



DIRECT DRIVE STK FRAMELESS MOTORS

STK range addresses direct drive applications

- Full integration of the motor for cutting volume and weight.
- High diameter hollow shaft.

MAIN CHARACTERISTICS

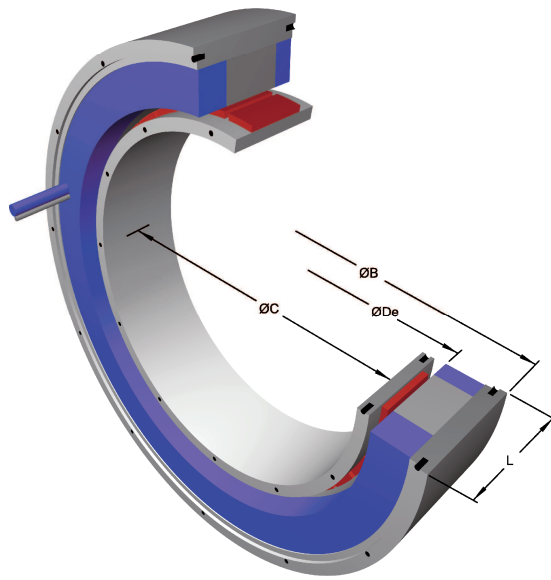
The STK permanent magnets brushless motors have been specially designed to drive axis without gears needing very low volume and weight compared to the torque and power developed.

- Continuous torque from 8 N.m up to 2700 N.m with natural convection and up to 6100 N.m with fluid cooling.
- Six external diameters from 145 mm up to 800 mm.
- Internal diameter from 48 mm up to 630 mm.
- Various available windings from 30 rpm up to 1500 rpm depending on the size.

Both electromagnetic and thermal optimisation allow to reach continuous torque-to-weight ratio up to 14 N.m/kg in natural convection and up to 32 N.m / kg with fluid cooling.

STK frameless motors address very demanding industrial applications in terms of performances (dynamics, compactness, accuracy in regularity at low speed). A particular attention has been dedicated in the design so that both technical and economical optimisation could be achieved.

Industrial users are sometimes limited by direct drive motors because they are generally torque motors getting therefore a reduced power and speed. STK frameless motors answer that objection by offering performances matching the low speed applications with the related speed regularity and also address the direct drive applications up to 30 kW in natural convection with speed reaching up to 1500 rpm, depending on the size.



	Stator's Overall Diameter	Rotor's Internal Diameter	Stator's Internal Diameter	Stator's Length	Max speed	Continuous torque (Low speed)	Maximum Torque (motor at 20°C)
	Ø B (mm)	Ø C (mm)	Ø De (mm)	L (mm)	rpm	N.m	N.m
145STK 1M	Ø145 / Ø153	Ø56 max.	Ø78,5	92,00	1500	8 / 15	27
145STK 2M				119,00		14,6 / 29,9	55
145STK 3M				146,00		21 / 45	82
145STK 4M				173,00		24,4 / 59,8	110
145STK 5M				200,00		32 / 75	137
145STK 6M				227,00		37,3 / 90	165
145STK 7M				254,00		42 / 105	192
145STK 8M				281,00		47,4 / 120	220
190STK 1M	Ø190 / Ø193	Ø72 max.	Ø98	103,75	1500	20 / 35	59
190STK 2M				140,00		36 / 71,4	119
190STK 3M				176,25		50 / 106	178
190STK 4M				212,50		63 / 141	238
190STK 5M				248,75	77 / 176	297	
190STK 6M				285,00	89 / 210	357	
190STK 7M				321,25	101 / 242	416	
190STK 8M				357,50	111 / 274	476	
300STK 1M	Ø303 / Ø303	Ø190 max.	Ø228	87,50	800	55 / 118	193
300STK 2M				115,00		98 / 235	387
300STK 3M				142,50		136 / 345	580
300STK 4M				170,00		170 / 453	774
300STK 5M				197,50		205 / 566	967
300STK 6M				225,00		235 / 679	1161
300STK 7M				252,50		268 / 794	1354
300STK 8M				280,00		295 / 910	1548
400STK 1M	Ø404 / Ø404	Ø258 max.	Ø306	100,50	800	125 / 263	440
400STK 2M				128,00		225 / 525	880
400STK 3M				155,50		318 / 792	1320
400STK 4M				183,00		400 / 1059	1760
400STK 5M				210,50		480 / 1307	2200
400STK 6M				238,00		550 / 1554	2640
400STK 7M				265,50	630 / 1816	3080	
400STK 8M				293,00	700 / 2077	3520	
500STK 1M	Ø502 / Ø502	Ø350 max.	Ø403	93,00	600	210 / 412	768
500STK 2M				120,50		365 / 819	1536
500STK 3M				148,00		520 / 1180	2304
500STK 4M				170,50		640 / 1550	3072
500STK 5M				203,00	759 / 1972	3840	
500STK 6M				230,50	878 / 2394	4608	
500STK 7M				258,00	985 / 2793	5376	
500STK 8M				285,50	1087 / 3192	6144	
500STK 9M				313,00	1185 / 3590	6912	
800STK 1M	Ø795 / Ø795	Ø630 max.	Ø688	112,50	250	610 / 1039	1828
800STK 2M				140,00		1127 / 2057	3656
800STK 3M				167,50		1620 / 3100	5484
800STK 4M				195,00		2010 / 4100	7312
800STK 5M				222,50		2359 / 5100	9140
800STK 6M				250,00		2708 / 6100	10968

Note: Values in blue are for fluid cooled motors (windings at 140°C)