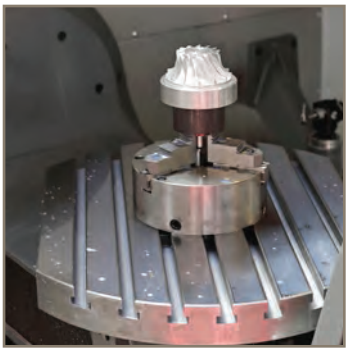

Frameless Servo Motors

北京润诚时代科技有限公司

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Electromechanical Worldwide Manufacturing Locations

Europe
Littlehampton, United Kingdom
Dijon, France
Offenburg, Germany
Filderstadt, Germany
Milan, Italy

Asia
Wuxi, China
Jangan, Korea
Chennai, India

North America
Rohnert Park, California
Irwin, Pennsylvania
Charlotte, North Carolina
New Ulm, Minnesota

Offenburg, Germany

Local Manufacturing and Support in Europe

Parker provides sales assistance and local technical support through a network of dedicated sales teams and authorized technical distributors throughout Europe.

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Milan, Italy

Littlehampton, UK

Filderstadt, Germany

Dijon, France

Description

Frameless servomotor is an innovative and comprehensive approach enabling the complete integration of the permanent magnets AC motor in a simplified mechanical system.
This approach ensures that the size constraints of the machine are utilized to maximum effect. This delivers a more accurate, reliable and robust solution than traditional construction methods.
Different ranges of products are available to meet the design needs of many different mechanical systems in a host of different applications. Other more bespoke adaptations can be developed upon request.

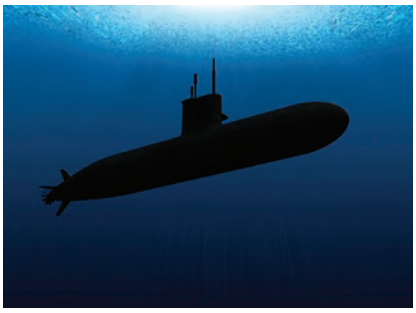
Advantages

- Global cost reduction
- Increased reliability
- Compact footprint of the machine
- High stiffness and robustness of the system
- Direct drive for more accurate and dynamic motion
- Simple machine design
- Reduced weigth of the system
- Reduced maintenance
- Integration assistance

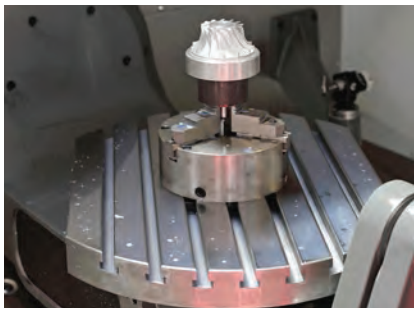
Applications

Machine Tools

Medical



Marine & Submarine

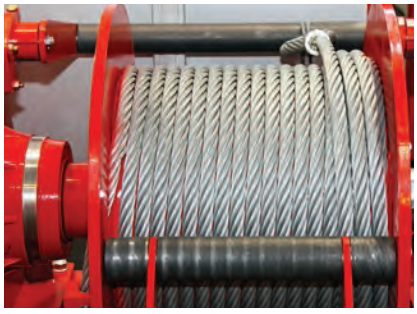


Rotating table

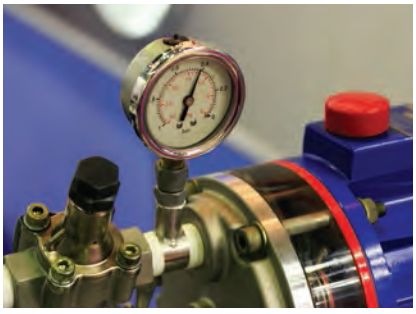
Special machine

Handling & Robotics

Mixer

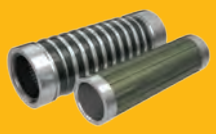
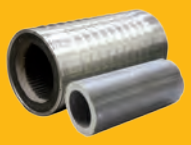


Winch



Compressor

Series	NK		K
	www.parker.com/eme/nk		www.parker.com/eme/k
	page 9		page 15
Cooling	**Natural Cooling**	**Water Cooling**	**Natural Cooling**
Power	0.2 to 7.5 kW	3.8 to 34 kW	0.06 to 2 kW
Torque	0.45 to 41 Nm	3.1 to 90 Nm	0 .07 to 23 Nm
Max Speed	8 900 min^{-1}	15 000 min^{-1}	10 000 min^{-1}
Diameter	42 - 56 - 62 - 80 - 111 - 143 mm	62 - 80 - 111 - 143 mm	32 - 44 - 64 - 89 - 178 mm
Power Supply	24 - 48 - 230 - 400 VAC	24 - 48 - 230 - 400 VAC	12 - 24 - 48 - 96 VDC 240 VAC only for size K178
Main Characteristics/ Performances	• Low cogging • Compact in diameter • Embedded magnets • Oil proof on request		• Low voltage • Compact in Length • Glued magnets • Integrated Hall Effect sensor as an option • Large hollow shaft

SKW	HKW	TK	
			
www.parker.com/eme/skw	www.parker.com/eme/hkw	www.parker.com/eme/tk	
page 21	page 27	page 35	
Water cooling	**Water Cooling**	**Natural Cooling**	**Water Cooling**
0.2 to 7.5 kW	2.3 to 276 kW	2.8 to 58 kW	7 to 207 kW
4 to 36 Nm	4.5 to 1 250 Nm	41 to 10 100 Nm	90 to 21 900 Nm
12 000 min^{-1}	50 000 min^{-1}	870 min^{-1}	2 500 min^{-1}
73 - 82 - 91 - 96 mm	85 - 108 - 155 - 195 - 242 - 310 mm	230 - 385 - 565 - 795 mm	230 - 385 - 565 - 795 mm
400 VAC	400 VAC	400 VAC	400 VAC
• Medium speed • Glued magnets • Winding potted in epoxy resin • Large hollow shaft • Oil proof	• High speed • High power • Constant power running (Field weakening mode) • Embedded magnets • Winding potted in epoxy resin • Medium hollow shaft • Oil proof on request	• High torque • High power • Glued magnets • Winding potted in epoxy resin • Very large hollow shaft • Oil proof on request • Coating against corrosion on request	

Frameless Servo Motor - NK Series

Overview

Description

NK Series Servo motors are an innovative direct drive solution designed for industrial applications. NK Series brushless servomotors combine exceptionally precise and quality motion, high dynamic performance with a compact footprint, allowing complete integration into a mechanical system.
NK motors are suite to applications where constant speed is needed due to their low cogging characteristic. Support with customisation and integration are possible on request.

Technical Characteristics - Overview

Cooling	Natural cooling	Water cooling
Power	0.2...7.5 kW	3.8...34 kW
Torque	0.45...41 Nm	3.1...90 Nm
Max Speed	8 900 min^{-1}	15 000 min^{-1}
Number of poles	10	10
Diameter	42 – 56 – 62 – 80 – 111 – 143 mm	62 – 80 – 111 – 143 mm
Power supply	24 – 48 – 230 – 400 VAC	24 – 48 – 230 – 400 VAC

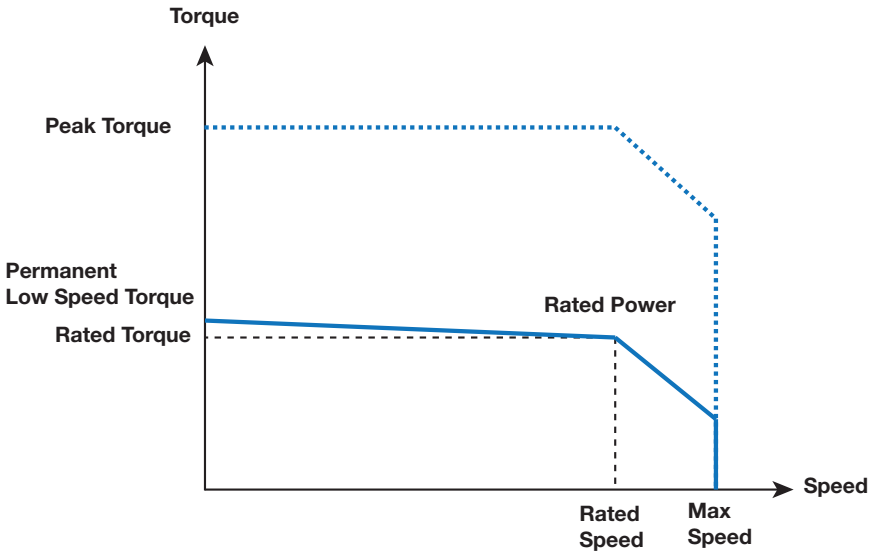
Advantages

- Low cogging solution
- Compact diameter
- Oil-proof on request
- Global cost reduction
- Increased reliability and reduced maintenance
- High dynamic performance and power density: increased productivity and reduced size when compared to induction motors
- Simple, light and compact machine design
- No coupling systems needed
- Greater stiffness and robustness of the system
- Low noise level
- Integration assistance

Application

- Medical
- Machine Tools
- Submarine
- Packaging Machinery
- Pump
- Compressor
- Winch
- Special Machine
- Electric Cylinder

Technical Data



Motor	Rated Power Pn	Rated Torque Mn	Rated Current In	Low speed torque Mo	Low Speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max	Frequency at max speed	Moment of Inertia J
	[kW]	[Nm]	[Arms]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[Hz]	[kgmm^2]
230VAC power supply - single or three-phased										
NK110E_P	0.21	0.33	0.79	0.45	1.0	1.7	4.0	6000	500	13
NK210E_T	0.33	0.80	1.11	1	1.3	3.4	5.4	4000	333	38
NK210E_P	0.39	0.61	1.32	1	2.0	3.4	8.0	6000	500	38
NK310E_P	0.43	1.8	1.27	2	1.4	6.6	5.6	2300	192	79
NK310E_K	0.69	1.65	2.06	2	2.4	6.6	9.7	4000	333	79
NK420E_P	0.85	3.53	2.41	4	2.7	13.4	10.9	2300	192	290
NK420E_J	1.31	3.14	3.74	4	4.7	13.4	18.9	4000	333	290
NK430E_J	1.57	4.68	4.53	5,5	5.2	18.7	21.0	3200	267	426
NK430E_F	1.80	4.29	5.28	5,5	6.6	18.7	26.6	4000	333	426
NK620E_R	1.71	7.42	4.99	8	5.3	26.6	21.2	2200	183	980
NK620E_J	2.55	6.08	7.82	8	9.9	26.6	39.5	4000	333	980
NK630E_R	1.63	10.7	4.75	12	5.3	39.9	21.0	1450	121	1470
NK630E_K	2.70	9.21	7.8	12	9.9	39.9	39.4	2800	233	1470
NK630E_G	3.48	8.31	10.1	12	13.9	39.9	55.7	4000	333	1470
NK820E_L	4.99	13.2	14.8	16	17.6	49.9	69.2	3600	300	3200
NK840E_J	5.27	22.9	15.7	28	18.9	91.8	74.8	2200	183	6200
NK860E_F	6.53	32.8	21.8	41	27.0	136.0	107.6	1900	158	9200
NK860E_D	7.48	27.5	22.5	41	33.0	136.0	131.6	2600	217	9200

Technical Data

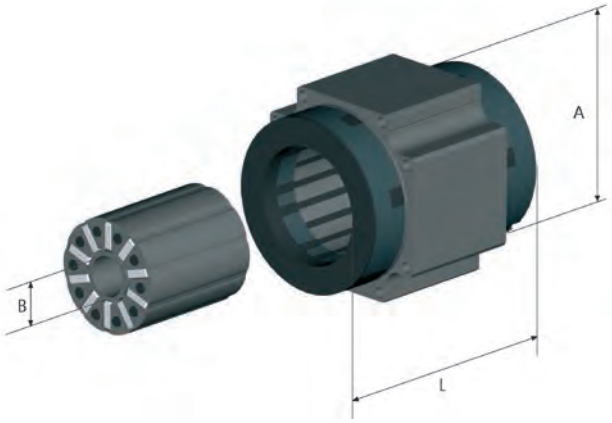
Motor	Rated Power Pn	Rated Torque Mn	Rated Current In	Low speed torque Mo	Low speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max	Frequency at max speed	Moment of Inertia J
	[kW]	[Nm]	[Arms]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[Hz]	[kgmm^2]
400VAC power supply - three-phased										
NK210E_T	0.385	0.613	0.9	1	1.3	3.4	5.4	6000	500	38
NK310E_P	0.689	1.65	1.2	2	1.4	6.6	5.6	4000	333	79
NK420E_V	0.753	3.6	1.2	4	1.4	13.4	5.5	2000	167	290
NK420E_P	1.31	3.14	2.2	4	2.7	13.4	10.9	4000	333	290
NK430E_V	0.563	5.38	1.4	5.5	1.4	18.7	5.6	1000	83	426
NK430E_P	1.5	4.77	2.5	5.5	2.8	18.7	11.3	3000	250	426
NK430E_L	1.8	4.29	3.0	5.5	3.8	18.7	15.1	4000	333	426
NK620E_V	1.57	7.52	2.7	8	2.8	26.6	11.3	2000	167	980
NK620E_R	2.52	6.17	4.3	8	5.3	26.6	21.2	3900	325	980
NK620E_J	2.45	4.1	5.6	8	9.9	26.6	39.5	5700	475	980
NK630E_V	1.53	10.8	2.4	12	2.6	39.9	10.5	1350	113	1470
NK630E_R	2.64	9.34	4.2	12	5.3	39.9	21.0	2700	225	1470
NK630E_N	3.18	7.6	5.3	12	7.9	39.9	31.7	4000	333	1470
NK820E_X	2.93	14.7	4.8	16	5.2	49.9	20.3	1900	158	3200
NK820E_R	5.29	12.9	9.1	16	11.0	49.9	43.2	3900	325	3200
NK840E_Q	5.09	23.2	8.5	28	10.1	91.8	39.9	2100	175	6200
NK840E_K	6.8	18.6	11.5	28	16.8	91.8	66.5	3500	292	6200
NK860E_J	7.48	27.5	12.7	41	18.5	136.0	74.0	2600	217	9200
400 VAC power supply - three-phased - water cooled										
NK310W_F	3.8	2.5	7.4	3.1	8.9	5.89	18.0	15000	1250	79
NK420W_D	4.9	4.64	12.6	6.1	16.3	12.6	36.4	12000	1000	290
NK430W_D	7.4	7.26	14.1	9.6	18.3	18.9	38.9	10000	833	420
NK620W_C	7.7	10.7	20.7	15	29	23.5	48.0	10000	833	980
NK630W_D	11.8	17.8	31.2	23	40.1	38.7	72.8	8000	667	1470
NK820W_G	12.6	19	35.2	24	44.1	37.9	75.0	8000	667	3200
NK840W_D	26.4	42.7	52.7	53	65.3	75.8	100.0	6500	542	6200
NK860W_D	34.8	83.2	64.6	90	70.2	140	123.2	4000	333	9200

Associated Drives

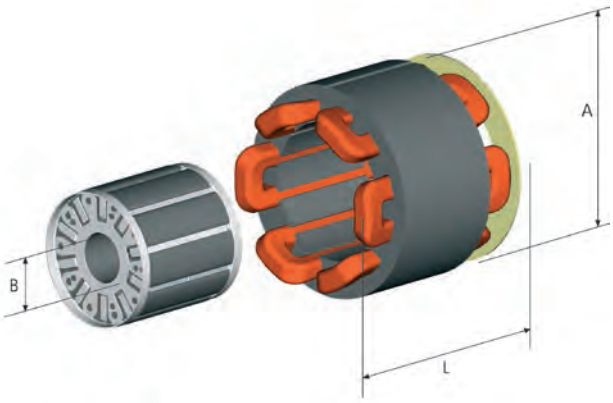
Motor	Compax3	PSD1	SLVD-N	AC890	AC30
230 VAC power supply - single or three-phased					
NK110E_P..	C3S025V2..	PSD1SW1200	SLVD1N	890SD-231300B...	-
NK210E_T..	C3S025V2..	PSD1SW1200	SLVD2N	890SD-231300B...	-
NK210E_P..	C3S025V2..	PSD1SW1200	SLVD2N	890SD-231300B...	-
NK310E_P..	C3S025V2..	PSD1SW1200	SLVD2N	890SD-231300B...	-
NK310E_K..	C3S025V2..	PSD1SW1200	SLVD2N	890SD-231550B...	-
NK420E_P..	C3S063V2..	PSD1SW1300	SLVD5N	890SD-231550B...	-
NK420E_J..	C3S063V2..	-	SLVD5N	890SD-231700B...	-
NK430E_J..	C3S063V2..	PSD1SW1300	SLVD7N	890SD-231700B...	-
NK430E_F..	C3S100V2..	-	SLVD7N	890SD-232165B...	-
NK620E_R..	C3S063V2..	PSD1SW1300	SLVD7N	890SD-231700B...	-
NK620E_J..	C3S100V2..	-	SLVD10N	890SD-232165B...	-
NK630E_R..	C3S063V2..	-	SLVD7N	890SD-231700B...	-
NK630E_K..	C3S100V2..	-	SLVD10N	890SD-232165B...	-
NK630E_G..	C3S150V2..	-	SLVD15N	890SD-232240C...	-
NK820E_L..	-	-	-	890SD-232240C...	-
NK840E_J..	-	-	-	890SD-232240C...	-
NK860E_F..	-	-	-	890SD-232300C...	-
NK860E_D..	-	-	-	-	-
400 VAC power supply - three-phased					
NK210E_T..	C3S015V4..	PSD1MW1300	-	890SD-531450B...	31V4-D0004-B...
NK310E_P..	C3S015V4..	PSD1MW1300	-	890SD-531450B...	31V4-D0004-B...
NK420E_V..	C3S015V4..	PSD1MW1300	-	890SD-531450B...	31V4-D0004-B...
NK420E_P..	C3S038V4..	PSD1MW1300	-	890SD-531450B...	31V4-D0004-B...
NK430E_V..	C3S015V4..	PSD1MW1300	-	890SD-531450B...	31V4-D0004-B...
NK430E_P..	C3S038V4..	PSD1MW1300	-	890SD-531450B...	31V4-D0004-B...
NK430E_L..	C3S038V4..	PSD1MW1300	-	890SD-532100B...	31V4-D0005-B...
NK620E_V..	C3S038V4..	PSD1MW1300	-	890SD-531450B...	31V4-D0004-B...
NK620E_R..	C3S075V4..	PSD1MW1400	-	890SD-532100B...	31V4-D0006-B...
NK620E_J..	C3S150V4..	PSD1MW1600	-	890SD-532160B...	31V4-D0006-B...
NK630E_V..	C3S038V4..	PSD1MW1300	-	890SD-531450B...	31V4-D0004-B...
NK630E_R..	C3S075V4..	PSD1MW1400	-	890SD-532100B...	31V4-D0006-B...
NK630E_N..	C3S150V4..	PSD1MW1600	-	890SD-532160B...	31V4-D0010-B...
NK820E_X..	C3S075V4..	PSD1MW1400	-	890SD-532100B...	31V4-D0006-B...
NK820E_R..	C3S150V4..	PSD1MW1600	-	890SD-532160B...	31V4-D0012-B...
NK840E_Q..	C3S150V4..	PSD1MW1600	-	890SD-532160B...	31V4-D0012-B...
NK840E_K..	C3S300V4..	PSD1MW1800	-	890SD-532240C...	31V4-E0023-B...
NK860E_J..	C3S300V4..	PSD1MW1800	-	890SD-532240C...	31V4-E0023-B...
400 VAC power supply - three-phased - water cooled					
NK310W_F..	C3S150V4..	PSD1MW1600	-	890SD-532160B...	31V4-E0016-B...
NK420W_D..	C3S300V4..	PSD1MW1800	-	890SD-532240C...	31V4-E0023-B...
NK430W_D..	C3S300V4..	PSD1MW1800	-	890SD-532240C...	31V4-F0032-B...
NK620W_C..	C3S300V4..	PSD1MW1800	-	890SD-53230SC...	31V4-G0045-B...
NK630W_D..	C3H050V4..	-	-	890SD-532590D...	31V4-G0060-B...
NK820W_G..	C3H050V4..	-	-	890SD-532590D...	31V4-G0060-B...
NK840W_D..	C3H090V4..	-	-	890SD-432730E...	31V4-H0105-B...
NK860W_D..	C3H090V4..	-	-	890SD-432730E...	31V4-G0073-B...

Dimensions

Motor	Dimensions [mm]		
	A	B	L
NK110	42	9	62
NK210	56	12	65



Motor	Dimensions [mm]		
	A	B	L
NK310	62	14	77
NK420	80	20	94
NK430			119
NK620	111	26	106
NK630			135
NK820	143	40	119
NK840			179
NK860			242
NK310W	82	14	85
NK420W	100	20	102
NK430W			127
NK620W	131	26	114
NK630W			143
NK820W	163	40	120
NK840W			180
NK860W			243



Option

Several types of sensor are available for use with servo motor kits depending upon the needs of the application, such as environment, resolution and accuracy: resolver, high resolution sensor, optical encoder...

Order Code

NK Series

	1	2	3	4	5	6	7
Order example	**NK110**	**E**	**A**	**K**	**R1**	**0**	**00**

1	**Motor type**	
	NK110 **NK210** **NK310** **...**	see table "Technical Data"

2	**Cooling**	
	E	Natural cooling
	W	Water cooling

3	**Feedback sensors/Motors**	
	A	2 pole resolver
	K	Without sensor (standard)
	P	Absolute single-turn encoder HIPERFACE DSL SIL2 - EKS36
	Q	Absolute multi-turn encoder HIPERFACE DSL SIL2 - EKM36
	R	Absolute single-turn HIPERFACE encoder 128 ppt SKS36
	S	Absolute multi-turn HIPERFACE encoder 128 ppt SKM36

4	**Motor type**	
	P **T** **J** **...**	see table "Technical Data"

5	**Fix code**	
	R1	

6	**Thermal protection + Brake/Motors**	
	0	Without (standard)
	1	PTC (NK3-8 only)
	2	Thermo switch (NK3-8 only)
	6	KTY (NK3-8 only)

7	**Mechanical characteristics/Motors**	
	00	Standard
	XX	Customization (on request)

Feedback Sensors

2 poles resolver - option A

- Accuracy: ±10' max
- Transformation ratio: 0.5 ±5 %
- Max. operating speed: 17 000 min^{-1}
- Working temperature range: -55...+155 °C
- Compatibility: NK1 to NK8

Single turn / Multiturn absolute encoder HIPERFACE SKS/SKM36 - option R/S

- Number of sine/cosine periods per revolution: 128
- Absolute position per revolution: 4096 (12 bits)
- Number of absolutely encodable revolutions: 4096 (SKM36)
- Max. operating speed SKS36: 12 000 min^{-1}
- Max. operating speed SKM36: 9000 min^{-1}
- Working temperature range: -20...+110 °C
- Compatibility: NK2 to NK8

Single turn / Multiturn absolute encoder HIPERFACE EKS/EKM36 - option P/Q

- Up to 20 bit resolution per revolution
- Number of absolutely encodable revolutions: 4096 (EKM)
- SIL2 certified
- Max. operating speed: 12 000 min^{-1} (EKS), 9000 min^{-1} (EKM)
- Working temperature range: -20...+115 °C
- Compatibility: NK1 to NK8

Frameless Servo Motor - K Series

Overview

Description

K Series frameless motor are the ideal solution for machine designs that require high performance at low voltages. Kit motors allow for direct integration without any mechanical transmission device, eliminating parts that add size and complexity. Use of Frameless Kit Motors results in a smaller, more reliable system.

Advantages

- Low voltage
- Compact size (length)
- Large hollow shaft
- Integrated Hall Effect sensor as an option
- Global cost reduction
- Increased reliability and reduced maintenance
- High dynamic performance and power density: increased productivity and reduced size when compared to induction motors
- Simple, light and compact machine design
- No coupling systems needed
- Greater stiffness and robustness of the system
- Low noise level
- Integration assistance available

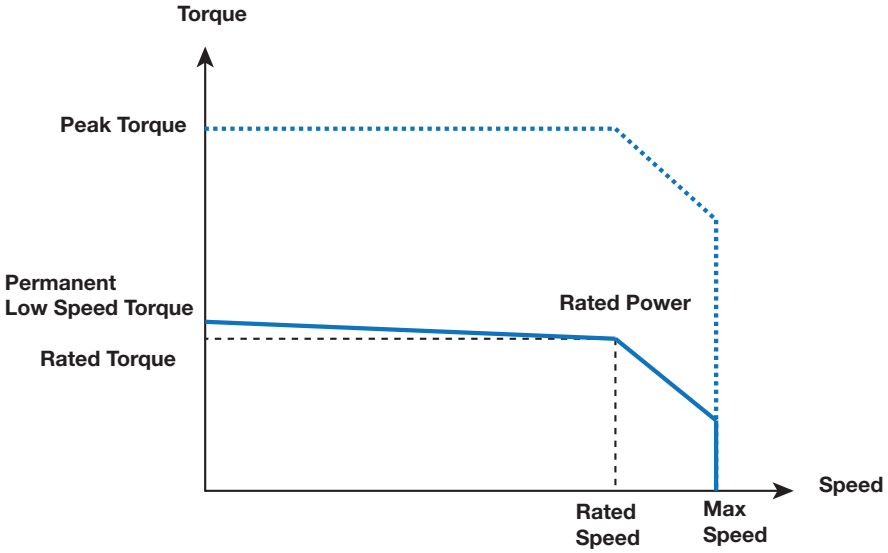
Technical Characteristics - Overview

Cooling	**Natural cooling**
Power	0.06...2 kW
Torque	0.07...23 Nm
Max Speed	10 000 min^{-1}
Number of poles	4 (K32) / 6 (K44) / 8 (K64) / 12 (K89) / 18 (K178)
Diameter	32 – 44 – 64 – 89 - 178 mm
Power supply	12 - 24 – 48 – 96 VDC 240VAC only for size K178

Application

- Medical
- Hand Tool
- Packaging Machinery
- Rotating Table
- Special Machines
- Pump
- Compressor

Technical Data



Motor	Rated Power Pn	Rated Torque Mn	Rated Speed Nn	Rated Current In	Low speed torque Mo	Low speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max	Frequency at max speed	Moment of Inertia J
	[kW]	[Nm]	[min^{-1}]	[Arms]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[Hz]	[kgmm^2]
24 VDC power supply											
K032050-7Y_	0.059	0.072	7795	3.1	0.074	3.2	0.26	11.2	10000	333	0.32
K032050-8Y_	0.042	0.074	5473	2.5	0.075	2.5	0,26	8.8	8155	272	0.32
K032050-EY_	0.020	0.074	2515	1.6	0.075	1.6	0,26	5.5	5126	171	0.32
K032100-7Y_	0.049	0.12	3744	2.7	0.13	2.7	0.44	9.6	5320	177	0.63
K032100-8Y_	0.034	0.13	2572	2.1	0.13	2.2	0.45	7.6	4111	137	0.63
K032100-EY_	0.014	0.13	1071	1.3	0.13	1.4	0.45	4.7	2584	86	0.63
K032200-7Y_	0.036	0.20	1704	2.2	0.21	2.2	0,72	7.8	2649	88	1.3
K032200-8Y_	0.024	0.21	1118	1.7	0.21	1.7	0.73	6.1	2047	68	1.3
K032200-EY_	0.008	0.21	365	1.1	0.21	1.1	0.73	3.9	1287	43	1.3
K044050-7Y_	0.073	0.19	3763	4.1	0.19	4,2	0.66	14.6	5361	268	1.4
K044050-8Y_	0.053	0.19	2723	3.3	0.19	3,3	0.66	11.6	4288	214	1.4
K044050-EY_	0.023	0.19	1173	2.1	0.19	2.1	0.66	7.3	2680	134	1.4
K044100-7Y_	0.061	0.33	1771	3.6	0.33	3.6	1.16	12.6	2657	133	2.9
K044100-8Y_	0.043	0.33	1250	2.8	0.33	2.9	1.15	10.1	2126	106	2.9
K044100-EY_	0.016	0.33	474	1.8	0.33	1.8	1.16	6.3	1329	66	2.9
K044200-7Y_	0.045	0.53	804	2.9	0.54	2.9	1.88	10.3	1334	67	5.8
K044200-8Y_	0.030	0.53	539	2.3	0.53	2.3	1.87	8.2	1068	53	5.8
K044200-EY_	0.008	0.54	145	1.5	0.54	1.5	1.88	5.1	667	33	5.8

Technical Data

Motor	Rated Power Pn	Rated Torque Mn	Rated Speed Nn	Rated Current In	Low speed torque Mo	Low speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max	Frequency at max speed	Moment of Inertia J
	[kW]	[Nm]	[min^{-1}]	[Arms]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[Hz]	[kgmm^2]
24 VDC power supply											
K064050-8Y_	0.058	0.53	1053	4.0	0.53	4.0	1.86	14.0	1830	122	9
K064050-9Y_	0.039	0.53	700	3.2	0.53	3.2	1.85	11.1	1464	98	9
K064050-EY_	0.022	0.53	396	2.5	0.53	2.5	1.87	8.8	1144	76	9
K064100-8Y_	0.047	0.93	484	3.5	0.94	3.5	3.29	12.3	915	61	18
K064100-9Y_	0.030	0.93	305	2.8	0.93	2.8	3.28	9.8	732	49	18
K064100-EY_	0.015	0.94	152	2.2	0.94	2.2	3.30	7.7	572	38	18
K064200-8Y_	0.033	1.56	204	2.9	1.57	2.9	5.50	10.3	457	30	36
K064200-9Y_	0.018	1.56	113	2.3	1.56	2.3	5.47	8.2	366	24	36
K064200-EY_	0.006	1.57	36	1.8	1.57	1.8	5.51	6.5	286	19	36
K089050-6Y_	0.117	1.33	839	7.5	1.34	7.6	4.72	26.6	1373	137	37
K089050-7Y_	0.082	1.32	597	6.0	1.33	6.1	4.66	21.3	1115	112	37
K089050-9Y_	0.030	1.31	216	3.8	1.32	3.9	4.62	13.5	714	71	37
K089100-6Y_	0.098	2.35	396	6.6	2.37	6.7	8.32	23.4	686	69	78
K089100-7Y_	0.066	2.33	272	5.3	2.34	5.4	8.22	18.8	558	56	78
K089100-9Y_	0.019	2.32	77	3.4	2.32	3.4	8.15	11.9	357	36	78
K089200-4Y_	0.153	3.9	379	8.8	3.9	8.9	13.7	31.3	558	56	150
K089200-7Y_	0.045	3.9	111	4.4	3.9	4.5	13.7	15.6	279	28	150
K089200-9Y_	0.004	3.9	11	2.8	3.9	2.8	13.6	9.9	178	18	150
K178050-6Y_	0.217	7.0	297	13.9	7.0	14.0	26.8	53.3	486	73	470
K178050-8Y_	0.100	7.0	137	8.8	7.0	8.8	26.7	33.6	307	46	470
K178050-EY_	0.024	7.0	33	5.6	7.0	5.6	26.6	21.2	194	29	470
K178100-8Y_	0.077	13.6	54	8.6	13.7	8.6	48.0	30.2	153	23	920
K178100-9Y_	0.035	13.7	24	6.8	13.7	6.8	48.0	23.9	121	18	920
K178200-8Y_	0.047	23.2	19	7.3	23.2	7.3	81.5	25.7	77	12	1800
K178200-9Y_	0.009	23.2	4	5.8	23.2	5.8	81.6	20.3	61	9	1800
240 VAC power supply											
K178050-6Y_	1.43	4.6	3000	9.1	7.0	14.0	26.8	53.3	3000	450	470
K178050-8Y_	1.43	4.6	3000	5.7	7.0	8.8	26.7	33.6	3000	450	470
K178050-EY_	1.39	5.4	2477	4.3	7.0	5.6	26.6	21.2	2818	423	470
K178100-8Y_	2.05	9.8	2006	6.1	13.7	8.6	48.0	30.2	2225	334	920
K178100-9Y_	1.82	11.3	1531	5.7	13.7	6.8	48.0	23.9	1761	264	920
K178100-EY_	1.51	12.1	1192	4.8	13.6	5.4	47.8	19.1	1409	211	920
K178200-8Y_	2.00	19.2	994	6.1	23.2	7.3	81.5	25.7	1112	167	1800
K178200-9Y_	1.66	20.6	768	5.1	23.2	5.8	81.6	20.3	881	132	1800
K178200-EY_	1.34	21.3	601	4.3	23.1	4.6	81.3	16.2	705	106	1800

Other power voltages are possible – see technical manual or consult us

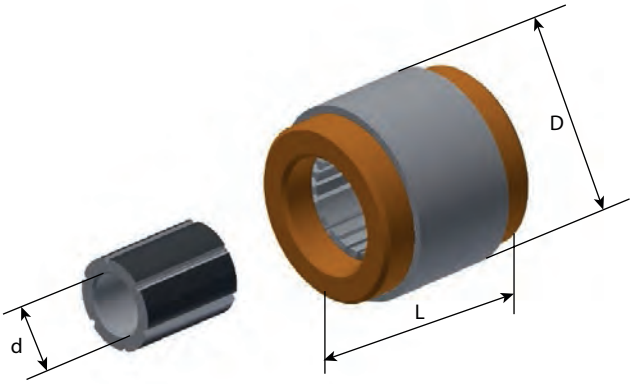
Associated Drives

Up to 80 VDC bus voltage			
Motor	VIX	Motor	VIX
	Low voltage servo drive		Low voltage servo drive
K032050-7Y_	VIX 500 IE	K064050-8Y_	VIX 500 IE
K032050-8Y_	VIX 500 IE	K064050-9Y_	VIX 500 IE
K032050-EY_	VIX 250 IE	K064050-EY_	VIX 500 IE
K032100-7Y_	VIX 500 IE	K064100-8Y_	VIX 500 IE
K032100-8Y_	VIX 250 IE	K064100-9Y_	VIX 500 IE
K032100-EY_	VIX 250 IE	K064100-EY_	VIX 250 IE
K032200-7Y_	VIX 250 IE	K064200-8Y_	VIX 500 IE
K032200-8Y_	VIX 250 IE	K064200-9Y_	VIX 250 IE
K032200-EY_	VIX 250 IE	K064200-EY_	VIX 250 IE
K044050-7Y_	VIX 500 IE	K089050-6Y_	-
K044050-8Y_	VIX 500 IE	K089050-7Y_	-
K044050-EY_	VIX 250 IE	K089050-9Y_	VIX 500 IE
K044100-7Y_	VIX 500 IE	K089100-6Y_	-
K044100-8Y_	VIX 500 IE	K089100-7Y_	-
K044100-EY_	VIX 250 IE	K089100-9Y_	VIX 500 IE
K044200-7Y_	VIX 500 IE	K089200-4Y_	-

230 VAC power supply - single or three-phased		
Motor	Compax3	AC890
K178050-6Y_	C3S150V2...	890SD-232240C...
K178050-8Y_	C3S100V2...	890SD-232165B...
K178050-EY_	C3S100V2...	890SD-232110B...
K178100-8Y_	C3S100V2...	890SD-232165B...
K178100-9Y_	C3S100V2...	890SD-232110B...
K178100-EY_	C3S063V2...	890SD-232110B...
K178200-8Y_	C3S100V2...	890SD-232110B...
K178200-9Y_	C3S063V2...	890SD-232110B...
K178200-EY_	C3S063V2...	890SD-232110B...

Dimensions

Motor	Dimensions [mm]		
	D	d	L
K032050	31.76	7.62	25.9
K032100			38.6
K032200			64.0
K044050	44.45	13.96	29.15
K044100			41.85
K044200			67.25
K064050	63.5	23.51	32.4
K064100			45.1
K064200			70.5
K089050	88.9	40.63	33.0
K089100			45.7
K089200			71.1
K178050	177.8	95.74	53.95
K178100			66.65
K178200			92.05



Order Code

K Series

	1	2	3	4	5	6		7
Order example	**K**	**32**	**50**	**E**	**Y**	**1**	**-**	**CE**

1	Motor Series	
	K	
2	**Motor Size**	
	32	see table "Technical Data"
	44	
	...	
3	**Motor Stack Length**	
	50	0.50 in
	100	1.00 in
	200	2.00 in

4	Winding	
	7	
	8	see table "Technical Data"
	...	
5	**Connection**	
	Y	Star connection
6	**Commutation - Hall effect sensor**	
	1	Without Hall effect sensor
	2	With Hall effect sensor
7	**Certification**	
	CE	CE Conformity

Frameless Spindle Servo Motor - SKW Series

Overview

Description

SKW motors are compact and highly dynamic permanent magnet synchronous servomotors for mono and multi spindle applications up to 21 kW. Delivered as separate components to be integrated into the mechanical structure of the machine, SKW motors offer constant torque capabilities over a wide speed range with very small dimensions.

Advantages

- Compactness (small external diameter)
- Large hollow shaft
- Increased internal diameter compared to other solutions: increased rigidity and greater capacity for bar stock handling in automatic lathes
- High resistance (Oil proof)
- Compatible with cost effective sensorless drives from Parker and third parties
- Accurate speed for the spindle
  - for the best surface finish
  - for a shorter cycle time
  - for a longer tool life time
- Cold permanent magnet technology: reduced heating in the bearings compared to induction motors, low dilatation effect
- Global cost reduction
- Increased reliability and reduced maintenance
- High dynamic performance and power density: increased productivity and reduced size when compared to induction motors
- Simple, light and compact machine design
- No coupling systems needed
- Greater stiffness and robustness of the system
- Low noise level
- Integration assistance available

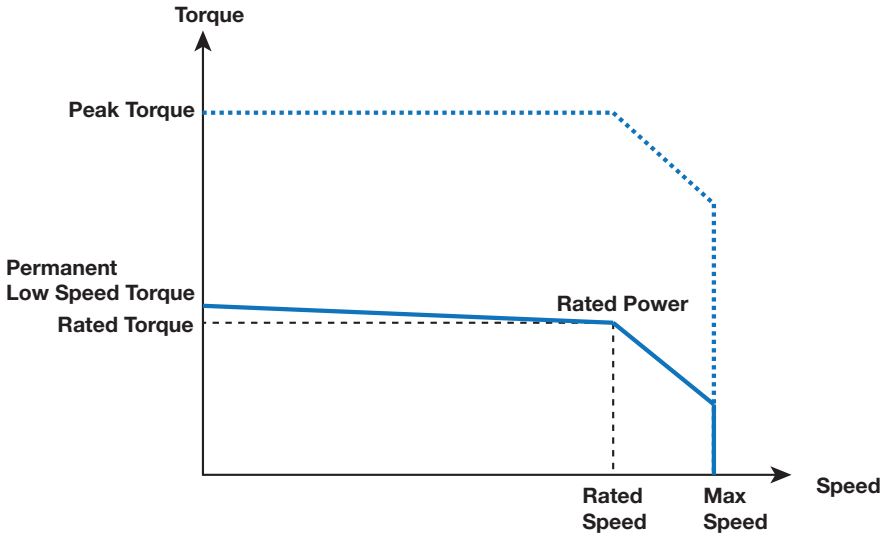
Technical Characteristics - Overview

Cooling	Water cooling
Power	0.2...7.5 kW
Torque	4...36 Nm
Speed	12 000 min^{-1}
Number of poles	10
Diameter	73 – 82 – 91 - 96 mm
Power supply	400 VAC

Applications

- Machine Tools (electro spindle)
- Multi Spindle Lathes

Technical Data



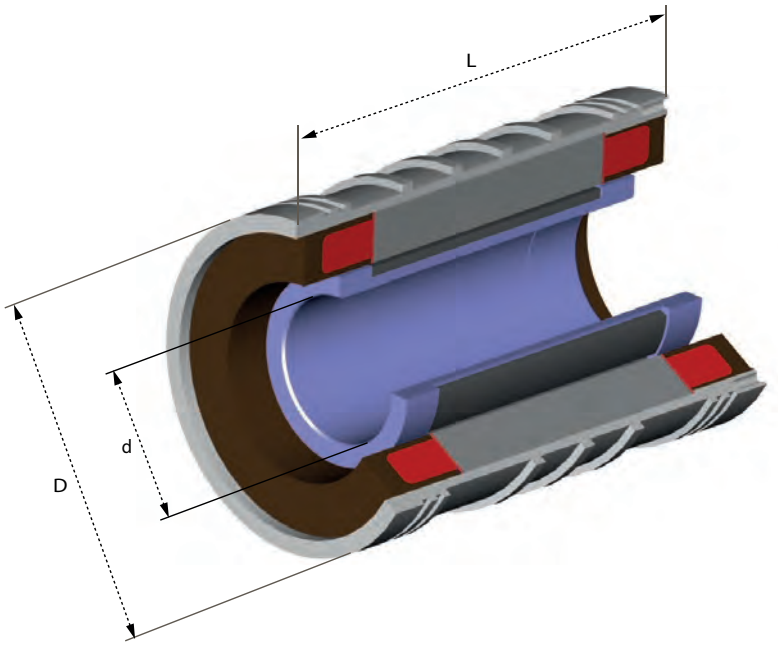
Motor	Rated Power Pn	Rated Torque Mn	Rated Speed Nn	Rated Current In	Low speed torque Mo	Low speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max	Frequency at max speed	Moment of Inertia J
	[kW]	(Nm)	[min^{-1}]	[Arms]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[Hz]	[kgmm^2]
400 VAC power supply - three-phased											
SKW073-050-LAM	3.1	4.0	7470	10.4	4.0	10.2	8.3	20.0	12000	1000	170
SKW073-100-LAM	6.3	8.8	6810	21.1	10.0	23.2	17.8	40.0	12000	1000	280
SKW073-150-LAM	9.7	13.5	6820	27.3	15.4	30.4	28.4	53.8	11000	917	390
SKW073-200-LAM	13.0	19.3	6450	40.9	21.8	45.2	37.8	75,.8	11000	917	500
SKW082-046-LAM	5.1	4.0	12000	10.2	4.4	10.7	8.6	20.0	12000	1000	370
SKW082-092-LAM	10.7	9.3	11000	21.6	10.1	22.8	23.0	48.6	11000	917	670
SKW082-138-LAM	15.3	14.6	10000	30.6	15.8	32.3	31.0	60.0	10000	833	970
SKW082-184-LAM	21.2	20.3	10000	44.7	22.2	47.7	44.2	90.0	10000	833	1300
SKW091-046-LAM	6.9	5.5	12000	14.3	6.5	16.3	10.7	28.2	12000	1000	370
SKW091-092-LAM	15.4	12.2	12000	29.4	15.1	35.4	23.0	55.6	12000	1000	670
SKW091-138-LAM	20.8	19.9	10000	40.1	23.8	47.1	36.1	73.3	10000	833	970
SKW091-184-LAM	28.0	26.8	10000	56.8	31.9	66.4	48.1	103.4	10000	833	1300
SKW096-046-LAM	3.6	6.9	5010	12.9	7.1	13.1	13.7	26.0	10000	833	1000
SKW096-092-LAM	7.8	16.3	4570	28.1	16.8	28.7	33.8	60.0	10000	833	1800
SKW096-138-LAM	11.7	26.4	4240	41.4	27.4	42.4	54.3	87.9	9000	750	2500
SKW096-184-LAM	16.2	36.0	4300	59.6	37.4	61.2	70.6	120.0	9000	750	3300

Associated Drives

Product Code	Drive Reference		
	AC30	AC890	Compax3
SKW073_050LAM	31V-4E0023-B... (16A@ , OL 180% /3s)	890SD-532240C (16A@8kHz, OL 200%/4s)	C3S150V4...
SKW073_100LAM	31V-4F0038-B... (32A@ , OL 180% / 3s)	890SD-532390D (26A@8kHz, OL 200%/4s)	C3S300V4...
SKW073_150LAM	31V-4G0060-B... (45A@ , OL 180% / 3s)	890SD-532450D (28A@8kHz, OL 200%/4s)	C3S300V4...
SKW073_200LAM	31V-4H0105-B... (87A@ , OL 180% / 3s)	890SD-532590D (50A@4kHz, OL 200%/4s)	C3H050V4...
SKW082_046LAM	31V-4E0023-B... (16A@ , OL 180% /3s)	890SD-532240C (16A@8kHz, OL 200%/4s)	C3S150V4...
SKW082_092LAM	31V-4F0038-B... (32A@ , OL 180% / 3s)	890SD-532390D (26A@8kHz, OL 200%/4s)	C3S300V4...
SKW082_138LAM	31V-4G0060-B... (45A@ , OL 180% / 3s)	890SD-532450D (38A@4kHz, OL 200%/4s)	C3S300V4...
SKW082_184LAM	31V-4H0105-B... (87A@ , OL 180% / 3s)	890SD-532590D (50A@4kHz, OL 200%/4s)	C3H050V4...
SKW091_046LAM	31V-4F0032-B... (23A@ , OL 180% / 3s)	890SD-532240C (16A@8kHz, OL 200%/4s)	C3S300V4...
SKW091_092LAM	31V-4G0073-B... (60A@ , OL 180% / 3s)	890SD-532450D (38A@4kHz, OL 200%/4s)	C3H050V4...
SKW091_138LAM	31V-4H0105-B... (87A@ , OL 180% / 3s)	890SD-532450D (38A@4kHz, OL 200%/4s)	C3H050V4...
SKW091_184LAM	31V-4H0145-B... (145A@ , OL 110% / 60s)	890SD-432730E (76A@4kHz, OL110%/60s)	C3H090V4...
SKW096_046LAM	31V-4F0032-B... (23A@ , OL 180% / 3s)	890SD-532240C (16A@8kHz, OL 200%/4s)	C3S150V4...
SKW096_092LAM	31V-4G0060-B... (45A@ , OL 180% / 3s)	890SD-532450D (28A@8kHz, OL 200%/4s)	C3S300V4...
SKW096_138LAM	31V-4G0073-B... (60A@ , OL 180% / 3s)	890SD-532590D (50A@4kHz, OL 200%/4s)	C3H050V4...
SKW096_184LAM	31V-4H0145-B... (145A@ , OL 110% / 60s)	890SD-432730E (76A@4kHz, OL110%/60s)	C3H090V4...

Dimensions

Product Code	Dimensions [mm]		
	Total length L	Hollow shaft diameter d	External diameter D
SKW073_050LAM	114	35	80
SKW073_100LAM	164	35	80
SKW073_150LAM	219	35	80
SKW073_200LAM	274	35	80
SKW082_046LAM	104	44	96
SKW082_092LAM	150	44	96
SKW082_138LAM	201	44	96
SKW082_184LAM	252	44	96
SKW091_046LAM	104	44	102
SKW091_092LAM	155	44	102
SKW091_138LAM	206	44	102
SKW091_184LAM	262	44	102
SKW096_046LAM	104	60	108
SKW096_092LAM	155	60	108
SKW096_138LAM	206	60	108
SKW096_184LAM	262	60	108



Order Code

SKW Series

	1	2	3	4	5	6	7	8	9
Order example	**SK**	**W**	**073**	**S**	**050**	**LAM**	**R**	**3**	**000**

1	**Product series**	
	SK	Frameless permanent magnet servomotors
2	**Cooling method**	
	W	Water cooling (standard)
3	**External diameter without water jacket**	
	073	73 mm
	082	82 mm
	091	91 mm
	096	96 mm
4	**Element**	
	-	Motor (stator + rator)
	S	Stator
	R	Rotor
5	**Active part length**	
	050 **...**	See table "Dimensions"
6	**Torque/Speed characteristics**	
	LAM **...**	See table "Technical Data" (other characteristics on request)
7	**Unused character**	
	R	
8	**Mechanical option**	
	2	Without water jacket, with hub (only on request)
	3	With water jacket, with hub (standard)
9	**Option**	
	000	Standard motor

Frameless High Speed Motor - HKW Series

Overview

Description

HKW motors are high performance permanent magnet synchronous servomotors for spindle applications up to 276 kW.
Delivered as separate components to be integrated into the mechanical structure of the machine, HKW motors benefit from the use of field weakening, in order to achieve both high torque at slow speed, and very high maximum speed at constant power.

Advantages

- High speed
- High power
- Large hollow shaft
- High resistance (oil proof on request)
- Compatible with Parker drives and third parties
- Accurate speed for the spindle
  - for the best surface finish
  - for a shorter cycle time
  - for a longer tool life time
- Cold permanent magnet technology: reduced heating in the bearings compared to induction motors, low dilatation effect
- Global cost reduction
- Increased reliability and reduced maintenance
- High dynamic performance and power density: increased productivity and reduced size when compared to induction motors
- Simple, light and compact machine design
- No coupling systems needed
- Greater stiffness and robustness of the system
- Low noise level
- Integration assistance available

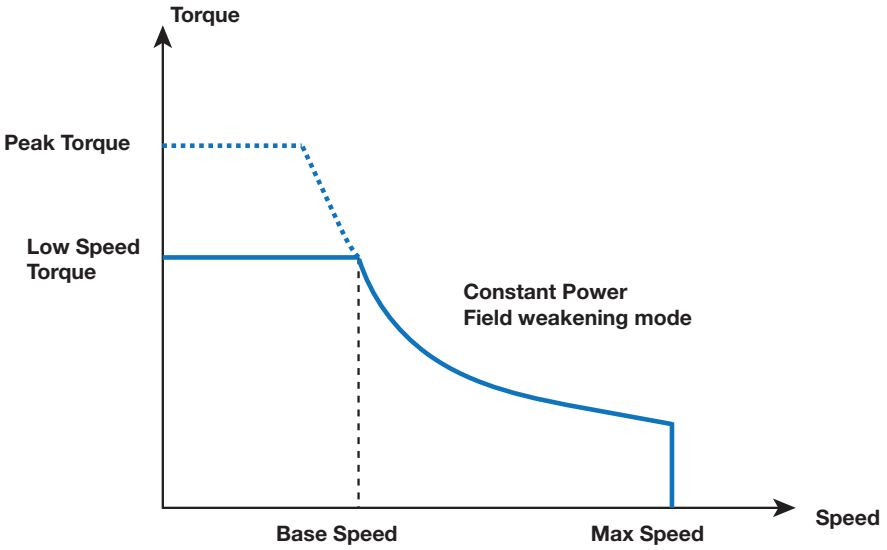
Applications

- Machines Tools
- Special Machines
- Textile Machines
- Centrifuges
- Compressors

Technical Characteristics - Overview

Cooling	Water cooling
Power	2.3...276 kW
Torque	4.5…1 250 Nm
Speed	50 000 min^{-1}
Number of poles	4 - HKW085 6 - HKW108 / HKW155 / HKW195 8 - HKW242 16 - HKW310
Diameter	85 – 108 – 155 – 195 – 242 - 310mm

Technical Data



Motor	S1 Power Ps1	Max. Speed Nmax	Frequency at max speed	Low speed torque Mo	Low speed Current Io	Peak Torque M peak	Peak Current I peak	Base Speed Nb	Moment of Inertia J
	[kW]	[min^{-1}]	[Hz]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[kgm^2]
400 VAC power supply - three-phased - Water cooled									
HKW085_066BAU	2.3	50000	1667	4.9	6.8	7.3	13.5	4480	0.00049
HKW085_066BAP	4.9	50000	1667	4.5	12.2	7.3	27	10400	0.00049
HKW085_066BAK	10.2	50000	1667	4.2	22.4	7.3	54	23200	0.00049
HKW085_099BAQ	4.7	50000	1667	7.4	12.6	11	25.1	6070	0.00068
HKW085_099BAL	10	50000	1667	7.3	24.7	11	50.2	13100	0.00068
HKW085_099BAI	15.6	50000	1667	6.8	35	11	78.1	21900	0.00068
HKW108_080CAN	4.9	30000	1500	10	9.6	15	14.5	4680	0.00082
HKW108_080CAI	10.4	30000	1500	10	19.2	15	28.9	9930	0.00082
HKW108_080CAF	16	30000	1500	10	28.9	15	43.4	15300	0.00082
HKW108_140CAI	10.2	30000	1500	20	21.9	30	33	4870	0.00143
HKW108_140CAF	15.6	30000	1500	20	32.9	30	49.6	7450	0.00143
HKW108_140CAD	25	30000	1500	20	49.4	30	74.3	11900	0.00143
HKW108_200CAJ	9	30000	1500	30	20.7	45	31.2	2870	0.00204
HKW108_200CAF	15.5	30000	1500	30	34.5	45	52	4940	0.00204
HKW108_200CAD	25	30000	1500	30	51.8	45	78	7960	0.00204
HKW155_080CRR	8.8	24000	1200	22	18.2	33	27.6	3820	0.0052
HKW155_080CRP	14	24000	1200	22	28.5	33	43.1	6080	0.0052
HKW155_080CAR	10.3	18000	900	28	19	42	29.4	3510	0.0052
HKW155_080CAP	16	18000	900	28	29.6	42	46	5500	0.0052
HKW155_120CAR	10	24000	1200	48	21.8	75	36.3	1990	0.0078
HKW155_120CAK	23	24000	1200	48	49.5	75	82.5	4600	0.0078
HKW155_120CAH	32	24000	1200	46	65.1	75	113	6640	0.0078
HKW155_120CAF	43	24000	1200	44	82.9	75	151	9330	0.0078
HKW155_160CAR	10	24000	1200	68	23.2	100	36.3	1410	0.0104
HKW155_160CAP	16	24000	1200	68	36.3	100	56.7	2250	0.0104
HKW155_160CAH	32	24000	1200	68	72.6	100	113	4500	0.0104
HKW155_160CAF	44	24000	1200	66	93.8	100	151	6370	0.0104
HKW155_160CAD	63	24000	1200	58	123	100	227	10300	0.0104
HKW195_120CAV	7.2	18000	900	80	19.4	120	35.1	860	0.016
HKW195_120CAP	16	20000	1000	80	42.1	120	76	1910	0.016
HKW195_120CAI	34	20000	1000	80	84.1	120	152	4050	0.016
HKW195_120CAF	52	20000	1000	75	117	120	228	6620	0.016
HKW195_120CAE	62	20000	1000	75	140	120	274	7900	0.016

Motor	S1 Power Ps1	Max. Speed Nmax	Frequency at max speed	Low speed torque Mo	Low speed Current Io	Peak Torque M peak	Peak Current I peak	Base Speed Nb	Moment of Inertia J
	[kW]	[min^{-1}]	[Hz]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[kgm^2]
400 VAC power supply - three-phased - Water cooled									
HKW195_180CAT	10	16000	800	120	26.1	180	47.2	795	0.024
HKW195_180CAP	16	20000	1000	120	42.1	180	76	1280	0.024
HKW195_180CAM	23	20000	1000	120	58.2	180	105	1830	0.024
HKW195_180CAJ	31	20000	1000	120	75.7	180	137	2470	0.024
HKW195_180CAF	52	20000	1000	120	126	180	228	4140	0.024
HKW195_180CAC	101	20000	1000	110	227	180	456	8770	0.024
HKW195_300CAM	23	20000	1000	200	58.2	300	105	1100	0.04
HKW195_300CAJ	30	20000	1000	200	75.7	300	137	1440	0.04
HKW195_300CAF	52	20000	1000	200	126	300	228	2490	0.04
HKW195_300CAE	63	20000	1000	200	151	300	274	3010	0.04
HKW195_300CAC	105	20000	1000	200	252	300	456	5010	0.04
HKW195_300CAX	175	20000	1000	200	454	300	821	8350	0.04
HKW195_300CBU	127	20000	1000	270	289	350	419	1500	0.04
HKW195_360CBU	135	20000	1000	340	308	420	419	3790	0.048
HKW195_420CBU	126	20000	1000	400	311	490	419	3000	0.056
HKW195_420CBX	230	18000	900	390	542	490	754	5630	0.056
HKW242_225DAN	15	11000	733	280	37.2	360	49,9	510	0.105
HKW242_225DAF	33	13000	867	280	74.4	360	99,7	1130	0.105
HKW242_225DAD	50	13000	867	280	112	360	150	1710	0.105
HKW242_225DAC	67	13000	867	275	146	360	199	2330	0.105
HKW242_225DAB	101	13000	867	260	206	360	299	3710	0.105
HKW242_375DAF	30	13000	867	480	76.8	600	99,7	600	0.175
HKW242_375DAD	49	13000	867	480	115	600	150	975	0.175
HKW242_375DAC	67	13000	867	480	154	600	199	1330	0.175
HKW242_375DAB	101	13000	867	480	230	600	299	2010	0.175
HKW242_375DAA	200	13000	867	460	439	600	598	4150	0.175
HKW242_375DBB	195	13000	867	620	465	800	653	3000	0.175
HKW242_375DBY	276	13000	867	585	578	800	870	4500	0.175
HKW242_375DBW	158	10000	667	630	316	800	435	2400	0.175
HKW310_200HAJ	37	8000	1067	600	87.1	900	141	590	0.23
HKW310_200HAH	46	8000	1067	580	105	900	177	760	0.23
HKW310_200HAE	77	8000	1067	575	166	900	282	1280	0.23
HKW310_200HAD	95	8000	1067	565	204	900	353	1610	0.23
HKW310_200HAC	115	8000	1067	550	265	900	471	2000	0.23
HKW310_300HAJ	35.4	8000	1067	940	91.2	1350	141	360	0.34
HKW310_300HAH	45	8000	1067	940	114	1350	177	460	0.34
HKW310_300HAE	76	8000	1067	930	180	1350	282	780	0.34
HKW310_300HAD	95	8000	1067	920	223	1350	353	990	0.34
HKW310_300HAC	120	8000	1067	900	290	1350	471	1270	0.34
HKW310_400HAJ	34	6000	800	1250	91	1800	141	260	0.45
HKW310_400HAH	44.5	8000	1067	1250	114	1800	177	340	0.45
HKW310_400HAF	62	8000	1067	1250	152	1800	235	475	0.45
HKW310_400HAE	75	8000	1067	1250	182	1800	282	575	0.45
HKW310_400HAD	94	8000	1067	1250	227	1800	353	720	0.45
HKW310_400HAC	120	8000	1067	1250	303	1800	471	910	0.45
HKW310_400HAY	230	8000	1067	1080	520	1800	942	2030	0.45
HKW310_500HBX	160	5000	667	1890	380	2700	569	810	0.56
HKW310_500HBB	200	6000	800	1880	472	2700	711	1030	0.56
HKW310_500HBY	270	7000	933	1840	616	2700	949	1400	0.56

Associated Drives

540 VDC voltage supply		
Motor	PARKER AC890SD	
	Drive	Speed limit(1) N_{max} [min^{-1}]
HKW085_066BAU	890SD-532160B0-B00-...	13800
HKW085_066BAP	890SD-232300C0-B00-...	27500
HKW085_066BAK	890SD-532450D0-B00-...	30000
HKW085_099BAQ	890SD-232300C0-B00-...	17000
HKW085_099BAL	890SD-532450D0-B00-...	30000
HKW085_099BAI	890SD-432730E0-0...	30000
HKW108_080CAN	890SD-232240C0-B00-...	9900
HKW108_080CAI	890SD-532390D0-B00-...	19800
HKW108_080CAF	890SD-532590D0-B00-...	20000
HKW108_140CAI	890SD-532390D0-B00-...	11300
HKW108_140CAF	890SD-532590D0-B00-...	17000
HKW108_140CAD	890SD-432870E0-0...	20000
HKW108_200CAJ	890SD-532390D0-B00-...	7100
HKW108_200CAF	890SD-532590D0-B00-...	11900
HKW108_200CAD	890SD-432870E0-0...	17800
HKW155_080CRR	890SD-232300C0-B00-...	8600
HKW155_080CRP	890SD-532450D0-B00-...	13500
HKW155_080CAR	890SD-532390D0-B00-...	7000
HKW155_080CAP	890SD-532450D0-B00-...	11000
HKW155_120CAR	890SD-532390D0-B00-...	4700
HKW155_120CAP	890SD-532450D0-B00-...	7300
HKW155_120CAK	890SD-432730E0-0...	10700
HKW155_120CAH	890SD-433105F...	14700
HKW155_120CAF	890SD-433156F...	19600
HKW155_160CAR	890SD-532390D0-B00-...	3500
HKW155_160CAP	890SD-532590D0-B00-...	5500
HKW155_160CAH	890SD-433105F...	11000
HKW155_160CAF	890SD-433156F...	14700
HKW155_160CAD	890SD-433316G...	20000
HKW195_120CAV	890SD-232300C0-B00-...	2400
HKW195_120CAP	890SD-432730E0-0...	5200
HKW195_120CAI	890SD-433156F...	10400
HKW195_120CAF	890SD-433316G...	15500
HKW195_120CAE	890SD-433361G...	18600
HKW195_180CAT	890SD-532450D0-B00-...	2100
HKW195_180CAP	890SD-432730E0-0...	3500
HKW195_180CAM	890SD-432870E0-0...	4800
HKW195_180CAJ	890SD-433156F...	6200
HKW195_180CAF	890SD-433316G...	10400
HKW195_180CAC	890SD-433520H...	20000
HKW195_300CAM	890SD-432870E0-0...	2900
HKW195_300CAJ	890SD-433156F...	3700
HKW195_300CAF	890SD-433316G...	6200
HKW195_300CAE	890SD-433361G...	7500
HKW195_300CAC	890SD-433520H...	12400
HKW195_300CAX	consult us	
HKW195_300CBU	890SD-433480H...	10300
HKW195_360CBU	890SD-433520H...	8600
HKW195_420CBU	890SD-433520H...	7400
HKW195_420CBX	consult us	

(1) Due to the back emf or the maximal drive frequency

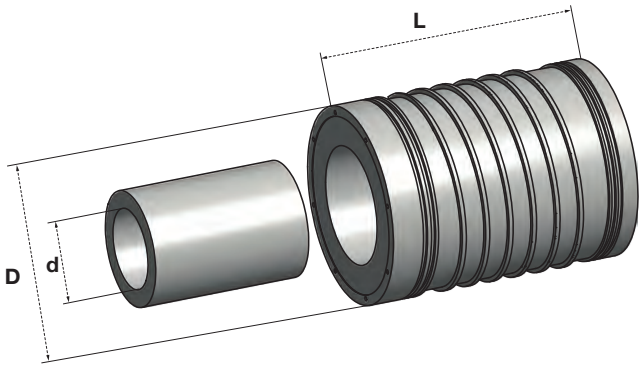
Associated Drives

540 VDC voltage supply		
Motor	PARKER AC890SD	
	Drive	Speed limit(1) N_{max} [min^{-1}]
HKW242_225DAN	890SD-532590D0-B00-...	1300
HKW242_225DAF	360 / 302	2600
HKW242_225DAD	360 / 302	3800
HKW242_225DAC	360 / 301	5100
HKW242_225DAB	890SD-433361G...	7600
HKW242_375DAF	890SD-433105F...	1500
HKW242_375DAD	480 / 401	2300
HKW242_375DAC	480 / 402	3100
HKW242_375DAB	890SD-433375H...	4600
HKW242_375DAA	consult us	
HKW242_375DBB	consult us	
HKW242_375DBY	consult us	
HKW242_375DBW	890SD-433520H...	4700
HKW310_200HAJ	890SD-433156F...	1400
HKW310_200HAH	890SD-433216G...	1800
HKW310_200HAE	890SD-433361G...	2900
HKW310_200HAD	890SD-433375H...	3600
HKW310_200HAC	890SD-433520H...	4800
HKW310_300HAJ	890SD-433156F...	1000
HKW310_300HAH	890SD-433216G...	1200
HKW310_300HAE	890SD-433361G...	1900
HKW310_300HAD	890SD-433375H...	2400
HKW310_300HAC	890SD-433520H...	3200
HKW310_400HAJ	890SD-433156F...	700
HKW310_400HAH	890SD-433216G...	900
HKW310_400HAF	890SD-433316G...	1200
HKW310_400HAE	890SD-433361G...	1400
HKW310_400HAD	890SD-433375H...	1800
HKW310_400HAC	890SD-433520H...	2400
HKW310_400HAY	consult us	
HKW310_500HBX	890SD-532730E0-0...	1900
HKW310_500HBB	consult us	
HKW310_500HBY	consult us	

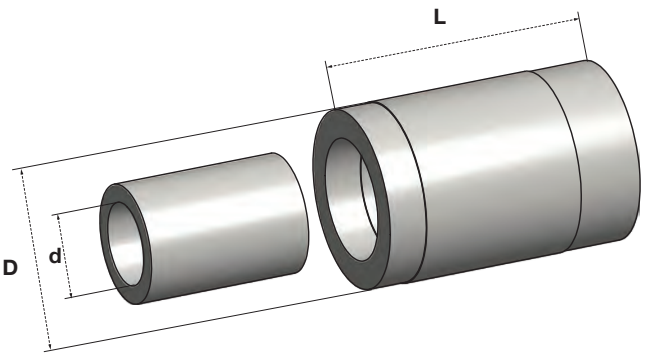
(1) Due to the back emf or the maximal drive frequency

Dimensions

Stator with cooling jacket



Stator without housing



Dimensions [mm]	Without housing			With cooling jacket		
Product	d	D	L	d	D	L
HKW085_066	32	85	134	32	100	136
HKW085_099			167			169
HKW108_080	47	108	148	47	130	150
HKW108_140			208			210
HKW108_200			268			270
HKW155_080	75	155.5	152	75	180	154
HKW155_120			192			194
HKW155_160			232			234
HKW155_160CAD			241			243
HKW195_120CAX	90	195	214	90	220	216
HKW195_120CAF			223			225
HKW195_120CAE			231			233
HKW195_180CAx			274			276
HKW195_180CAF			283			285
HKW195_180CAC			291			293
HKW195_300CAM/J			394			396
HKW195_300CAF			403			405
HKW195_300CAE/C			411			413
HKW195_300CAX			464			466
HKW195_300CBU			464			413
HKW195_360CBU			524			499
HKW195_420CBU			584			559
HKW195_420CBX			584			559

Dimensions [mm]	Without housing			With cooling jacket		
Product	d	D	L	d	D	L
HKW242_225DAN/F	130	242	313	130	270	315
HKW242_225DAD			322			324
HKW242_225DAC			330			332
HKW242_225DAB			333			335
HKW242_375DAF			463			465
HKW242_375DAD			472			474
HKW242_375DAC			480			482
HKW242_375DAB			477			479
HKW242_375DAA			513			515
HKW242_375DBB			513			515
HKW242_375DBY			513			515
HKW310_200HAJ	180	310	308	180	340	310
HKW310_200HAH			317			319
HKW310_200HAE			328			330
HKW310_200HAD			322			324
HKW310_200HAC			325			327
HKW310_300HAJ			408			410
HKW310_300HAH			417			419
HKW310_300HAE			428			430
HKW310_300HAD			422			424
HKW310_300HAC			425			427
HKW310_400HAJ			508			510
HKW310_400HAH			517			519
HKW310_400HAF			525			527
HKW310_400HAE			528			530
HKW310_400HAD			522			524
HKW310_400HAC			525			527
HKW310_400HAY			540			542
HKW310_500HBX			640			642
HKW310_500DBB			640			642
HKW310_500DBY			640			642

Order Code

HKW Series

	1	2	3	4	5	6	7	8	9
Order example	**HK**	**W**	**155**	**-**	**080**	**CAP**	**R**	**0**	**000**

1	**Motor type**	
	HK	Frameless permanent magnet servomotors

2	**Cooling**	
	W	Water cooling (standard)

3	**External diameter**	
	085	85 mm
	108	108 mm
	155	155 mm
	195	195 mm
	242	242 mm
	310	310 mm

4	**Element**	
	-	Motor (stator + rator)
	S	Stator
	R	Rotor

5	**Length L [mm]**	
	080 **140** **200** **...**	see table "Dimensions"

6	**Torque/Speed characteristics**	
	BAU **BAP** **BAK** **...**	see table "Technical data"

7	**Fix Code**	
	R	

8	**Mechanical options**	
	0	Without housing, without hub
	1	With housing, without hub
	2	Without housing, with hub
	3	With housing, with hub

9	**Interface**	
	000	Standard motor

Frameless Servo Motor - TK Series

Overview

Description

TK Series torque motors, delivered as separate rotor and stator to be integrated into the mechanical structure of the machine, lead to simplified designs, reduced costs, and increased accuracy.
TK series is distinguished from existing solutions by their exceptional robustness, making them particularly suited to harsh environments.
Benefiting from Parker's unprecedented know-how in the design and manufacture of torque motors, TK series can also be delivered as complete sub-assemblies including frame, cooling system, bearings, feedback sensor, etc.

Advantages

- Very high torque
- Very large hollow shaft
- Coating against corrosion (on request)
- High resistance (oil proof on request)
- Compatible with Parker drives and third parties
- Global cost reduction
- Increased reliability and reduced maintenance
- Simple, light and compact machine design
- No coupling systems needed
- Greater stiffness and robustness of the system
- Low noise level
- Integration assistance available

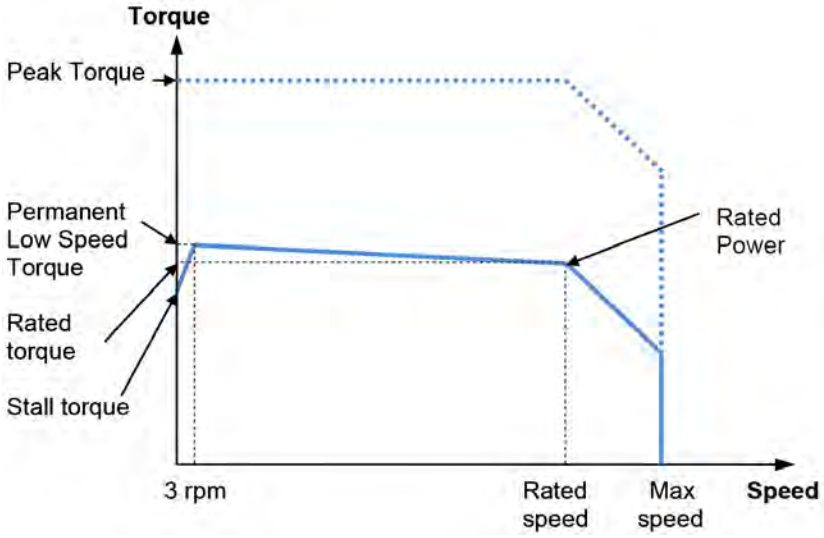
Applications

- Rotating Table
- Mixer for Pulp & Paper
- Material Forming
- Material Handling
- Machine Tools
- Winch and Marine

Technical Characteristics - Overview

Cooling	Natural cooling	Water cooling
Power	2.8...58 kW	7...207 kW
Torque	41...10 100 Nm	90...21 900 Nm
Speed	870 min^{-1}	2 500 min^{-1}
Number of poles	30 (TK_130) / 60 (TK_200) / 90 (TK_300) / 120 (TK_400)	
Diameter	230 – 385 – 565 - 795 mm	
Power supply	400 VAC	

Technical Data



Motor	Rated Power Pn	Rated Torque Mn	Rated Current In	Rated Speed Nn	Low speed torque Mo	Low speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max	Frequency at max speed	Moment of Inertia J
	[kW]	(Nm)	[Arms]	[min^{-1}]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[Hz]	[kgm^2]
400 VAC power supply - three-phased - Natural cooling											
TKA131HL	2.8	28	5.0	940	41	7.0	200	38.2	940	235	0.01
TKA132HL	4.5	70	8.3	610	85	9.8	415	54.2	610	153	0.02
TKA133HN	6.6	108	12.2	580	130	14.4	625	78.8	580	145	0.03
TKA134HN	7.4	154	13.8	460	175	15.4	850	85.9	460	115	0.04
TKA135HP	8.5	198	16	410	220	17.6	1060	97.0	410	103	0.05
TKA136HP	10.0	239	18.6	400	265	20.4	1280	113.0	400	100	0.06
TKA201HM	4.9	109	8.9	430	145	11.4	650	63.6	430	215	0.09
TKA202HS	8.0	246	14.5	310	300	17.3	1300	93.2	310	155	0.18
TKA203HR	9.8	398	18.1	235	455	20.3	1950	108.0	235	118	0.27
TKA204HV	10.5	558	20	180	610	21.6	2600	114.0	180	90	0.35
TKA205HU	12.5	705	23.5	170	770	25.5	3250	134.0	170	85	0.44
TKA206HS	16.6	832	31.7	190	925	34.7	3900	182.0	190	95	0.52
TKA208HS	17.0	1160	32.9	140	1240	34.9	5200	182.0	140	70	0.69
TKA301HJ	7.1	273	13	250	350	16.2	1200	57.6	250	188	0.6
TKA302HP	11.4	604	20.7	180	720	24.2	2400	83.6	180	135	1.2
TKA303HN	14.9	948	27.9	150	1100	31.8	3600	108.0	150	113	1.7
TKA304HN	20.8	1240	38.6	160	1470	45.0	4800	152.0	160	120	2.3
TKA305HN	24.1	1590	44.8	145	1850	51.4	6000	173.0	145	109	2.9
TKA306HM	26.6	1950	49.1	130	2220	55.0	7200	185.0	130	98	3.4
TKA308HL	28.5	2720	55.1	100	2970	59.5	9600	199.0	100	75	4.6
TKA30AHL	29.3	3490	56.4	80	3710	59.4	12000	199.0	80	60	5.7

Motor	Rated Power Pn	Rated Torque Mn	Rated Current In	Rated Speed Nn	Low speed torque Mo	Low speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max	Frequency at max speed	Moment of Inertia J
	[kW]	(Nm)	[Arms]	[min^{-1}]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[Hz]	[kgm^2]
400 VAC power supply - three-phased - Natural cooling											
TKA401HG	12.6	604	22.6	200	820	29.7	3300	145.0	200	200	1.9
TKA402HP	20.4	1260	37	155	1640	47.0	6600	229.0	155	155	3.5
TKA403HL	27.4	1940	48.7	135	2460	60.4	9900	295.0	135	135	5.2
TKA404HR	30.5	2770	55.9	105	3270	64.9	13200	317.0	105	105	6.8
TKA405HQ	33.7	3570	62.2	90	4070	70.0	16500	344.0	90	90	8.5
TKA406HP	36.6	4370	69	80	4880	76.3	19800	375.0	80	80	10.1
TKA408HN	46.0	5850	84.7	75	6490	93.0	26400	459.0	75	75	13.4
TKA40AHM	49.3	7470	91.5	63	8100	98.3	33000	486.0	63	63	16.7
TKA40CHK	58.1	9400	109	59	10100	116.0	39600	550.0	59	59	20
400 VAC power supply - three-phased - water cooled											
TKW131HL	6.9	88.3	15.1	750	90	15.2	200	38.2	1120	280	0.01
TKW131HC	17.9	68.2	35.1	2500	90	44.3	200	111.0	2800	700	0.01
TKW132HL	10.1	201	23	480	205	23.4	415	54.2	720	180	0.02
TKW132HF	22.2	189	47.5	1120	205	50.6	415	118.0	1680	420	0.02
TKW133HN	14.8	314	34.7	450	320	35.2	625	78.8	675	169	0.03
TKW133HH	30.7	299	66.7	980	320	70.4	625	158.0	1470	368	0.03
TKW133HD	45.3	278	93.8	1550	320	106	625	236.0	2320	580	0.03
TKW134HN	15.3	431	37.9	340	435	38	850	85.9	510	128	0.04
TKW134HJ	27.8	422	63.2	630	435	64.6	850	146.0	945	236	0.04
TKW134HF	46.4	402	101	1100	435	108	850	243.0	1650	413	0.04
TKW135HM	27.7	540	64.8	490	550	65.4	1060	146.0	735	184	0.05
TKW135HG	54.0	515	116	1000	550	123	1060	273.0	1500	375	0.05
TKW136HM	31.0	656	72.9	450	660	72.7	1280	163.0	675	169	0.06
TKW136HF	71.2	616	155	1100	660	164	1280	367.0	1650	413	0.06
TKW201HF	20.6	219	39.9	900	275	48.6	650	143.0	1000	500	0.09
TKW201HM	10.0	262	20.8	365	275	21.6	650	63.6	540	270	0.09
TKW202HF	45.0	480	87.7	895	610	108	1300	286.0	1040	520	0.18
TKW202HS	15.8	592	34.5	255	610	35.3	1300	93.2	380	190	0.18
TKW203HD	57.5	819	115	670	960	133	1950	334.0	940	470	0.27
TKW203HE	53.7	835	108	614	960	123	1950	308.0	905	453	0.27
TKW203HR	18.2	936	42.2	185	960	43.2	1950	108.0	275	138	0.27
TKW204HI	71.1	1140	145	595	1300	163	2600	401.0	890	445	0.35
TKW204HV	18.9	1280	46.1	140	1300	46.5	2600	114.0	170	85	0.35
TKW205HH	80.7	1480	167	520	1650	184	3250	445.0	780	390	0.44
TKW205HM	51.8	1570	113	316	1650	118	3250	286.0	470	235	0.44
TKW205HU	22.2	1630	54.6	130	1650	55.1	3250	134.0	195	98	0.44
TKW206HG	92.0	1810	192	485	2000	209	3900	501.0	725	363	0.52
TKW206HM	51.3	1920	116	255	2000	120	3900	286.0	380	190	0.52
TKW206HS	31.0	1960	75	150	2000	76.1	3900	182.0	225	113	0.52
TKW208HF	106.0	2500	226	405	2700	242	5200	572.0	605	303	0.69
TKW208HM	50.9	2630	119	185	2700	121	5200	286.0	275	138	0.69
TKW208HS	29.4	2670	76.6	105	2700	77.1	5200	182.0	135	68	0.69
TKW301HB	36.1	497	67.4	695	680	87.6	1200	162.0	695	521	0.6
TKW301HJ	14.7	651	30.2	215	680	31.1	1200	57.6	320	240	0.6

Motor	Rated Power Pn	Rated Torque Mn	Rated Current In	Rated Speed Nn	Low speed torque Mo	Low speed Current Io	Peak Torque M peak	Peak Current I peak	Max. Speed N max	Frequency at max speed	Moment of Inertia J
	[kW]	(Nm)	[Arms]	[min^{-1}]	[Nm]	[Arms]	[Nm]	[Arms]	[min^{-1}]	[Hz]	[kgm^2]
400 VAC power supply - three-phased - water cooled											
TKW302HE	64.0	1290	124	475	1520	143	2400	235.0	605	454	1.2
TKW302HJ	46.0	1390	91.6	315	1520	98.2	2400	162.0	470	353	1.2
TKW302HP	23.2	1480	49.7	150	1520	50.7	2400	83.5	220	165	1.2
TKW303HC	83.2	2120	166	375	2380	183	3600	288.0	550	413	1.7
TKW303HJ	47.8	2270	99.1	200	2380	103	3600	162.0	295	221	1.7
TKW303HN	30.5	2330	67.4	125	2380	68.4	3600	108.0	185	139	1.7
TKW304HG	96.4	2970	196	310	3250	211	4800	324.0	465	349	2.3
TKW304HM	51.1	3150	110	155	3250	112	4800	173.0	230	173	2.3
TKW304HN	44.8	3160	97.1	135	3250	99.1	4800	152.0	195	146	2.3
TKW305HG	99.2	3870	203	245	4100	213	6000	324.0	360	270	2.9
TKW305HN	50.6	4030	112	120	4100	113	6000	173.0	175	131	2.9
TKW305HO	42.4	4050	99.3	100	4100	100	6000	152.0	125	94	2.9
TKW306HF	113.0	4710	235	230	4950	245	7200	370.0	340	255	3.4
TKW306HM	53.9	4900	122	105	4950	122	7200	185.0	150	113	3.4
TKW306HO	41.3	4930	101	80	4950	101	7200	152.0	120	90	3.4
TKW308HC	141.0	6400	296	211	6740	309	9600	457.0	315	236	4.6
TKW308HL	55.7	6650	133	80	6740	135	9600	199.0	115	86	4.6
TKW308HO	39.3	6690	103	56	6740	103	9600	152.0	80	60	4.6
TKW30AHD	162.0	8110	340	190	8450	351	12000	518.0	280	210	5.7
TKW30AHL	52.0	8420	135	59	8450	135	12000	199.0	70	53	5.7
TKW30AHO	35.4	8450	104	40	8450	103	12000	152.0	60	45	5.7
TKW401HA	45.6	1150	87.2	380	1460	108	3300	295.0	415	415	1.9
TKW401HG	24.4	1370	50.5	169	1460	53	3300	145.0	255	255	1.9
TKW402HG	78.8	2840	158	265	3270	180	6600	434.0	375	375	3.5
TKW402HI	69.0	2930	141	225	3270	155	6600	375.0	335	335	3.5
TKW402HP	42.5	3110	90.9	130	3270	94.8	6600	229.0	195	195	3.5
TKW403HC	106.0	4590	215	220	5100	237	9900	550.0	325	325	5.2
TKW403HJ	66.3	4860	142	130	5100	148	9900	344.0	195	195	5.2
TKW403HL	56.7	4910	123	110	5100	127	9900	295.0	160	160	5.2
TKW404HI	124.0	6400	260	185	6900	278	13200	635.0	275	275	6.8
TKW404HQ	63.7	6760	148	90	6900	151	13200	344.0	135	135	6.8
TKW404HR	60.3	6780	137	84.9	6900	139	13200	317.0	125	125	6.8
TKW405HH	134.0	8270	292	155	8800	308	16500	688.0	200	200	8.5
TKW405HQ	65.1	8630	152	72	8800	154	16500	344.0	105	105	8.5
TKW406HG	148.0	10100	324	140	10600	338	19800	750.0	210	210	10.1
TKW406HP	71.4	10500	168	65	10600	169	19800	375.0	95	95	10.1
TKW406HQ	63.9	10500	154	58	10600	155	19800	344.0	70	70	10.1
TKW408HF	166.0	13800	365	115	14400	379	26400	825.0	170	170	13.4
TKW408HN	84.8	14200	208	57	14400	211	26400	459.0	85	85	13.4
TKW408HQ	59.9	14300	157	40.1	14400	158	26400	344.0	60	60	13.4
TKW40AHE	184.0	17500	413	100	18100	424	33000	917.0	145	145	16.7
TKW40AHM	88.3	17900	223	47	18100	225	33000	486.0	70	70	16.7
TKW40AHQ	54.9	18100	159	29	18100	159	33000	344.0	40	40	16.7
TKW40CHD	207.0	21200	469	93	21900	482	39600	1030.0	135	135	20
TKW40CHK	97.5	21700	255	43	21900	257	39600	550.0	60	60	20

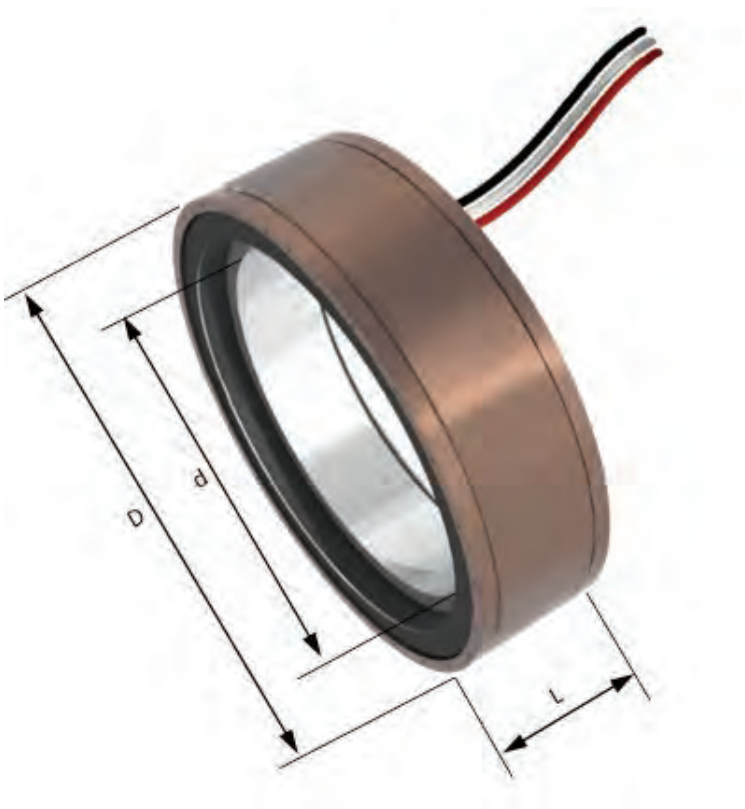
Associated Drives

Motor	AC890	Compax3
400 VAC power supply - three-phased - Natural cooling		
TKA131HL	AC890SD-531600B	C3S075V4
TKA132HL	AC890SD-532100B	C3S150V4
TKA133HN	AC890SD-532240C	C3S150V4
TKA134HN	AC890SD-532240C	C3S300V4
TKA135HP	AC890SD-532240C	C3S300V4
TKA136HP	AC890SD-532300C	C3S300V4
TKA201HM	AC890SD-532240C	C3S150V4
TKA202HS	AC890SD-532240C	C3S300V4
TKA203HR	AC890SD-532300C	C3S300V4
TKA204HV	AC890SD-532300C	C3S300V4
TKA205HU	AC890SD-532390D	C3S300V4
TKA206HS	AC890SD-532390D	C3H050V4
TKA208HS	AC890SD-532390D	C3H050V4
TKA301HJ	AC890SD-532240C	C3S300V4
TKA302HP	AC890SD-532300C	C3S300V4
TKA303HN	AC890SD-532390D	C3H050V4
TKA304HN	AC890SD-532590D	C3H050V4
TKA305HN	AC890SD-432730E	C3H090V4
TKA306HM	AC890SD-432730E	C3H090V4
TKA308HL	AC890SD-432730E	C3H090V4
TKA30AHL	AC890SD-432730E	C3H090V4
TKA401HG	AC890SD-532390D	C3S300V4
TKA402HP	AC890SD-532590D	C3H050V4
TKA403HL	AC890SD-432730E	C3H090V4
TKA404HR	AC890SD-432730E	C3H090V4
TKA405HQ	AC890SD-432730E	C3H090V4
TKA406HP	AC890SD-433105F	C3H090V4
TKA408HN	AC890SD-433145F	C3H125V4
TKA40AHM	AC890SD-433145F	C3H125V4
TKA40CHK	AC890SD-433156F	C3H125V4
400 VAC power supply - three-phased - Water cooled		
TKW131HL	AC890SD-532240C	C3S300V4
TKW131HC	AC890SD-532590D	C3H050V4
TKW132HL	AC890SD-532300C	C3S300V4
TKW132HF	AC890SD-532590D	C3H090V4
TKW133HN	AC890SD-532390D	C3H050V4
TKW133HH	AC890SD-432730E	C3H090V4
TKW133HD	AC890SD-433145F	C3H125V4
TKW134HN	AC890SD-532450D	C3H050V4
TKW134HJ	AC890SD-432730E	C3H090V4
TKW134HF	AC890SD-433145F	C3H125V4
TKW135HM	AC890SD-432730E	C3H090V4
TKW135HG	AC890SD-433156F	C3H125V4
TKW136HM	AC890SD-432730E	C3H090V4
TKW136HF	AC890SD-433216G	-
TKW201HF	AC890SD-532590D	C3H050V4
TKW201HM	AC890SD-532300C	C3S300V4
TKW202HF	AC890SD-433145F	C3H125V4
TKW202HS	AC890SD-532450D	C3H090V4
TKW203HD	AC890SD-433156F	C3H155V4
TKW203HE	AC890SD-433156F	C3H125V4
TKW203HR	AC890SD-532590D	C3H050V4
TKW204HI	AC890SD-433250G	-
TKW204HV	AC890SD-532590D	C3H050V4

Motor	AC890	Compax3
400 VAC power supply - three-phased - Water cooled		
TKW205HH	AC890SD-433316G	-
TKW205HM	AC890SD-433156F	C3H125V4
TKW205HU	AC890SD-432730E	C3H090V4
TKW206HG	AC890SD-433316G	-
TKW206HM	AC890SD-433156F	C3H125V4
TKW206HS	AC890SD-432870E	C3H090V4
TKW208HF	AC890SD-433361G	-
TKW208HM	AC890SD-433156F	C3H125V4
TKW208HS	AC890SD-432870E	C3H090V4
TKW301HB	AC890SD-433145F	C3H090V4
TKW301HJ	AC890SD-532390D	C3H050V4
TKW302HE	AC890SD-433216G	C3H155V4
TKW302HJ	AC890SD-433145F	C3H125V4
TKW302HP	AC890SD-432730E	C3H090V4
TKW303HC	AC890SD-433316G	-
TKW303HJ	AC890SD-433145F	C3H125V4
TKW303HN	AC890SD-432730E	C3H090V4
TKW304HG	AC890SD-433316G	-
TKW304HM	AC890SD-433156F	C3H125V4
TKW304HN	AC890SD-433145F	C3H125V4
TKW305HG	AC890SD-433316G	-
TKW305HN	AC890SD-433156F	C3H125V4
TKW305HO	AC890SD-433145F	C3H125V4
TKW306HF	AC890SD-433361G	-
TKW306HM	AC890SD-433156F	C3H125V4
TKW306HO	AC890SD-433145F	C3H125V4
TKW308HC	AC890SD-433480H	-
TKW308HL	AC890SD-433216G	C3H155V4
TKW308HO	AC890SD-433145F	C3H125V4
TKW30AHD	AC890SD-433520H	-
TKW30AHL	AC890SD-433216G	C3H155V4
TKW30AHO	AC890SD-433145F	C3H125V4
TKW401HA	AC890SD-433145F	C3H125V4
TKW401HG	AC890SD-432730E	C3H090V4
TKW402HG	AC890SD-433316G	-
TKW402HI	AC890SD-433250G	C3H155V4
TKW402HP	AC890SD-433145F	C3H125V4
TKW403HC	AC890SD-433361G	-
TKW403HJ	AC890SD-433216G	C3H155V4
TKW403HL	AC890SD-433156F	C3H155V4
TKW404HI	AC890SD-433420H	-
TKW404HQ	AC890SD-433250G	C3H155V4
TKW404HR	AC890SD-433216G	C3H155V4
TKW405HH	AC890SD-433480H	-
TKW405HQ	AC890SD-433250G	C3H155V4
TKW406HG	AC890SD-433520H	-
TKW406HP	AC890SD-433250G	-
TKW406HQ	AC890SD-433250G	C3H155V4
TKW408HF	AC890SD-433590J	-
TKW408HN	AC890SD-433316G	-
TKW408HQ	AC890SD-433250G	-
TKW40AHE	AC890SD/5/0685K	-
TKW40AHM	AC890SD-433361G	-
TKW40AHQ	AC890SD-433250G	-
TKW40CHD	AC890SD/5/0798K	-
TKW40CHK	AC890SD-433420H	-

Dimensions

Motor	Dimensions [mm]		
	d	D	L
TKA131HL	132	230	90
TKA132HL			140
TKA133HN			190
TKA134HN			240
TKA135HP			290
TKA136HP			340
TKA201HM	250	385	110
TKA202HS			160
TKA203HR			210
TKA204HV			260
TKA205HU			320
TKA206HS			370
TKA208HS			470
TKA301HJ	420	565	110
TKA302HP			160
TKA303HN			210
TKA304HN			255
TKA305HN			320
TKA306HM			370
TKA308HL			470
TKA30AHL			580
TKA401HG	620	795	110
TKA402HP			160
TKA403HL			215
TKA404HR			265
TKA405HQ			330
TKA406HP			385
TKA408HN			485
TKA40AHM			590
TKA40CHK			700



Motor	d	D	L
TKW131HL	132	230	90
TKW131HC			100
TKW132HL			140
TKW132HF			150
TKW133HN			190
TKW133HH			205
TKW133HD			225
TKW134HN			246
TKW134HJ			256
TKW134HF			276
TKW135HM			306
TKW135HG			326
TKW136HM			356
TKW136HF			376
TKW201HF	250	385	110
TKW201HM			110
TKW202HF			170
TKW202HS			160
TKW203HD			220
TKW203HE			220
TKW203HR			210
TKW204HI			270
TKW204HV			270
TKW205HH			340
TKW205HM			340
TKW205HU			340
TKW206HG			390
TKW206HM			390
TKW206HS			390
TKW208HF			480
TKW208HM			480
TKW208HS			480
TKW301HB	420	565	110
TKW301HJ			110
TKW302HE			170
TKW302HJ			160
TKW302HP			160
TKW303HC			220
TKW303HJ			210
TKW303HN			210
TKW304HG			275
TKW304HM			275
TKW304HN			275
TKW305HG			340
TKW305HN			340
TKW305HO			340
TKW306HF			395
TKW306HM			380
TKW306HO			380
TKW308HC			520
TKW308HL			485
TKW308HO			485
TKW30AHD			650
TKW30AHL			590
TKW30AHO			590

Motor	d	D	L
TKW401HA	620	795	130
TKW401HG			130
TKW402HG			180
TKW402HI			180
TKW402HP			180
TKW403HC			230
TKW403HJ			230
TKW403HL			230
TKW404HI			280
TKW404HQ			280
TKW404HR			280
TKW405HH			350
TKW405HQ			350
TKW406HG			400
TKW406HP			400
TKW406HQ			400
TKW408HF			500
TKW408HN			500
TKW408HQ			500
TKW40AHE			605
TKW40AHM			605
TKW40AHQ			605
TKW40CHD			710
TKW40CHK			710

Order Code

TK-Series

	1	2	3	4	5	6	7	8	9	10	11	12
Order example	**TK**	**W**	**20**	**4HG**	**Y**	**Z**	**B**	**2**	**R**	**9**	**0**	**00**

1	**Motor type**	
	TK	Frameless torque motors
2	**Cooling method**	
	W	Water cooling (standard)
	A	Natural convection (available with derating, consult us)
3	**Shaft heights**	
	13	130 mm
	20	200 mm
	30	315 mm
	40	400 mm
4	**Torque/Speed characteristics**	
	1HL **1HC** **2HL** **...**	see table TK-Series technical data
5	**Feedback sensor**	
	K	Without sensor
	B	Direct Endat encoder
6	**Transportation bridge**	
	B	Bridges on both sides
	C	Bridges on cables output side
	D	Bridges on cables output opposite side
	Z	Without bridges (standard)
7	**Cables output**	
	B	Output towards the rear
8	**Cable length**	
	2	2 m
9	**Fix code**	
	R	
10	**Connections**	
	1	Flying cables (3 phases + ground)
11	**Thermal protection**	
	0	1 PTC 140°C + 1 PTC 150°C + 1 KTY (+1 in reserve)
12	**Mechanical interface**	
	00	Standard motor

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Hydraulic systems & components
Thermal management
Wheels & brakes

Climate Control

Key Markets

Agriculture
Air conditioning
Construction Machinery
Food & beverage
Industrial machinery
Life sciences
Oil & gas
Precision cooling
Process
Refrigeration
Transportation

Key Products

Accumulators
Advanced actuators
CO_2 controls
Electronic controllers
Filter driers
Hand shut-off valves
Heat exchangers
Hose & fittings
Pressure regulating valves
Refrigerant distributors
Safety relief valves
Smart pumps
Solenoid valves
Thermostatic expansion valves

Electromechanical

Key Markets

Aerospace
Factory automation
Life science & medical
Machine tools
Packaging machinery
Paper machinery
Plastics machinery & converting
Primary metals
Semiconductor & electronics
Textile
Wire & cable

Key Products

AC/DC drives & systems
Electric actuators, gantry robots & slides
Electrohydrostatic actuation systems
Electromechanical actuation systems
Human machine interface
Linear motors
Stepper motors, servo motors, drives & controls
Structural extrusions

Filtration

Key Markets

Aerospace
Food & beverage
Industrial plant & equipment
Life sciences
Marine
Mobile equipment
Oil & gas
Power generation & renewable energy
Process
Transportation
Water Purification

Key Products

Analytical gas generators
Compressed air filters & dryers
Engine air, coolant, fuel & oil filtration systems
Fluid condition monitoring systems
Hydraulic & lubrication filters
Hydrogen, nitrogen & zero air generators
Instrumentation filters
Membrane & fiber filters
Microfiltration
Sterile air filtration
Water desalination & purification filters & systems

Fluid & Gas Handling

Key Markets

Aerial lift
Agriculture
Bulk chemical handling
Construction machinery
Food & beverage
Fuel & gas delivery
Industrial machinery
Life sciences
Marine
Mining
Mobile
Oil & gas
Renewable energy
Transportation

Key Products

Check valves
Connectors for low pressure fluid conveyance
Deep sea umbilicals
Diagnostic equipment
Hose couplings
Industrial hose
Mooring systems & power cables
PTFE hose & tubing
Quick couplings
Rubber & thermoplastic hose
Tube fittings & adapters
Tubing & plastic fittings

Hydraulics

Key Markets

Aerial lift
Agriculture
Alternative energy
Construction machinery
Forestry
Industrial machinery
Machine tools
Marine
Material handling
Mining
Oil & gas
Power generation
Refuse vehicles
Renewable energy
Truck hydraulics
Turf equipment

Key Products

Accumulators
Cartridge valves
Electrohydraulic actuators
Human machine interfaces
Hybrid drives
Hydraulic cylinders
Hydraulic motors & pumps
Hydraulic systems
Hydraulic valves & controls
Hydrostatic steering
Integrated hydraulic circuits
Power take-offs
Power units
Rotary actuators
Sensors

Pneumatics

Key Markets

Aerospace
Conveyor & material handling
Factory automation
Life science & medical
Machine tools
Packaging machinery
Transportation & automotive

Key Products

Air preparation
Brass fittings & valves
Manifolds
Pneumatic accessories
Pneumatic actuators & grippers
Pneumatic valves & controls
Quick disconnects
Rotary actuators
Rubber & thermoplastic hose & couplings
Structural extrusions
Thermoplastic tubing & fittings
Vacuum generators, cups & sensors

Process Control

Key Markets

Alternative fuels
Biopharmaceuticals
Chemical & refining
Food & beverage
Marine & shipbuilding
Medical & dental
Microelectronics
Nuclear Power
Offshore oil exploration
Oil & gas
Pharmaceuticals
Power generation
Pulp & paper
Steel
Water/wastewater

Key Products

Analytical Instruments
Analytical sample conditioning products & systems
Chemical injection fittings & valves
Fluoropolymer chemical delivery fittings, valves & pumps
High purity gas delivery fittings, valves, regulators & digital flow controllers
Industrial mass flow meters/ controllers
Permanent no-weld tube fittings
Precision industrial regulators & flow controllers
Process control double block & bleeds
Process control fittings, valves, regulators & manifold valves

Sealing & Shielding

Key Markets

Aerospace
Chemical processing
Consumer
Fluid power
General industrial
Information technology
Life sciences
Microelectronics
Military
Oil & gas
Power generation
Renewable energy
Telecommunications
Transportation

Key Products

Dynamic seals
Elastomeric o-rings
Electro-medical instrument design & assembly
EMI shielding
Extruded & precision-cut, fabricated elastomeric seals
High temperature metal seals
Homogeneous & inserted elastomeric shapes
Medical device fabrication & assembly
Metal & plastic retained composite seals
Shielded optical windows
Silicone tubing & extrusions
Thermal management
Vibration dampening

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