



Customer :
Reference :

Pump Performance Datasheet

Wilo Quotation System 24.3.4

Item number	: Temp. Pumps	Size	: VIS 4X4X8G 3x575V.
Service	: P1 & 2	Stages	: 1
Quantity	: 2	Based on curve number	: 4X4X8G 3600
Quote number	: 2378157	Article Number	:
		Date last saved	: 23 Oct 2024 11:54 AM

Operating Conditions

Flow, rated	: 675.0 USgpm
Head, rated (requested)	: 150.0 ft
Head, rated (actual)	: 150.0 ft
Suction pressure, rated / max	: 0.00 / 0.00 psi.g
NPSH available	: Ample
Site Supply Frequency	: 60 Hz

Performance

Speed criteria	: Synchronous
Speed	: 3500 rpm
Impeller dia.	: 7.00 in
Impeller diameter, maximum	: 7.10 in
Impeller diameter, minimum	: 5.00 in
Efficiency	: 75.91 %
NPSH required / margin required	: 38.55 / 0.00 ft
Ns (imp. eye flow) / Nss (imp. eye flow)	: 1,710 / 6,428 US Units
MCSF	: -
Head max.	: 200.9 ft
Head rise to shutoff	: 33.94 %
Flow, best eff. point	: 558.1 USgpm
Flow ratio, rated / BEP	: 120.95 %
Diameter ratio (rated / max)	: 98.59 %
Head ratio (rated dia / max dia)	: 93.68 %
Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00
Selection status	: Acceptable

Liquid

Liquid type	: Water
Additional liquid description	:
Solids Diameter, required / pump max	: 0.00 in / 0.00 in
Solids concentration, by volume	: 0.00 %
Temperature	: 68.00 deg F
Fluid density	: 1.000 / 1.000 SG
Viscosity	: 1.00 cP
Vapor pressure, rated	: 0.34 psi.a

Material

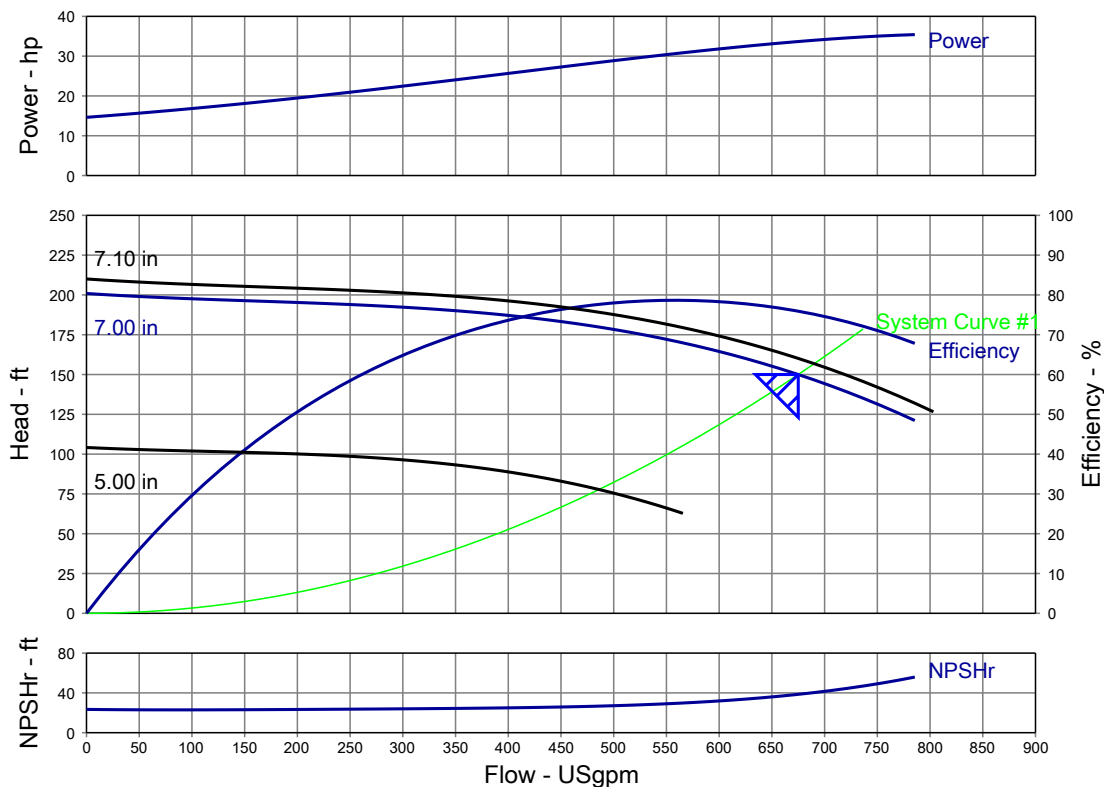
Material selected	: Standard
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Pressure Data

Maximum working pressure	: 86.95 psi.g
Maximum allowable working pressure	: 175.0 psi.g
Maximum allowable suction pressure	: N/A
Hydrostatic test pressure	: N/A

Driver & Power Data (@Max density)

Driver sizing specification	: Rated power
Margin over specification	: 0.00 %
Service factor	: 1.00
Power, hydraulic	: 25.56 hp
Power, rated	: 33.67 hp
Power, maximum	: 35.41 hp
Motor rating	: 40.00 hp / 29.83 kW

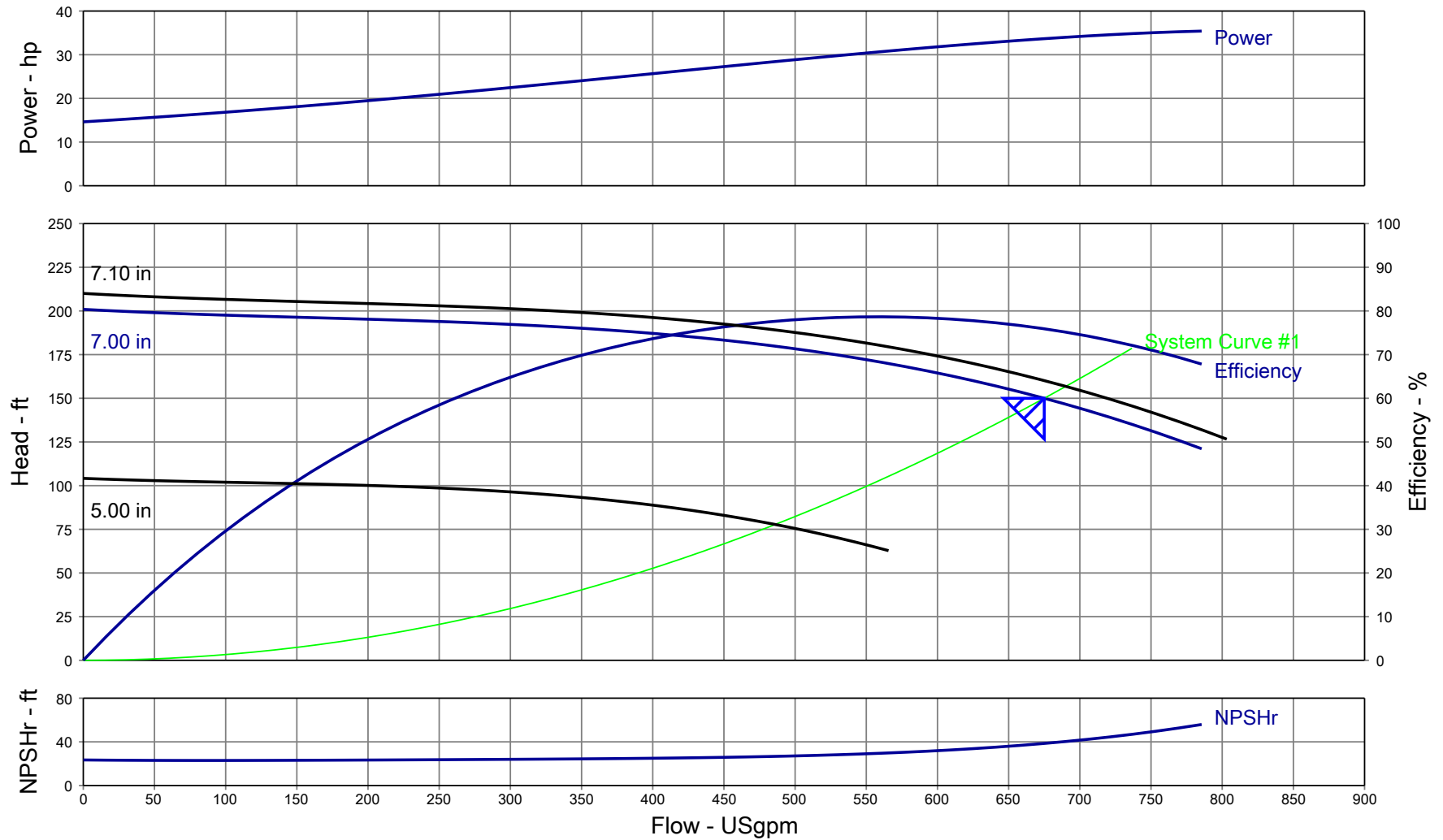




Customer :
Reference :

Pump Performance Curve

Wilco Quotation System 24.3.4



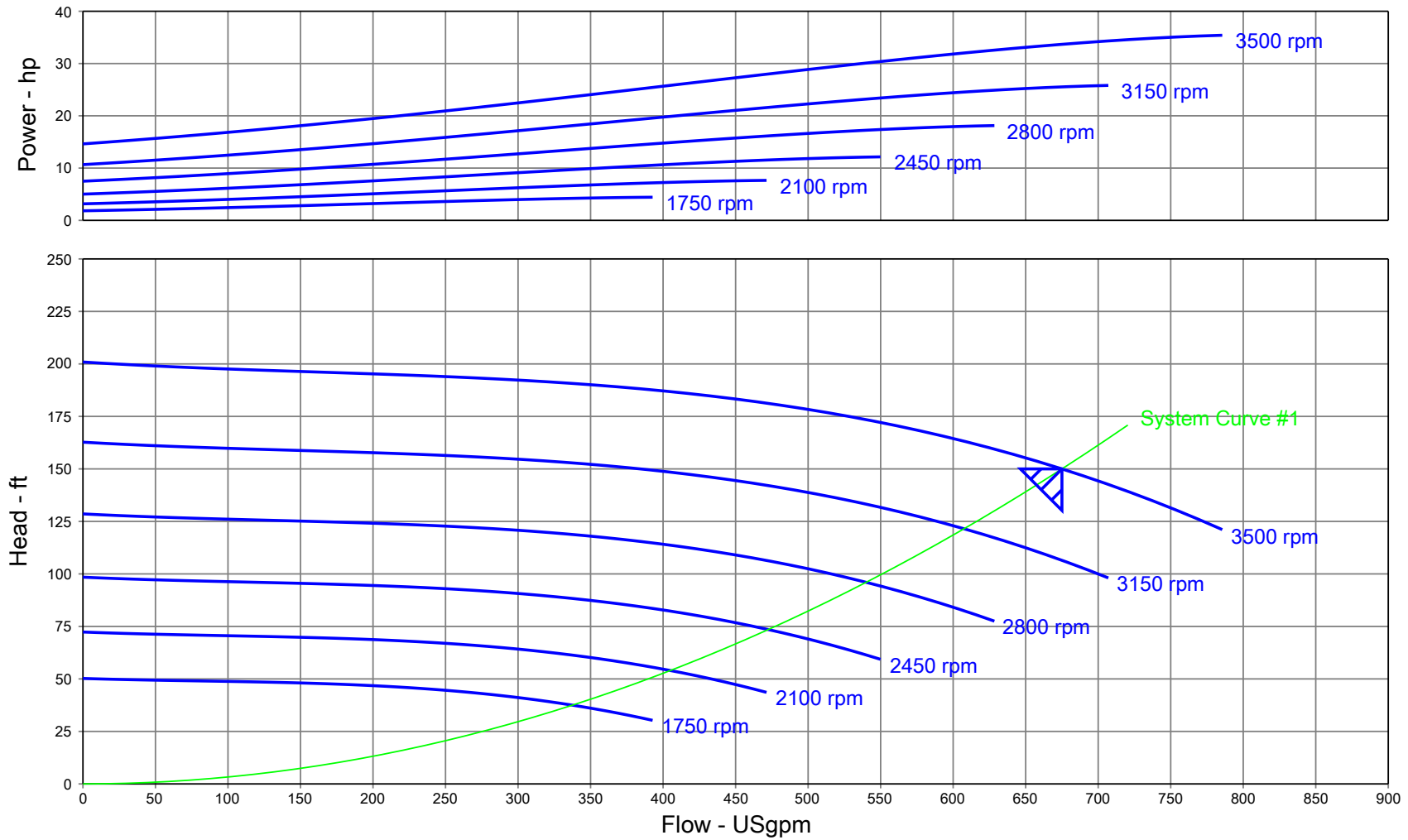
Item number	: Temp. Pumps	Size	: VIS 4X4X8G	Flow, rated	: 675.0 USgpm
Service	: P1 & 2	Stages	: 1	Head, rated	: 150.0 ft
Quantity	: 2	Speed	: 3500 rpm	NPSH required	: 38.55 ft
Quote number	: 2378157	Based on curve number	: 4X4X8G 3600	Fluid density	: 1.000 / 1.000 SG
Date last saved	: 23 Oct 2024 11:54 AM	Efficiency	: 75.91 %	Viscosity	: 1.00 cP
		Power, rated	: 33.67 hp	Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00



Customer :
Reference :

Multi-Speed Performance Curve

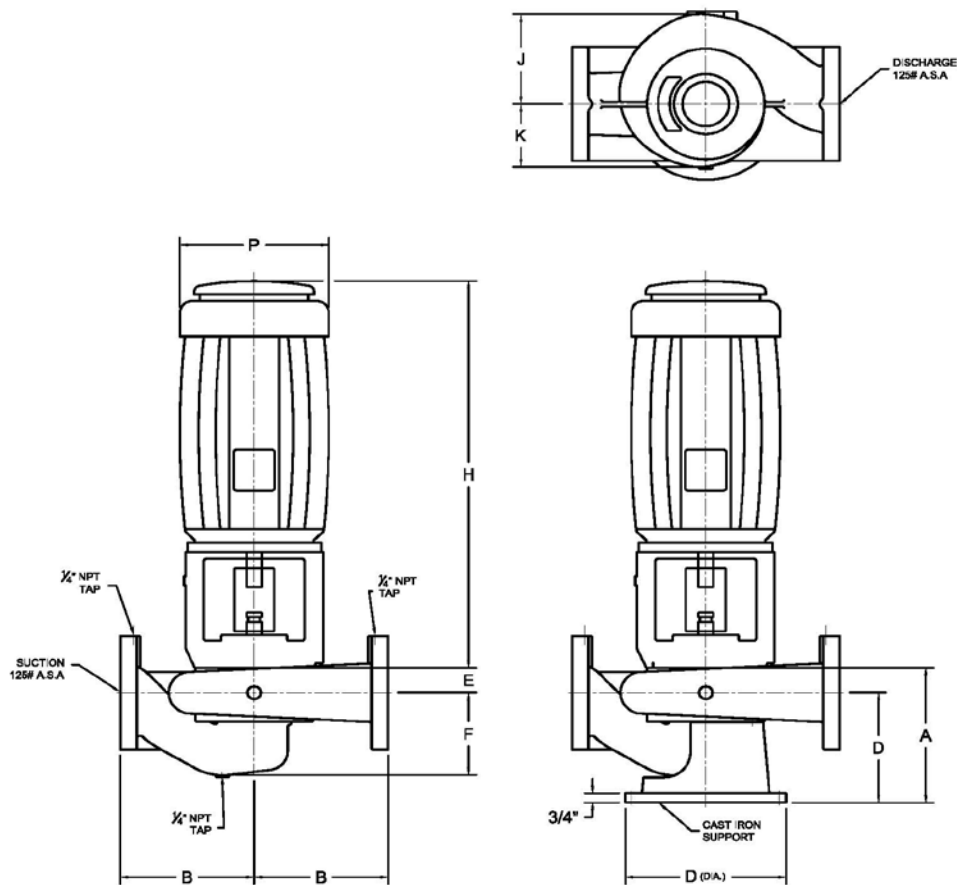
Wilo Quotation System 24.3.4



Item number	: Temp. Pumps	Size	: VIS 4X4X8G	Flow, rated	: 675.0 USgpm
Service	: P1 & 2	Stages	: 1	Head, rated	: 150.0 ft
Quantity	: 2	Efficiency	: 75.91 %	Speed	: 3500 rpm
Quote number	: 2378157	Power, rated	: 33.67 hp	Impeller dia.	: 7.00 in
Based on curve	: 4X4X8G 3600	NPSH required	: 38.55 ft	Fluid density	: 1.000 / 1.000 SG
number		Site Supply Frequency	: 60 Hz	Viscosity	: 1.00 cP
Date last saved	: 23 Oct 2024 11:54 AM	Nominal speed	: 3525 rpm	Cq/Ch/Ce/Cn [ANSI/HI 9.6.7-2010]	: 1.00 / 1.00 / 1.00 / 1.00

IS SPACER COUPLING PUMPS

Model IS 404008 4" x 4"



Motor Frame		XA CONSTRUCTION						XB CONSTRUCTION			
		143VP	145VP	182VP	184VP	213VP	215VP	254VP	256VP	284VP	286VP
HP & RPM	3500	1 1/2	2-3	5	7 1/2	10	15	20	25	30	40
	1750	1	1 1/2 - 2	3	5	-	-	-	-	-	-
RPM	1150	-	-	-	-	-	-	-	-	-	-

H (Max)	20	18	20	20	22	22	24	24	26	26
P (Max)	8	8	10	10	12	12	14	14	15	15

Model Disch. x Suct.	DIMENSIONS							
	A	B	C	D	E	F	J	K
404008 4" X 4"	10 11/16	10	12	8 11/16	2	6 11/16	7 3/8	5 1/8

ALL DIMENSIONS IN INCHES - SUBJECT TO CHANGE WITHOUT NOTICE

Project:										
Customer:										
P.O.#										
Model no.										
Service Ref.										
Flow:	_____	Usgpm	_____	Li/s	_____	M3/h				
Head:	_____	Feet	_____	M	_____	Ka				
Motor	_____	HP	_____	RPM	Volt.	_____	EFF.	_____	Frame	_____
Submitted by:	_____				Date:	_____				

LOW VOLTAGE AC DRIVES

Drives for HVAC

ACH580, 1 to 350 hp



The ACH580 drive sets new standards in both simplicity and reliability, and ensures smooth, energy-efficient operation of your HVAC systems in normal and mission-critical situations.

Leading the way in HVAC drives

Built-in features reduce on-site commissioning time, add value to existing control systems and provide easy diagnostics and troubleshooting.

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

Maximum usability

The ACH580 drive series provides common features throughout the whole product family, making it easy for you to install, commission, and use them for your entire installation.

Advanced HVAC features

The drive comes with a variety of new features, such as a new primary settings menu that allows you to commission and program the drive based on your application. Sleep and timed functions are built into the software to ensure that the drive doesn't run when you don't need it. Another significant feature of the ACH580 drive to increase life and property safety is its in-built override mode.

Highlights

- Simple to select, install and use
- Integrated HVAC-specific features
- Intuitive control panel with optional Bluetooth capability
- Reliable connectivity with major automation and control systems
- Based on ABB's all-compatible drive platform
- Safe maintenance and broad service offering

ACH580 ultra-low harmonic drive

Overcome challenges of harmonics

Harmonics in electrical systems can be considered as pollution of the electrical grid and can have negative effects on equipment.

All-in-one concept

ABBs HVAC Ultra-Low Harmonic (ULH) drives have all the harmonic mitigation technology in the drive. With a THDi of 3% or less, there is no need for external components to install with the drive for reducing harmonics.

Secured operation under special conditions

The ACH580 ULH drive offers a reliable solution to overcome these challenges as it is able to lower the harmonic content so that sensitive equipment stay running. In addition, the ACH580 ULH greatly reduces the risk of generator failure when you need it the most.

ACH580-01/31 technical data

Compliance ACH580-01/31 ACH580-XxR	CE, UL, cUL, CSA, and EAC UL
Power range ACH580-01 ACH580-31	1 to 350 hp (frame sizes R1 to R9) 5 to 400 hp (frame sizes R3, R6, R8, R11)
Input voltage (U_i) ACH580-xx-xxxA-2 ACH580-xx-xxxA-4 ACH580-xx-xxxA-6	208/240V 480V 600V
Input voltage tolerance Phase	+10% / -15% 3-phase (1-phase, 240 V)
Power factor (cosφ) at nominal load ACH580-01 ACH580-31	0.98 1.0
Efficiency at rated power ACH580-01 ACH580-31	98.0% 96.5%
Frequency	48 to 63 Hz
Supported motor control	Scalar and vector
Supported motor types	Asynchronous motor, permanent magnet motor (vector), SynRM (vector)
Degree of protection	UL (NEMA) Type 1, as standard UL (NEMA) Type 12, as option UL (NEMA) Type 3R, as option
Ambient conditions	-15 to +50 °C (5 to 122 °F): No frost allowed. Output derated above +40 °C (104 °F)
Harmonic mitigation ACH580-31	Harmonics are below the limits defined in IEEE519
Control connections	Two analog inputs, two analog outputs, six digital inputs including thermistor input, three relay outputs, external 24 V DC supply input, USB via control panel
Optional I/O extension modules	CMOD-01: External 24 V DC/AC and digital I/O extension (2 x relay output and 1 x digital output) CHDI-01: Six (6) 115/230V AC digital inputs and two relay outputs
Communication extension modules	Standard: BACnet MS/TP, Modbus RTU, Johnson Controls N2 Options: BACnet/IP, DeviceNet, Ethernet IP, PROFIBUS DP, LonWorks (Q3, 2019)
PC tools	Drive composer tool entry, available for free via ABB website Drive composer tool pro
Control panel options	Hand-Off-Auto control panel (ACH-AP-H), as standard Hand-Off-Auto control panel with Bluetooth (ACH-AP-W), as option Control panels feature battery back-up