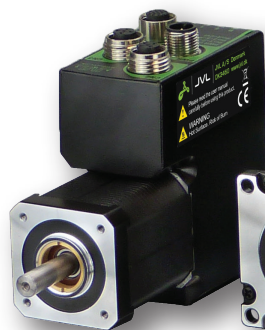




# ServoStep®

## All-in-one integrated stepper motors with closed-loop, ePLC, multiturn encoder and support for all Ethernet protocols

**NEMA 17**  
(42 mm)



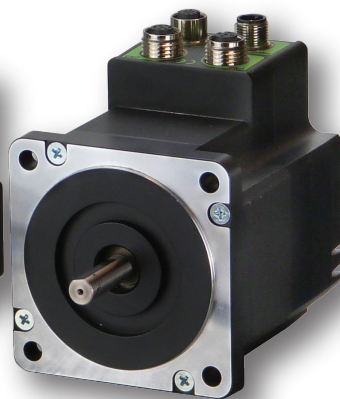
**0.8 Nm**

**NEMA 23**  
(57 mm)



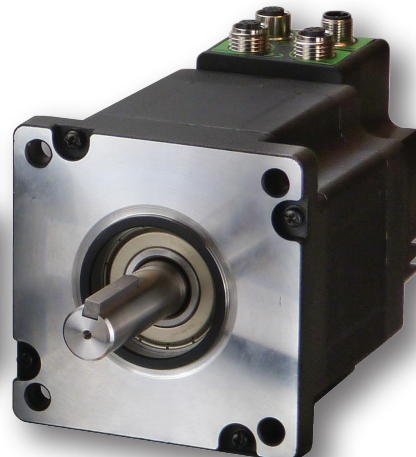
**3 Nm**

**NEMA 34**  
(87 mm)



**12 Nm**

**NEMA 43**  
(110 mm)



**25 Nm**



### Benefits of integrated motors

The benefits of integrated motors are that they do not take up space in the control cabinet, and are all-in-one units. All electronics are combined in the same metal housing for high EMC safety.

### ePLC™ embedded PLC

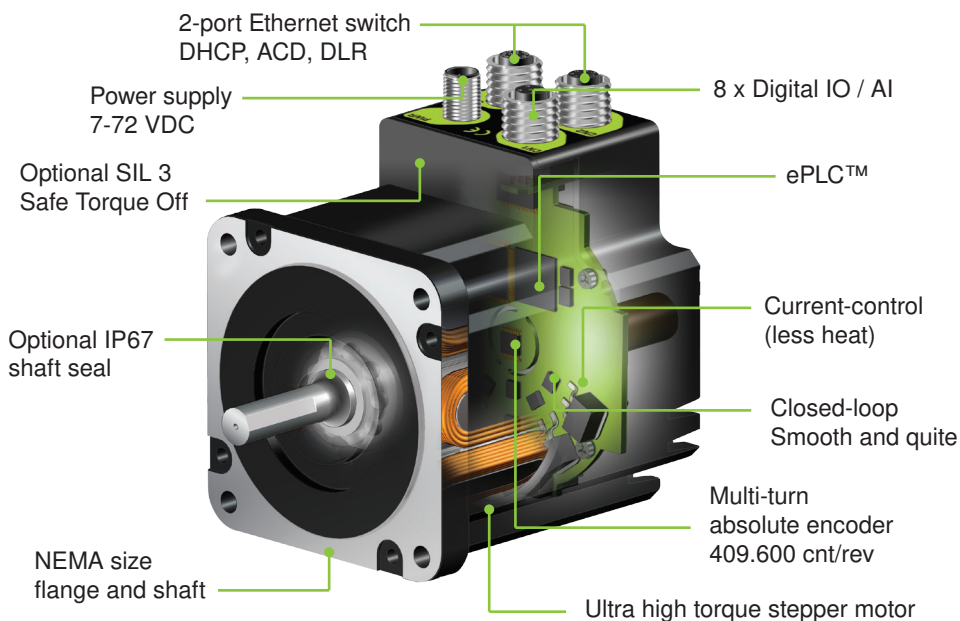
All JVL motors have ePLC™ built-in with up to 8 IO points. It enables <1 ms reactions times and can work together with a master PLC running Ethernet. Graphical point-n-click programming.

### Ethernet with protocol change

This unique feature gives you the flexibility to change protocol between Profinet, EtherNet/IP, Sercos, EtherCAT, Powerlink and Modbus TCP/UDP on any JVL motor. It is easy with JVL's MacTalk® software.



Technology Partner  
A ROCKWELL AUTOMATION PARTNER



JVL A/S is a Danish manufacturer founded in 1986 and is the inventor of the integrated servo motor concept. Our focus is on developing state-of-the-art products for motion control. We are proud to be a certified supplier to the aerospace and automotive industries. We offer two all-in-one ranges: Servo motors from 50 to 4500 W and ServoStep™ motors from 0.18 to 25 Nm. All motors are designed for IIot and are Industry 4.0 ready.



# JVL – your global partner



JVL A/S is a Danish company with subsidiaries in Germany, UK, USA and Turkey. And we have distributors and partner companies in more than 30 countries world-wide – sales and support are always nearby.

## NEMA 17 NEMA 23



Main motor type*	MIS171	MIS173	MIS176	MIS231S	MIS232S	MIS234S	MIS231T	MIS232T	SMC66	
Holding torque	0.18 [25]	0.40 [56]	0.78 [110]	0.97 [137]	1.97 [279]	3.08 [462]	1.16 [164]	2.53 [358]	6 A	Nm [Oz-In]
Resolution	409600	409600	409600	409600	409600	409600	409600	409600	409600	Counts per rev.
Supply voltage Driver	7-72	7-72	7-72	7-72	7-72	7-72	7-72	7-72	7-72	VDC
Supply: Control + I/O	7-28	7-28	7-28	7-28	7-28	7-28	7-28	7-28	7-28	VDC
Max supply current Driver @24 / 48 / 72 VDC	2.9 / 2.0 / 1.3	3.3 / 3.2 / 2.7	2.8 / 3.0 / 3.2	5.1 / 5.2 / 5.1	4.4 / 4.6 / 4.8	3.5 / 4.1 / 4.1	6.7 / 6.3 / 5.6	5.9 / 6.1 / 6.2	6.7 / 6.3 / 6.2	ADC RMS
Nominal speed range	0.01 - 3000	0.01 - 3000	0.01 - 3000	0.01 - 3000	0.01 - 3000	0.01-3000	0.01-3000	0.01-3000	0.01 - 3000	RPM
Max mechanical power**	100	142	135	177	221	212	198	316		W
Rotor inertia	0.02 [0.0003]	0.054 [0.0008]	0.1 [0.00144]	0.3 [0.0042]	0.48 [0.0068]	0.65 [0.0092]	0.3 [0.0042]	0.48 [0.0068]		kg-cm <sup>2</sup> /oz-in-s <sup>2</sup>
Flange dimensions	42x42 [1.7]	42x42 [1.7]	42x42 [1.7]	57x57 [2.3x2.3]	57x57 [2.3x2.3]	57x57 [2.3x2.3]	57x57 [2.3x2.3]	57x57 [2.3x2.3]	42x109	mm [Inch]
Length	73.5 [2.89]	85.2 [3.35]	106 [4.17]	103 [4.06]	124 [4.88]	161 [6.34]	103 [4.06]	124 [4.88]	59.5	mm [inch]
Shaft diameter***	Ø5 [0.197]	Ø5 [0.197]	Ø8 [0.315]	Ø6.35 [0.25]	Ø6.35 [0.25]	Ø10[0.3937]	Ø6.35 [0.25]	Ø10[0.3937]		mm [inch]
Weight	0.54 [1.19]	0.68 [1.50]	0.90 [1.98]	1.1 [2.43]	1.4 [3.09]	2.0 [4.41]	1.1 [2.43]	1.4 [3.09]	0.40 [0.88]	kg [lb]
Protection class	IP42 (IP65 Optional)									

\* Rear end connectors available      \*\* Peak power @ 72 VDC      \*\*\* Other shaft types also available

## NEMA 34 NEMA 43



Main motor type	MIS340	MIS341	MIS342	MIS343	MIL34	MIS430	MIS431	MIS432	SMC85	
Holding torque	3.0 [425]	5.1 [722]	9.0 [1274]	12.0 [1699]	2300 N	10.0 [1416]	18.7 [2648]	25.0 [3539]	9 A	Nm [Oz-In]
Resolution	409600	409600	409600	409600	409600	409600	409600	409600	409600	Counts per rev.
Supply voltage Driver	7-72	7-72	7-72	7-72	7-72	7-72	7-72	7-72	7-72	VDC
Supply: Control + I/O	7-28	7-28	7-28	7-28	7-28	7-28	7-28	7-28	7-28	VDC
Max supply current Driver @24 / 48 / 72 VDC	5.0 / 5.2 / 5.4	5.6 / 5.3 / 5.9	6.0 / 5.4 / 6.1	6.3 / 5.7 / 6.6	5.6 / 5.3 / 5.6	6.6	6.6	6.6	6.6	ADC RMS
Nominal speed range	0.01 - 3000	0.01 - 3000	0.01 - 3000	0.01-3000	0.01 - 3000	0.01-3000	0.01-3000	0.01-3000	0.01-3000	RPM
Max mechanical power**	260	288	367	296	288	240	323	245		W
Rotor inertia	1.4 [0.0198]	2.7 [0.0382]	4.0 [0.0564]	5.3 [0.0750]		5.5 [0.0778]	10.9 [0.154]	16.2 [0.2292]		kg-cm <sup>2</sup> /oz-in-s <sup>2</sup>
Flange dimensions	87x87 [3.4x3.4]	87x87 [3.4x3.4]	87x87 [3.4x3.4]	87x87 [3.4x3.4]	87x87 [3.4x3.4]	110x110 [4.3x4.3]	110x110 [4.3x4.3]	110x110 [4.3x4.3]	51x116	mm [Inch]
Length	95.0 [3.74]	125.0 [4.92]	155.0 [6.10]	185.0 [7.28]		145.5 [5.73]	196.5 [7.74]	247.5 [9.74]	117	mm [inch]
Shaft diameter***	Ø9.53 [0.3752]	Ø9.53 [0.3752]	Ø14.0 [0.5512]	Ø14 [0.5512]		Ø19 [0.748]	Ø19 [0.748]	Ø19 [0.748]		mm [inch]
Weight	2.1 [4.5]	3.1 [6.9]	4.3 [9.5]	5.3 [11.7]		5.1 [11.2]	8.9 [19.6]	11.8 [26.0]	0.6 [1.3]	kg [lb]
Protection class	IP42 (IP65 Optional)									

\*\* Peak power @ 72 VDC      \*\*\* Other shaft types also available

## Software integration on all major platforms



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