156D-S-AP	3GAA103560-BSK	M3AA 100LF 6	IPP	17.01	77	230D/400Y,50Hz; 460Y,60Hz	
2.2 // 3	3000/3600	90	EMVM09222D-S-AP	3GAA091530-BSK	M3AA 90LC 2	IPP	13.05	44	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMVM10224D-S-AP	3GAA102550-BSK	M3AA 100LE 4	IPP	17.01	79	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	112	EMVM11226D-S-AP	3GAA113330-BSK	M3AA 112MC 6	IPP	16.97	95	230D/400Y,50Hz; 460Y,60Hz	
3 // 4	3000/3600	100	EMVM10032D-S-AP	3GAA101530-BSK	M3AA 100LC 2	IPP	17.01	62	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMVM10034D-S-AP	3GAA102560-BSK	M3AA 100LF 4	IPP	17.01	79	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13036D-S-AP	3GAA133330-BSK	M3AA 132MC 6	IPP	17.01	145	230D/400Y,50Hz; 460Y,60Hz	
4 // 5.3	3000/3600	112	EMVM11042D-S-AP	3GAA111320-BSK	M3AA 112MB 2	IPP	19.17	84	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	112	EMVM11044D-S-AP	3GAA112320-BSK	M3AA 112MB 4	IPP	19.17	97	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13046D-S-AP	3GAA133340-BSK	M3AA 132MD 6	IPP	19.17	148	230D/400Y,50Hz; 460Y,60Hz	
5.5 // 7.3	3000/3600	132	EMVM13552D-S-AP	3GAA131120-BSK	M3AA 132SB 2	IPP	19.17	128	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	132	EMVM13554D-S-AP	3GAA132320-BSK	M3AA 132MB 4	IPP	19.17	150	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13556D-S-AP	3GAA133350-BSK	M3AA 132ME 6	IPP	19.17	139	230D/400Y,50Hz; 460Y,60Hz	
7.5 // 10	3000/3600	132	EMVM13752D-S-AP	3GAA131130-BSK	M3AA 132SC 2	IPP	19.17	139	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	132	EMVM13754D-S-AP	3GAA132330-BSK	M3AA 132MC 4	IPP	19.17	150	230D/400Y,50Hz; 460Y,60Hz	

(a) See notes on inside back flap.

\* Motors are stamped with kW only.

\*\* Included variant codes are not shown in Product Code, please contact local sales office.

Motors are suitable for use at 230V, 60Hz

3 year warranty

**Process Performance, IEC aluminum, three phase**

kW // Hp*	RPM	IEC Frame	Catalog Number	ABB Product Code**	ABB Type Number	Disc. Sym.	"L" Dim. (in)	Aprx. Wt. (lb)	Voltage	Notes (a)
<b>IM B14 (3601), face mounted, footless</b>										
0.18 //	3000/3600	63	MVM06182C-S-AP	3GAA061311-CSF	M3AA 63A 2	IPP	8.43	9	230D/400Y,50Hz; 460Y,60Hz	
0.25	1500/1800	63	MVM06184C-S-AP	3GAA062312-CSF	M3AA 63B 4	IPP	8.43	10	230D/400Y,50Hz; 460Y,60Hz	
0.25 //	3000/3600	63	MVM06252C-S-AP	3GAA061312-CSF	M3AA 63B 2	IPP	8.43	10	230D/400Y,50Hz; 460Y,60Hz	
0.33	1500/1800	71	MVM07254C-S-AP	3GAA072311-CSE	M3AA 71A 4	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
0.37 // 0.5	3000/3600	71	MVM07372C-S-AP	3GAA071311-CSE	M3AA 71A 2	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	71	MVM07374C-S-AP	3GAA072312-CSE	M3AA 71B 4	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
0.55 //	3000/3600	71	MVM07552C-S-AP	3GAA071312-CSE	M3AA 71B 2	IPP	9.45	11	230D/400Y,50Hz; 460Y,60Hz	
0.75	1500/1800	80	MVM08554C-S-AP	3GAA082311-CSE	M3AA 80A 4	IPP	10.45	19	230D/400Y,50Hz; 460Y,60Hz	
0.75 // 1	3000/3600	80	EMVM08752C-S-AP	3GAA081320-CSK	M3AA 80MB 2	IPP	10.45	21	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	80	EMVM08754C-S-AP	3GAA082350-CSK	M3AA 80ME 4	IPP	11.56	30	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	90	EMVM09756C-S-AP	3GAA093540-CSK	M3AA 90LD 6	IPP	13.05	42	230D/400Y,50Hz; 460Y,60Hz	
1.1 // 1.5	3000/3600	80	EMVM08112C-S-AP	3GAA081330-CSK	M3AA 80MC 2	IPP	10.45	23	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	100	EMVM10116C-S-AP	3GAA103550-CSK	M3AA 100LE 6	IPP	17.01	77	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMVM09114C-S-AP	3GAA092530-CSK	M3AA 90LC 4	IPP	13.05	77	230D/400Y,50Hz; 460Y,60Hz	
1.5 // 2	3000/3600	90	EMVM09152C-S-AP	3GAA091520-CSK	M3AA 90LB 2	IPP	13.05	37	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMVM09154C-S-AP	3GAA092540-CSK	M3AA 90LD 4	IPP	13.05	42	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	100	EMVM10156C-S-AP	3GAA103560-CSK	M3AA 100LF 6	IPP	17.01	77	230D/400Y,50Hz; 460Y,60Hz	
2.2 // 3	3000/3600	90	EMVM09222C-S-AP	3GAA091530-CSK	M3AA 90LC 2	IPP	13.05	44	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMVM10224C-S-AP	3GAA102550-CSK	M3AA 100LE 4	IPP	17.01	79	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	112	EMVM11226C-S-AP	3GAA113330-CSK	M3AA 112MC 6	IPP	16.97	95	230D/400Y,50Hz; 460Y,60Hz	
3 // 4	3000/3600	100	EMVM10032C-S-AP	3GAA101530-CSK	M3AA 100LC 2	IPP	17.01	62	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMVM10034C-S-AP	3GAA102560-CSK	M3AA 100LF 4	IPP	17.01	79	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13036C-S-AP	3GAA133330-CSK	M3AA 132MC 6	IPP	19.17	145	230D/400Y,50Hz; 460Y,60Hz	
4 // 5.3	3000/3600	112	EMVM11042C-S-AP	3GAA111320-CSK	M3AA 112MB 2	IPP	16.97	84	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	112	EMVM11044C-S-AP	3GAA112320-CSK	M3AA 112MB 4	IPP	16.97	97	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13046C-S-AP	3GAA133340-CSK	M3AA 132MD 6	IPP	19.17	148	230D/400Y,50Hz; 460Y,60Hz	
5.5 // 7.3	3000/3600	132	EMVM13552C-S-AP	3GAA131120-CSK	M3AA 132SB 2	IPP	19.17	128	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	132	EMVM13554C-S-AP	3GAA132320-CSK	M3AA 132MB 4	IPP	19.17	150	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13556C-S-AP	3GAA133350-CSK	M3AA 132ME 6	IPP	19.17	139	230D/400Y,50Hz; 460Y,60Hz	
7.5 // 10	3000/3600	132	EMVM13752C-S-AP	3GAA131130-CSK	M3AA 132SC 2	IPP	19.17	139	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	132	EMVM13754C-S-AP	3GAA132330-CSK	M3AA 132MC 4	IPP	19.17	150	230D/400Y,50Hz; 460Y,60Hz	

(a) See notes on inside back flap.

\* Motors are stamped with kW only.

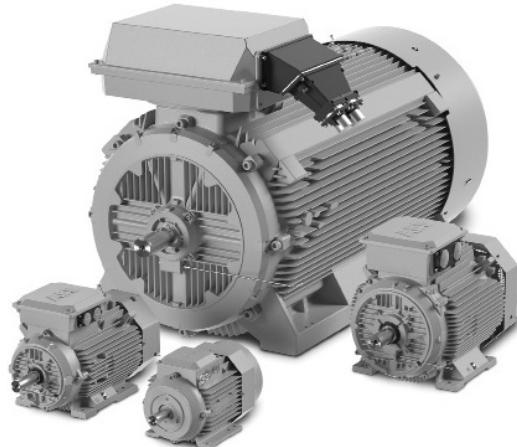
\*\* Included variant codes are not shown in Product Code, please contact local sales office

Motors are suitable for use at 230VD, 60Hz

3 year warranty

## Process Performance

IEC cast iron, three phase, 50/60 Hz, 400/460V  
0.33-125 Hp



### Features:

- Rugged cast iron construction (including endplates)
- IE3 efficiency per IEC 60034-30-1 (2014) (80 frame and above) All motors are compliant with DOE and NRCan
- Complies with EU MEPS/EcoDesign Regulation (EU) 2019/1781 effective July 2021. CE marked.
- 6 post terminal block in large, F3 terminal box provides easier, lower cost installation
- Class F insulation with Class B temperature limits
- Inverter ready 2:1CT and 20:1VT
- Painting system C3M acc. to ISO 12944-5:2007
- (3) PTC thermistors, 150 °C standard on sizes 71-280
- IC411 enclosure (TEFC)

### Applications:

- Pumps
- Compressors
- Fans
- Conveyors
- General machinery

kW // Hp*	RPM	IEC Frame	Catalog Number	ABB Product Code**	ABB Type Number	Disc. Sym.	"L" Dim. (in)	Aprx. Wt. (lb)	Voltage	Notes (a)
<b>IM B3 (1001), foot mounted</b>										
0.25 // 0.33	1500/1800	71	MM07254-S-PP	3GBP072321-ASB	M3BP 71MA 4	IPP	10.39	22	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	80	EMM08256-S-PP	3GBP083310-ASK	M3BP 80MA 6	IPP	13.03	31	230D/400Y,50Hz; 460Y,60Hz	
0.37 // 0.50	3000/3600	71	MM07372-S-PP	3GBP071321-ASB	M3BP 71MA 2	IPP	10.39	24	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	71	MM07374-S-PP	3GBP072322-ASB	M3BP 71MB 4	IPP	10.39	24	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	80	EMM08376-S-PP	3GBP083340-ASK	M3BP 80MD 6	IPP	13.03	35	230D/400Y,50Hz; 460Y,60Hz	
0.55 // 0.75	3000/3600	71	MM07552-S-PP	3GBP071322-ASB	M3BP 71MB 2	IPP	10.39	24	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	80	EMM08554-S-PP	3GBP082440-ASK	M3BP 80MLD 4	IPP	14.29	44	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	80	EMM08556-S-PP	3GBP083470-ASK	M3BP 80MLG 6	IPP	14.29	46	230D/400Y,50Hz; 460Y,60Hz	
0.75 // 1	3000/3600	80	EMM08752-S-PP	3GBP081340-ASK	M3BP 80MD 2	IPP	13.03	40	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	80	EMM08754-S-PP	3GBP082470-ASK	M3BP 80MLG 4	IPP	14.29	49	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	90	EMM09756-S-PP	3GBP093570-ASK	M3BP 90LG 6	IPP	15.35	75	230D/400Y,50Hz; 460Y,60Hz	
1.1 // 1.5	3000/3600	80	EMM08112-S-PP	3GBP081370-ASK	M3BP 80MG 2	IPP	13.03	42	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	100	EMM10116-S-PP	3GBP103870-ASK	M3BP 100LKG 6	IPP	17.13	104	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMM09114-S-PP	3GBP092530-ASK	M3BP 90LC 4	IPP	15.35	73	230D/400Y,50Hz; 460Y,60Hz	
1.5 // 2	3000/3600	90	EMM09152-S-PP	3GBP091520-ASK	M3BP 90LB 2	IPP	15.35	68	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMM09154-S-PP	3GBP092540-ASK	M3BP 90LD 4	IPP	15.35	75	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	112	EMM11156-S-PP	3GBP113380-ASK	M3BP 112MH 6	IPP	17.40	117	230D/400Y,50Hz; 460Y,60Hz	
2.2 // 3	3000/3600	90	EMM09222-S-PP	3GBP091530-ASK	M3BP 90LC 2	IPP	15.35	77	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMM10224-S-PP	3GBP102810-ASK	M3BP 100LKA 4	IPP	17.13	108	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMM13226-S-PP	3GBP133230-ASK	M3BP 132SMC 6	IPP	20.94	179	230D/400Y,50Hz; 460Y,60Hz	
3 // 4	3000/3600	100	EMM10032-S-PP	3GBP101810-ASK	M3BP 100LKA 2	IPP	17.13	110	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMM10034-S-PP	3GBP102820-ASK	M3BP 100LKB 4	IPP	17.13	108	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMM13036-S-PP	3GBP133240-ASK	M3BP 132SMD 6	IPP	20.94	181	230D/400Y,50Hz; 460Y,60Hz	
4 // 5.3	3000/3600	112	EMM11042-S-PP	3GBP111370-ASK	M3BP 112MG 2	IPP	17.40	123	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	112	EMM11044-S-PP	3GBP112370-ASK	M3BP 112MG 4	IPP	17.40	115	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMM13046-S-PP	3GBP133270-ASK	M3BP 132SMG 6	IPP	20.94	181	230D/400Y,50Hz; 460Y,60Hz	
5.5 // 7.5	3000/3600	132	EMM13552-D-PP	3GBP131260-ADK	M3BP 132SMF 2	IPP	20.94	170	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	132	EMM13554-D-PP	3GBP132260-ADK	M3BP 132SMF 4	IPP	20.94	179	400D/415D/690Y,50Hz; 460D,60Hz	25
	1000/1200	132	EMM13556-D-PP	3GBP133280-ADK	M3BP 132SMH 6	IPP	20.94	174	400D/415D/690Y,50Hz; 460D,60Hz	25
7.5 // 10	3000/3600	132	EMM13752-D-PP	3GBP131270-ADK	M3BP 132SMG 2	IPP	20.94	170	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	132	EMM13754-D-PP	3GBP132270-ADK	M3BP 132SMG 4	IPP	20.94	179	400D/415D/690Y,50Hz; 460D,60Hz	25

(a) See notes on inside back flap.

□ Cast iron frame

\* Motors are stamped with kW only.

\*\* Included variant codes are not shown in Product Code, please contact local sales office

Catalog numbers with (-D-) are not suitable for VFD operation at 690VY.

Catalog numbers with (-S-) are suitable for use on 230VD, 60Hz

3 year warranty

**Process Performance, IEC cast iron, three phase**

kW // Hp*	RPM	IEC Frame	Catalog Number	ABB Product Code**	ABB Type Number	Disc. Sym.	"L" Dim.	Apx. Wt. (in)	Voltage	Notes (a)
<b>IM B3 (1001), foot mounted (continued)</b>										
11 // 15	3000/3600	160	EMM16112-D-PPN	3GBP161410-ADK	M3BP 160MLA 2	IPP	22.99	311	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	160	EMM16114-D-PPN	3GBP162410-ADK	M3BP 160MLA 4	IPP	22.99	382	400D/415D/690Y,50Hz; 460D,60Hz	25
15 // 20	3000/3600	160	EMM16152-D-PPN	3GBP161420-ADK	M3BP 160MLB 2	IPP	22.99	375	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	160	EMM16154-D-PPN	3GBP162420-ADK	M3BP 160MLB 4	IPP	26.81	413	400D/415D/690Y,50Hz; 460D,60Hz	25
18.5 // 25	3000/3600	160	EMM16182-D-PPN	3GBP161430-ADK	M3BP 160MLC 2	IPP	26.81	403	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	180	EMM18184-D-PPN	3GBP182410-ADK	M3BP 180MLA 4	IPP	28.58	519	400D/415D/690Y,50Hz; 460D,60Hz	25
22 // 30	3000/3600	180	EMM18222-D-PPN	3GBP181410-ADK	M3BP 180MLA 2	IPP	28.58	516	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	180	EMM18224-D-PPN	3GBP182420-ADK	M3BP 180MLB 4	IPP	28.58	519	400D/415D/690Y,50Hz; 460D,60Hz	25
30 // 40	3000/3600	200	EMM20302-D-PPN	3GBP201410-ADK	M3BP 200MLA 2	IPP	32.32	657	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	200	EMM20304-D-PPN	3GBP202410-ADK	M3BP 200MLA 4	IPP	32.32	703	400D/415D/690Y,50Hz; 460D,60Hz	25
37 // 50	3000/3600	200	EMM20372-D-PPN	3GBP201420-ADK	M3BP 200MLB 2	IPP	32.32	692	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	225	EMM22374-D-PPN	3GBP222210-ADK	M3BP 225SMA 4	IPP	34.65	877	400D/415D/690Y,50Hz; 460D,60Hz	25
45 // 60	3000/3600	225	EMM22452-D-PPN	3GBP221210-ADK	M3BP 225SMA 2	IPP	33.46	692	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	225	EMM22454-D-PPN	3GBP222220-ADK	M3BP 225SMB 4	IPP	34.65	877	400D/415D/690Y,50Hz; 460D,60Hz	25
55 // 75	3000/3600	250	EMM25552-D-PPN	3GBP251210-ADK	M3BP 250SMA 2	IPP	34.80	997	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	250	EMM25554-D-PPN	3GBP252210-ADK	M3BP 250SMA 4	IPP	34.80	1049	400D/415D/690Y,50Hz; 460D,60Hz	25
75 // 100	3000/3600	280	EMM28752-D-PP	3GBP281220-ADK	M3BP 280SMB 2	IPP	34.80	1466	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	280	EMM28754-D-PP	3GBP282220-ADK	M3BP 280SMB 4	IPP	34.80	1466	400D/415D/690Y,50Hz; 460D,60Hz	25
90 // 125	3000/3600	280	EMM28902-D-PP	3GBP281230-ADK	M3BP 280SMC 2	IPP	34.80	1598	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	280	EMM28904-D-PP	3GBP282230-ADK	M3BP 280SMC 4	IPP	34.80	1598	400D/415D/690Y,50Hz; 460D,60Hz	25
<b>IM B5 (3001), flange mounted, footless</b>										
0.25 // 0.33	1000/1200	80	EMVM08256D-S-PP	3GBP083310-BSK	M3BP 80MA 6	IPP	13.03	31	230D/400Y,50Hz; 460Y,60Hz	
0.37 // 0.50	1000/1200	80	EMVM08376D-S-PP	3GBP083340-BSK	M3BP 80MD 6	IPP	13.03	35	230D/400Y,50Hz; 460Y,60Hz	
0.55 // 0.75	1500/1800	80	EMVM08554D-S-PP	3GBP082440-BSK	M3BP 80MLD 4	IPP	14.29	44	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	80	EMVM08556D-S-PP	3GBP083470-BSK	M3BP 80MLG 6	IPP	14.29	46	230D/400Y,50Hz; 460Y,60Hz	
0.75 // 1	3000/3600	80	EMVM08752D-S-PP	3GBP081340-BSK	M3BP 80MD 2	IPP	13.03	40	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	80	EMVM08754D-S-PP	3GBP082470-BSK	M3BP 80MLG 4	IPP	14.29	49	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	90	EMVM09756D-S-PP	3GBP093570-BSK	M3BP 90LG 6	IPP	15.35	75	230D/400Y,50Hz; 460Y,60Hz	
1.1 // 1.5	3000/3600	80	EMVM08112D-S-PP	3GBP081370-BSK	M3BP 80MG 2	IPP	13.03	42	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	100	EMVM10116D-S-PP	3GBP103870-BSK	M3BP 100LKG 6	IPP	17.13	104	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMVM09114D-S-PP	3GBP092530-BSK	M3BP 90LC 4	IPP	15.35	73	230D/400Y,50Hz; 460Y,60Hz	
1.5 // 2	3000/3600	90	EMVM09152D-S-PP	3GBP091520-BSK	M3BP 90LB 2	IPP	15.35	68	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMVM09154D-S-PP	3GBP092540-BSK	M3BP 90LD 4	IPP	15.35	75	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	112	EMVM11156D-S-PP	3GBP113380-BSK	M3BP 112MH 6	IPP	17.40	117	230D/400Y,50Hz; 460Y,60Hz	
2.2 // 3	3000/3600	90	EMVM09222D-S-PP	3GBP091530-BSK	M3BP 90LC 2	IPP	15.35	77	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMVM10224D-S-PP	3GBP102810-BSK	M3BP 100LKA 4	IPP	17.13	108	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13226D-S-PP	3GBP133230-BSK	M3BP 132SMC 6	IPP	20.94	179	230D/400Y,50Hz; 460Y,60Hz	
3 // 4	3000/3600	100	EMVM10032D-S-PP	3GBP101810-BSK	M3BP 100LKA 2	IPP	17.13	110	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMVM10034D-S-PP	3GBP102820-BSK	M3BP 100LKB 4	IPP	17.13	108	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13036D-S-PP	3GBP133240-BSK	M3BP 132SMD 6	IPP	20.94	181	230D/400Y,50Hz; 460Y,60Hz	
4 // 5.3	3000/3600	112	EMVM11042D-S-PP	3GBP111370-BSK	M3BP 112MG 2	IPP	17.40	123	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	112	EMVM11044D-S-PP	3GBP112370-BSK	M3BP 112MG 4	IPP	17.40	115	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13046D-S-PP	3GBP133270-BSK	M3BP 132SMG 6	IPP	20.94	181	230D/400Y,50Hz; 460Y,60Hz	
5.5 // 7.5	3000/3600	132	EMVM13552D-S-PP	3GBP131260-BDK	M3BP 132SMF 2	IPP	20.94	170	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	132	EMVM13554D-S-PP	3GBP132260-BDK	M3BP 132SMF 4	IPP	20.94	179	400D/415D/690Y,50Hz; 460D,60Hz	25
	1000/1200	132	EMVM13556D-S-PP	3GBP133280-BDK	M3BP 132SMH 6	IPP	20.94	174	400D/415D/690Y,50Hz; 460D,60Hz	25
7.5 // 10	3000/3600	132	EMVM13752D-S-PP	3GBP131270-BDK	M3BP 132SMG 2	IPP	20.94	170	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	132	EMVM13754D-S-PP	3GBP132270-BDK	M3BP 132SMG 4	IPP	20.94	179	400D/415D/690Y,50Hz; 460D,60Hz	25

(a) See notes on inside back flap.

□ Cast iron frame

\* Motors are stamped with kW only.

\*\* Included variant codes are not shown in Product Code, please contact local sales office

Catalog numbers with (-D-) are not suitable for VFD operation at 690VY.

Catalog numbers with (-S-) are suitable for use on 230VD, 60Hz

3 year warranty

**Process Performance, IEC cast iron, three phase**

kW // Hp*	RPM	IEC Frame	Catalog Number	ABB Product Code**	ABB Type Number	Disc. Sym.	"L" Dim. (in)	Aprx. Wt. (lb)	Voltage	Notes (a)
<b>IM B14 (3601), face mounted, footless</b>										
0.25 // 0.33	1000/1200	80	EMVM08256C-S-PP	3GBP083310-BSK	M3BP 80MA 6	IPP	13.03	31	230D/400Y,50Hz; 460Y,60Hz	
0.37 // 0.50	1000/1200	80	EMVM08376C-S-PP	3GBP083340-BSK	M3BP 80MD 6	IPP	13.03	35	230D/400Y,50Hz; 460Y,60Hz	
0.55 // 0.75	1500/1800	80	EMVM08554C-S-PP	3GBP082440-BSK	M3BP 80MLD 4	IPP	14.29	44	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	80	EMVM08556C-S-PP	3GBP083470-BSK	M3BP 80MLG 6	IPP	14.29	46	230D/400Y,50Hz; 460Y,60Hz	
0.75 // 1	3000/3600	80	EMVM08752C-S-PP	3GBP081340-BSK	M3BP 80MD 2	IPP	13.03	40	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	80	EMVM08754C-S-PP	3GBP082470-BSK	M3BP 80MLG 4	IPP	14.29	49	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	90	EMVM09756C-S-PP	3GBP093570-BSK	M3BP 90LG 6	IPP	15.35	75	230D/400Y,50Hz; 460Y,60Hz	
1.1 // 1.5	3000/3600	80	EMVM08112C-S-PP	3GBP081370-BSK	M3BP 80MG 2	IPP	13.03	42	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	100	EMVM10116C-S-PP	3GBP103870-BSK	M3BP 100LKG 6	IPP	17.13	104	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMVM09114C-S-PP	3GBP092530-BSK	M3BP 90LC 4	IPP	15.35	73	230D/400Y,50Hz; 460Y,60Hz	
1.5 // 2	3000/3600	90	EMVM09152C-S-PP	3GBP091520-BSK	M3BP 90LB 2	IPP	15.35	68	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	90	EMVM09154C-S-PP	3GBP092540-BSK	M3BP 90LD 4	IPP	15.35	75	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	112	EMVM11156C-S-PP	3GBP113380-BSK	M3BP 112MH 6	IPP	17.40	117	230D/400Y,50Hz; 460Y,60Hz	
2.2 // 3	3000/3600	90	EMVM09222C-S-PP	3GBP091530-BSK	M3BP 90LC 2	IPP	15.35	77	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMVM10224C-S-PP	3GBP102810-BSK	M3BP 100LKA 4	IPP	17.13	108	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13226C-S-PP	3GBP133230-BSK	M3BP 132SMC 6	IPP	20.94	179	230D/400Y,50Hz; 460Y,60Hz	
3 // 4	3000/3600	100	EMVM10032C-S-PP	3GBP101810-BSK	M3BP 100LKA 2	IPP	17.13	110	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	100	EMVM10034C-S-PP	3GBP102820-BSK	M3BP 100LKB 4	IPP	17.13	108	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13036C-S-PP	3GBP133240-BSK	M3BP 132SMD 6	IPP	20.94	181	230D/400Y,50Hz; 460Y,60Hz	
4 // 5.3	3000/3600	112	EMVM11042C-S-PP	3GBP111370-BSK	M3BP 112MG 2	IPP	17.40	123	230D/400Y,50Hz; 460Y,60Hz	
	1500/1800	112	EMVM11044C-S-PP	3GBP112370-BSK	M3BP 112MG 4	IPP	17.40	115	230D/400Y,50Hz; 460Y,60Hz	
	1000/1200	132	EMVM13046C-S-PP	3GBP133270-BSK	M3BP 132SMG 6	IPP	20.94	181	230D/400Y,50Hz; 460Y,60Hz	
5.5 // 7.5	3000/3600	132	EMVM13552C-D-PP	3GBP131260-BDK	M3BP 132SMF 2	IPP	20.94	170	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	132	EMVM13554C-D-PP	3GBP132260-BDK	M3BP 132SMF 4	IPP	20.94	179	400D/415D/690Y,50Hz; 460D,60Hz	25
	1000/1200	132	EMVM13556C-D-PP	3GBP133280-BDK	M3BP 132SMH 6	IPP	20.94	174	400D/415D/690Y,50Hz; 460D,60Hz	25
7.5 // 10	3000/3600	132	EMVM13752C-D-PP	3GBP131270-BDK	M3BP 132SMG 2	IPP	20.94	170	400D/415D/690Y,50Hz; 460D,60Hz	25
	1500/1800	132	EMVM13754C-D-PP	3GBP132270-BDK	M3BP 132SMG 4	IPP	20.94	179	400D/415D/690Y,50Hz; 460D,60Hz	25

(a) See notes on inside back flap.

□ Cast iron frame

\* Motors are stamped with kW only.

\*\* Included variant codes are not shown in Product Code, please contact local sales office

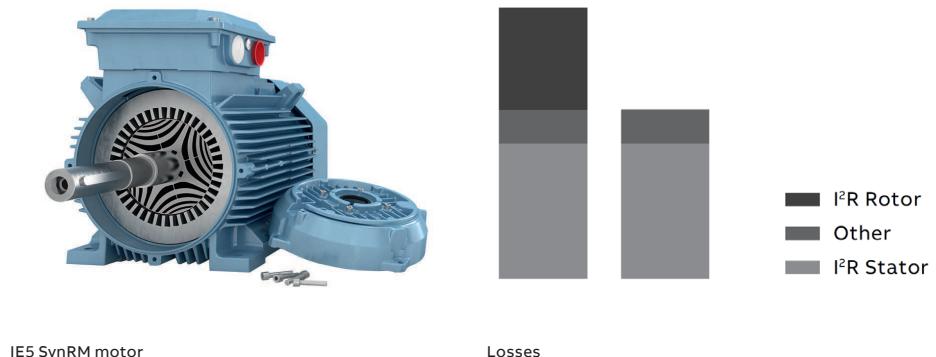
Catalog numbers with (-D-) are not suitable for VFD operation at 690VY.

Catalog numbers with (-S-) are suitable for use on 230VD, 60Hz

3 year warranty

## Synchronous reluctance motors

Ultimate efficiency and reliability to optimize your cost of ownership



IE5 SynRM motor

Losses

- I<sup>2</sup>R Rotor
- Other
- I<sup>2</sup>R Stator

### Innovation inside

The idea is simple. Take a conventional, proven stator technology and a innovative rotor design. Then combine them with a best-in-class ABB drive loaded with new, purpose-designed software.

### Magnet-free design

Synchronous reluctance technology combines the performance of the permanent magnet motor with the simplicity and service-friendliness of an induction motor. The rotor has neither magnets nor windings and suffers virtually no power losses. And because there are no magnetic forces in the rotor, maintenance is as straightforward as with induction motors.

### Highest reliability to minimize the cost of not running

IE5 synchronous reluctance motors have very low winding temperatures, which increases the reliability and lifetime of the winding. More importantly, the cool synchronous reluctance rotor means significantly lower bearing temperatures – an important factor because bearing failures cause about 70 percent of unplanned motor outages.

### Full motor control, down to zero speed

Many processes require accurate speed control. As the name says, SynRM is a synchronous motor that always runs at reference speed with practically no error, without an encoder. Even the best slip compensation systems in an induction motor inverter will never match the precision of SynRM. Sometimes your application may require you to run your motor at slow speeds, for example at less than 40 rpm. If you are using SynRM and your drive cannot provide the necessaire torque, it may trip. This means you may have downtime while the problem is being debugged. ABB drives provide full control and torque down to zero speed, even without speed sensors.

### For all applications

This is important if you are planning on using the motor with applications other than quadratic torque applications like pumps and fans. Our drives provide full SynRM motor control for constant torque applications such as extruders, conveyors and wire drawing machines.

### Perfect for retrofits

The SynRM package is a perfect solution for motor retrofits. The IE5 SynRM is the same size as an IE2 induction motor, eliminating the need for mechanical modifications. The increased efficiency will, on the other hand, reduce the payback time of the investment.

**Motor type:** M3AL/M3BL

**Output:** 5.5 to 315 kW (7.5 to 400HP)

**Frame sizes:** IEC 132–315

For further information and ordering, please speak to your HVAC Channel Partner or local ABB sales office.

SynRM technology	Benefit
Higher efficiency IE5	Lowest energy consumption
No rare earth metals	Environmental sustainability
Magnet-free rotor	Easy service
Lower winding and bearing temperatures	Longer life time, extended service intervals
Better controllability	Accurate speed and torque control
Lower noise level	Better working environment
Same size with IE2	Perfect for retrofits

# Customized solutions for special applications



## Low Voltage Permanent Magnet Motors

ABB's low voltage permanent magnet motors combine the high speed accuracy of synchronous technology with the robust design of induction motors. They have the capability to deliver very high torque from small motor sizes at low speed.

### Summary of benefits:

- Lower maintenance cost
- Reduced spare parts inventories
- Easier system installation
- Higher "system reliability"
- No mechanical power transmission losses
- Well suited for district/campus energy designs

### Main features:

- Motor Type: M3BJ and M3LJ
- Power: 17 to 2,500 kW (25 to 3,000 HP)
- Torque: 1,000 to 50,000 Nm (735 to 36,000 ft lbs)
- Voltage: 400 to 690 V
- Frame size: IEC 280 to 560
- Protection: IP55, IP56
- Cooling form: IC411, IC416, IC417, IC71W
- Starting method: ABB frequency converter

## Low Voltage Water Cooled Motors



ABB's water-cooled low-voltage motors are an ideal choice for applications where reliable and powerful operation is required. The motors are robust, compact, economical and simple in design.

### Summary of benefits:

- Extremely power dense for tight spaces
- Cooler running for enhanced motor life
- Reliable in harsh environments
- Highly customizable to fit the application
- Energy efficient making them an ideal choice for some 24/7 industrial applications

### Main features:

- Motor Type: M3LP
- Output power: 90 to 2,000 kW (120 to 2,700HP)
- Frame size: IEC 280 to 500
- Number of poles: 2-8
- Voltages: All commonly used voltages
- Frequency: 50 or 60 Hz
- Protection: IP55, IP56
- Cooling: IC71W
- Efficiency classes: IE2 and IE3

## Smoke Extraction Motors



ABB's Smoke Extraction and Ventilation motors are specially designed to meet the needs of emergency ventilation systems. In case of a fire, the ventilation system or dedicated smoke extraction fans maintain escape routes and help emergency services suppress the fire.

### Summary of benefits:

- Operate reliably even at high temperatures seen within a fire zone.
- Comply with smoke and heat control systems standard EN 12101-3, classes F200-120, F300-60, F400-120, T250-120.
- Designed for direct-on-line and VSD operation, both in normal and emergency situations.
- Frame sizes IEC 160 to 450, up to 1000 kW (1,300HP)
- Extended cable with protective conduit and remote terminal box
- Flexible cabling solutions, halogen free materials
- IP55 protection as standard, IP66 as option
- Insulation class H, Temperature rise class B, F
- Cooling IC411 as standard, IC418 as option
- Wide range surface treatment and corrosion protection options
- Efficiency classes IE2, IE3 and IE4

For further information and ordering, please speak to your HVAC Channel Partner or local ABB sales office

## Catalog notes

Customers have easy access to additional data and information by visiting [new.abb.com/motor-generators](http://new.abb.com/motor-generators) or [baldor.com](http://baldor.com).

- Local sales offices
- Warranty information
- Performance data
- Renewal parts
- Authorized distributors
- Authorized service centers
- Connection diagrams
- Customer product
- Sales terms & conditions
- Product literature
- Dimension sheets
- Freight policy
- Energy efficiency
- Installation manuals
- education

### Catalog notes:

**Efficiencies** – Efficiencies of all 60 Hz motor designs are listed as NEMA nominal at full load (Except the motors designed to meet the Small Motor Rule average efficiencies as specified by the DOE).

**Full Load Amps (FLA)** – For low voltage amps, double high voltage amps shown, excluding medium voltage amps for 2300/4000 voltage.

**Motor bearings** – Motors with ball bearings are suitable for coupled loads. If a load is belted, a roller bearing may be required, contact your local sales office if you have questions or need assistance.

**Service factor** – NEMA T-frames in TEFC construction have a service factor of 1.15 or greater except where noted. All NEMA U-frame TEFC motors (except explosion-proof) have NEMA open service factors. Fractional horsepower TEFC motors have NEMA open service factors. All Inverter-Duty® and Vector Duty® AC motors have 1.0 Service Factors. All DC motors have 1.0 service factors.

**Mounting holes** – Most steel band and cast iron foot-mounted motors have dual mounting holes (143T-145T, 182T-184T, etc.)

**F1/F2** – All Cast iron motors are built with symmetrical frames which may be converted from F1 to F2 by switching endplates and rotor from end-to-end except for L182T, L184T, L213T, L215T and L449T. TEFC 5000 and 5800 frame motors are field convertible from F1 to F2 via swingarm. For ODP 5000 and 5800 Frames, please check with factory for F-1/F-2 conversion. Frames with the "L" prefix have standard NEMA base and BA dimensions. Also applies to TC versions of these frame sizes.

**SCR drive motors** – Field Amps listed are for High Voltage Connections with motor at operating temperature.

**Modified motors** – Using stock motors, ABB can modify motors to fit a variety of applications in only 2 to 5 working days for most modifications. Please see the Mod Express section in this catalog for more information.

**Custom motors** – For information on motor designs and capabilities not found in this catalog, please contact your local sales office.

<b>IP Protection – Baldor-Reliance® enclosures<sup>(1)</sup></b>	
<b>Open motor enclosures:</b>	
IP22 or 23 -	Open drip proof AC or DC motors
<b>Totally enclosed motor enclosures *</b> :	
IP44 -	LV General purpose AC or DC motors **
IP54 -	MV General purpose AC motors
IP55 -	ABB IEC motors Severe duty AC motors (ECP) Crusher, Quarry & Dirty Duty motors White Washdown & Paint-Free motors
IP56 -	LV Motors meeting IEEE 841 Dirty Duty motors Feather Picker motors Stainless steel motors (non-encapsulated)
IP69 for Water -	Food Safe Stainless steel encapsulated motors

Notes:

<sup>(1)</sup> Codes are not included on stock motor nameplate as standard.

\* Totally enclosed motors will meet IP protection level indicated when drain plugs and/or T-drains are properly installed.

\*\* IP54 when drain fitting kit #HA5027A03 is installed in the weep holes (48 thru 256T frame motors only)

### Summary of IP protection numbers

<b>First #</b> <b>Protection Against Solid Objects</b>	<b>Second #</b> <b>Protection Against Liquids</b>
IP Tests	0 No protection
O No protection	1 Protection against vertical drops of water. (e.g. condensation.)
1 Protection against solid objects up to 50 mm. (e.g. Accidental touch by hands.)	2 Protection against falling water up to 15 degrees from the vertical.
2 Protection against solid objects up to 12 mm. (e.g. fingers)	3 Protection against falling water up to 60 degrees from the vertical.
3 Protection against solid objects over 2.5 mm. (e.g. tools, wires)	4 Protection against splashing water from all directions, limited ingress.
4 Protection against solid objects over 1mm. (e.g. tools, wires and small wires)	5 Protection against low pressure jets of water from all directions, limited ingress.
5 Protection against dust - limited ingress	6 Protection against strong jets of water. (e.g. Use on ship decks, limited ingress.)
6 <b>Totally protected against all dust.</b>	7 Protection against immersion.
	8 Protection against submersion.
	9 Protection against high pressure, high temperature spray of water from all directions

Contact your local sales office for clarification, assistance or additional information on any Baldor-Reliance or ABB product. A listing of the offices can be found on [baldor.com](http://baldor.com)

## Catalog notes

1. Class F insulated motor with 1.15 service factor or higher that operates within Class "B" temperature limits at rated horsepower.
2. 1.00 service factor.
3. Capacitor start, induction run.
5. Belted duty only, roller bearing.
6. F-2 mounting
7. Copper bar rotor
8. Class "H" Insulated.
9. Metric frame dimensions
10. Non-stock, built on demand.
11. F-3 mounting
12. 1.25 service factor
13. 1.35 service factor
14. 1.00 service factor, Class F rise
15. Small Motor Rule compliant. Average efficiency.
16. Motor can no longer be produced as of June 1, 2016. The Integral Horsepower Rule allows for existing inventory of this motor built prior to June 1, 2016 to be sold until inventory is depleted.
17. Capable of 100% thrust in either direction.
18. Motors are rated for Division 2, Class I, Groups C&D only
19. 60/50 Hertz motor. 60 Hertz data shown, contact your local sales office for 50 Hertz data.
20. Class F insulation.
21. Stage 3 EU MEPS.
22. Non-encapsulated winding.
24. Part winding start or DOL.
25. Wye start, delta run or DOL.
27. Motors have ball bearing suitable for coupled loads. If load is belted, a roller bearing may be required, contact your local sales office.
29. V-dimension is 2.5".
30. Usable at 208 volts.
31. Design D
33. Voltage @ 60 Hz.
35. Design A, exceeds Design B inrush limits.
36. Can mount as NEMA 56, 143T & 145T frames with NEMA 56 frame shaft dimensions.
37. Can mount as NEMA 56, 143T & 145T frames with NEMA 143T-145T frame shaft dimensions.
38. Motor not suitable for inverter use.
40. Brake motors may be mounted for vertical mounting with brake below motor.
41. Brake motors may be mounted for vertical mounting with brake above or below motor.
42. Brake motors must be modified for vertical mounting. Springs included with brake.
45. Horizontal mount, no C-Face. May be converted to C-Face in Mod Express® or built as custom motors.
46. Includes 1024 ppr encoder.
47. BA dimension does not meet NEMA standards.
48. Includes phase insulation. Suitable for use on inverter.
50. Voltage @ 50 Hz, usable on 460 Volt 60 Hz.
51. Full Load Amps @ 400 Volt nominal - 50 Hz.
52. IP55 enclosure.
53. Tungsten carbide outer seal
56. Legacy Reliance® E-Line motor design. Has F1 side mounted conduit box. Single frame mounting holes in 447 & 449 frame sizes.
57. Can mount as NEMA 145T frame with 145T frame shaft dimensions.
59. Suitable for operation @ 415V, 50 Hz.
60. Totally-enclosed, non-ventilated, continuous duty.
63. Foot also drilled for 447T frame mounting.
64. Motors include 100 ohm platinum winding RTDs and space heaters.
65. Capacitor start, capacitor run (two value capacitor).
66. Resilient mount single phase motors with moderate starting torque for fan applications.
67. NEMA 48 Base Mount, not swivel mount.
68. 3 lead.
69. 6 lead suitable for part winding start on 200 volts.
70. Constant velocity fan: 230/460 volts, three phase.
71. Nominal efficiency is based at the 1800 RPM (High RPM) and low speed efficiency is available just not published.
73. SCR motors with a 3:1 constant torque speed range.
74. V-dimension is 3".
77. Inverter duty.
78. Furnished without conduit box. (Order kit BK2400)
80. Motor has thermostat and provisions for adding flange mounted tach.
81. 230/460V 3Φ motor, 200/400V 3Φmotor or 115/230V 1Φ motor connected for voltage shown. Can be reconnected for other voltage.
82. Single voltage motor. Cannot reconnect.
83. May be operated on 50Hz rectified power supply with full nameplate rating. AC supply voltage must be same as 60Hz supply; i.e., either 230 or 460 volts. Motor nameplate is stamped D-50/60. Motor mounted blower may be added to DPG enclosure.
84. May be operated on 50Hz rectified power supply with full nameplate rating only when motor is force ventilated with motor mounted blower. AC supply voltage must be same as 60Hz supply.
85. Cannot be operated at full nameplate rating on 50Hz rectified power supply.
87. Motor has thermostat and provisions for adding adapter mounted tach.
88. Sleeve bearings - coupled loads only.
89. Cooling fan on each end.
90. Foot mounted and 180TC face.
91. Foot mounted and 210TC face.
92. Foot mounted and 250TC face.
93. Foot mounted only.
94. Foot mounted only. These stock models include VPI insulation on L440 only, insulated ODE bearing, shaft ground brush, and stator RTD's.

## Catalog notes

- 95. Foot mounted only. Includes filter, VPI, insulated ODE bearing and two sets of thermostats.
- 96. UL Recognized thermal protection.
- 97. One size smaller flange and shaft.
- 99. G-Series motor design. Has F3 Lead outlet in frame and an arm mounted conduit box for F1 & F2 Lead Location. Dual Frame mounting holes in 445/447 and 447/449 frames.
- 100. Motor will be discontinued once inventory is depleted
- 101. Blower on drive end.
- 102. Force vent with blower and filter. Full nameplate rating on 50 Hz rectified power, AC supply voltage must be same as 60 Hz supply.
- 103. Force vent with blower, full nameplate rating on 50 Hz rectified power. AC supply voltage must be same as 60 Hz supply, thermostats and tach provisions.
- 104. Force vent with blower, cannot run full nameplate on 50 Hz rectified power, thermostats and tach provisions.
- 105. Force vent with blower on drive end filter, thermostats and tach provisions.
- 106. Suitable for sinewave operation.
- 107. Uses HS25 encoder, 1024 PPR

# Abbreviations

The basic catalog number consists of a letter(s) prefix and several non-significant proceeding numbers. A suffix letter(s) and/or number(s) may also be part of the catalog number. For example L3510 or L3510T. Following is a list of prefix and suffix definitions.

## Motors Prefix

AEM	Automotive Motor, three phase
AFL	Aeration Fan Motor, single phase
AFM	Aeration Fan Motor, three phase
ANFL	Auger Fan Motor, single phase
AOM	Air Over Motor, three phase
AP	Subfractional Hp, PM motor
B	Brake motor
BN	Brake motor, TENV enclosure
BTG	Tachometer generator
C	NEMA C-Face with base
CBXM	General Purpose explosion proof, Brake, three phase, C-Face foot mounted
CBXMN	General Purpose explosion proof, Brake, three phase, C-Face foot mounted, TENV
CCPX	Severe Duty explosion proof, three phase, C-Face foot mounted
CD	Wound field DC motor NEMA C-Face with base
CDM	Dirty Duty - three phase, C-Face
CDMG	Lifting magnet generator, C-Face
CDP	PM SCR drive motor
CDPSWD	Paint free washdown PM SCR drive motor C-Face with base
CDPT	PM SCR drive motor with integral tachometer
CDPWD	Washdown PM SCR drive motor NEMA C-Face with base
CDPX	Explosion proof PM SCR drive motor C-Face with base
CDRX	Drill Rig Duty explosion proof, three phase, C-face foot mounted
CDRXL	Drill Rig Duty explosion proof, single phase, C-face foot mounted
CDX	Explosion proof wound Field DC motor, NEMA C-Face
CEL	Super-E® premium efficient motor, single phase, C-Face
CEM	Super-E premium efficient motor, three phase, C-Face
CFC	Condenser fan motor, permanent split capacitor
CFM	Condenser fan motor, three phase
CHC	Direct drive fan motor, permanent split capacitor
CHL	Direct drive fan motor, single phase
CHM	Direct drive fan motor, three phase
CJWDM	Washdown jet pump, three phase, foot mounted
CP	Severe duty motor
CPX	Severe Duty explosion proof, three phase
CR	Crusher duty motor
CSC	Checkout stand motor
CTM	Cooling tower motor, three phase
CXL	General Purpose explosion proof, single phase, C-Face foot mounted
CXM	General Purpose explosion proof, three phase, C-Face foot mounted
D	Wound field DC motor
DDC	Direct drive, indoor blower motor, permanent split capacitor
DEL	Dairy/vacuum pump motor, single phase
DM	Dirty Duty - three phase
DRX	Drill Rig Duty explosion proof, three phase
E	Super-E premium efficient motor
ECP	Super-E Severe duty motor
ECP6	IEEE 661 motor
ECP8	IEEE 841 motor
ENCP	Super-E severe duty motor, TENV
ENCP8	IEEE 841 motor, TENV
F	TEFC motor (when special)
FDL	Farm duty motor, single phase
FDEM	Farm duty motor, three phase, premium efficient, standard NEMA frame
FLT	Filter kit

## Motors Prefix

FM	F-2 mounted motor
FP	Fire pump motor
FSWDM	All stainless steel food safe washdown motor, three phase
FSWDL	All stainless steel food safe washdown motor, single phase
FVB	Blower kit
FWDM	Washdown duty motor, TEFC, three phase
GD	Grain dryer centrifugal fan motor
GSL	Grain stirring motor, single phase
HFM	HVAC duty, F-2 mounted connection box, three phase
HIC	Incubator/hatchery vent fan motor, permanent split capacitor
HM	HVAC duty motor, three phase
HPM	Hydraulic pump motor, three phase
IDBRPM	RPMAC Inverter-Duty® motor – laminated frame, TEBC
IDCSWDM	Inverter-Duty® motor, paint free washdown, C-Face with base
IDDRPM	RPMAC Inverter-Duty® motor – laminated frame, DPG-FV
IDFRPM	RPMAC Inverter-Duty® motor – laminated frame, TEFC
IDM	Inverter-Duty® motor, TEBC
IDNM	Inverter-Duty® motor, TENV
IDNRPM	RPMAC Inverter-Duty® motor – laminated frame, TENV
IDVSM	VS Master Inverter-Duty® motor
IDVSNM	VS Master Inverter-Duty® motor, TENV
IDVSWDM	Inverter-Duty® motor, paint free washdown, C- Face less base
IDWNM	Washdown Inverter-Duty® motor, TENV
IM	Irrigation drive motor
IR	Instant reversing single phase farm motor
J	56J stainless steel threaded shaft with drip cover/jet pump
JM	JM pump shaft and face
JMXM	General purpose explosion proof, three phase, Close Coupled Pump
JP	JP pump shaft & face with base/close-coupled pump
JPDRX	Drill Rig Duty explosion proof, three phase, Close Coupled pump
JPM	JP pump shaft and face with base, three phase/close-coupled pump
JS	Square flange pump mount motors with threaded shaft
JXL	General purpose explosion proof, single phase, jet pump
JXM	General purpose explosion proof, three phase, jet pump
K	Model 34 diameter motor with 56 C-Face, less base
L	Single phase motor
M	Three phase motor
MM	Metric dimension motor with base
MP	Metering pump motor, three phase
MVM	Metric dimension motor, flange mount less base, three phase
N	Totally enclosed non-ventilated motor
PCL	Pressure washer motor, C-Face with base, single phase
PFTG	Tachometer generator foot mount
PL	Pressure washer motor, single phase
PSC	Permanent split capacitor motor
PTG	Tachometer generator
R	Repulsion-start induction-run motor
RBH	High cycle brake motor, three phase
RHM	Definite purpose HVAC motors, three phase
RL	Resilient base motor (cradle mount), single phase
RM	Resilient base motor (cradle mount), three phase
SPM	Synchronous permanent magnet motor
SSEWDM	All stainless encapsulated Super-E washdown motor, three phase
SSWDM	All stainless washdown, three phase
SWDM	Paint free washdown duty motor, three phase
UCC	Universal crop dryer motor, permanent split capacitor, open air over

# Abbreviations

## Motors Prefix

UCL	Grain dryer/vane axial fan, single phase, open air over
UCLE	Grain dryer/vane axial fan, single phase, TEAO
UCM	Grain dryer/vane axial fan, three phase, open air over
UCME	Grain dryer/vane axial fan, three phase, TEAO
UH	Unit handling motor
UHM	Unit handling motor, three phase
V	NEMA C-Face less base
V2L	Two compartment jet pump motor C-Face less base, single phase
VDRX	Drill Rig Duty explosion proof, three phase, C-face footless
VEM	Super-E premium efficient motor, three phase, C-Face, less base
VHECP	Super-E vertical pump motor, severe duty - normal thrust
VHM	Vertical pump motor - normal thrust, three phase
VLCP	Vertical pump motor, severe duty - medium thrust
VP	PM SCR drive motor with metric flange or C-Face
VPCP	Vertical pump motor, severe duty - high thrust
VXL	General Purpose explosion proof, single phase, C-Face footless
VXM	General Purpose explosion proof, three phase, C-Face footless
WC	West coast fit TCZ
WD	Washdown duty motor
WDBM	Washdown brake motor, three phase
XL	General purpose explosion proof, single phase
XM	General purpose explosion proof, three phase
YPC	Yoke pedestal fan motor, permanent split capacitor
ZDBRPM	RPMAC Vector Duty® motor – laminated frame, TEBC
ZDFRPM	RPMAC Vector Duty® motor – laminated frame, TEFC
ZDM	Vector Duty® motor, TEBC
ZDNM	Vector Duty® motor, TENV
ZDNRPM	RPMAC Vector Duty® motor - laminated frame, TENV
ZDPM	RPMAC permanent magnet rotor - laminated frame
ZDVSCP	VS Master severe duty Vector Duty® motor
ZDVSM	VS Master Vector Duty® motor
ZDVSNCP	VS Master severe duty Vector Duty® motor, TENV
ZDVSNM	VS Master Vector Duty® motor, TENV
ZDWNM	Washdown Vector Duty® motor, TENV
ZDVSNM	VS Master Vector Duty® motor, TENV
ZDWNM	Washdown Vector Duty® motor, TENV

## Kits & Accessories Prefix

BLW	Blower kit
BU	Bushing kit
CBL	Cable assembly
CC	Corrective capacitor bank
EN	Encoder kit
FCD	Drip cover kit
FFC	Fan cover/conduit box Kit
FL	Flange kit
RBT	Roller bearing conversion kit
RES	Resolver feedback kit
TK	Tachometer mounting kit

## Motors Suffix

/35	Full 140 frame band diameter
/36	Full 180 frame band diameter
-2	120/240V field
-2/4	200/400 volt winding
-4	460 volt winding
-5	575 volt winding
-8	200 volt winding
-9	NEMA Design C high torque winding
-12	12 leads
-50	Wound for 50 hertz service
-57	230/380-415 volt winding
-58	380-415 Volt Y-start/delta-run

## Motors Suffix (continued)

-2340	2300/4000 volt winding
-AP	Aluminum process performance
-PP	Cast iron process performance
-BG	Baldor-Reliance® shaft ground motor
-BV	Blower vented
-CI	Cast iron frame
-D	Dodge D-series brake
-DI	Dings Brake
-E	Encapsulated windings
-EX1	Ex nA
-EX2	Ex d
-EX3	Ex de
-G	AEGIS shaft ground motor
-H	56H mounting
-I	Explosion-proof, 1.15 service factor
-NL	Non linear - for VFD use
-P	Partial AC motor excludes pulley endplate
-S	Dodge short-series brake
-TP	Refrigerator fan motor
A	Automatic thermal overload
C	IEC frame B14 face mount
D	IEC frame B5 flange mount
E	New electrical design
L	Long shafted motor with ball bearings that may be converted to have D.E. roller bearing.
LR	Long shafted motor with D.E. roller bearing that may be converted to ball bearings.
M	Manual thermal overload
P	Wound field DC motor NEMA "AT" frame
S	Motor has a short shaft for coupled loads
T	NEMA "T" frame dimensions
TP	Feather picker motor
TR	NEMA "T" frame - roller bearing
TS	NEMA "T" frame - short shaft
Y	Special mounting dimension

## Grinders Suffix

D	Deluxe
E	Exhaust guards
W	Wide design

---

# Services Contents

- 3-2      Services to match your needs**
- 3-4      A lifetime of peak performance**

# Services to match your needs

Your service needs depend on your operations, the life cycle of your equipment, and your business priorities. We have identified our customers' four most common needs, and we created service options to satisfy them. Which will you choose to keep your drives at peak performance?

Is rapid response  
a key consideration?

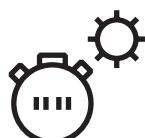
If your drives need immediate action,  
our global network is at your service.

**Example services include:**

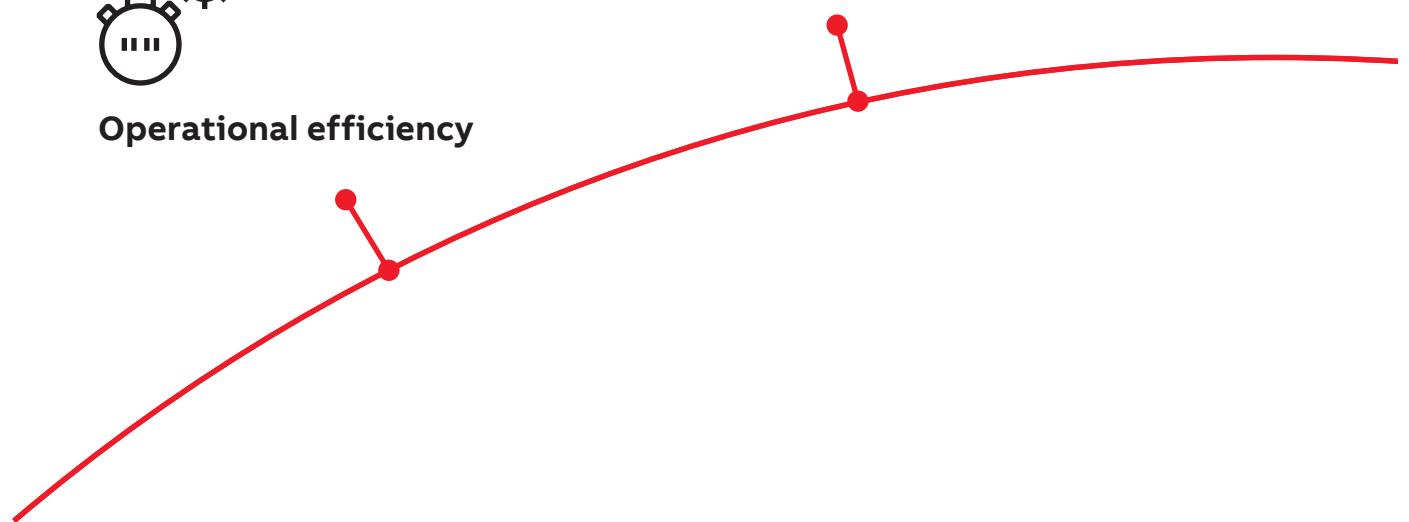
- Technical Support
- On-site Repair
- ABB Ability™ Remote Assistance
- Response time agreements
- Training



**Rapid response**



**Operational efficiency**



# Drives service

## Your choice, your future

### The longevity of your drives is influenced by the service you choose.

Whatever you choose, it should be a well-informed decision. We have the expertise and experience to help you find and implement the right service for your drive equipment. Start by asking yourself these two critical questions:

- Why would my drive be serviced?
- What would my optimal service options be?

From here, count on our guidance and full support throughout the entire lifetime of your drives.

Need to extend your assets' lifetime?

Maximize the lifetime of your drive with our services.

#### Example services include:

- ABB Ability™ Life Cycle Assessment
- Upgrades, Retrofits and Modernization
- Replacement, Disposal and Recycling



### Life cycle management

### Your choice, your business efficiency

ABB Drive Care lets you focus on your core business. A selection of predefined service options matching your needs provides optimal, more reliable performance, extends your drive's lifetime, and controls costs. This reduces the risk of unplanned downtime and makes it easier to budget for maintenance.

#### We can help you more if we know where you are!

Register your drive for advanced services.

Is performance most critical to your operation?

Get optimal performance out of your machinery and systems.

#### Example services include:

- ABB Ability™ Remote Services
- Engineering and Consulting
- Inspection and Diagnostics
- Upgrades, Retrofits and Modernization
- Workshop Repair
- Tailored services



### Performance improvement

# A lifetime of peak performance

You're in control of every phase of the life of your drive. At the heart of drive services is a four-phase product life cycle management model. This model defines the services recommended and available throughout your drive's lifespan.

Now it's easy for you to see the exact service and maintenance available for your drives.

## ABB drives life cycle phases explained:



	Full range of life cycle services and support	Limited range of life cycle services and support	Replacement and end-of-life services
Product	Product is in active sales and manufacturing phase.	Serial production has ceased. Product may be available for plant extensions, as a spare part or for installed base renewal.	Product is no longer available.
Services	Full range of life cycle services is available.	Full range of life cycle services is available. Product enhancements may be available through upgrade and retrofit solutions.	Limited range of life cycle services is available. Spare parts availability is limited to available stock.

### Keeping you informed

We notify you every step of the way using life cycle status statements and announcements.

The benefit for you is clear information about the status of your drives and the exact services available. It helps you plan the preferred service actions ahead of time and make sure that continuous support is always available.

### Step 1

#### Life Cycle Status Announcement

Provides early information about the upcoming life cycle phase change and how it affects the availability of services.

### Step 2

#### Life Cycle Status Statement

Provides information about the drive's current life cycle status, the availability of product and services, the life cycle plan, and recommended actions.

## Notes



---

For more information, please contact your local ABB representative or visit

[new.abb.com/drives/HVAC](http://new.abb.com/drives/HVAC)  
[locator.abbnow.com](http://locator.abbnow.com)  
[abb.com/motors-generators](http://abb.com/motors-generators)  
[www.baldor.com/brands/baldor-reliance/products/motors/ac-motors/hvac](http://www.baldor.com/brands/baldor-reliance/products/motors/ac-motors/hvac)

**ABB Inc.**  
**16250 W. Glendale Drive**  
**New Berlin, WI 53151**  
**(800) 752-0696**