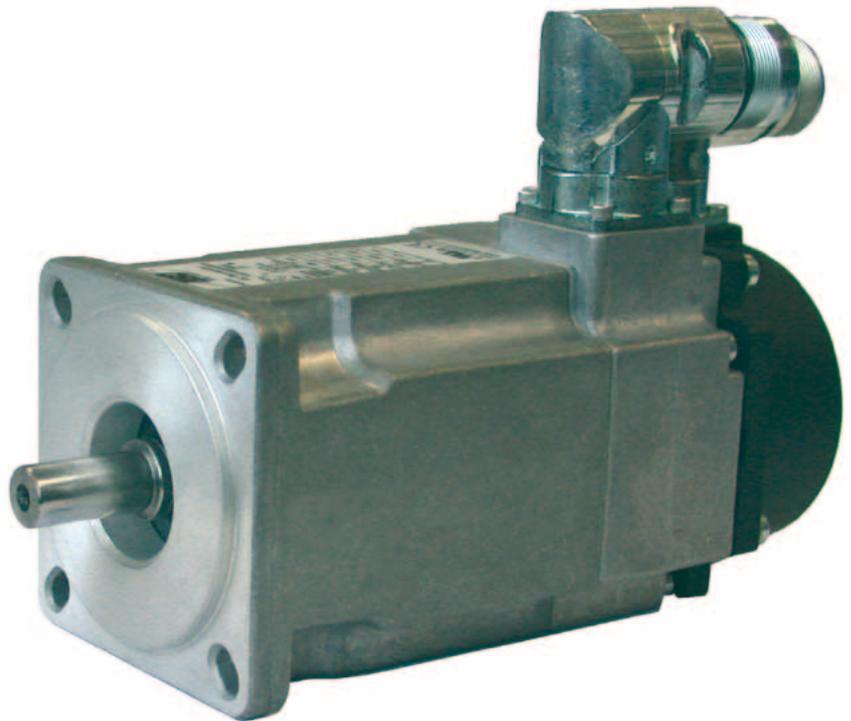




aerospace  
climate control  
**electromechanical**  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding



## NX Series

Low Cogging Servo Motor



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# Parker Hannifin

## The global leader in motion and control technologies

### A world class player on a local stage

#### Global Product Design

Parker Hannifin has more than 40 years experience in the design and manufacturing of drives, controls, motors and mechanical products. With dedicated global product development teams, Parker draws on industry-leading technological leadership and experience from engineering teams in Europe, North America and Asia.

#### Local Application Expertise

Parker has local engineering resources committed to adapting and applying our current products and technologies to best fit our customers' needs.

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Offenburg, Germany  
Filderstadt, Germany  
Milan, Italy

##### Asia

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Chennai, India

##### North America

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Irwin, Pennsylvania  
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Milan, Italy



Littlehampton, UK



- Electromechanical Manufacturing
- Parker Sales Offices
- Distributors



Dijon, France

# Low Cogging Servo Motor - NX Series

## Overview

### Description

NX Series brushless servomotors from Parker combine exceptional precision and motion quality, high dynamic performance and very compact dimensions. A large set of torque / speed characteristics, options and customization possibilities are available, making NX Series servomotors the ideal solution for most servosystems applications.

### Advantages

- High precision and motion quality
- High dynamic performance
- Compact robust
- Large set of options and customization possibilities
- CE and UL marking certification available

### Applications

- Life Science Diagnostic
- Tooling Machines
- Pulp & Paper
- Renewable Energy
- Aerospace
- Radiation Hardend
- Marine
- Continuous Process
- Mobile Hybrid Solutions

### Features

- **Mounting**
  - Flange with clearance holes
- **Shaft end**
  - Plain smooth shaft (standard)
  - Plain keyed shaft (option)
- **Cooling**
  - Natural ventilation
  - Forced ventilation (NX860V only)
- **Feedback sensors**
  - Resolver (standard)
  - Absolute EnDat, Hiperface, Encoder
  - Posivex (only with Digivex Motion)
- **Other options**
  - Brake
  - Thermal protection (PTC, Thermo Switch or KTY)



### Technical Characteristics - Overview

<b>Motor type</b>	Permanent magnet synchronous servomotors	
<b>Rotor design</b>	Rotor with concentrated-flux rare earth magnets	
<b>Number of poles</b>	10	
<b>Power range</b>	0.2...13.7 kW	
<b>Torque range</b>	0.45...64 Nm	
<b>Speed range</b>	0...7500 min <sup>-1</sup>	
<b>Protection level (IEC60034-5)</b>	<ul style="list-style-type: none"> <li>• IP64 (standard)</li> <li>• IP65 (option)</li> <li>• IP44 (ventilated version)</li> </ul>	
<b>Marking</b>	CE	UL
<b>Voltage supply</b>	230/400 VAC	230/480 VAC
<b>Temperature class (IEC60034-1)</b>	<ul style="list-style-type: none"> <li>• Class F</li> </ul>	<ul style="list-style-type: none"> <li>• Class A (NX1-2)</li> <li>• Class F (NX3-8)</li> </ul>
<b>Connections</b>	<ul style="list-style-type: none"> <li>• Connectors (standard)</li> <li>• Flying cables (option)</li> <li>• Terminal box (option)</li> </ul>	<ul style="list-style-type: none"> <li>• Connectors (NX1-8)</li> <li>• Terminal box (NX860V)</li> </ul>

## NX1-NX2 CE Motors

### Technical Data

Rated Speed $N_N$ [min <sup>-1</sup> ]	Stall Torque $M_0^*$ [Nm]	Rated Torque $M_N$ [Nm]	Peak Torque $N_{max}$ [Nm]	Stall Current $I_0^*$ [A <sub>RMS</sub> ]	Rated Current $I_N$ [A <sub>RMS</sub> ]	Peak Current $I_{max}$ [A <sub>RMS</sub> ]	Rated Power $P_N$ [kW]	Moment of Inertia $J$ [kgmm <sup>2</sup> ]	Product Code							
<b>230 VAC supply voltage - mono or three-phased</b>																
6000	0.45	0.33	1.72	0.99	0.78	3.96	0.21	13	NX110E	■	P	■	■	■	■	■
5000	0.45	0.37	2	1.01	0.84	5.08	0.19	21	NX205E	■	V	■	■	■	■	■
7500	0.45	0.29	2	1.4	0.95	7.01	0.23	21	NX205E	■	S	■	■	■	■	■
4000	1	0.80	3.4	1.34	1.11	5.35	0.34	28	NX210E	■	T	■	■	■	■	■
6000	1	0.61	3.4	1.99	1.32	7.96	0.38	38	NX210E	■	P	■	■	■	■	■
<b>400 VAC supply voltage - three-phase</b>																
8900	0.45	0.23	2	1.40	0.79	7.01	0.21	21	NX205E	■	S	■	■	■	■	■
6000	1	0.61	3.4	1.34	0.89	5.35	0.38	38	NX210E	■	T	■	■	■	■	■
7000	1	0.5	3.4	2.75	1.53	11	0.37	38	NX210E	■	G	■	■	■	■	■

\* Mounting on aluminium flange: 280 x 280 x 8 mm (NX1-2), Temperature <40 °C near motor's flange

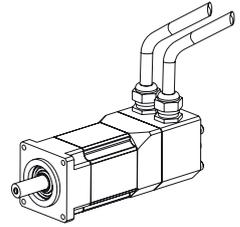
### Drive Associations

Motor	Rated Speed $N_N$ [min <sup>-1</sup> ]	Compax3		SLVD-N		638
		Drive reference	Max. Speed [min <sup>-1</sup> ]	Drive reference	Max. Speed [min <sup>-1</sup> ]	Drive reference
<b>230 VAC supply voltage - mono or three-phased</b>						
NX110E■P■■■■■	6000	C3S025V2...	6000	SLVD1N	5400	638A-01-3-F-0-STO...
NX205E■V■■■■■	5000	C3S025V2...	5000	SLVD1N	5000	638A-01-3-F-0-STO...
NX205E■S■■■■■	7500	C3S025V2...	7500	-	-	638A-02-3-F-0-STO...
NX210E■T■■■■■	4000	C3S025V2...	3420	SLVD2N	3420	638A-02-3-F-0-STO...
NX210E■P■■■■■	6000	C3S025V2...	5530	SLVD2N	5400	638A-02-3-F-0-STO...
<b>400 VAC supply voltage - three-phased</b>						
NX205E■S■■■■■	8900	C3S015V4...	8900	-	-	638B-03-6-F-0-STO...
NX210E■T■■■■■	6000	C3S015V4...	6000	-	-	638B-03-6-F-0-STO...
NX210E■G■■■■■	7000	C3S038V4...	7000	-	-	638B-05-6-F-0-STO...

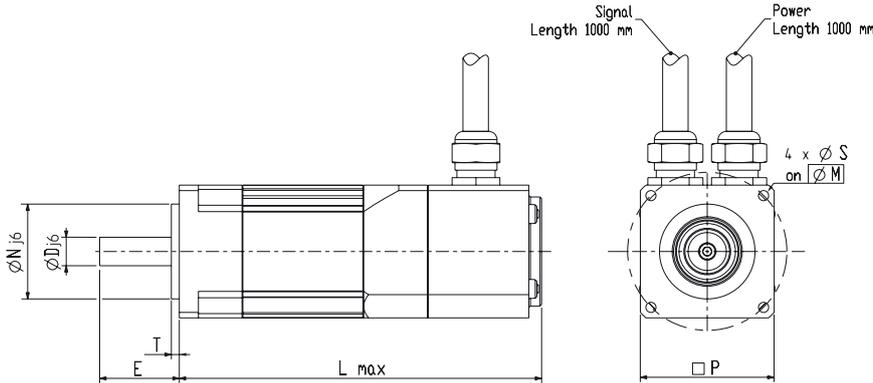
## Dimensions

### NX1 and NX2 - wires with shielded sleeve

Motor	N [mm]	M [mm]	D [mm]	E [mm]	T [mm]	P [mm]	S [mm]	Without brake		With brake		Fr* [daN]	Fa* [daN]
								Weight [kg]	L [mm]	Weight [kg]	L [mm]		
NX110	30	50	9	25	2.5	42.5	3.2	0.8	110	1	141	15	6.9
NX205	40	63	11	25	2.5	56.5	5.5	0.8	100	1.1	137	28	15.5
NX210	40	63	11	25	2.5	56.5	5.5	1.3	120	1.6	157	30	16.7

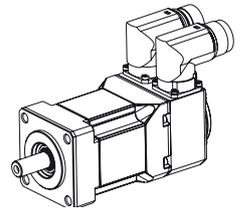


\* Fr and Fa not cumulative: At 1500 min<sup>-1</sup> for a bearing service life of 20000 hours

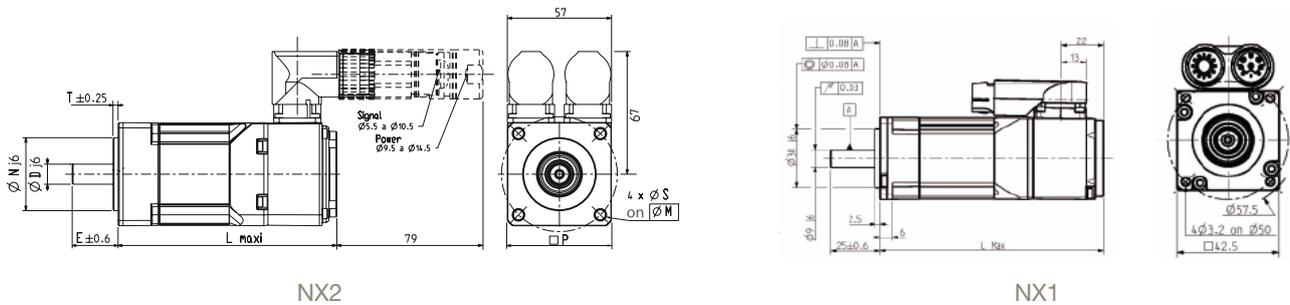


### NX 1 and NX2 - connector version

Motor	N [mm]	M [mm]	D [mm]	E [mm]	T [mm]	P [mm]	S [mm]	Without brake		With brake		Fr* [daN]	Fa* [daN]
								Weight [kg]	L [mm]	Weight [kg]	L [mm]		
NX110	30	50	9	25	2.5	42.5	3.2	0.8	110	1	141	15	6.9
NX205	40	63	11	25	2.5	56.5	5.5	0.8	100	1.1	137	28	15.5
NX210	40	63	11	25	2.5	56.5	5.5	1.3	120	1.6	157	30	16.7



\* Fr and Fa not cumulative: At 1500 min<sup>-1</sup> for a bearing service life of 20000 hours



NX2

NX1

## Order Code

### NX1, NX2, CE - Natural Cooling Version

	1	2	3	4	5	6	7	8
Order example	<b>NX110E</b>	<b>A</b>	<b>P</b>	<b>R</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>0</b>

<b>1 Motor type</b>	<b>NX110E</b>	see table NX1-NX2 CE Motors
	<b>NX205E</b>	"Technical data"
	<b>NX210E</b>	
<b>2 Feedback sensor</b>	<b>A</b>	2 pole resolver (standard)
	<b>K</b>	Without sensor
	<b>Q</b>	Absolute multi-turn HIPERFACE 16 ppr SEL37 (NX2 on request)
	<b>R</b>	Absolute single-turn HIPERFACE encoder 128 ppr SKS36 (on request)
	<b>S</b>	Absolute multi-turn HIPERFACE encoder 128 ppr SKM36 (on request)
	<b>V</b>	Absolute single-turn EnDat encoder ECN 1113 (on request)
	<b>W</b>	Absolute multi-turn EnDat encoder EQN 1125 (on request)
<b>3 Motor type</b>	<b>P</b>	see table NX1-NX2 CE Motors
	<b>V</b>	"Technical data"
	<b>S</b>	
	...	
<b>4 Painting</b>	<b>R</b>	Unpainted (standard)
	<b>B</b>	Black mat (on request)
<b>5 Connections/Ventilation</b>	<b>1</b>	Flying cables/No
	<b>4</b>	Wires with shielded sleeve/No
	<b>7</b>	Connectors (standard)/No
<b>6 Brake</b>	<b>0</b>	Without brake
	<b>3</b>	With brake
<b>7 Protection degree</b>	<b>0</b>	IP64 (standard)
	<b>1</b>	IP65
<b>8 Shaft end</b>	<b>0</b>	Smooth shaft (standard)
	<b>1</b>	Keyed shaft

## NX1-NX2 UL Motors

### Technical Data

Rated Speed $N_N$ [min <sup>-1</sup> ]	Stall Torque $M_0^*$ [Nm]	Rated Torque $M_N$ [Nm]	Peak Torque $M_{max}$ [Nm]	Stall Current $I_0^*$ [A <sub>RMS</sub> ]	Rated Current $I_N$ [A <sub>RMS</sub> ]	Peak Current $I_{max}$ [A <sub>RMS</sub> ]	Rated Power $P_N$ [kW]	Moment of Inertia $J$ [kgmm <sup>2</sup> ]	Product Code							
<b>230 VAC supply voltage - mono or three-phased</b>																
5000	0.31	0.09	1.72	0.97	0.34	1.72	0.05	130	NX110A	■	J	■	7	■	■	■
5000	0.40	0.21	2	0.91	0.52	5.5	0.11	210	NX205A	■	V	■	7	■	■	■
4000	0.70	0.41	3.4	1	0.61	5.58	0.17	380	NX210A	■	T	■	7	■	■	■
<b>480 VAC supply voltage - three-phased</b>																
6600	0.4	0.11	2	0.91	0.32	5.5	0.08	210	NX205A	■	V	■	7	■	■	■
6000	0.7	0.15	3.4	1	0.27	5.58	0.09	380	NX210A	■	T	■	7	■	■	■

\* Mounting on aluminium flange: 280 x 280 x 8 mm (NX1-2), Temperature <40 °C near motor's flange

### Drive Associations

Motor	Rated Speed $N_N$ [min <sup>-1</sup> ]	Compax3		SLVD-N		638
		Drive reference	Max. Speed [min <sup>-1</sup> ]	Drive reference	Max. Speed [min <sup>-1</sup> ]	Drive reference
<b>230 VAC supply voltage - mono or three-phased</b>						
NX110A■J■7■	5000	C3S025V2...	5000	SLVD1N	5000	638A-01-3-F-0-STO...
NX205A■V■7■	5000	C3S025V2...	5000	SLVD1N	5000	638A-01-3-F-0-STO...
NX210A■T■7■	4000	C3S025V2...	3420	SLVD1N	3420	638A-01-3-F-0-STO...
<b>480 VAC supply voltage - three-phased</b>						
NX205A■V■7■	6600	-	-	-	-	-
NX210A■T■7■	6000	-	-	-	-	-

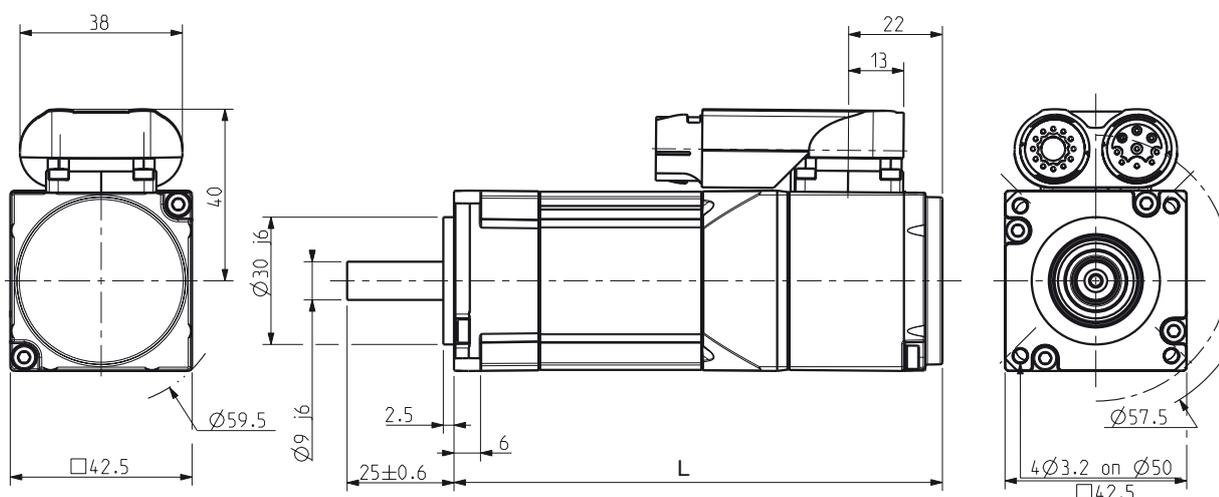
## Dimensions

NX1- NX2 - connector version													
Motor	N [mm]	M [mm]	D [mm]	E [mm]	T [mm]	P [mm]	S [mm]	Without brake		With brake		Fr* [daN]	Fa* [daN]
								Weight [kg]	L [mm]	Weight [kg]	L [mm]		
NX110	-	-	-	-	-	-	-	0.8	134	1	141	15	6.9
NX205	40	63	11	25	2.5	56.5	5.5	0.8	129	1.1	137	28	15.5
NX210	40	63	11	25	2.5	56.5	5.5	1.3	149	1.6	157	30	16.7

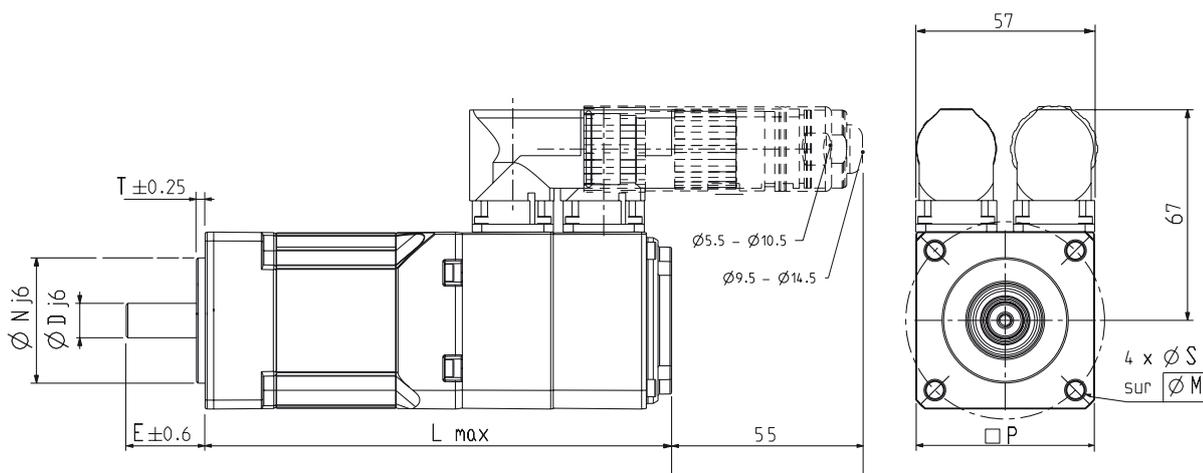


\* Fr and Fa not cumulative: At 1500 min<sup>-1</sup> for a bearing service life of 20 000 hours

### NX1 - connector version



### NX2 - connector version



## Order Code

### NX1, NX2, UL - Natural Cooling Version

	1	2	3	4	5	6	7	8
Order example	<b>NX110A</b>	<b>A</b>	<b>J</b>	<b>R</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>1 Motor type</b>	<b>NX110A</b>	see table NX1-NX2 UL Motors
	<b>NX205A</b>	"Technical data"
	<b>NX210A</b>	
<b>2 Feedback sensor</b>	<b>A</b>	2 pole resolver (standard)
	<b>K</b>	Without sensor
	<b>Q</b>	Absolute multi-turn HIPERFACE 16ppr SEL37 (NX2 on request)
	<b>R</b>	Absolute single-turn HIPERFACE encoder 128 ppt SKS36 (NX2 only)
	<b>S</b>	Absolute multi-turn HIPERFACE encoder 128 ppt SKM36 (NX2 only)
	<b>V</b>	Absolute single-turn EnDat encoder ECN 1113 (NX2 only)
	<b>W</b>	Absolute multi-turn EnDat encoder EQN 1125 (NX2 only)
<b>3 Motor type</b>	<b>J</b>	see table NX1-NX2 UL Motors
	<b>V</b>	"Technical data"
	<b>T</b>	
<b>4 Painting</b>	<b>R</b>	Unpainted (standard)
	<b>B</b>	Black mat (on request)
<b>5 Connector</b>	<b>7</b>	Standard
<b>6 Brake</b>	<b>0</b>	Without brake
	<b>3</b>	With brake
<b>7 Protection degree</b>	<b>0</b>	IP64 (standard)
	<b>1</b>	IP65
<b>8 Shaft end</b>	<b>0</b>	Smooth shaft (standard)
	<b>1</b>	Keyed shaft

# NX3-NX8 CE and UL Motors

## Technical Data

Rated Speed $N_N$ [min <sup>-1</sup> ]	Stall Torque $M_0^*$ [Nm]	Rated Torque $M_N$ [Nm]	Peak Torque $M_{max}$ [Nm]	Stall Current $I_0^*$ [A <sub>RMS</sub> ]	Rated Current $I_N$ [A <sub>RMS</sub> ]	Peak Current $I_{max}$ [A <sub>RMS</sub> ]	Rated Power $P_N$ [kW]	Moment of Inertia $J$ [kgmm <sup>2</sup> ]	Product Code								
<b>230 VAC supply voltage - mono or three-phased</b>																	
2300	2	1.8	6.6	1.39	1.27	5.56	0.43	79	NX310E	■	P	■	■	■	■	■	■
4000	2	1.65	6.6	2.43	2.06	9.71	0.69	79	NX310E	■	K	■	■	■	■	■	■
6600	2	1.4	6.6	3.85	2.85	15.4	0.97	79	NX310E	■	X	■	■	■	■	■	■
2300	4	3.53	13.4	2.71	2.41	10.9	0.85	290	NX420E	■	P	■	■	■	■	■	■
4000	4	3.14	13.4	4.69	3.74	18.8	1.32	290	NX420E	■	J	■	■	■	■	■	■
550	5.5	5.45	18.8	1.41	1.4	5.64	0.31	426	NX430E	■	V	■	■	■	■	■	■
3200	5.5	4.68	18.8	5.24	4.53	21	1.57	426	NX430E	■	J	■	■	■	■	■	■
3400	5.5	4.59	18.8	5.64	4.78	22.5	1.64	426	NX430E	■	H	■	■	■	■	■	■
4000	5.5	4.29	18.8	6.64	5.28	26.5	1.80	426	NX430E	■	F	■	■	■	■	■	■
2200	8	7.42	26.7	5.31	4.99	21.2	1.71	980	NX620E	■	R	■	■	■	■	■	■
4000	8	6.08	26.7	9.89	7.82	39.5	2.55	980	NX620E	■	J	■	■	■	■	■	■
1450	12	10.73	40	5.25	4.75	21	1.63	1470	NX630E	■	R	■	■	■	■	■	■
2800	12	9.21	40	9.86	7.8	39.4	2.70	1470	NX630E	■	K	■	■	■	■	■	■
4000	12	7.6	40	13.9	9.31	55.6	3.18	1470	NX630E	■	G	■	■	■	■	■	■
1000	16	15.38	50	5.16	4.99	20.3	1.61	3200	NX820E	■	X	■	■	■	■	■	■
2200	16	14.48	50	11	10.04	43.2	3.34	3200	NX820E	■	R	■	■	■	■	■	■
3600	16	13.24	50	17.5	14.82	69.1	4.99	3200	NX820E	■	L	■	■	■	■	■	■
1200	258	25.54	92	10.1	9.27	39.9	3.21	6200	NX840E	■	Q	■	■	■	■	■	■
1700	20.5	20.5	92	11.1	11.24	59.8	3.65	6200	NX840E	■	L	■	■	■	■	■	■
2200	28	22.88	92	18.9	15.7	74.8	5.27	6200	NX840E	■	J	■	■	■	■	■	■
2600	41	27.47	137	33	22.72	132	7.48	9200	NX860E	■	D	■	■	■	■	■	■
<b>400 VAC supply voltage - three-phase</b>																	
4000	2	1.65	6.6	1.39	1.18	5.56	0.69	79	NX310E	■	P	■	■	■	■	■	■
9800	2	0.71	6.6	3.38	1.42	13.5	0.72	79	NX310E	■	I	■	■	■	■	■	■
2000	4	3.60	13.4	1.36	1.23	5.47	0.75	290	NX420E	■	V	■	■	■	■	■	■
4000	4	3.14	13.4	2.71	2.16	10.9	1.32	290	NX420E	■	P	■	■	■	■	■	■
7500	4	1.90	13.4	5.43	2.16	10.9	1.49	290	NX420E	■	X	■	■	■	■	■	■
1000	5.5	5.38	18.8	1.41	1.38	5.64	0.56	426	NX430E	■	V	■	■	■	■	■	■
3000	5.5	4.77	18.8	2.82	2.48	11.3	1.50	426	NX430E	■	P	■	■	■	■	■	■
4000	5.5	4.29	18.8	3.78	3.01	15.1	1.80	426	NX430E	■	L	■	■	■	■	■	■
6000	5.5	2.98	18.8	6.64	3.76	26.5	1.87	426	NX430E	■	F	■	■	■	■	■	■
2000	8	7.52	26.7	2.83	2.69	11.3	1.58	980	NX620E	■	V	■	■	■	■	■	■
3900	8	6.17	26.7	5.31	4.25	21.2	2.52	980	NX620E	■	R	■	■	■	■	■	■
5700	8	4.10	26.7	9.89	5.56	39.5	1.93	980	NX620E	■	J	■	■	■	■	■	■
6000	8	3.68	26.7	12.1	6.19	48.3	2.31	980	NX620E	■	D	■	■	■	■	■	■
1350	12	10.83	40	2.62	2.4	10.5	1.53	1470	NX630E	■	V	■	■	■	■	■	■
2700	12	9.34	40	5.25	4.2	21	2.64	1470	NX630E	■	R	■	■	■	■	■	■
4000	12	7.60	40	7.92	5.3	31.6	3.18	1470	NX630E	■	N	■	■	■	■	■	■
5000	12	6.07	40	13.9	7.64	55.6	3.18	1470	NX630E	■	G	■	■	■	■	■	■
1900	16	14.72	50	5.16	4.79	20.3	2.93	3200	NX820E	■	X	■	■	■	■	■	■
3900	160	12.94	50	11	9.07	43.2	5.28	3200	NX820E	■	R	■	■	■	■	■	■
2100	28	23.17	92	10.1	8.47	39.9	5.10	6200	NX840E	■	Q	■	■	■	■	■	■
3100	20.5	20.50	92	11.1	11.09	59.8	6.49	6200	NX840E	■	L	■	■	■	■	■	■
3500	28	18.56	92	16.8	11.51	66.5	6.80	6200	NX840E	■	K	■	■	■	■	■	■
4500	28	14.00	65	21.7	-	-	6.60	6200	NX840E	■	H	■	■	■	■	■	■
1700	41	34.10	137	14.8	12.44	59.2	6.07	9200	NX860E	■	L	■	■	■	■	■	■
2600	41	27.47	137	18.5	12.78	74	7.48	9200	NX860E	■	J	■	■	■	■	■	■
3200	41	21.89	137	27	14.88	108	7.34	9200	NX860E	■	F	■	■	■	■	■	■

\* Mounting on aluminium flange: 400 x 400 x 12 mm (NX3-8) Temperature <40 °C near motor's flange

Rated Speed $N_N$ [min <sup>-1</sup> ]	Stall Torque $M_{I_0^*}$ [Nm]	Rated Torque $M_N$ [Nm]	Peak Torque $M_{I_{max}}$ [Nm]	Stall Current $I_{I_0^*}$ [A <sub>RMS</sub> ]	Rated Current $I_N$ [A <sub>RMS</sub> ]	Peak Current $I_{I_{max}}$ [A <sub>RMS</sub> ]	Rated Power $P_N$ [kW]	Moment of Inertia $J$ [kgmm <sup>2</sup> ]	Product Code							
<b>480 VAC supply voltage - three-phase</b>																
4800	2.00	1.57	6.6	1.39	1.13	5.56	0.79	79	NX310E	■	P	■	■	■	■	■
2300	4.00	3.53	13.4	1.36	1.21	5.47	0.85	290	NX420E	■	V	■	■	■	■	■
4700	4.00	2.96	13.4	2.71	2.05	10.9	1.46	290	NX420E	■	P	■	■	■	■	■
1200	5.50	5.34	18.8	1.41	1.37	5.64	0.67	426	NX430E	■	V	■	■	■	■	■
3500	5.50	4.55	18.8	2.82	2.37	11.3	1.67	426	NX430E	■	P	■	■	■	■	■
4600	5.50	3.95	18.8	3.78	2.78	15.1	1.90	426	NX430E	■	L	■	■	■	■	■
2300	8.00	7.36	26.7	2.83	2.64	11.3	1.77	980	NX620E	■	V	■	■	■	■	■
4500	8.00	5.57	26.7	5.31	3.89	21.2	2.62	980	NX620E	■	R	■	■	■	■	■
5700	8.00	4.10	26.7	9.89	5.56	39.5	2.45	980	NX620E	■	J	■	■	■	■	■
1500	12.00	10.68	40	2.62	2.37	10.5	1.68	1470	NX630E	■	V	■	■	■	■	■
3100	12.00	8.84	40	5.25	4	21	2.87	1470	NX630E	■	R	■	■	■	■	■
4600	12.00	6.70	40	7.92	4.74	31.6	3.23	1470	NX630E	■	N	■	■	■	■	■
2100	16.00	14.56	50	5.16	4.75	20.3	3.20	3200	NX820E	■	X	■	■	■	■	■
4600	16.00	12.22	50	11	8.62	43.2	5.89	3200	NX820E	■	R	■	■	■	■	■
2400	28.00	22.27	92	10.1	8.17	39.9	5.60	6200	NX840E	■	Q	■	■	■	■	■
4000	28.00	16.65	92	16.8	10.43	66.5	6.97	6200	NX840E	■	K	■	■	■	■	■
3000	41.00	23.85	137	18.5	11.22	74	7.49	9200	NX860E	■	J	■	■	■	■	■

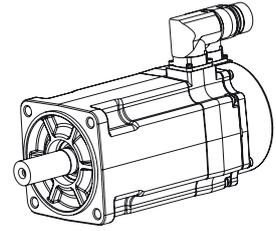
\* Mounting on aluminium flange: 400 x 400 x 12 mm (NX3-8) Temperature <40 °C near motor's flange

## Drive Associations

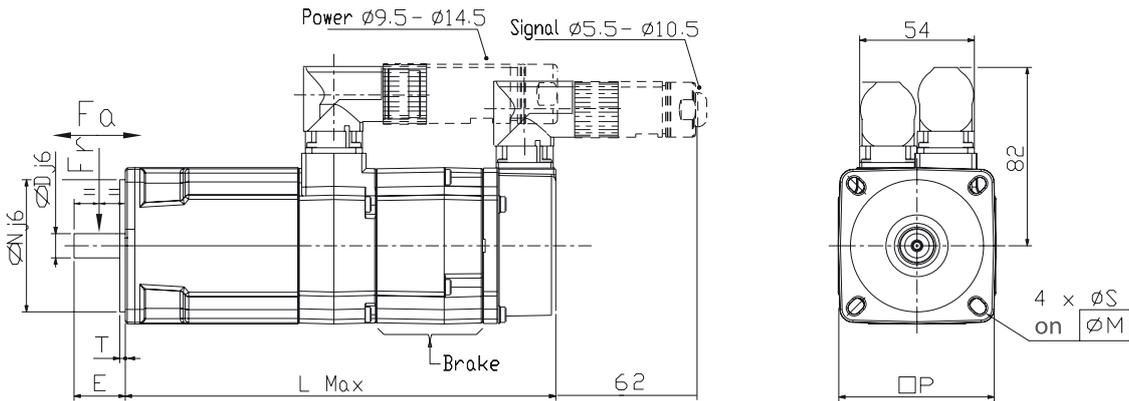
Motor	Rated Speed N <sub>N</sub> [min <sup>-1</sup> ]	Compax3		SLVD-N		638
		Drive reference	Max. Speed [min <sup>-1</sup> ]	Drive reference	Max. Speed [min <sup>-1</sup> ]	Drive reference
<b>230 VAC supply voltage - mono or three-phased</b>						
NX310E■P■■■■■■■	2300	C3S025V2...	1930	SLVD2N	1930	638A-02-3-F-0-STO
NX310E■K■■■■■■■	4000	C3S025V2...	3600	SLVD2N	3600	638A-04-3-F-0-STO
NX310E■X■■■■■■■	6600	C3S063V2...	5590	-	-	638A-04-3-F-0-STO
NX420E■P■■■■■■■	2300	C3S063V2...	1990	SLVD5N	1990	638A-04-3-F-0-STO
NX420E■J■■■■■■■	4000	C3S063V2...	3620	SLVD5N	3620	638A-04-3-F-0-STO
NX430E■V■■■■■■■	550	C3S025V2...	550	SLVD2N	550	638A-02-3-F-0-STO
NX430E■J■■■■■■■	3200	C3S063V2...	2860	SLVD7N	2860	638A-06-3-F-0-STO
NX430E■H■■■■■■■	3400	C3S063V2...	3110	SLVD7N	3110	638A-06-3-F-0-STO
NX430E■F■■■■■■■	4000	C3S100V2...	3700	SLVD7N	3700	-
NX620E■R■■■■■■■	2200	C3S063V2...	1880	SLVD7N	1880	638A-06-3-F-0-STO
NX620E■J■■■■■■■	4000	C3S100V2...	3670	SLVD10N	3670	-
NX630E■R■■■■■■■	1450	C3S063V2...	1320	SLVD7N	1320	638A-06-3-F-0-STO
NX630E■K■■■■■■■	2800	C3S100V2...	2600	SLVD10N	2600	-
NX630E■G■■■■■■■	4000	C3S150V2...	3750	SLVD15N	3750	-
NX820E■X■■■■■■■	1000	C3S063V2...	890	SLVD7N	890	638A-06-3-F-0-STO
NX820E■R■■■■■■■	2200	C3S150V2...	2000	SLVD15N	2000	-
NX820E■L■■■■■■■	3600	-	3310	-	-	-
NX840E■Q■■■■■■■	1200	C3S100V2...	1060	SLVD10N	1060	-
NX840E■L■■■■■■■	1700	C3S150V2...	1630	SLVD15N	1630	-
NX840E■J■■■■■■■	2200	-	2070	-	-	-
NX860E■D■■■■■■■	2600	-	2510	-	-	-
<b>400 VAC supply voltage - three-phased</b>						
NX310E■P■■■■■■■	4000	C3S015V4...	3570	-	-	638B-03-6-F-0-STO
NX310E■I■■■■■■■	9800	C3S038V4...	9510	-	-	638B-05-6-F-0-STO
NX420E■V■■■■■■■	2000	C3S015V4...	1710	-	-	638B-03-6-F-0-STO
NX420E■P■■■■■■■	4000	C3S038V4...	3630	-	-	638B-05-6-F-0-STO
NX420E■X■■■■■■■	7500	C3S075V4...	7500	-	-	638B-08-6-F-0-STO
NX430E■V■■■■■■■	1000	C3S015V4...	1000	-	-	638B-03-6-F-0-STO
NX430E■P■■■■■■■	3000	C3S038V4...	2670	-	-	638B-05-6-F-0-STO
NX430E■L■■■■■■■	4000	C3S038V4...	3650	-	-	638B-05-6-F-0-STO
NX430E■F■■■■■■■	6000	C3S075V4...	6000	-	-	638B-08-6-F-0-STO
NX620E■V■■■■■■■	2000	C3S038V4...	1730	-	-	638B-05-6-F-0-STO
NX620E■R■■■■■■■	3900	C3S075V4...	3440	-	-	638B-08-6-F-0-STO
NX620E■J■■■■■■■	5700	C3S150V4...	5700	-	-	638B-10-6-F-0-STO
NX620E■D■■■■■■■	6000	C3S150V4...	6000	-	-	-
NX630E■V■■■■■■■	1350	C3S038V4...	1150	-	-	638B-05-6-F-0-STO
NX630E■R■■■■■■■	2700	C3S075V4...	2390	-	-	638B-08-6-F-0-STO
NX630E■N■■■■■■■	4000	C3S150V4...	3710	-	-	638B-10-6-F-0-STO
NX630E■G■■■■■■■	5000	C3S150V4...	5000	-	-	-
NX820E■X■■■■■■■	1900	C3S075V4...	1620	-	-	638B-08-6-F-0-STO
NX820E■R■■■■■■■	3900	C3S150V4...	3600	-	-	638B-15-6-F-0-STO
NX840E■Q■■■■■■■	2100	C3S150V4...	1910	-	-	638B-10-6-F-0-STO
NX840E■L■■■■■■■	3100	C3S150V4...	2930	-	-	638B-15-6-F-0-STO
NX840E■K■■■■■■■	3500	C3S300V4...	3270	-	-	-
NX840E■H■■■■■■■	4500	C3S300V4...	4290	-	-	-
NX860E■L■■■■■■■	1700	C3S150V4...	1700	-	-	-
NX860E■J■■■■■■■	2600	C3S300V4...	2440	-	-	-
NX860E■F■■■■■■■	3200	C3S300V4...	3200	-	-	-

## Dimensions

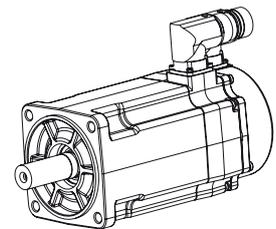
NX3, NX4, NX6													
Motor	N [mm]	M [mm]	D [mm]	E [mm]	T [mm]	P [mm]	S [mm]	Without brake		With brake		Fr* [daN]	Fa* [daN]
								Weight [kg]	L [mm]	Weight [kg]	L [mm]		
NX310	60	75-80	11	23	2.5	71	5.5	2	147	2.4	195	36	20
NX420	80	100	19	40	3	91.5	7	3.7	175	4.5	226	72	24
NX430	80	100	19	40	3	91.5	7	4.6	200	5.4	251	82	24
NX620	110	130	24	50	3.5	121	9	6.9	181	8	236	82	52
NX630	110	130	24	50	3.5	121	9	8.8	210	10	265	86	54



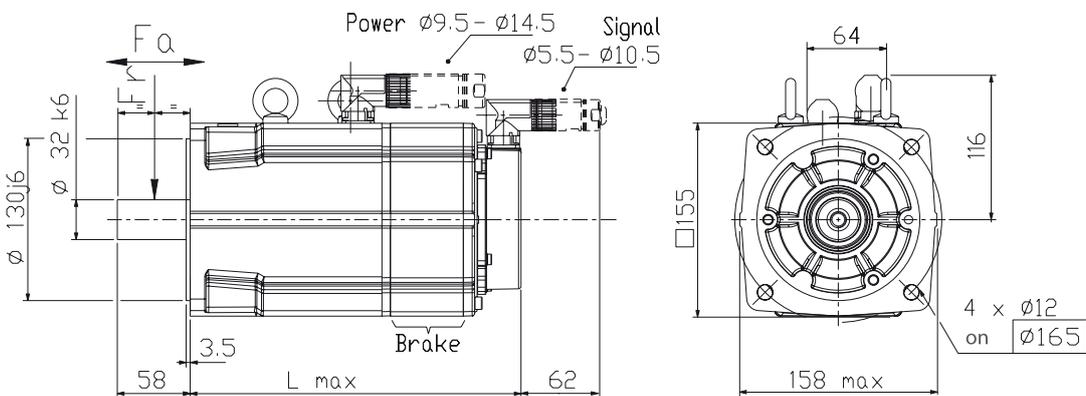
\* Fr and Fa not cumulative: At 1500 min<sup>-1</sup> for a bearing service life of 20000 hours



NX8						
Motor	Without brake		With brake		Fr* [daN]	Fa* [daN]
	Weight [kg]	L [mm]	Weight [kg]	L [mm]		
NX820	13	200	16.5	266	151	28
NX840	20	260	23.5	326	165	33
NX860	27	320	30.5	386	172	37



\* Fr and Fa not cumulative: At 1500 min<sup>-1</sup> for a bearing service life of 20000 hours



## Order Code

### NX3-NX8, CE, UL - Natural Cooling Version

	1	2	3	4	5	6	7	8
Order example	<b>NX310E</b>	<b>A</b>	<b>P</b>	<b>R</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>

#### 1 Motor type

<b>NX310E</b>	see table NX3-NX8 CE and UL Motors
<b>NX420E</b>	"Technical data"
<b>NX430E</b>	
...	

#### 2 Feedback sensor

<b>A</b>	2 pole resolver (standard)
<b>K</b>	Without sensor (on request)r
<b>Q</b>	Absolute multi-turn HIPERFACE 16 ppr SEL37 (on request)
<b>R</b>	Absolute single-turn HIPERFACE encoder 128 ppr SKS36
<b>S</b>	Absolute multi-turn HIPERFACE encoder 128 ppr SKM36
<b>T</b>	Absolute single-turn HIPERFACE encoder 1024 ppr SRS50 (on request)
<b>U</b>	Absolute multi-turn HIPERFACE encoder 1024 ppr SRM50 (on request)
<b>V</b>	Absolute single-turn EnDat encoder ECN 1113
<b>W</b>	Absolute multi-turn EnDat encoder EQN 1125

#### 3 Motor type

<b>P</b>	see table NX3-NX8 CE and UL Motors
<b>K</b>	"Technical data"
<b>X</b>	
...	

#### 4 Painting

<b>R</b>	Unpainted (standard)
<b>B</b>	Black mat (on request)

#### 5 Connections/Ventilation

<b>1</b>	Shielded cables/No
<b>7</b>	Connectors (standard)/No

#### 6 Brake/Thermal Protection

<b>0</b>	Without brake (standard)/ No protection
<b>1</b>	Without brake/PTC on power connection
<b>2</b>	Without brake/Thermo switch on power connection (on request)
<b>3</b>	With brake/No protection
<b>4</b>	With brake/PTC on power connection
<b>5</b>	With brake/Thermo switch on power connection (on request)
<b>A</b>	Without brake/PTC on sensor connection (not available for UL version)
<b>B</b>	Without brake/Thermo switch on sensor connection (on request) (not available for UL version)
<b>C</b>	Without brake/KTY on sensor connector (not available for UL version)
<b>D</b>	With brake/PTC on sensor connection (not available for UL version)
<b>E</b>	With brake/Thermo switch on sensor connection (on request) (not available for UL version)
<b>F</b>	With brake/KTY on sensor connection (not available for UL version)

#### 7 Protection degree

<b>0</b>	IP64 (standard)
<b>1</b>	IP65

#### 8 Shaft end

<b>0</b>	Smooth shaft (standard)
<b>1</b>	Keyed shaft

# NX8 CE and UL Motors - Ventilated Version

## Technical Data

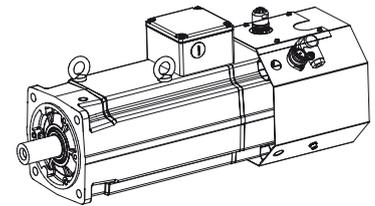
Rated Speed $N_N$ [min <sup>-1</sup> ]	Stall Torque $M_0$ [Nm]	Rated Torque $M_N$ [Nm]	Peak Torque $M_{max}$ [Nm]	Stall Current $I_0$ [A <sub>RMS</sub> ]	Rated Current $I_N$ [A <sub>RMS</sub> ]	Peak Current $I_{max}$ [A <sub>RMS</sub> ]	Rated Power $P_N$ [kW]	Moment of Inertia $J$ [kgmm <sup>2</sup> ]	Product Code
<b>230 VAC supply voltage - mono or three-phased</b>									
1450	64.00	57.50	137	29.3	26.4	74	8.73	9200	NX860V ■ J ■ ■ ■ ■ ■ ■ ■ ■
<b>400 VAC supply voltage - three-phased</b>									
2600	64.00	50.52	137	29.3	23.22	74	13.76	9200	NX860V ■ J ■ ■ ■ ■ ■ ■ ■ ■
3750	64.00	41.78	137	42.7	28.11	108	16.40	9200	NX860V ■ F ■ ■ ■ ■ ■ ■ ■ ■
<b>480 VAC supply voltage - three-phased</b>									
3000	64.00	47.67	137	29.3	21.95	74	14.98	9200	NX860V ■ J ■ ■ ■ ■ ■ ■ ■ ■
4400	64.00	36.09	137	42.7	24.47	108	16.63	9200	NX860V ■ F ■ ■ ■ ■ ■ ■ ■ ■

## Drive Associations

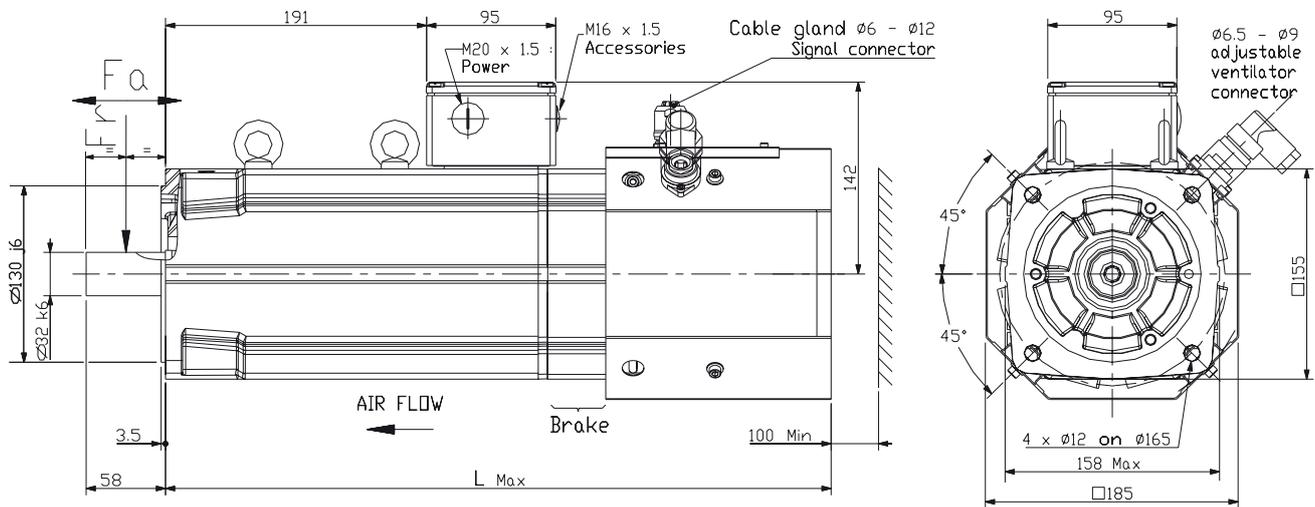
Motor	Rated Speed $N_N$ [min <sup>-1</sup> ]	Compax3		SLVD-N		638
		Drive reference	Max. Vitesse [min <sup>-1</sup> ]	Drive reference	Max. Vitesse [min <sup>-1</sup> ]	Drive reference
<b>230 VAC supply voltage - mono or three-phased</b>						
NX860V ■ J ■ ■ ■ ■ ■ ■ ■ ■	1450	C3S300V4...	-	-	-	-
<b>400 VAC supply voltage - three-phased</b>						
NX860V ■ J ■ ■ ■ ■ ■ ■ ■ ■	2600	C3S300V4...	2230	-	-	-
NX860V ■ F ■ ■ ■ ■ ■ ■ ■ ■	3750	C3H050V4...	-	-	-	-
<b>480 VAC supply voltage - three-phased</b>						
NX860V ■ J ■ ■ ■ ■ ■ ■ ■ ■	3000	-	-	-	-	-
NX860V ■ F ■ ■ ■ ■ ■ ■ ■ ■	4400	-	-	-	-	-

## Dimensions

NX8 - ventilated version						
Motor	without brake		with brake		Fr* [daN]	Fa* [daN]
	Mass [kg]	L [mm]	Mass [kg]	L [mm]		
NX860V	30.5	424	34	490	172	37



\* Fr and Fa not cumulative: At 1500 min<sup>-1</sup> for a bearing service life of 20000 hours



## Order Code

### NX8, CE, UL - Ventilated Version

	1	2	3	4	5	6	7	8
Order example	<b>NX860V</b>	<b>A</b>	<b>J</b>	<b>R</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>

#### 1 Motor type

**NX860V** NX brushless servomotor

#### 2 Feedback sensor

<b>A</b>	2 pole resolver (standard)
<b>K</b>	Without sensor (on request)
<b>Q</b>	Absolute multi-turn HIPERFACE 16 ppr SEL37 (on request)
<b>R</b>	Absolute single-turn HIPERFACE encoder 128 ppr SKS36
<b>S</b>	Absolute multi-turn HIPERFACE encoder 128 ppr SKM36
<b>T</b>	Absolute single-turn HIPERFACE encoder 1024 ppr SRS50 (on request)
<b>U</b>	Absolute multi-turn HIPERFACE encoder 1024 ppr SRM50 (on request)
<b>V</b>	Absolute single-turn EnDat encoder ECN 1113
<b>W</b>	Absolute multi-turn EnDat encoder EQN 1125

#### 3 Motor type

**J** see table NX8 CE and UL Motors  
**F** ventilated version "Technical data"

#### 4 Painting

<b>R</b>	Unpainted (standard)
<b>B</b>	Black mat (on request)

#### 5 Connections

<b>5</b>	UL power terminal box + feedback connector
<b>9</b>	CE power terminal box + feedback connector

#### 6 Brake/Thermal protection

<b>0</b>	Without brake (standard)/ No protection
<b>1</b>	Without brake/PTC on power connection
<b>2</b>	Without brake/Thermo switch on power connection (on request)
<b>3</b>	With brake/No protection
<b>4</b>	With brake/PTC on power connection
<b>5</b>	With brake/Thermo switch on power connection (on request)
<b>A</b>	Without brake/PTC on sensor connection (not available for UL version)
<b>B</b>	Without brake/Thermo switch on sensor connection (on request) (not available for UL version)
<b>C</b>	Without brake/KTY on sensor connection (not available for UL version)
<b>D</b>	With brake/PTC on sensor connection (not available for UL version)
<b>E</b>	With brake/Thermo switch on sensor connection (on request) (not available for UL version)
<b>F</b>	With brake/KTY on sensor connection (not available for UL version)

#### 7 Protection degree

**0** IP44

#### 8 Shaft end

<b>0</b>	Smooth shaft (standard)
<b>1</b>	Keyed shaft

## Accessoires et Options

### Motor Power Cable

	1	2	3	4	5	6	7	8
Code example	C	C3	U	P1	F1	R	0	005

<b>1 Type</b>	<b>C</b>	Cable
	<b>P</b>	Extension cable
<b>2 Drive type</b>	<b>C3</b>	Compax3
	<b>D1</b>	Digivex
	<b>S2</b>	638
	<b>S4</b>	AC890
	<b>S5</b>	SLVD
<b>3 Characteristic</b>	<b>U</b>	PUR jacket class 6 (standard)
<b>4 Power cable</b>	<b>P0</b>	For NX1
	<b>P1</b>	For NX <15 A <sub>rms</sub>
	<b>P2</b>	For NX <21 A <sub>rms</sub>
<b>5 Motor connector</b>	<b>F1</b>	For NX2-NX8 motors
	<b>F4</b>	For NX1 motor
<b>6 Section</b>	<b>R</b>	Fixed
<b>7 Fixed field</b>	<b>0</b>	
<b>8 Cable length *</b>	<b>001</b>	1 m
	...	
	<b>050</b>	50 m

### Feedback Cable

	1	2	3	4	5	6	7	8
Code example	C	C3	U	A1	F1	R	0	005

<b>1 Type</b>	<b>C</b>	Cable
	<b>P</b>	Extension cable
<b>2 Drive type</b>	<b>C3</b>	Compax3
	<b>D1</b>	Digivex
	<b>S2</b>	638
	<b>S4</b>	AC890
	<b>S5</b>	SLVD
<b>3 Characteristic</b>	<b>U</b>	PUR jacket class 6 (standard)
<b>4 Feedback cable</b>	<b>A1</b>	Resolver
	<b>V1</b>	EnDat encoder
	<b>R1</b>	Hiperface encoder
<b>5 Motor connector</b>	<b>F1</b>	For motor with resolver or Hiperface
	<b>F3</b>	For motor with EnDat
	<b>F4</b>	For NX1 motor
<b>6 Section</b>	<b>R</b>	Fixed
<b>7 Fixed field</b>	<b>0</b>	
<b>8 Cable length *</b>	<b>001</b>	1 m
	...	
	<b>050</b>	50 m

(\*) The 3 last digits indicate cable length in meters  $\pm 5$  %max  
For non-standard length cable with length different from: 1/2/3/4/5/10/15/20/25/30/40/50 m please contact us.  
Example CC3UP1F1R0015: power cable, length = 15 m.



## Feedback Sensors for CE and UL Motors

### 2 poles resolver - option A

- Accuracy:  $\pm 10'$  max
- Transformation ratio:  $0.5 \pm 5\%$
- Max. operating speed:  $17\,000\text{ min}^{-1}$
- Working temperature range:  $-55\dots+155\text{ }^\circ\text{C}$
- Compatibility: NX1 to NX8

### 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:  $12\,000\text{ min}^{-1}$
- Max. operating speed SKM36:  $9\,000\text{ min}^{-1}$
- Working temperature range:  $-20\dots+110\text{ }^\circ\text{C}$
- Compatibility: NX2 to NX8

### Single turn / Multiturn absolute encoder EnDat ECN1113/EQN1125 - option V/W

- Number of sine/cosine periods per revolution: 512
- Absolute position per revolution: 8192 (13 bits)
- Number of absolutely encodable revolutions: 4096
- Accuracy:  $\pm 60''$
- Absolute position value EnDat 2.2
- Max. operating speed:  $12\,000\text{ min}^{-1}$
- Working temperature range:  $-40\dots+115\text{ }^\circ\text{C}$
- Compatibility: NX2 to NX8

### Single turn / Multiturn absolute encoder HIPERFACE SRS/SRM50 - option T/U (on request)

- Number of sine/cosine periods per revolution: 1024
- Number of absolutely encodable revolutions: 4096 (SRM50)
- Absolute position per revolution: 32768 (15 bits)
- Working speed up to which the absolute position can be reliably determined:  $6\,000\text{ min}^{-1}$
- Max. operating speed:  $12\,000\text{ min}^{-1}$
- Working temperature range:  $-20\dots+115\text{ }^\circ\text{C}$
- Compatibility: NX3 to NX8

### Multiturn absolute encoder HIPERFACE SEL37 - option Q (on request)

- Number of sine/cosine periods per revolution: 16
- Number of absolutely encodable revolutions: 4096
- Working speed up to which the absolute position can be reliably determined:  $6\,000\text{ min}^{-1}$
- Max. operating speed:  $10\,000\text{ min}^{-1}$
- Working temperature range:  $-20\dots+115\text{ }^\circ\text{C}$
- Compatibility: NX2 to NX8





# Parker's Motion & Control Technologies

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 00800 27 27 5374.



## AEROSPACE

### Key Markets

- Aircraft engines
- Business & general aviation
- Commercial transports
- Land-based weapons systems
- Military aircraft
- Missiles & launch vehicles
- Regional transports
- Unmanned aerial vehicles

### Key Products

- Flight control systems & components
- Fluid conveyance systems
- Fluid metering delivery & atomization devices
- Fuel systems & components
- Hydraulic systems & components
- Inert nitrogen generating systems
- Pneumatic systems & components
- Wheels & brakes



## CLIMATE CONTROL

### Key Markets

- Agriculture
- Air conditioning
- Food, beverage & dairy
- Life sciences & medical
- Precision cooling
- Processing
- Transportation

### Key Products

- CO<sup>2</sup> controls
- Electronic controllers
- Filter driers
- Hand shut-off valves
- Hose & fittings
- Pressure regulating valves
- Refrigerant distributors
- Safety relief valves
- Solenoid valves
- Thermostatic expansion valves



## ELECTROMECHANICAL

### Key Markets

- Aerospace
- Factory automation
- Food & beverage
- 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
- Controllers
- Gantry robots
- Gearheads
- Human machine interfaces
- Industrial PCs
- Inverters
- Linear motors, slides and stages
- Precision stages
- Stepper motors
- Servo motors, drives & controls
- Structural extrusions



## FILTRATION

### Key Markets

- Food & beverage
- Industrial machinery
- Life sciences
- Marine
- Mobile equipment
- Oil & gas
- Power generation
- Process
- Transportation

### Key Products

- Analytical gas generators
- Compressed air & gas filters
- Condition monitoring
- Engine air, fuel & oil filtration & systems
- Hydraulic, lubrication & coolant filters
- Process, chemical, water & microfiltration filters
- Nitrogen, hydrogen & zero air generators



## FLUID & GAS HANDLING

### Key Markets

- Aerospace
- Agriculture
- Bulk chemical handling
- Construction machinery
- Food & beverage
- Fuel & gas delivery
- Industrial machinery
- Mobile
- Oil & gas
- Transportation
- Welding

### Key Products

- Brass fittings & valves
- Diagnostic equipment
- Fluid conveyance systems
- Industrial hose
- PTFE & PFA hose, tubing & plastic fittings
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters
- Quick disconnects



## HYDRAULICS

### Key Markets

- Aerospace
- Aerial lift
- Agriculture
- Construction machinery
- Forestry
- Industrial machinery
- Mining
- Oil & gas
- Power generation & energy
- Truck hydraulics

### Key Products

- Diagnostic equipment
- Hydraulic cylinders & accumulators
- Hydraulic motors & pumps
- Hydraulic systems
- Hydraulic valves & controls
- Power take-offs
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters
- Quick disconnects



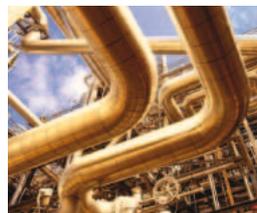
## PNEUMATICS

### Key Markets

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

### Key Products

- Air preparation
- Compact cylinders
- Field bus valve systems
- Grippers
- Guided cylinders
- Manifolds
- Miniature fluidics
- Pneumatic accessories
- Pneumatic actuators & grippers
- Pneumatic valves and controls
- Rodless cylinders
- Rotary actuators
- Tie rod cylinders
- Vacuum generators, cups & sensors



## PROCESS CONTROL

### Key Markets

- Chemical & refining
- Food, beverage & dairy
- Medical & dental
- Microelectronics
- Oil & gas
- Power generation

### Key Products

- Analytical sample conditioning products & systems
- Fluoropolymer chemical delivery fittings, valves & pumps
- High purity gas delivery fittings, valves & regulators
- Instrumentation fittings, valves & regulators
- Medium pressure fittings & valves
- Process control manifolds



## SEALING & SHIELDING

### Key Markets

- Aerospace
- Chemical processing
- Consumer
- Energy, oil & gas
- Fluid power
- General industrial
- Information technology
- Life sciences
- Military
- Semiconductor
- Telecommunications
- Transportation

### Key Products

- Dynamic seals
- Elastomeric o-rings
- EMI shielding
- Extruded & precision-cut, fabricated elastomeric seals
- Homogeneous & inserted elastomeric shapes
- High temperature metal seals
- Metal & plastic retained composite seals
- Thermal management

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