

# JAGUAR - HVAC



## Product Outline and Characteristics of Jaguar - VXH Series

- Wide capacity range from 0.75 to 710 kW
- Torque vector control
- IP21 & IP55 with same dimension
- DCR Reactor and EMC filter built-in up 90 kW
- Automatic energy-saving operation
- Wet-bulb temperature presumption control
- Fire mode (forced operation)
- 4PID control
- Customisable logic
- Pick-up operation function
- Regenerative avoidance control
- Filter clogging prevention function
- Linearisation function
- Real time clock
- Password function
- Standard comms BACnet MS/TP, Modbus RTU & Metasys N2



## User friendly, easy to see keypad

- |                            |                   |                       |
|----------------------------|-------------------|-----------------------|
| 1. Present value (PV)      | 5. Output current | 9. Power consumption  |
| 2. Setting value (SV)      | 6. Output voltage | 10. Cumulative energy |
| 3. Manipulating value (MV) | 7. Torque         |                       |
| 4. Frequency               | 8. Rotation speed |                       |



\* User defined process value display options

\*Multi-language function: 19 languages + user customised language supported

### DC Reactor + EMC Filter Built In

0.75 to 90kW (Protective structure IP21 or IP55 can be selected with the model between 0.75 and 90kW.)

Inverter capacity	EMC filter	DC reactor	Protective structure
0.75kW to 90kW	Built-in	Built-in	IP21/IP55
110kW to 710kW	Built-in	External	IP00

## Optimum Control for HVAC Facilities

The first IMO Jaguar Drive developed specifically for HVAC and Pump applications in a slim, easy to install package. The Jaguar VXH achieves optimum energy saving on fan and pump applications, contributing significantly to environmental protection while drastically reducing energy costs.

Inverter technology is proven to save energy consumption and an increasing number of users are benefiting from these savings. With its optimised control algorithm and dedicated application control functions the Jaguar VXH is leading the way in performance while continuing the user friendly reputation that Jaguar is renowned for.

- Application**
- Cooling pump • Ventilation fan • chillers
  - Water supply/distribution pump • Cooling tower • AHU

# Standard specifications



3-phase, 400V series (0.75 to 710kW)

Item		Specifications													
Model	VXH-#**4E	2A5	4A1	5A5	9	13A5	18A5	24A5	32	39	45	60	75	91	112
Applicable standard motor (rated output) [kW] <sup>*1</sup>		0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55
Output ratings	Rated capacity [kVA] <sup>*2</sup>	1.9	3.1	4.1	6.8	10	14	18	24	29	34	45	57	69	85
	Voltage [V] <sup>*3</sup>	3-phase, 380 to 480V (with AVR function)													
	Rated current [A]	2.5	4.1	5.5	9.0	13.5	18.5	24.5	32	39	45	60	75	91	112
	Overload current rating	110% -1 min (Overload tolerated interval: compliant with IEC 61800-2)													
	Rated frequency [Hz]	50, 60Hz													
Input Power Supply	Main power supply (No. of phase, voltage, frequency)	3-phase, 380 to 480V, 50/60Hz													
	Control power supply auxiliary-input (No. of phase, voltage, frequency)	Single phase, 380 to 480V, 50/60Hz													
	Voltage, frequency variations	Voltage: +10 to -15% (Unbalance rate between phases is within 2%) <sup>*4</sup> Frequency: +5 to -5%													
	Rated input current [A]	1.6	3.0	4.3	7.4	10.3	13.9	20.7	27.9	34.5	41.1	55.7	69.4	83.1	102
	Required power supply capacity [kVA]	1.2	2.1	3.0	5.2	7.2	9.7	15	20	24	29	39	49	58	71
Braking	Braking torque [%] <sup>*5</sup>	20										10 to 15			
	DC braking	Braking starting frequency: 0.0 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level: 0 to 60%													
EMC filter		Built-in [Compliant with EMC standard (IEC/EN61800-3:2004)]													
DC reactor (DCR)		Built-in (IEC/EN61000-3-2, IEC/EN61000-3-12)													
Compliant with Electrical Safety Standards		UL508C, C22.2No.14, IEC/EN61800-5-1:2007													
" #" Enclosure (IEC/EN60529)		IP21/IP55													
Cooling method		Natural cooling					Fan cooling								
Weight/Mass [kg]	IP21/IP55	10	10	10	10	10	10	18	18	18	18	23	23	TBD	TBD

Item		Specifications													
Model	VXH-#**4E	150	176	210	253	304	377	415	520	585	650	740	960	1170	1370
Applicable standard motor (rated output) [kW] <sup>*1</sup>		75	90	110	132	160	200	220	280	315	355	400	500	630	710
Output ratings	Rated capacity [kVA] <sup>*2</sup>	114	134	160	192	231	287	316	396	445	495	563	731	891	1044
	Voltage [V] <sup>*3</sup>	3-phase, 380 to 480V (with AVR function)													
	Rated current [A]	150	176	210	253	304	377	415	520	585	650	740	960	1170	1370
	Overload current rating	110% -1 min (Overload tolerated interval: compliant with IEC 61800-2)													
	Rated frequency [Hz]	50, 60Hz													
Input Power Supply	Main power supply (No. of phase, voltage, frequency)	3-phase, 380 to 480V, 50/60Hz													
	Control power supply auxiliary-input (No. of phase, voltage, frequency)	Single phase, 380 to 480V, 50/60Hz													
	Voltage, frequency variations	Voltage: +10 to -15% (Unbalance rate between phases is within 2%) <sup>*4</sup> Frequency: +5 to -5%													
	Rated input current [A]	136	162	201	238	286	357	390	500	559	628	705	881	1115	1256
	Required power supply capacity [kVA]	95	113	140	165	199	248	271	347	388	436	489	611	773	871
Braking	Braking torque [%] <sup>*5</sup>	10 to 15													
	DC braking	Braking starting frequency: 0.0 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level: 0 to 60%													
EMC filter		Built-in [Compliant with EMC standard (IEC/EN61800-3:2004)]													
DC reactor (DCR)		Built-in		Standard accessory (IEC/EN61000-3-2, IEC/EN61000-3-12)											
Compliant with Electrical Safety Standards		UL508C, C22.2No.14, IEC/EN61800-5-1:2007													
" #" Enclosure (IEC/EN60529)		IP21/IP55			IP00										
Cooling method		Fan cooling													
Weight/Mass [kg]	IP21/IP55	TBD	TBD												
	IP00			62	64	94	98	129	140	245	245	245	330	530	530

Option - USB port equipped, three types of optional board can be mounted!!

- Relay output card (2 × 1c)/(7 × 1a)
- Analog input/output interface card
- Pt100 temperature sensor input card
- PROFIBUS-DP communication card
- CC-Link communication card
- LONWORKS communication card
- DeviceNet communication card
- CANopen communication card
- Ethernet communication card

\*1) Applicable standard motors are the case of IMO -pole standard motors.

\*2) The rated capacity indicates the case of 440V ratings.

\*3) Output voltage cannot exceed the power supply voltage.

\*4) Interphase voltage unbalance ratio [%] = (max. voltage [V] - min. voltage [V]) / 3-phase average voltage [V] × 67 (See IEC61800-3.) W hen unbalance ratio is between 2 and 3% please use optional AC reactor (ACR).

\*5) Average braking torque obtained by use of a motor. (Varies with the efficiency of the motor)