

New 35ECS Ultra EC Brushless Motor Ultra High Speed in a Compact Package

Portescap is proud to announce the expansion of the Ultra EC™ range of brushless DC slotless motors with the introduction of the new 35ECS motor. This 2 pole motor offers ultra high speed and power (up to 330W, max continuous) without compromising on the smooth operation and long life you expect from Portescap's brushless slotless motors.

The new 35ECS motor is available in two lengths: the 35ECS60 and the 35ECS80. The 35ECS60 and 35ECS80 motors feature our patented Ultra EC coil technology which provides unparalleled torque and power density with limited core losses over a wide range of working speeds without friction & brush wear. These motors feature our patented high-speed rotor design as well to sustain speeds up to 40,000 rpm. The 35ECS80 is unique and opens new areas for slim/long package with impressive torque capabilities at very high speeds, while the 35ECS60 allows high speed capabilities at very low voltages. Thanks to its rugged design, the 35ECS can sustain peak torque during 2s up to 1.1Nm (35ECS60) and 2.0Nm (35ECS80).

The 35ECS motors can be adapted in most applications, including industrial applications, enhancing the life and reliability of a device without compromising on power and

machine throughput and saving energy. The new 35ECSs are an ideal choice for applications such as battery-operated hand tools (industrial tightening devices or drills), factory automation equipment (large fans or vacuum pumps), and also for applications where there are constraints on diameter.

The new 35ECS motors feature a laser welded front flange to ensure the strongest housing to sustain high torque reaction. A temperature probe on the coil head ensures an optimized control of motor performances in heavy duty applications. These motors are offered with hall sensors and a total of 6 different coils to match your speed and voltage requirements. Upon request, Portescap can also provide options for customization including gearboxes, encoders, coil variations and mechanical interface modifications.

Portescap is globally ISO 9001:2015 certified and our production site in India is also ISO 13485, ISO 14001:2015 and OHSAS 18001:2015 certified.

Motor Performances					
	Frame Size		Torque	R/K2**	Max Speed
	Diameter(mm)	Length(mm)	mNm	10³ / Nms	rpm
Portescap 35ECS60	35	60	120	0.900	40,000
Portescap 35ECS80	35	80	193	0.370	40,000
*This motor constant gives Joule losses power Pj for a given torque T ; the lower the better: $P_j = (R/K^2) * T^2$					

About Portescap

Portescap offers the broadest miniature and specialty motor products in the industry, encompassing coreless [brush DC](#), [brushless DC](#), stepper can stack, gearheads, digital linear actuators, and disc magnet technologies. Portescap products have been serving diverse motion control needs in wide spectrum of medical and industrial applications, life science, instrumentation, automation, aerospace and commercial applications, for more than 70 years.

Portescap has manufacturing centers in the United States, St. Kitts, and India, and utilizes a Global Product Development network with research and development centers in the United States, China, India, and Switzerland.