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

Motion Solutions

ENGINEERING YOUR SUCCESS.

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^2 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

Parker

ENGINEERING YOUR SUCCESS.

WARNING — USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

Contents

Solutions for machine-tools

Machines requiring smooth rotation

Motor range	Feature set		Torque range & Page
NV		**High speed servomotor for spindles** (based on NX series)	Up to 11 N.m Page 73
NX		**Brushless servomotors** Low cogging, high efficiency motors High torque density, med inertia - NX, CE marked servomotors - NX, UL marked servomotors - NX Sensorless servomotors	0.45 to 64 N.m Page 14 Up to 95 N.m
HV		**Synchronous motor for spindles** High torque and low speed	From 63 to 250 N.m Page 87
NK		**Frameless low cogging, medium inertia servomotor** (based on NX series)	Up to 95 N.m Page 77
SKW		**Compact frameless high speed servomotor for spindles**	Up to 100 N.m Page 90
HKW		**Watercooled frameless AC brushless** High speed applications	Up to 1 500 N.m Page 95
TK		**Frameless direct-drive torque motor**	Up to 21 000 N.m Page 82

Solutions for special purpose machinery

Motor range	Feature set		Torque range & Page
NK		**Frameless low cogging, medium inertia servomotor** (based on NX series)	Up to 95 N.m Page 77
TK		**Frameless direct-drive torque motor**	Up to 21 000 N.m Page 82

Solutions for explosive atmospheres

Motor range	Feature set		Torque range & Page
EX		**Motors for explosive atmosphere - ATEX** Motors for Division 1 hazardous environments	Up to 75 N.m Page 33

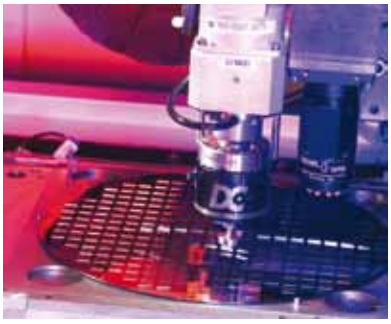
Solutions for tests rigs and dynamometers

Motor range	Feature set		Torque range & Page
MGV		**High speed servomotor for spindles** (Based on HW Series)	Up to 170 N.m Page 67

Solutions for production process machinery :
Extrusion, paper, mixers, calenders

Motor range	Feature set		Torque range & Page
TMW		**PM torque motors**	From 1 200 to 22 000 N.m Page 53
TK		**Direct-drive frameless torque motors** (Based on TM/TMW)	Up to 21 000 N.m Page 82

OEM's solutions - medical and semiconductors



Motor range	Feature set		Torque range & Page
AXEM		**DC servomotor** Low noise, smooth motion, limited maintenance	Up to 19 N.m Page 101
RS		**Compact DC servomotor** Low speed motion	Up to 100 N.m Page 103
RX		**Compact DC servomotor** Low speed motion	Up to 320 N.m Page 106

Together, we can save energy and improve productivity.

Thanks to its innovative sensorless servo control algorithm, the new AC650S drive now makes affordable in usual industrial applications the benefits of servo motor technologies. Energy savings up to 12% can be achieved when using the new drive with servo motors instead of inverters and induction motors. Sensor or fan are no longer required on the motors, which improves dramatically the machine reliability and productivity. Available from 0.25 to 7.5kW, the AC650S drive is specially recommended for applications where energy savings are important like conveyers, fans, pumps, hydraulic systems, extruders.

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Together, we can make compact and more reliable machinery.

Thanks to its innovative sensorless servo control algorithm, the new AC650S drive now makes affordable in usual industrial applications the benefits of servo motor technologies. Parker servo motors are up to 75% smaller than same-power induction motors. Associated with the new compact AC drive, they help reduce dramatically the machine footprint compared to solutions based on inverters and induction motors. As sensor or fan are no longer required on the motors, the machine reliability and productivity are significantly increased. Available from 0.25 to 7.5kW, the AC650S drive is specially recommended when compactness is critical : machine-tools, special purpose machinery, converting and packaging machinery.

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Parker Hannifin

The global leader in motion and control technologies and systems

Global Partnerships Global Support

Parker is committed to helping make our customers more productive and more profitable through our global offering of motion and control products and systems. In an increasingly competitive global economy, we seek to develop customer relationships as technology partnerships. Working closely with our customers, we can ensure the best selection of technologies to suit the needs of our customers' applications.

Electromechanical Technologies for High Dynamic Performance and Precision Motion

Parker electromechanical technologies form an important part of Parker's global motion and control offering. Electromechanical systems combine high performance speed and position control with the flexibility to adapt the systems to the rapidly changing needs of the industries we serve.

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Parker Hannifin Corporation

With annual sales exceeding $12 billion, Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems, providing precision-engineered solutions for a wide variety of commercial, mobile, industrial and aerospace markets. The company employs more than 61,000 people in 48 countries around the world.

Parker has increased its annual dividends paid to shareholders for 52 consecutive years, among the top five longest-running dividend-increase records in the S&P 500 index. For more information, visit the company's web site at http://www.parker.com, or its investor information site at http://www.phstock.com.

Electromechanical Automation

Global products with local manufacturing and support

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. Parker's engineering resources also extend to the development and manufacture of complete systems for continuous process and motion control applications.

Manufacturing to Meet Our Customers' Needs

Parker is committed to meeting the increasing service demands that our customers require to succeed in the global industrial market. Parker's manufacturing teams seek continuous improvement through the implementation of lean manufacturing methods throughout the process. We measure ourselves on meeting our customers' expectations of quality and delivery, not just our own. In order to meet these expectations, Parker operates and continues to invest in our manufacturing facilities in Europe, North America and Asia. This allows us to minimize transportation time and cost and to be able to respond more quickly to customer needs.

Worldwide Electromechanical Automation Manufacturing Locations

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

Asia
Shanghai, China
Chennai, India

North America
Rohnert Park, California
Irwin, Pennsylvania
Wadsworth, Ohio
Port Washington, New York
New Ulm, Minnesota

Offenburg, Germany

Local manufacturing and support in Europe

Parker provides sales assistance and local technical support through a **team of dedicated sales teams** and **authorized technical distributors** throughout Europe. For contact information, please refer to the Sales Offices on the back cover of this document or visit www.parker.com.

Dijon, France

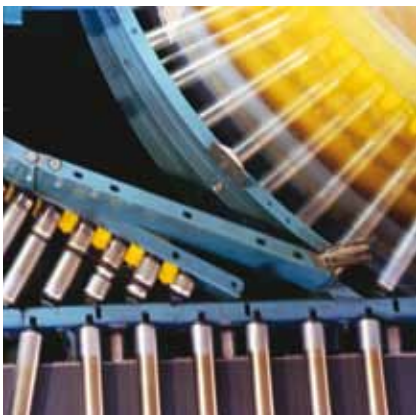
Milan, Italy

Littlehampton, UK

Solutions to Improve Productivity, Increase Flexibility and Save Energy

Process Productivity and Reliability

Parker brings together the technology and experience required for continuous process applications across many industries. AC and DC variable speed drive products combined with application-specific function block-based configuration software ensure precise speed control and reliable performance. Parker combines more than 30 years of application experience with a global sales and support network that help you increase your machine availability.



Converting machinery	AC Drives	DC Drives	Direct Drive Motors	Servo Drives and Motors
Folding, gluing, stitching and collating	√	√		√
Coating, laminating and foil stamping	√	√	√	√
Slitting, cutting and rewinding	√	√	√	√
Plastics processing machinery				
Plastic extrusion	√		√	
Injection moulding	√		√	√
Thermal forming	√		√	√
Wire and cable				
Wire and cable manufacturing	√	√		√
Winding/unwinding	√	√	√	
Extrusion for wire and cable	√	√	√	
Printing Machinery				
Web/sheetfed offset	√		√	√
Flexo printing	√		√	√
Gravure printing	√		√	√
Shaftless printing	√		√	√
Other industries				
Paper machinery	√		√	
Sugar processing	√	√		
Steel production	√	√	√	
Construction materials	√	√		
Automotive test rigs	√	√	√	

Energy Efficiency and Clean Power

Parker has developed the technology to maximize the efficient use of energy in industrial. mobile and infrastructure environments.

Hybrid Vehicle Technology

Parker has adapted its electric drive technologies for use in hybrid electric vehicles, including utility vehicles and passenger vehicles. Examples include inverters and motor drives,
as well as electric drive motors.

Energy-savings for pumps, fans and compressors

Parker has the drive technology to help you make significant energy savings in the operation of pumps, fans and compressors in both industrial and infrastructure applications, including:

- Commercial refrigeration
- Water and wastewater treatment
- Building automation
- Industrial processes
- Hydraulic systems

Power Generation and Conversion

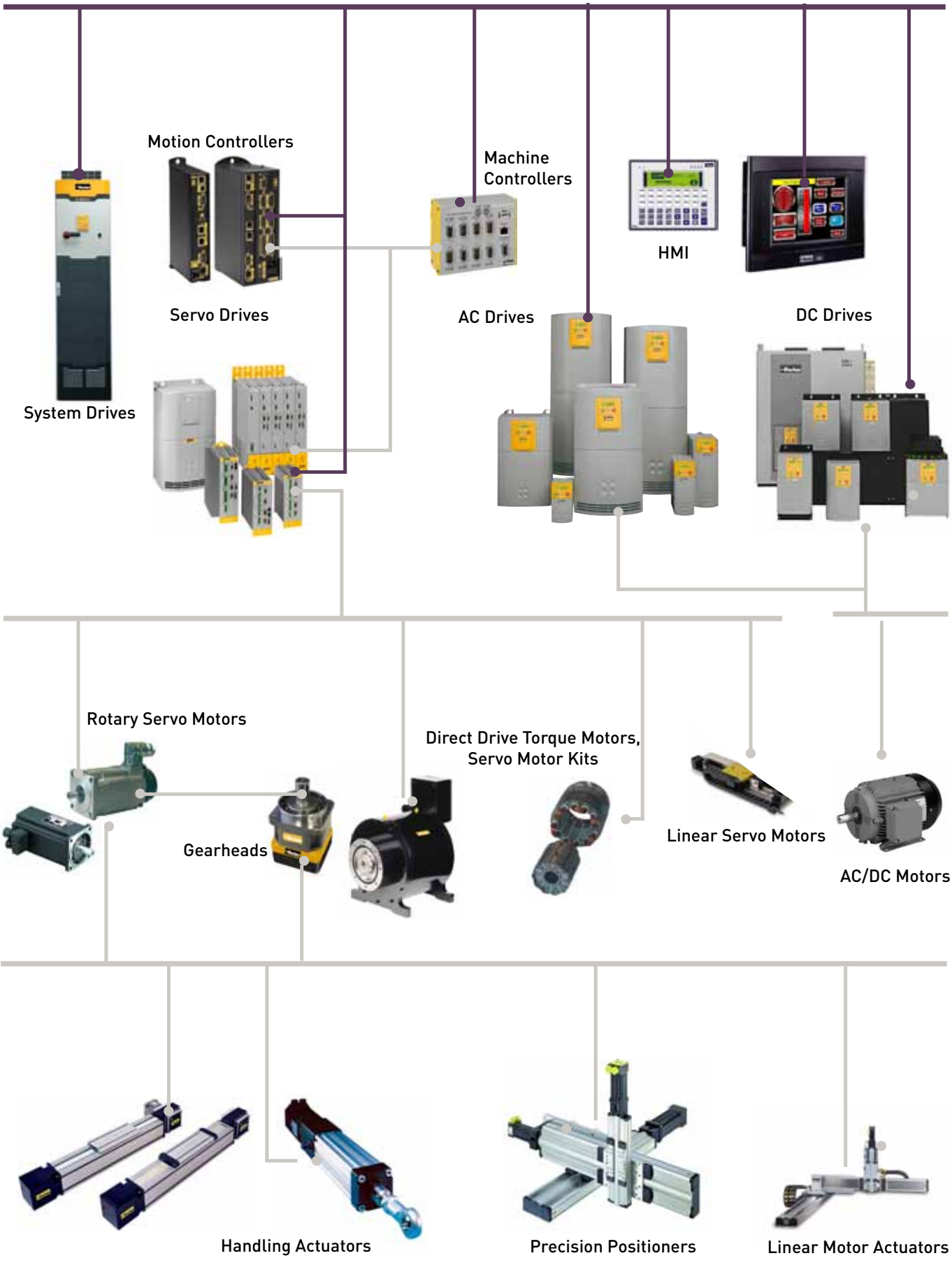
Using proven inverter technology, Parker has developed numerous solutions for the conversion of energy for commercial use from a variety of sources, including wind, wave and energy storage devices.

Motion Control Systems for Total Production Flexibility

Parker's electromechanical automation customers enjoy total production flexibility in their general and precision motion control applications. Complete packaged linear positioning systems, coupled to servo and stepper drives and controls, enable our customers to develop a complete motion solution with one partner. Parker provides the products for a wide range of motion needs- power, speed, travel, force- with easy to use controls designed to work on multiple control and communication platforms. Additionally, Parker's products can be easily customized to suit specific applications.

	Mechanical Actuators	Motors and Gearheads	Drives	Controls	HMI
Assembly machinery					
Pick and place	√	√	√	√	√
Lifting	√	√	√	√	
Transfer machinery	√	√	√	√	√
Automotive assembly					
Resistance welding	√	√	√	√	
Painting applications	√	√	√	√	√
Transfer machinery	√	√	√	√	√
Packaging machinery					
Primary, secondary, tertiary	√	√	√	√	√
Handling machinery	√	√	√	√	√
Food processing machinery					
Processing machinery	√	√	√	√	
Packaging machinery	√	√	√	√	
Handling machinery	√	√	√	√	√
Material handling systems					
Transfer systems	√	√	√	√	√
Pick and place systems	√	√	√	√	√
Metal forming machinery					
Presses	√	√	√	√	√
Tube bending	√	√	√	√	√
Handling applications	√	√	√	√	√
Machine tools					
Spindles		√	√		
Ancillary axes		⊟	√		
Semiconductor machinery					
Front end processes	√	√	√	√	√
Inspection machinery	√	√	√	√	√
Packaging machinery	√	√	√	√	√
Lithography	√	√	√	√	
Medical devices					
Device manufacturing	√	√	√	√	√
Product packaging and dispensing	√	√	√	√	√
Scanning equipment	√	√	√		
Pumps and analyzers		√	√		
Entertaiment					
Theatre and studio automation	√	√	√	√	
Simulation and amusement rides	√	√	√		

Complete range of motion control solutions



Brushless servomotors

NX series

0,45 to 64 Nm

Description

NX Series brushless servomotors from Parker SSD Parvex combine exceptional precision and motion quality, high dynamic performances 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 performances

Compact dimensions and robustness

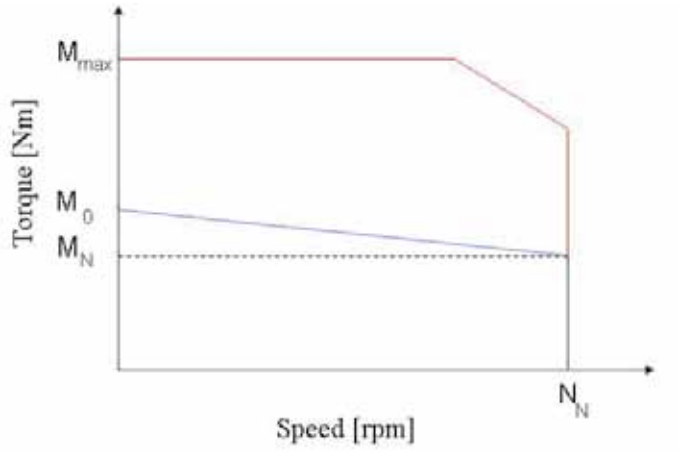
Large set of options and customization possibilities

CE and UL marking certification available

Applications

- Machine-tools axis
- Packaging machinery
- Robot applications
- Special machinery

General technical characteristics		
Motor type	Permanent magnets synchronous servomotors	
Rotor design	Rotor with concentrated-flux rare earth magnets	
Number of poles	10	
Power range	0,2 - 13,7 kW	
Torque range	0,45 - 64 Nm	
Speed range	0 - 7500 rpm	
Mounting	Flange with smooth holes	
Shaft end	• Plain smooth shaft (standard) • Plain keyed shaft (option)	
Cooling	• Natural ventilation • Forced ventilation (NX860V only)	
Protection level (IEC60034-5)	• IP64 (standard) • IP65 (option) • IP44 (ventilated version)	
Feedback sensors	• Resolver (standard) • Absolute Endat,Hiperface,Encoder • Posivex (only with Digivex Motion)	
Other options	• Brake • Thermal protection (PTC, Thermo Switch or KTY)	
Marking	CE	UL
Voltage supply	230 / 400 VAC	230 / 480 VAC
Temperature class (IEC60034-1)	• Class F	• Class A (NX1 – 2) • Class F (NX3 – 8)
Connections	• Connectors (standard) • Flying cables (option) • Terminal box (option)	• Connectors (NX1 – 8) • Terminal box (NX860V)



NX1 - NX2 models

CE motors

0,45 - 1 Nm

Selection and ordering

Rated Speed N_N (rpm)	Stall Torque M_0* (Nm)	Rated Torque M_N (Nm)	Peak Torque N_{MAX} (Nm)	Stall Current I_0* (A_{RMS})	Rated Current I_N (A_{RMS})	Peak Current I_{MAX} (A_{RMS})	Rated Power P_N (kW)	Moment of Inertia J (kg.m².10-5)	Product Code
230 VAC supply voltage - mono or three-phased									
6000	0.45	0.33	1.72	0.99	0.78	3.96	0.21	1.30	N X 1 1 0 E ▪ P ▪ ▪ ▪ ▪ ▪
5000	0.45	0.37	2	1.01	0.84	5.08	0.19	2.10	N X 2 0 5 E ▪ V ▪ ▪ ▪ ▪ ▪
7500	0.45	0.29	2	1.4	0.95	7.01	0.23	2.10	N X 2 0 5 E ▪ S ▪ ▪ ▪ ▪ ▪
4000	1	0.80	3.4	1.34	1.11	5.35	0.34	3.80	N X 2 1 0 E ▪ T ▪ ▪ ▪ ▪ ▪
6000	1	0.61	3.4	1.99	1.32	7.96	0.38	3.80	N X 2 1 0 E ▪ P ▪ ▪ ▪ ▪ ▪
400 VAC supply voltage - three-phase									
8900	0.45	0.23	2	1.34	0.79	7.01	0.21	2.10	N X 2 0 5 E ▪ S ▪ ▪ ▪ ▪ ▪
6000	1	0.61	3.4	1.34	0.89	5.35	0.38	3.80	N X 2 1 0 E ▪ T ▪ ▪ ▪ ▪ ▪
7000	1	0.5	2	2.75			0.21	3.80	N X 2 1 0 E ▪ G ▪ ▪ ▪ ▪ ▪

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

Drives associations

Motor	Rated Speed N_N (rpm)	Compax 3		637f/638	Digivex
		Drive reference	Max.Speed (rpm)	Drive reference	Drive reference
230 VAC supply voltage - mono or three-phased					
N X 1 1 0 E ▪ P ▪ ▪ ▪ ▪ ▪	6000	C3S100V2...	6000	638A-01-3-F-0-STO...	DLD13M04R
N X 2 0 5 E ▪ V ▪ ▪ ▪ ▪ ▪	5000	C3S100V2...	5000	638A-01-3-F-0-STO...	DLD13M04R
N X 2 0 5 E ▪ S ▪ ▪ ▪ ▪ ▪	7500	C3S100V2...	7500	638A-02-3-F-0-STO...	DLD13M04R
N X 2 1 0 E ▪ T ▪ ▪ ▪ ▪ ▪	4000	C3S100V2...	3420	638A-02-3-F-0-STO...	DLD13M04R
N X 2 1 0 E ▪ P ▪ ▪ ▪ ▪ ▪	6000	C3S100V2...	5530	638A-02-3-F-0-STO...	DLD13M04R
400 VAC supply voltage - three-phased					
N X 2 0 5 E ▪ S ▪ ▪ ▪ ▪ ▪	8900	C3S015V4...	8900	638B-03-6-F-0-STO...	DSD16002...
N X 2 1 0 E ▪ T ▪ ▪ ▪ ▪ ▪	6000	C3S015V4...	6000	638B-03-6-F-0-STO...	DSD16002...
N X 2 1 0 E ▪ G ▪ ▪ ▪ ▪ ▪	7000	C3S038V4...	7000	638B-05-6-F-0-STO...	DSD16004...

NX1 - NX2 models

CE motors

0,45 - 1 Nm

NX1, NX2, CE - codification

NX1/NX2 - Natural cooling	Product Code Example										
	N	X	2	1	0	E	▪	G	▪	▪	▪	▪	▪
FEEDBACK SENSOR													
2 poles resolver (standard)							**A**						
Cost effective absolute POSIVEX encoder (NX1 on request)							M						
Absolute single-turn HIPERFACE encoder 128 ppr SKS36 (NX1 on request)							R						
Absolute multi-turn HIPERFACE encoder 128 ppr SKM36 (NX1 on request)							S						
Absolute signle-turn ENDAT encoder ECN 1113 (NX1 on request)							V						
Absolute multi-turn ENDAT encoder EQN 1125 (NX 1 on request)							W						
Low cost encoder with 10 commutation tracks 2048 ppr (NX1 on request)							X						
Absolute multi-turn HIPERFACE 16ppr SEL37 (NX1 on request)							Q						
PAINTING													
Without painting (standard)									**R**				
Black mat									B				
CONNECTIONS / **VENTILATION**													
Flying cables / No										1			
Wires with shielded sleeve / No										4			
Connectors (standard) / **No**										**7**			
BRAKE / **THERMAL PROTECTION**													
Without brake / **No protection**											**0**		
Without brake / PTC on power connection											1		
With brake / No protection											3		
With brake / PTC on power connection											4		
PROTECTION DEGREE													
IP64 (standard)												**0**	
IP65												1	
SHAFT END													
Smooth shaft (standard)													**0**
Keyed shaft													1

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

NX1 - NX2 models

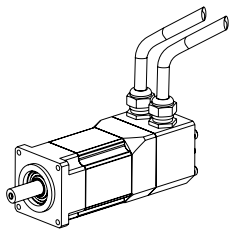
CE motors

0,45 - 1 Nm

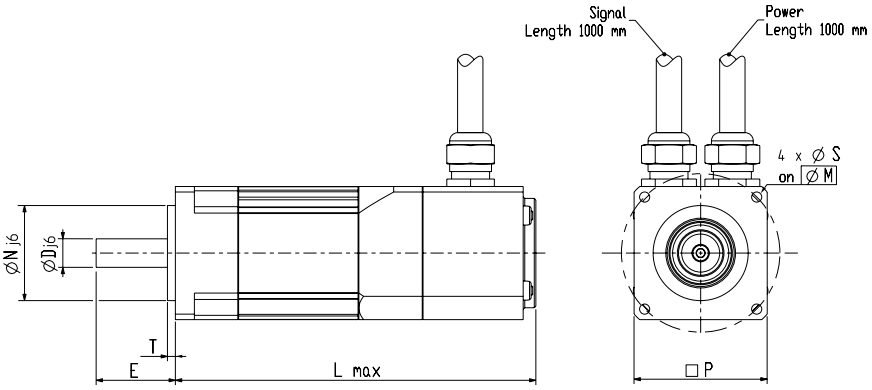
Dimensions and drawings (resolver version)

NX1 and NX2 dimensions - 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

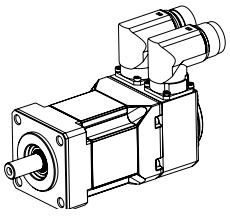


* Fr and Fa not cumulative : At 1500 rpm for a bearing service life of 20000 hours

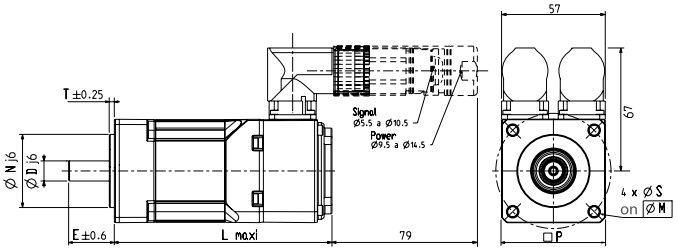


NX 1 and NX2 dimensions - connectors version

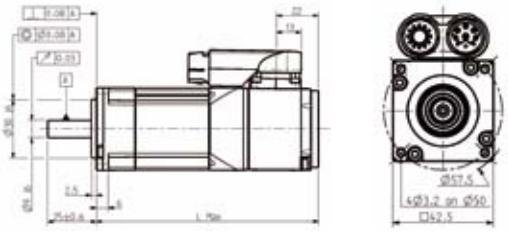
Moteur	N (mm)	M (mm)	D (mm)	E (mm)	T (mm)	P (mm)	S (mm)	Without brake		With brake		Fr* (daN)	Fa* (daN)
								Weight (kg)	L (mm)	Weight (kg)	L (mm)		
NX110	30	50	9	25	2.5	42.5	3.2	0.8	110	1	141	15	6.9
NX205	40	63	11	25	2.5	56.5	5.5	0.8	100	1.1	137	28	15.5
NX210	40	63	11	25	2.5	56.5	5.5	1.3	120	1.6	157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



* Fr and Fa not cumulative : At 1500 rpm for a bearing service life of 20000 hours



NX2



NX1

NX1 - NX2 models

UL motors

0,31 - 0,7 Nm

Selection and ordering

Rated Speed N_N (rpm)	Stall Torque M_0* (Nm)	Rated Torque M_N (Nm)	Peak Torque M_{MAX} (Nm)	Stall Current I_0* (A_{RMS})	Rated Current I_N (A_{RMS})	Peak Current I_{MAX} (A_{RMS})	Rated Power P_N (kW)	Moment of Inertia J (kg.m².10-5)	Product Code
230 VAC supply voltage - mono or three-phased									
5000	0.31	0.09	1.72	0.97	0.34	1.72	0.05	1.30	N X 1 1 0 A ▪ J ▪ 7 ▪ ▪ ▪
5000	0.40	0.21	2	0.91	0.52	5.5	0.11	2.10	N X 2 0 5 A ▪ V ▪ 7 ▪ ▪ ▪
4000	0.70	0.41	3.4	1	0.61	5.58	0.17	3.80	N X 2 1 0 A ▪ T ▪ 7 ▪ ▪ ▪
480 VAC supply voltage - three-phased									
6600	0.4	0.11	2	0.91	0.32	5.5	0.08	2.10	N X 2 0 5 A ▪ V ▪ 7 ▪ ▪ ▪
6000	0.7	0.15	3.4	1	0.27	5.58	0.09	3.80	N X 2 1 0 A ▪ T ▪ 7 ▪ ▪ ▪

Drives associations

Motor	Rated Speed N_N (rpm)	Compax 3		AC890SD	637f/638	Digivex
		Drive reference	Max. speed (rpm)	Drive reference	Drive reference	Drive reference
230 VAC supply voltage - mono or three-phased						
NX110A▪J▪7▪▪▪	5000	C3S100V2 ...	5000	890SD-231300B0 ...	638A-01-3-F-0-STO...	DSD13004...
NX205A▪V▪7▪▪▪	5000	C3S100V2 ...	5000	890SD-231300B0...	638A-01-3-F-0-STO...	DSD13004...
NX210A▪T▪7▪▪▪	4000	C3S100V2 ...	3420	890SD-231300B0...	638A-01-3-F-0-STO...	DSD13004...
480 VAC supply voltage - three-phased						
NX205A▪V▪7▪▪▪	6600	-	-	890SD-531200B0...	-	-
NX210A▪T▪7▪▪▪	6000	-	-	890SD-531200B0...	-	-

NX1 - NX2 models

UL motors

0,31 - 0,7 Nm

NX 1, NX2 UL codification

NX1, NX2 - natural cooling	Product code example											
	N	X	2	1	0	A	▪	T	▪	7	▪	▪	▪
FEEDBACK SENSOR													
2 poles resolver (standard)							**A**						
Cost effective absolute POSIVEX encoder (NX2 only)							M						
Absolute single-turn HIPERFACE encoder 128 ppt SKS36 (NX2 only)							R						
Absolute multi-turn HIPERFACE encoder 128 ppt SKM36 (NX2 only)							S						
Absolute signle-turn ENDAT encoder ECN 1113 (NX2 only)							V						
Absolute multi-turn ENDAT encoder EQN 1125 (NX 2 only)							W						
Low cost encoder with 10 commutation tracks 2048 ppr (NX2 only)							X						
PAINTING													
Without painting (standard)									**R**				
Black mat									B				
BRAKE													
Without brake (standard)													
With brake													
THERMAL PROTECTION													
No protection											**0**		
No protection											3		
PROTECTION DEGREE													
IP64 (standard)												**0**	
IP65												1	
SHAFT END													
Smooth shaft (standard)													**0**
Keyed shaft													1

NX1 - NX2 models

UL motors

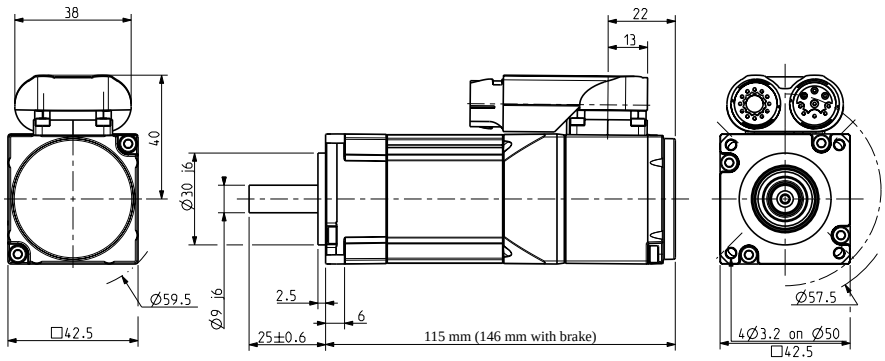
0,31 - 0,7 Nm

Dimensions and drawings (resolver version)

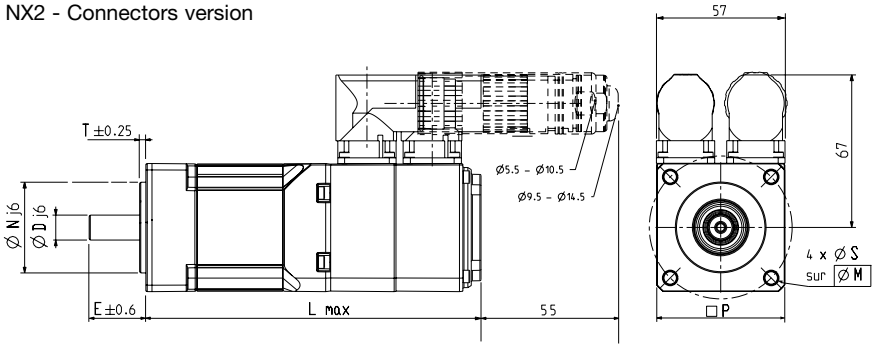
NX1- NX2 - connectors version													
Motor	N (mm)	M (mm)	D (mm)	E (mm)	T (mm)	P (mm)	S (mm)	Without brake		With brake		Fr* (daN)	Fa* (daN)
								Weight (kg)	L (mm)	Weight (kg)	L (mm)		
NX110	30	50	9	25	2.5	42.5	3.2	0.8	134	1	141	15	6.9
NX205	40	63	11	25	2.5	56.5	5.5	0.8	129	1.1	137	28	15.5
NX210	40	63	11	25	2.5	56.5	5.5	1.3	149	1.6	157	30	16.7
NX2 - cables version													
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 rpm for a bearing service life of 20000 hours

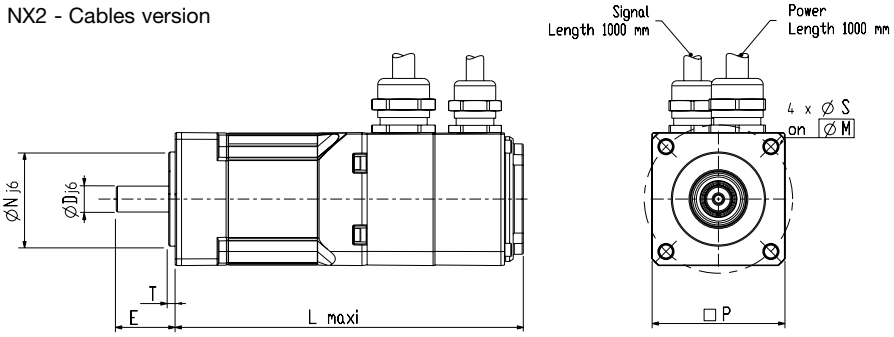
NX1 - Connectors version



NX2 - Connectors version



NX2 - Cables version



NX3 - NX8 models

CE and UL motors

2 - 41 Nm

Selection and ordering

Rated Speed N_N (rpm)	Stall Torque M_0* (Nm)	Rated Torque M_N (Nm)	Peak Torque M_{MAX} (Nm)	Stall Current I_0* (A_{RMS})	Rated Current I_N (A_{RMS})	Peak Current I_{MAX} (A_{RMS})	Rated Power P_N (kW)	Moment of Inertia J (kg.m².10-5)	Product Code
230 VAC supply voltage - mono or three-phased									
2300	2	1.8	6.6	1.39	1.27	5.56	0.43	7.90	N X 3 1 0 E ▪ P ▪ ▪ ▪ ▪ ▪
4000	2	1.65	6.6	2.43	2.06	9.71	0.69	7.90	N X 3 1 0 E ▪ K ▪ ▪ ▪ ▪ ▪
6600	2	1.4	6.6	3.85	2.85	15.4	0.97	7.90	N X 3 1 0 E ▪ X ▪ ▪ ▪ ▪ ▪
2300	4	3.53	13.4	2.71	2.41	10.9	0.85	29.00	N X 4 2 0 E ▪ P ▪ ▪ ▪ ▪ ▪
4000	4	3.14	13.4	4.69	3.74	18.8	1.32	29.00	N X 4 2 0 E ▪ J ▪ ▪ ▪ ▪ ▪
550	5.5	5.45	18.8	1.41	1.4	5.64	0.31	42.60	N X 4 3 0 E ▪ V ▪ ▪ ▪ ▪ ▪
3200	5.5	4.68	18.8	5.24	4.53	21	1.57	42.60	N X 4 3 0 E ▪ J ▪ ▪ ▪ ▪ ▪
3400	5.5	4.59	18.8	5.64	4.78	22.5	1.64	42.60	N X 4 3 0 E ▪ H ▪ ▪ ▪ ▪ ▪
4000	5.5	4.29	18.8	6.64	5.28	26.5	1.80	42.60	N X 4 3 0 E ▪ F ▪ ▪ ▪ ▪ ▪
2200	8	7.42	26.7	5.31	4.99	21.2	1.71	98.00	N X 6 2 0 E ▪ R ▪ ▪ ▪ ▪ ▪
4000	8	6.08	26.7	9.89	7.82	39.5	2.55	98.00	N X 6 2 0 E ▪ J ▪ ▪ ▪ ▪ ▪
1450	12	10.73	40	5.25	4.75	21	1.63	147.00	N X 6 3 0 E ▪ R ▪ ▪ ▪ ▪ ▪
2800	12	9.21	40	9.86	7.8	39.4	2.70	147.00	N X 6 3 0 E ▪ K ▪ ▪ ▪ ▪ ▪
4000	12	7.6	40	13.9	9.31	55.6	3.18	147.00	N X 6 3 0 E ▪ G ▪ ▪ ▪ ▪ ▪
1000	16	15.38	50	5.16	4.99	20.3	1.61	320.00	N X 8 2 0 E ▪ X ▪ ▪ ▪ ▪ ▪
2200	16	14.48	50	11	10.04	43.2	3.34	320.00	N X 8 2 0 E ▪ R ▪ ▪ ▪ ▪ ▪
3600	16	13.24	50	17.5	14.82	69.1	4.99	320.00	N X 8 2 0 E ▪ L ▪ ▪ ▪ ▪ ▪
1200	258	25.54	92	10.1	9.27	39.9	3.21	620.00	N X 8 4 0 E ▪ Q ▪ ▪ ▪ ▪ ▪
1700	20.5	20.5	92	11.1	11.24	59.8	3.65	620.00	N X 8 4 0 E ▪ L ▪ ▪ ▪ ▪ ▪
2200	28	22.88	92	18.9	15.7	74.8	5.27	620.00	N X 8 4 0 E ▪ J ▪ ▪ ▪ ▪ ▪
2600	41	27.47	137	33	22.72	132	7.48	920.00	N X 8 6 0 E ▪ D ▪ ▪ ▪ ▪ ▪
400 VAC supply voltage - three-phase									
4000	2	1.65	6.6	1.39	1.18	5.56	0.69	7.90	N X 3 1 0 E ▪ P ▪ ▪ ▪ ▪ ▪
9800	2	0.71	6.6	3.38	1.42	13.5	0.72	7.90	N X 3 1 0 E ▪ I ▪ ▪ ▪ ▪ ▪
2000	4	3.60	13.4	1.36	1.23	5.47	0.75	29.00	N X 4 2 0 E ▪ V ▪ ▪ ▪ ▪ ▪
4000	4	3.14	13.4	2.71	2.16	10.9	1.32	29.00	N X 4 2 0 E ▪ P ▪ ▪ ▪ ▪ ▪
7500	4	1.90		5.43			1.49	29.00	N X 4 2 0 E ▪ X ▪ ▪ ▪ ▪ ▪
1000	5.5	5.38	18.8	1.41	1.38	5.64	0.56	42.60	N X 4 3 0 E ▪ V ▪ ▪ ▪ ▪ ▪
3000	5.5	4.77	18.8	2.82	2.48	11.3	1.50	42.60	N X 4 3 0 E ▪ P ▪ ▪ ▪ ▪ ▪
4000	5.5	4.29	18.8	3.78	3.01	15.1	1.80	42.60	N X 4 3 0 E ▪ L ▪ ▪ ▪ ▪ ▪
6000	5.5	2.98	18.8	6.64	3.76	26.5	1.87	42.60	N X 4 3 0 E ▪ F ▪ ▪ ▪ ▪ ▪
2000	8	7.52	26.7	2.83	2.69	11.3	1.58	98.00	N X 6 2 0 E ▪ V ▪ ▪ ▪ ▪ ▪
3900	8	6.17	26.7	5.31	4.25	21.2	2.52	98.00	N X 6 2 0 E ▪ R ▪ ▪ ▪ ▪ ▪
4500	8	4.10	26.7	9.89	5.56	39.5	1.93	98.00	N X 6 2 0 E ▪ J ▪ ▪ ▪ ▪ ▪
6000	8	3.68	26.7	12.1	6.19	48.3	2.31	98.00	N X 6 2 0 E ▪ D ▪ ▪ ▪ ▪ ▪
1350	12	10.83	40	2.62	2.4	10.5	1.53	147.00	N X 6 3 0 E ▪ V ▪ ▪ ▪ ▪ ▪
2700	12	9.34	40	5.25	4.2	21	2.64	147.00	N X 6 3 0 E ▪ R ▪ ▪ ▪ ▪ ▪
4000	12	7.60	40	7.92	5.3	31.6	3.18	147.00	N X 6 3 0 E ▪ N ▪ ▪ ▪ ▪ ▪
5000	12	6.07	40	13.9	7.64	55.6	3.18	147.00	N X 6 3 0 E ▪ G ▪ ▪ ▪ ▪ ▪
1900	16	14.72	50	5.16	4.79	20.3	2.93	320.00	N X 8 2 0 E ▪ X ▪ ▪ ▪ ▪ ▪
3900	160	12.94	50	11	9.07	43.2	5.28	320.00	N X 8 2 0 E ▪ R ▪ ▪ ▪ ▪ ▪
2100	28	23.17	92	10.1	8.47	39.9	5.10	620.00	N X 8 4 0 E ▪ Q ▪ ▪ ▪ ▪ ▪
3100	20.5	20.50	92	11.1	11.09	59.8	6.49	620.00	N X 8 4 0 E ▪ L ▪ ▪ ▪ ▪ ▪
3500	28	18.56	92	16.8	11.51	66.5	6.80	620.00	N X 8 4 0 E ▪ K ▪ ▪ ▪ ▪ ▪
4500	28	14.00	65	21.7			6.60	620.00	N X 8 4 0 E ▪ H ▪ ▪ ▪ ▪ ▪
1700	41	34.10	137	14.8	12.44	59.2	6.07	920.00	N X 8 6 0 E ▪ L ▪ ▪ ▪ ▪ ▪
2600	41	27.47	137	18.5	12.78	74	7.48	920.00	N X 8 6 0 E ▪ J ▪ ▪ ▪ ▪ ▪
3200	41	21.89	137	27	14.88	108	7.34	920.00	N X 8 6 0 E ▪ F ▪ ▪ ▪ ▪ ▪

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

NX3 - NX8 models

CE and UL motors

2 - 41 Nm

Selection and ordering

Rated Speed N_N (rpm)	Stall Torque M_0* (Nm)	Rated Torque M_N (Nm)	Peak Torque M_{MAX} (Nm)	Stall Current I_0* (A_{RMS})	Rated Current I_N (A_{RMS})	Peak Current I_{MAX} (A_{RMS})	Rated Power P_N (kW)	Moment of Inertia J (kg.m².10-5)	Product Code							
480 VAC supply voltage - three-phase																
4800	2.00	1.57	6.6	1.39	1.13	5.56	0.79	7.90	N X 3 1 0 E	▪	P	▪	▪	▪	▪	▪
2300	4.00	3.53	13.4	1.36	1.21	5.47	0.85	29.00	N X 4 2 0 E	▪	V	▪	▪	▪	▪	▪
4700	4.00	2.96	13.4	2.71	2.05	10.9	1.46	29.00	N X 4 2 0 E	▪	P	▪	▪	▪	▪	▪
1200	5.50	5.34	18.8	1.41	1.37	5.64	0.67	42.60	N X 4 3 0 E	▪	V	▪	▪	▪	▪	▪
3500	5.50	4.55	18.8	2.82	2.37	11.3	1.67	42.60	N X 4 3 0 E	▪	P	▪	▪	▪	▪	▪
4600	5.50	3.95	18.8	3.78	2.78	15.1	1.90	42.60	N X 4 3 0 E	▪	L	▪	▪	▪	▪	▪
2300	8.00	7.36	26.7	2.83	2.64	11.3	1.77	98.00	N X 6 2 0 E	▪	V	▪	▪	▪	▪	▪
4500	8.00	5.57	26.7	5.31	3.89	21.2	2.62	98.00	N X 6 2 0 E	▪	R	▪	▪	▪	▪	▪
5700	8.00	4.10	26.7	9.89	5.56	39.5	2.45	98.00	N X 6 2 0 E	▪	J	▪	▪	▪	▪	▪
1500	12.00	10.68	40	2.62	2.37	10.5	1.68	147.00	N X 6 3 0 E	▪	V	▪	▪	▪	▪	▪
3100	12.00	8.84	40	5.25	4	21	2.87	147.00	N X 6 3 0 E	▪	R	▪	▪	▪	▪	▪
4600	12.00	6.70	40	7.92	4,74	31.6	3.23	147.00	N X 6 3 0 E	▪	N	▪	▪	▪	▪	▪
2100	16.00	14.56	50	5.16	4.75	20.3	3.20	320.00	N X 8 2 0 E	▪	X	▪	▪	▪	▪	▪
4600	16.00	12.22	50	11	8.62	43.2	5.89	320.00	N X 8 2 0 E	▪	R	▪	▪	▪	▪	▪
2400	28.00	22.27	92	10.1	8.17	39.9	5.60	620.00	N X 8 4 0 E	▪	Q	▪	▪	▪	▪	▪
4000	28.00	16.65	92	16.8	10.43	66.5	6.97	620.00	N X 8 4 0 E	▪	K	▪	▪	▪	▪	▪
3000	41.00	23.85	137	18.5	11.22	74	7.49	920.00	N X 8 6 0 E	▪	J	▪	▪	▪	▪	▪

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

NX3 - NX8 models

CE and UL motors

2 - 41 Nm

Drives associations

Motor	Rated Speed N_N (rpm)	Compax 3		AC890SD	637f/638	Digivex
		Drive reference	Max. speed (rpm)	Drive reference	Drive reference	Drive reference
230 VAC supply voltage - mono or three-phased						
NX310E▪P▪▪▪▪▪	2300	C3S025V2...	1930	890SD-231300B0...	638A-02-3-F-0-STO	DLD13M04...
NX310E▪K▪▪▪▪▪	4000	C3S025V2...	3600	890SD-231550B0...	638A-04-3-F-0-STO	DLD13M04...
NX310E▪X▪▪▪▪▪	6600	C3S063V2...	5590	890SD-231550B0...	638A-04-3-F-0-STO	DLD13M04...
NX420E▪P▪▪▪▪▪	2300	C3S100V2...	1990	890SD-231550B0...	638A-04-3-F-0-STO	DLD13M04...
NX420E▪J▪▪▪▪▪	4000	C3S100V2...	3620	890SD-231700B0...	638A-04-3-F-0-STO	DLD13007...
NX430E▪V▪▪▪▪▪	550	C3S025V2...	550	890SD-231300B0...	638A-02-3-F-0-STO	DLD13M02...
NX430E▪J▪▪▪▪▪	3200	C3S100V2...	2860	890SD-231700B0...	638A-06-3-F-0-STO	DLD13007...
NX430E▪H▪▪▪▪▪	3400	C3S100V2...	3110	890SD-231700B0...	638A-06-3-F-0-STO	DLD13007...
NX430E▪F▪▪▪▪▪	4000	C3S100V2...	3700	890SD-232110B0...	-	DSD13015...
NX620E▪R▪▪▪▪▪	2200	C3S100V2...	1880	890SD-231700B0...	638A-06-3-F-0-STO	DLD13007...
NX620E▪J▪▪▪▪▪	4000	C3S100V2...	3670	890SD-232165B0...	-	DSD13015...
NX630E▪R▪▪▪▪▪	1450	C3S100V2...	1320	890SD-231700B0...	638A-06-3-F-0-STO-	DLD13007...
NX630E▪K▪▪▪▪▪	2800	C3S100V2...	2600	890SD-232165B0...	-	DSD13015...
NX630E▪G▪▪▪▪▪	4000	C3S150V2...	3750	890SD-232240C0...		DSD13015...
NX820E▪X▪▪▪▪▪	1000	C3S100V2...	890	890SD-231700B0...	638A-06-3-F-0-STO-	DLD13007...
NX820E▪R▪▪▪▪▪	2200	C3S150V2...	2000	890SD-232165B0...	-	DSD13015...
NX820E▪L▪▪▪▪▪	3600	-	3310	890SD-232240C0...	-	DSD13030...
NX840E▪Q▪▪▪▪▪	1200	C3S100V2...	1060	890SD-232165B0...	-	DSD13015...
NX840E▪L▪▪▪▪▪	1700	C3S150V2...	1630	890SD-232165B0...	-	DSD13015...
NX840E▪J▪▪▪▪▪	2200	-	2070	890SD-232240C0...	-	DSD13030...
NX860E▪D▪▪▪▪▪	2600	-	2510	890SD-232300C0...		-
400 VAC supply voltage - three-phased						
NX310E▪P▪▪▪▪▪	4000	C3S015V4...	3570	890SD-531200B0...	638B-03-6-F-0-STO	DSD16002...
NX310E▪I▪▪▪▪▪	9800	C3S038V4...	9510	890SD-531450B0...	638B-05-6-F-0-STO	DSD16004...
NX420E▪V▪▪▪▪▪	2000	C3S015V4...	1710	890SD-531200B0...	638B-03-6-F-0-STO	DSD16002...
NX420E▪P▪▪▪▪▪	4000	C3S038V4...	3630	890SD-531450B0...	638B-05-6-F-0-STO	DSD16004...
NX420E▪X▪▪▪▪▪	7500	C3S075V4...	7500	890SD-532100B0...	638B-08-6-F-0-STO	DSD16008...
NX430E▪V▪▪▪▪▪	1000	C3S015V4...	1000	890SD-531200B0...	638B-03-6-F-0-STO	DSD16002...
NX430E▪P▪▪▪▪▪	3000	C3S038V4...	2670	890SD-531450B0...	638B-05-6-F-0-STO	DSD16004...
NX430E▪L▪▪▪▪▪	4000	C3S038V4...	3650	890SD-531600B0...	638B-05-6-F-0-STO	DSD16008...
NX430E▪F▪▪▪▪▪	6000	C3S075V4...	6000	890SD-532120B0...	638B-08-6-F-0-STO	DSD16008...
NX620E▪V▪▪▪▪▪	2000	C3S038V4...	1730	890SD-531450B0...	638B-05-6-F-0-STO	DSD16004...
NX620E▪R▪▪▪▪▪	3900	C3S075V4...	3440	890SD-532100B0...	638B-08-6-F-0-STO	DSD16008...
NX620E▪J▪▪▪▪▪	4500	C3S150V4...	5700	890SD-532160B0...	638B-10-6-F-0-STO	DSD16016...
NX620E▪D▪▪▪▪▪	6000	C3S150V4...	6000	890SD-532240C0...	637F/KD6R22-7	DSD16016...
NX630E▪V▪▪▪▪▪	1350	C3S038V4...	1150	890SD-531450B0...	638B-05-6-F-0-STO	DSD16004...
NX630E▪R▪▪▪▪▪	2700	C3S075V4...	2390	890SD-532100B0...	638B-08-6-F-0-STO	DSD16008...
NX630E▪N▪▪▪▪▪	4000	C3S150V4...	3710	890SD-532120B0...	638B-10-6-F-0-STO	DSD16016...
NX630E▪G▪▪▪▪▪	5000	C3S150V4...	5000	890SD-532240C0...	637F/KD6R22-7	DSD16016...
NX820E▪X▪▪▪▪▪	1900	C3S075V4...	1620	890SD-532100B0...	638B-08-6-F-0-STO	DSD16008...
NX820E▪R▪▪▪▪▪	3900	C3S150V4...	3600	890SD-532160B0...	638B-15-6-F-0-STO	DSD16016...
NX840E▪Q▪▪▪▪▪	2100	C3S150V4...	1910	890SD-532160B0...	638B-10-6-F-0-STO	DSD16016...
NX840E▪L▪▪▪▪▪	3100	C3S150V4...	2930	890SD-532160B0...	638B-15-6-F-0-STO	DSD16016...
NX840E▪K▪▪▪▪▪	3500	C3S300V4...	3270	890SD-532240C0...	637F/KD6R22-7	DSD16032...
NX840E▪H▪▪▪▪▪	4500	C3S300V4...	4290	890SD-532300C0...	637F/KD6R22-7	DSD16032...
NX860E▪L▪▪▪▪▪	1700	C3S150V4...	1700	890SD-532240C0...	637F/KD6R22-7	DSD16016...
NX860E▪J▪▪▪▪▪	2600	C3S300V4...	2440	890SD-532240C0...	637F/KD6R22-7	DSD16032...
NX860E▪F▪▪▪▪▪	3200	C3S300V4...	3200	890SD-532390C0	637F/KD6R22-7	DSD16032...

NX3 - NX8 models

CE and UL motors

2 - 41 Nm

NX3 - NX8, CE and UL - codification

NX3/4/6/8 - natural cooling	Product Code Example							
	NX860E	▪	**D**	▪	▪	▪	▪	▪
FEEDBACK SENSOR								
2 poles resolver (standard)		**A**						
Cost effective absolute POSIVEX encoder		M						
Absolute singleturn HIPERFACE encoder 128 ppr SKS36		R						
Absolute multiturn HIPERFACE encoder 128 ppr SKM36		S						
Absolute singleturn HIPERFACE encoder 1024 ppr SRS50		T						
Absolute multiturn HIPERFACE encoder 1024 ppr SRM50		U						
Absolute signleturn ENDAT encoder ECN 1113		V						
Absolute multiturn ENDAT encoder EQN 1125		W						
Low cost encoder with 10 commutation tracks 2048 ppr		X						
Absolute multi-turn HIPERFACE 16ppr SEL37		Q						
PAINTING								
Without painting (standard)				**R**				
Black mat				**B**				
CONNECTIONS / **VENTILATION**								
Shielded cables / No					1			
Connectors (standard) / **No**					**7**			
BRAKE / **THERMAL PROTECTION**								
Without brake (standard) / **No protection**						**0**		
Without brake / PTC on power connection						1		
Without brake / Thermo switch on power connection						2		
With brake / No protection						3		
With brake / PTC on power connection						4		
With brake / Thermo switch on power connection						5		
Without brake / PTC on sensor connection (not available for UL version)						A		
Without brake / Thermo switch on sensor connection (not available for UL version)						B		
Without brake / KTY on sensor connector (not available for UL version)						C		
With brake / PTC on sensor connection (not available for UL version)						D		
With brake / Thermo switch on sensor connection (not available for UL version)						E		
With brake / KTY on sensor connection (not available for UL version)						F		
PROTECTION DEGREE								
IP64							**0**	
IP65							1	
SHAFT END								
Smooth shaft								**0**
Keyed shaft								1

NX3 - NX8 models

CE and UL motors

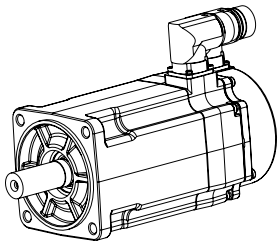
2 - 41 Nm

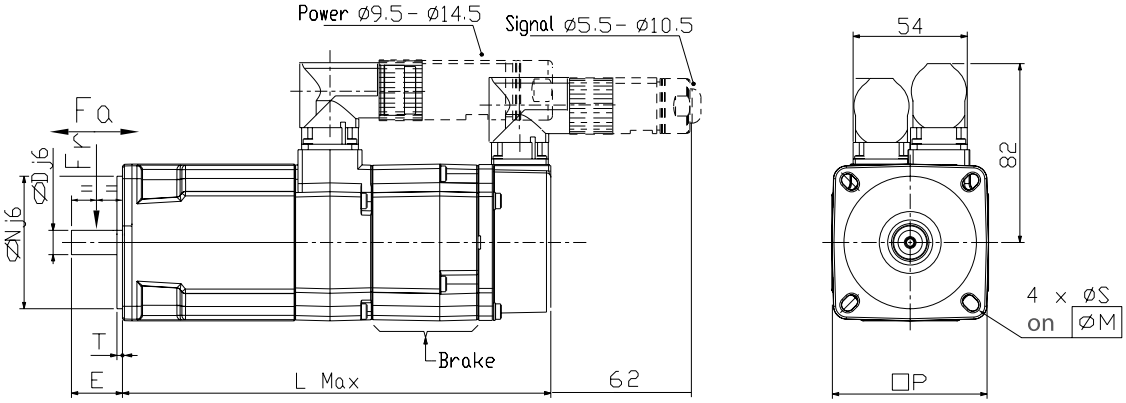
Dimensions and drawings (resolver version)

NX3, NX4, NX6 dimensions

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 rpm for a bearing service life of 20000 hours

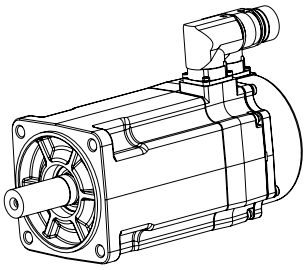


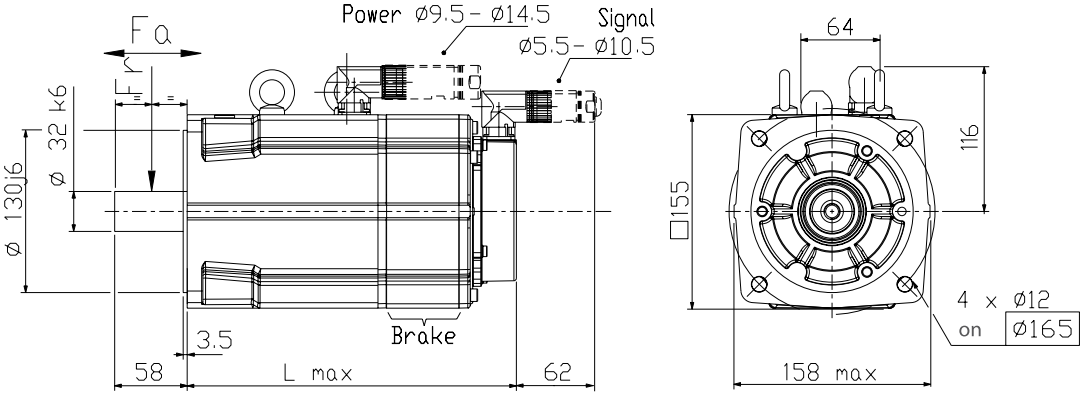


NX8 dimensions

Moteur	Without brake		With brake		Fr* (daN)	Fa* (daN)
	Weight (kg)	L (mm)	Weight (kg)	L (mm)		
N X 8 2 0	13	200	16.5	266	151	28
N X 8 4 0	20	260	23.5	326	165	33
N X 8 6 0	27	320	30.5	386	172	37

* Fr and Fa not cumulative : At 1500 rpm for a bearing service life of 20000 hours





NX8 Model - ventilated version

CE and UL motors

64 Nm

Selection and ordering

Rated Speed N_N (rpm)	Stall Torque M_0 (Nm)	Rated Torque M_N (Nm)	Peak-Torque M_{MAX} (Nm)	Stall Current I_0 (A_{RMS})	Rated Current I_N (A_{RMS})	Peak Current I_{MAX} (A_{RMS})	Rated Power P_N (kW)	Moment of Inertia J ($kg.m^2.10^{-5}$)	Product Code
230 VAC supply voltage - mono or three-phased									
1450	64.00	57.50	137	29.3	26.4	74	8.73	920	N X 8 6 0 V ▪ J ▪ ▪ ▪ ▪ ▪
400 VAC supply voltage - three-phased									
2600	64.00	50.52	137	29.3	23.22	74	13.76	920	N X 8 6 0 V ▪ J ▪ ▪ ▪ ▪ ▪
3750	64.00	41.78	137	42.7	28.11	108	16.40	920	N X 8 6 0 V ▪ F ▪ ▪ ▪ ▪ ▪
480 VAC supply voltage - three-phased									
3000	64.00	47.67	137	29.3	21.95	74	14.98	920	N X 8 6 0 V ▪ J ▪ ▪ ▪ ▪ ▪
4400	64.00	36.09	137	42.7	24.47	108	16.63	920	N X 8 6 0 V ▪ F ▪ ▪ ▪ ▪ ▪

Drives associations

Motor	Rated Speed N_N (rpm)	Compax 3		AC890SD	637f/638	Digivex
		Drive reference	Max. speed (rpm)	Drive reference	Drive reference	Drive reference
230 VAC supply voltage - mono or three-phased						
N X 8 6 0 V ▪ J ▪ ▪ ▪ ▪ ▪	1450	-	-	890SD-232300C0...	-	DP▪2705
400 VAC supply voltage - three-phased						
N X 8 6 0 V ▪ J ▪ ▪ ▪ ▪ ▪	2600	C3S300V4...	2230	890SD-532300C0...	637F/KD6R30-7	DP▪2705
N X 8 6 0 V ▪ F ▪ ▪ ▪ ▪ ▪	3750	C3S500V4...	3400	890SD-532590C0...		DP▪170
480 VAC supply voltage - three-phased						
N X 8 6 0 V ▪ J ▪ ▪ ▪ ▪ ▪	3000	-	-	890SD-532390D0...	-	-
N X 8 6 0 V ▪ F ▪ ▪ ▪ ▪ ▪	4400	-	-	890SD-532390D0...	-	-

NX8 Model - ventilated version

CE and UL motors

64 Nm

NX 8 ventilated version, CE and UL - codification

	Product code example										
	N	X	8	6	0	V	▪	J	▪	▪	▪	▪	▪
FEEDBACK SENSOR													
2 poles resolver (standard)							**A**						
Cost effective absolute POSIVEX encoder							M						
Absolute multi-turn HIPERFACE 16ppr SEL37							Q						
Absolute single-turn HIPERFACE encoder 128 ppr SKS36							R						
Absolute multi-turn HIPERFACE encoder 128 ppr SKM36							S						
Absolute single-turn HIPERFACE encoder 1024 ppr SRS50							T						
Absolute multi-turn HIPERFACE encoder 1024 ppr SRM50							U						
Absolute signle-turn ENDAT encoder ECN 1113							V						
Absolute multi-turn ENDAT encoder EQN 1125							W						
Low cost encoder with 10 commutation tracks 2048 ppr							X						
PAINTING													
Without painting (standard)									**R**				
Black mat									B				
CONNECTIONS													
UL power terminal box + feedback connector										5			
CE power terminal box + feedback connector										9			

BRAKE	THERMAL PROTECTION	
Without brake (standard)	**No protection**	**0**
Without brake	PTC on power connection	1
Without brake	Thermo switch on power connection	2
With brake	No protection	3
With brake	PTC on power connection	4
With brake	Thermo switch on power connection	5
Without brake	PTC on sensor connection (not available for UL version)	A
Without brake	Thermo switch on sensor connection (not available for UL version)	B
Without brake	KTY on sensor connection (not available for UL version)	C
With brake	PTC on sensor connection (not available for UL version)	D
With brake	Thermo switch on sensor connection (not available for UL version)	E
With brake	KTY on sensor connection (not available for UL version)	F

PROTECTION DEGREE													
IP44												**0**	
SHAFT END													
Smooth shaft (standard)													**0**
Keyed shaft													1

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

NX8 Model - ventilated version

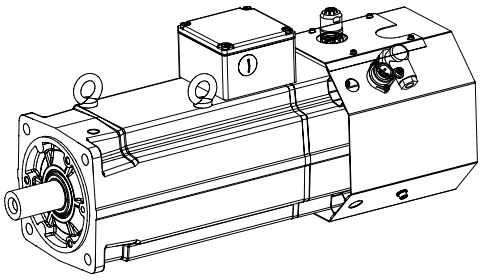
CE and UL motors

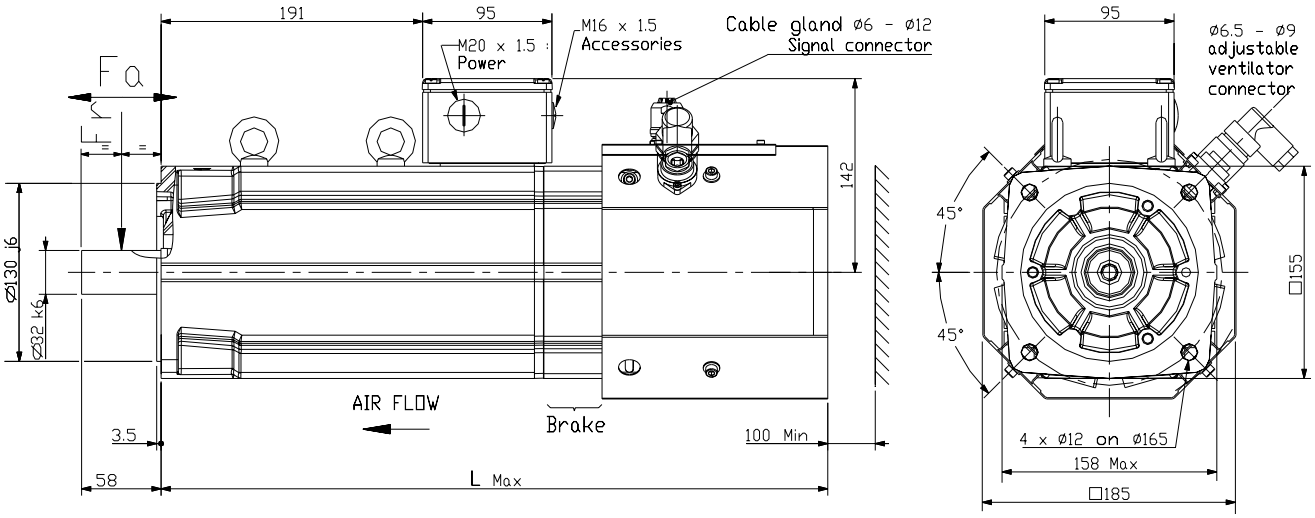
64 Nm

Dimensions and drawings (resolver version)

Dimensions NX8 ventilé						
Moteur	Sans frein		Sans frein		Fr* (daN)	Fa* (daN)
	Masse (kg)	L (mm)	Masse (kg)	L (mm)		
NX860V	30.5	424	34	490	172	37

* Fr and Fa not cumulative : At 1500 rpm for a bearing service life of 20000 hours





Sensorless motors

NX series

0,5 - 7,5 kW, 0,45 - 41 Nm

Description

The sensorless version of NX Series motors has been designed to offer a cost effective brushless solution in association with AC650S drives.

Controlled without feedback sensor, NX Series servomotors are innovative, compact, performant and highly efficient alternative to traditional induction motors.

Features and benefits

Cost effective brushless solution

Sensorless control with AC650S drives

Increased compactness and efficiency compared to induction motors

Increased robustness due to suppression of feedback sensor

No need fan ventilation

Associations with Parker NX servo moteurs

At rated speed		@ 1500 rpm	@ 3000 rpm	At low speed		Inertia	Motor code	Drive Code
Nn (rpm)	Pn (kW)	P (kW)	P (kW)	M0 (Nm)	I0 (Arms)	(kg.m2.10-5)		
230 Vac power supply								
6000	0,21	0,07	0,13	0,45	1,14	2,1	NX205EYUR6000	650S-21140010-001P00-A1
5000	0,37	0,15	0,27	1	1,99	3,8	NX210EYPR6000	650S-21140010-001P00-A1
2000	0,38	0,29	_	2	1,39	7,9	NX310EYPR6000	650S-21140010-001P00-A1
3500	0,62	0,29	0,55	2	2,43	7,9	NX310EYKR6000	650S-21140010-001P00-A1
1900	0,72	0,58	_	4	2,71	29	NX420EYPR6000	650S-21140010-001P00-A1
3350	1,09	0,58	1,06	4	4,43	29	NX420EYKR6000	650S-21170020-001P00-A1
1750	0,95	0,83	_	5,5	3,43	42,6	NX430EYMR6000	650S-21140010-001P00-A1
2700	1,38	0,83	_	5,5	5,24	42,6	NX430EYJR6000	650S-21170020-001P00-A1
3500	1,67	0,83	1,5	5,5	6,64	42,6	NX430EYFR6000	650S-21170020-001P00-A1
1850	1,47	1,21	_	8	5,31	98	NX620EYRR6000	650S-21170020-001P00-A1
1650	1,82	1,8	_	12	6,74	147	NX630EYWR6000	650S-21170020-001P00-A1
850	1,38	_	_	16	5,16	320	NX820EYXR6000	650S-21170020-001P00-A1
400 Vac power supply								
6000	0,21	0,07	0,13	0,45	1,14	2,1	NX205EYUR6000	650S-43125020-B01P00-A1
6000	0,39	0,15	0,27	1	1,99	3,8	NX210EYPR6000	650S-43125020-B01P00-A1
3700	0,65	0,29	0,55	2	1,39	7,9	NX310EYPR6000	650S-43125020-B01P00-A1
6000	0,88	0,29	0,55	2	2,43	7,9	NX310EYKR6000	650S-43125020-B01P00-A1
1750	0,67	0,58	_	4	1,36	29	NX420EYVR6000	650S-43125020-B01P00-A1
3500	1,19	0,58	1,06	4	2,71	29	NX420EYPR6000	650S-43155020-B01P00-A1
6000	1,65	0,58	1,06	4	4,43	29	NX420EYKR6000	650S-43155020-B01P00-A1
2250	1,19	0,83	_	5,5	2,45	42,6	NX430EYQR6000	650S-43125020-B01P00-A1
3150	1,55	0,83	1,5	5,5	3,43	42,6	NX430EYMR6000	650S-43155020-B01P00-A1
3500	1,67	0,83	1,5	5,5	3,78	42,6	NX430EYLR6000	650S-43155020-B01P00-A1
1500	1,21	1,21	_	8	2,42	98	NX620EYIR6000	650S-43125020-B01P00-A1
3350	2,33	1,21	2,17	8	5,31	98	NX620EYRR6000	650S-43155020-B01P00-A1
5800	2,41	1,21	2,17	8	8,88	98	NX620EYKR6000	650S-43190030-B01P00-A1
2350	2,4	1,8	_	12	5,25	147	NX630EYRR6000	650S-43155020-B01P00-A1
3000	3,12	1,8	3,12	12	6,74	147	NX630EYWR6000	650S-43190030-B01P00-A1
4000	3,48	1,8	3,12	12	8,98	147	NX630EYLR6000	650S-43190030-B01P00-A1
1620	2,53	2,36	_	16	5,16	320	NX820EYXR6000	650S-43155020-B01P00-A1
3500	4,89	2,36	4,33	16	11	320	NX820EYRR6000	650S-43216030-B01P00-A1
5150	6,26	2,36	4,33	16	16	320	NX820EYMR6000	650S-43216030-B01P00-A1
1650	4,22	3,9	_	28	8,9	620	NX840EYRR6000	650S-43290030-B01P00-A1
3000	6,39	3,9	6,39	28	15,9	620	NX840EYWR6000	650S-43216030-B01P00-A1
1400	5,26	_	_	41	15,6	920	NX860EYWR6000	650S-43216030-B01P00-A1

Sensorless motors

NX series

0,5 - 7,5 kW, 0,45 - 41 Nm

Associations with Parker NX servo moteurs

460 Vac power supply

At rated speed		@ 1500 rpm	@ 3000 rpm	At low speed		Inertia	Motor code	Drive Code
Nn (rpm)	Pn (kW)	P (kW)	P (kW)	M0 (Nm)	I0 (Arms)	(kg.m2.10-5)		
6000	0,24	0,08	0,16	0,45	1,14	2,1	NX205EYUR6000	650S-43125020-B01P00-A1
6000	0,45	0,18	0,32	1	1,99	3,8	NX210EYPR6000	650S-43125020-B01P00-A1
4200	0,75	0,35	0,66	2	1,39	7,9	NX310EYPR6000	650S-43125020-B01P00-A1
6000	1,01	0,35	0,66	2	2,43	7,9	NX310EYKR6000	650S-43125020-B01P00-A1
2000	0,77	0,7	_	4	1,36	29	NX420EYVR6000	650S-43125020-B01P00-A1
4000	1,37	0,7	1,27	4	2,71	29	NX420EYPR6000	650S-43155020-B01P00-A1
6000	1,9	0,7	1,27	4	4,43	29	NX420EYKR6000	650S-43155020-B01P00-A1
2500	1,37	1	_	5,5	2,45	42,6	NX430EYQR6000	650S-43125020-B01P00-A1
3600	1,78	1	1,8	5,5	3,43	42,6	NX430EYMR6000	650S-43155020-B01P00-A1
4000	1,92	1,00	1,8	5,5	3,78	42,6	NX430EYLR6000	650S-43155020-B01P00-A1
1700	1,39	1,45	_	8	2,42	98	NX620EYIR6000	650S-43125020-B01P00-A1
3800	2,68	1,45	2,6	8	5,31	98	NX620EYRR6000	650S-43155020-B01P00-A1
6000	2,77	1,45	2,6	8	8,88	98	NX620EYKR6000	650S-43190030-B01P00-A1
2700	2,76	2,16	_	12	5,25	147	NX630EYRR6000	650S-43155020-B01P00-A1
3400	3,24	2,16	3,38	12	6,74	147	NX630EYWR6000	650S-43190030-B01P00-A1
4600	3,66	2,16	3,38	12	8,98	147	NX630EYLR6000	650S-43190030-B01P00-A1
1800	2,83	2,83	_	16	5,16	320	NX820EYXR6000	650S-43155020-B01P00-A1
4000	5,62	2,83	5,2	16	11	320	NX820EYRR6000	650S-43216030-B01P00-A1
5900	7,2	2,83	5,2	16	16	320	NX820EYMR6000	650S-43216030-B01P00-A1
1900	4,85	4,68	_	28	8,9	620	NX840EYRR6000	650S-43290030-B01P00-A1
3400	7,35	4,68	7,67	28	15,9	620	NX840EYWR6000	650S-43216030-B01P00-A1
1600	5,53	4,68	_	41	15,6	920	NX860EYWR6000	650S-43216030-B01P00-A1

Sensorless motors

NX series

0,5 - 7,5 kW

NX sensorless codification

NX Sensorless - natural cooling		Product code example											
		N	X	8	6	0	E	Y	J	▪	▪	▪	▪	▪
PAINTING														
Without painting (standard)										**R**				
Black mat										B				
CONNECTION														
Terminal Box (standard)											**6**			
Connectors											7			
BRAKE	THERMAL PROTECTION													
Without brake	**No thermal protection**											**0**		
Without brake	PTC (only with connectors : 7)											1		
Without brake	Thermo switch (only with connectors : 7)											2		
With brake	No thermal protection (only with connectors : 7)											3		
With brake	PTC (only with connectors : 7)											4		
With brake	Thermo switch (only with connectors : 7)											5		
PROTECTION DEGREE														
IP64 (standard)													**0**	
IP65													1	
SHAFT END														
Smooth shaft (standard)														**0**
Keyed shaft														1

* Mounting on aluminium flange : 280 x 280 x 8 mm (NX1-2), 400 x 400 x 12 mm (NX3-8)
Temperature < 40°C near motor's flange

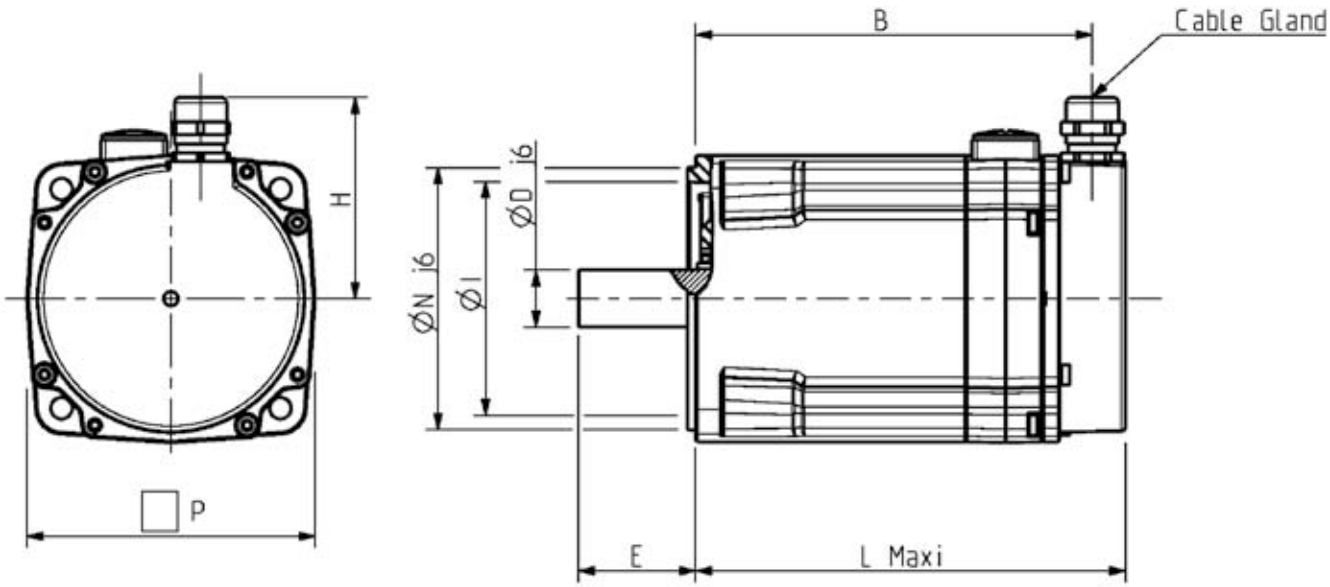
Sensorless motors

NX series

0,5 - 7,5 kW

Dimensions and drawings

NX sensorless dimensions [mm]								
Motor	B	Lmaxi	P	N	I	D	E	H
N X 2 0 5	7 8	100	56.5	40 j6	NA	11 j6	25 ± 0,6	53
N X 2 1 0	9 8	120	56.5	40 j6	NA	11 j6	25 ± 0,6	53
N X 3 1 0	1 3 5	147	71	60 j6	NA	11 j6	23 ± 0,6	59.3
N X 4 2 0	1 6 0	175	91.5	80 j6	74	19 j6	40 ± 0,6	67
N X 4 3 0	1 8 5	200	91.5	80 j6	74	19 j6	40 ± 0,6	67
N X 6 2 0	1 6 7	181	121	110 j6	98	24 j6	50 ± 0,6	84.5
N X 6 3 0	1 9 6	210	121	110 j6	98	24 j6	50 ± 0,6	84.5
N X 8 2 0	18 5	200	158	130j6	118	32k6	58 ± 0,6	84.5
N X 8 4 0	24 5	260	158	130j6	118	32k6	58 ± 0,6	84.5
N X 8 6 0	30 5	320	158	130j6	118	32k6	58 ± 0,6	84.5



POWER CONNECTORS

Black : phase U
White : phase V
Red : phase W
Yellow/Green : Ground

Servomotors for explosive atmospheres

EX series

1,75 to 35 Nm

General technical characteristics	
Motor type	Permanent magnets synchronous motors
Number of poles	10
Torque range	1,75 to 35 Nm
Speed range	2000 to 8000 rpm
Mounting	- Flange with smooth holes
Mechanical interface	- Solid smooth shaft (standard) - Solid shaft with key (option)
Feedback sensors	- 2 poles resolver (standard) - Absolute EnDat encoder (option) - Absolute Hiperface encoder (option)
Thermal protection	- Thermoswitches and thermofuses integrated to the winding
Other options	- Parking brake

Voltage supply	230 / 400 VAC	230/ 480 VAC
Conformance	- ATEX 94/9/EC Directive - EN60079-0, EN60079-1 EN61241-0 and EN61241-1 standards	- UL 674 standard : Electric Motors and Generators for use in Division 1 Hazardous (Classified) Locations
Classification	- II 2G Ex d IIB T4 IP64 (Gaz) - II 2GD Ex d IIB T4 IP65 Ex tD A21 IP65 T135°C (Gas and dust)	- Class 1, Division 1, Group C & D
Ingress protection level	- IP64 (standard) - IP65 (option)	- IP65
Connections	- cable glands	- Tapped holes
Marking		

Description

EX series is a range of permanent magnets servomotors designed for use in explosive atmospheres. Featuring robust explosion-proof housings, EX motors are capable of bearing internal explosions with no risks of propagation to the neighbouring environment. Two versions are available, conforming with north american or european safety standards. EX servomotors are characterized by excellent motion quality, great acceleration / deceleration capabilities, and high torque output over a wide speed range. Various winding variants and numerous options are available to offer maximum flexibility.

Advantages

Servomotors with explosion proof housings

CE or UL versions available

High dynamic performances

Compactness and robustness

No maintenance

Applications

- Printing machinery
- Paint spray equipments
- Plastics machinery
- Chemical, petro-chemical and pharmaceutical industries
- Waste processing plants...

CE servomotors

EX series

1,75 to 35 Nm

Selection and ordering

Rated Speed N_{MAX} (rpm)	Stall Torque M_0 (Nm)	Stall Current I_0 (A^{RMS})	Rated Torque M_N (Nm)	Rated Current I_N (A^{RMS})	Peak Torque M_{MAX} (Nm)	Peak Current I_{MAX} (A_{RMS})	Max. Speed with Compax3 N_{MAX} (rpm)	Moment of Inertia J (kgm^2x10^{-5})	Reference					
230 VAC power supply														
2300	1.75	1.24	1.66	1.19	6.6	5.64	1960	7.9	E X 3 1 0 E	▪	P R 1	▪	▪	▪
4000	1.75	2.16	1.54	1.96	6.6	9.85	3630	7.9	E X 3 1 0 E	▪	K R 1	▪	▪	▪
2300	3.5	2.46	3.18	2.26	13.4	11.3	2030	29	E X 4 2 0 E	▪	P R 1	▪	▪	▪
4000	3.5	4.26	2.67	3.33	13.4	19.6	3700	29	E X 4 2 0 E	▪	J R 1	▪	▪	▪
3200	4.8	4.57	3.74	3.63	18.8	21	2930	42.6	E X 4 3 0 E	▪	J R 1	▪	▪	▪
4000	4.8	5.8	3.26	4.05	18.8	26.6	3790	42.6	E X 4 3 0 E	▪	F R 1	▪	▪	▪
2500	7	5.51	5.49	4.47	26.7	24.8	2310	98	E X 6 2 0 E	▪	O R 1	▪	▪	▪
3000	10.4	10	7.24	7.32	40	42.2	2860	147	E X 6 3 0 E	▪	I R 1	▪	▪	▪
2200	14	9.28	11.16	7.45	50	41.8	2050	320	E X 8 2 0 E	▪	R R 1	▪	▪	▪
3600	14	14.85	7.53	8.3	50	66.9	3430	320	E X 8 2 0 E	▪	L R 1	▪	▪	▪
2200	24.5	16.04	14.18	9.54	92	72.7	2120	620	E X 8 4 0 E	▪	J R 1	▪	▪	▪
2500	35	27.3	8.5	7.28	137	133	2500	920	E X 8 6 0 E	▪	D R 1	▪	▪	▪
400VAC power supply														
4000	1.75	1.24	1.54	1.12	6.6	5.64	3600	7.9	E X 3 1 0 E	▪	P R 1	▪	▪	▪
2000	3.5	1.24	3.22	1.15	13.4	5.68	1740	29	E X 4 2 0 E	▪	V R 1	▪	▪	▪
4000	3.5	2.46	2.68	1.93	13.4	11.3	3720	29	E X 4 2 0 E	▪	P R 1	▪	▪	▪
3000	4.8	2.46	3.85	2	18.8	11.3	2740	42.6	E X 4 3 0 E	▪	P R 1	▪	▪	▪
4000	4.8	3.3	3.26	2.31	18.8	15.1	3740	42.6	E X 4 3 0 E	▪	L R 1	▪	▪	▪
4300	7	5.22	3.13	2.75	26.7	24.8	4240	98	E X 6 2 0 E	▪	O R 1	▪	▪	▪
2900	10.4	5.54	7.42	4.12	40	23.2	2750	147	E X 6 3 0 E	▪	Y R 1	▪	▪	▪
4000	10.4	7.5	5.2	4.08	40	31.4	3820	147	E X 6 3 0 E	▪	N R 1	▪	▪	▪
2200	14	5.4	11.16	4.36	50	24.3	2080	320	E X 8 2 0 E	▪	W R 1	▪	▪	▪
3600	14	9.3	7.53	5.19	50	41.8	3600	320	E X 8 2 0 E	▪	R R 1	▪	▪	▪
2100	24.5	8.55	15	5.37	92	38.8	1950	620	E X 8 4 0 E	▪	Q R 1	▪	▪	▪
3300	24.5	14.3	2.85	2.07	92	64.7	3300	620	E X 8 4 0 E	▪	K R 1	▪	▪	▪
2500	35	15.4	8.5	4.1	137	75	2500	920	E X 8 6 0 E	▪	J R 1	▪	▪	▪

CE servomotors

EX series

1,75 to 35 Nm

Drives associations

Motor	Rated Speed N_{MAX} (rpm)	Associated drives sizes				
		Compax3	Max. Speed with Compax3 N_{MAX} (rpm)	890SD	650S	DIGIVEX
230 VAC power supply						
E X 3 1 0 E ▪ P R 1 ▪ ▪ ▪	2300	C3S025V2...	1960	890SD-231300B0...	650S-21140010...	DSD13004…
E X 3 1 0 E ▪ K R 1 ▪ ▪ ▪	4000	C3S025V2...	3630	890SD-231300B0...	650S-21140010..	DSD13004…
E X 4 2 0 E ▪ P R 1 ▪ ▪ ▪	2300	C3S025V2...	2030	890SD-231550B0...	650S-21140010...	DSD13004…
E X 4 2 0 E ▪ J R 1 ▪ ▪ ▪	4000	C3S063V2...	3700	890SD-231700B0...	650S-21170020...	DSD13007…
E X 4 3 0 E ▪ J R 1 ▪ ▪ ▪	3200	C3S063V2...	2930	890SD-231700B0...	650S-21170020...	DSD13007…
E X 4 3 0 E ▪ F R 1 ▪ ▪ ▪	4000	C3S063V2...	3790	890SD-231700B0...	650S-21170020...	DSD13015…
E X 6 2 0 E ▪ O R 1 ▪ ▪ ▪	2500	C3S063V2...	2310	890SD-231700B0...	650S-21170020...	DSD13015…
E X 6 3 0 E ▪ I R 1 ▪ ▪ ▪	3000	C3S100V2...	2860	890SD-232165B0...	-	DSD13015…
E X 8 2 0 E ▪ R R 1 ▪ ▪ ▪	2200	C3S100V2...	2050	890SD-232165B0...	-	DSD13015…
E X 8 2 0 E ▪ L R 1 ▪ ▪ ▪	3600	C3S150V2...	3430	890SD-232240C0...	-	DSD13030…
E X 8 4 0 E ▪ J R 1 ▪ ▪ ▪	2200	-	2120	890SD-232240C0...	-	DSD13030…
E X 8 6 0 E ▪ D R 1 ▪ ▪ ▪	2500	-	2500	890SD-232300C0...	-	DSD13060…
480 VAC power supply						
E X 3 1 0 E ▪ P R 1 ▪ ▪ ▪	4000	C3S015V4...	3600	890SD-531200B0...	650S-43125020...	DSD16002…
E X 4 2 0 E ▪ V R 1 ▪ ▪ ▪	2000	C3S015V4...	1740	890SD-531200B0...	650S-43125020...	DSD16002…
E X 4 2 0 E ▪ P R 1 ▪ ▪ ▪	4000	C3S038V4...	3720	890SD-531350B0...	650S-43125020...	DSD16004…
E X 4 3 0 E ▪ P R 1 ▪ ▪ ▪	3000	C3S038V4...	2740	890SD-531350B0...	650S-43125020...	DSD16004…
E X 4 3 0 E ▪ L R 1 ▪ ▪ ▪	4000	C3S038V4...	3740	890SD-531450B0...	650S-43155020...	DSD16008…
E X 6 2 0 E ▪ O R 1 ▪ ▪ ▪	4300	C3S075V4...	4240	890SD-532100B0...	650S-43155020...	DSD16008…
E X 6 3 0 E ▪ Y R 1 ▪ ▪ ▪	2900	C3S075V4...	2750	890SD-532100B0...	650S-43155020...	DSD16008…
E X 6 3 0 E ▪ N R 1 ▪ ▪ ▪	4000	C3S075V4...	3820	890SD-532120B0...	650S-43190030...	DSD16016…
E X 8 2 0 E ▪ W R 1 ▪ ▪ ▪	2200	C3S075V4...	2080	890SD-532100B0...	650S-43155020...	DSD16008…
E X 8 2 0 E ▪ R R 1 ▪ ▪ ▪	3600	C3S150V4...	3600	890SD-532160B0...	650S-43216030...	DSD16016…
E X 8 4 0 E ▪ Q R 1 ▪ ▪ ▪	2100	C3S150V4...	1950	890SD-532120B0...	650S-43190030...	DSD16016…
E X 8 4 0 E ▪ K R 1 ▪ ▪ ▪	3300	C3S150V4...	3300	890SD-53216SB0...	650S-43216030...	DSD16032…
E X 8 6 0 E ▪ J R 1 ▪ ▪ ▪	2500	C3S300V4...	2500	890SD-53216SB0...	650S-43216030...	DSD16032…

CE servomotors

EX series

1,75 to 35 Nm

EX codification

EX motors - CE marked	Product code example					
	EX860E	▪	JR1	▪	▪	▪
FEEDBACK SENSOR						
2 poles resolver (Standard)		**A**				
Absolute multi-turn HIPERFACE 16ppr SEL37		Q				
Absolute singleturn HIPERFACE SKS36 Encoder (128 periods/rev)		R				
Absolute multiturn HIPERFACE SKM36 Encoder (128 periods/rev)		S				
Absolute singleturn HIPERFACE SRS50 encoder 1024 ppr (not available for EX3)		T				
Absolute multiturn HIPERFACE SRM50 encoder 1024 ppr (not available for EX3)		U				
Absolute dingleturn ENDAT ECN 1113 encoder		V				
Absolute multiturn ENDAT EQN 1125 encoder		W				
Low cost encoder with 10 commutation tracks 2048 ppr		X				
Without feedback sensor		Y				
Other sensor		Z				
BRAKE						
Motor without brake (standard) + thermal switch sensor				**2**		
Motor with brake + thermal switch sensor				5		
INGRESS PROTECTION LEVEL						
IP64					**0**	
IP65					1	
SHAFT END						
Smooth shaft						**0**
Keyed shaft						1

CE servomotors

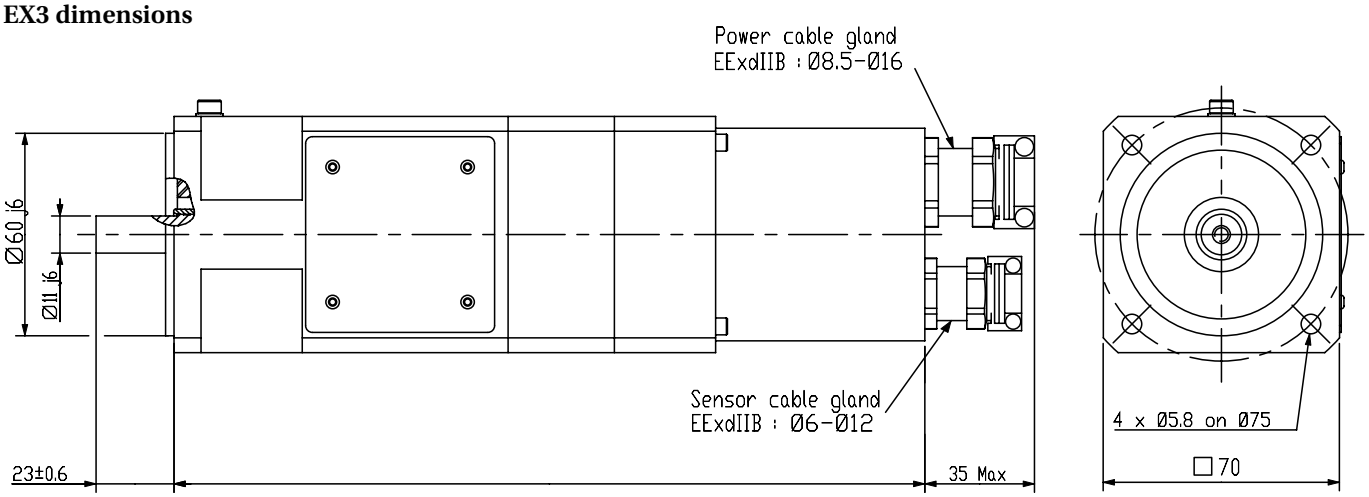
EX series

1,75 to 35 Nm

Dimensions (resolver version)

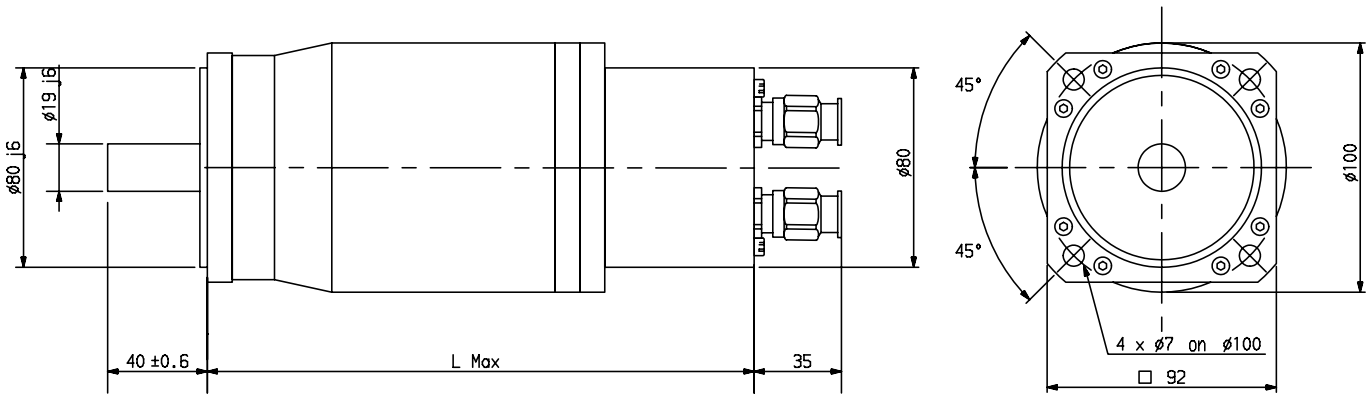
EX3 dimensions (mm)		
Motor	L	
	Without brake	With brake
E X 3 1 0	225	255

EX3 dimensions



EX4 dimensions (mm)		
Motor	L	
	Without brake	With brake
E X 4 2 0	265	290
E X 4 3 0	290	315

EX4 dimensions



CE servomotors

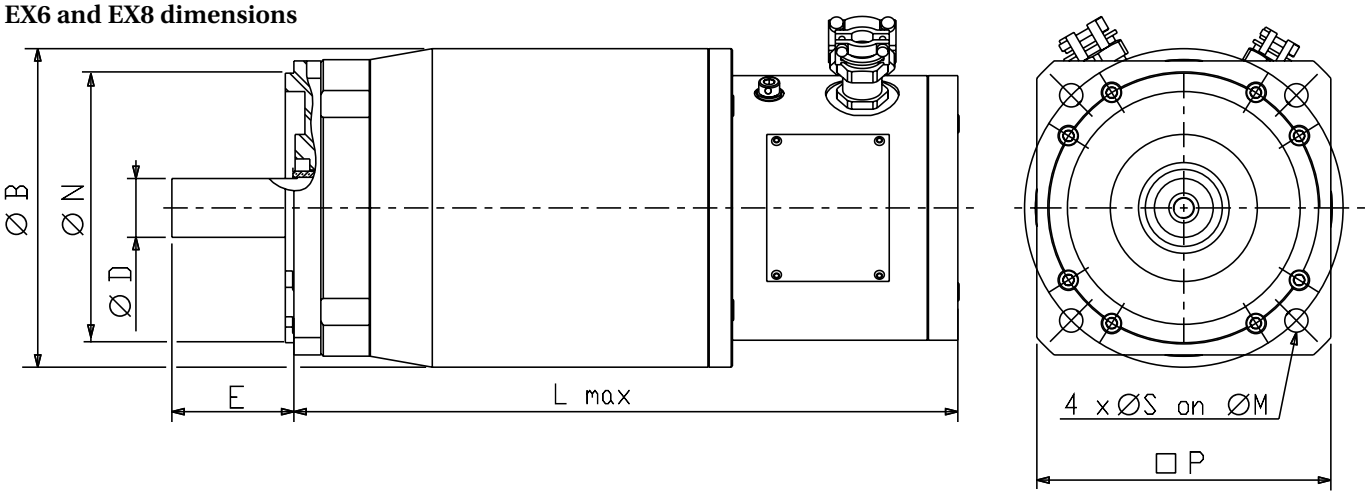
EX series

1,75 to 35 Nm

Dimensions (resolver version)

EX6-EX8 dimensions (mm)									
Motor								L	
	N	D	E	B	P	S	M	Without brake	With brake
EX620	110	24	50	130	120	8.4	130	275	290
EX630	110	24	50	130	120	8.4	130	300	325
EX820	130	32	58	165	155	12	165	290	325
EX840	130	32	58	165	155	12	165	350	385
EX860	130	32	58	165	155	12	165	410	445

EX6 and EX8 dimensions



UL servomotors

EX series

1,75 to 35 Nm

c UL US LISTED

Selection and ordering

Rated Speed N_{MAX} (rpm)	Stall Torque M_0 (Nm)	Stall Current I_0 (A^{RMS})	Rated Torque M_N (Nm)	Rated Current I_N (A^{RMS})	Peak-Torque M_{MAX} (Nm)	Peak Current I_{MAX} (A_{RMS})	Moment of Inertia J kgm^2x10^{-5}	Product Code
230 VAC power supply								
4200	1.6	2.46	1.41	2.24	3.98	6.29	7.9	E X 3 1 0 U ▪ U R 1 ▪ 1 ▪
4000	3.2	4.15	2.45	3.25	8	10.8	29	E X 4 2 0 U ▪ I R 1 ▪ 1 ▪
3200	4.4	4.88	3.48	3.94	11	12.6	42.6	E X 4 3 0 U ▪ G R 1 ▪ 1 ▪
2750	6.4	6.02	4.76	4.67	17.4	16.2	98	E X 6 2 0 U ▪ M R 1 ▪ 1 ▪
2700	9.5	7.91	7.12	6.16	23.8	19.4	147	E X 6 3 0 U ▪ K R 1 ▪ 1 ▪
2300	12.9	9.1	10.1	7.21	30	22.8	320	E X 8 2 0 U ▪ Q R 1 ▪ 1 ▪
1650	22.6	12	16.8	9	60	34.6	620	E X 8 4 0 U ▪ L R 1 ▪ 1 ▪
1500	31.4	13.9	22.3	10.01	90	43.5	920	E X 8 6 0 U ▪ J R 1 ▪ 1 ▪
480 VAC power supply								
7600	1.6	2.46	1.03	1.74	3.98	6.29	7.9	E X 3 1 0 U ▪ U R 1 ▪ 1 ▪
7000	3.2	4.15	1.1	1.58	8	10.8	29	E X 4 2 0 U ▪ I R 1 ▪ 1 ▪
5700	4.4	4.88	1.72	2.07	11	12.6	42.6	E X 4 3 0 U ▪ G R 1 ▪ 1 ▪
5000	6.4	6.02	1.71	1.95	17.4	16.2	98	E X 6 2 0 U ▪ M R 1 ▪ 1 ▪
4200	9.5	7.91	4.38	4.02	23.8	19.4	147	E X 6 3 0 U ▪ K R 1 ▪ 1 ▪
4000	12.9	9.1	5.77	4.27	30	22.8	320	E X 8 2 0 U ▪ Q R 1 ▪ 1 ▪
3000	22.6	12	5.84	3.39	60	34.6	620	E X 8 4 0 U ▪ L R 1 ▪ 1 ▪
2500	31.4	13.9	8.31	4.01	90	43.5	920	E X 8 6 0 U ▪ J R 1 ▪ 1 ▪

Associated drives

Motor	Rated Speed N_{MAX} (rpm)	Associated Drives Sizes			
		Compax3	890SD	650S	DIGIVEX
230 VAC power supply					
E X 3 1 0 U ▪ U R 1 ▪ 1 ▪	4200	C3S063V2...	890SD-231550B0...	650S-21140010…	DSD13004…
E X 4 2 0 U ▪ I R 1 ▪ 1 ▪	4000	C3S063V2...	890SD-231700B0...	650S-21170020…	DSD13007…
E X 4 3 0 U ▪ G R 1 ▪ 1 ▪	3200	C3S063V2...	890SD-231700B0...	650S-21170020…	DSD13015…
E X 6 2 0 U ▪ M R 1 ▪ 1 ▪	2750	C3S063V2...	890SD-231700B0...	650S-21170020…	DSD13015…
E X 6 3 0 U ▪ K R 1 ▪ 1 ▪	2700	C3S100V2...	890SD-232165B0...	-	DSD13015…
E X 8 2 0 U ▪ Q R 1 ▪ 1 ▪	2300	C3S100V2...	890SD-232165B0...	-	DSD13015…
E X 8 4 0 U ▪ L R 1 ▪ 1 ▪	1650	C3S150V2...	890SD-232165B0...	-	DSD13030…
E X 8 6 0 U ▪ J R 1 ▪ 1 ▪	1500	C3S150V2...	890SD-232240C0...	-	-
480 VAC power supply					
E X 3 1 0 U ▪ U R 1 ▪ 1 ▪	7600	C3S038V4...	890SD-531450B0...	650S-43125020…	DSD16004…
E X 4 2 0 U ▪ I R 1 ▪ 1 ▪	7000	C3S075V4...	890SD-532100B0...	650S-43155020…	DSD16008…
E X 4 3 0 U ▪ G R 1 ▪ 1 ▪	5700	C3S075V4...	890SD-532100B0...	650S-43155020…	DSD16008…
E X 6 2 0 U ▪ M R 1 ▪ 1 ▪	5000	C3S075V4...	890SD-532100B0...	650S-43190030…	DSD16016…
E X 6 3 0 U ▪ K R 1 ▪ 1 ▪	4200	C3S150V4...	890SD-532120B0...	650S-43190030…	DSD16016…
E X 8 2 0 U ▪ Q R 1 ▪ 1 ▪	4000	C3S150V4...	890SD-532160B0...	650S-43216030…	DSD16016…
E X 8 4 0 U ▪ L R 1 ▪ 1 ▪	3000	C3S150V4...	890SD-53216SB0...	650S-43216030…	DSD16032…
E X 8 6 0 U ▪ J R 1 ▪ 1 ▪	2500	C3S150V4...	890SD-53216SB0...	650S-43216030…	DSD16032…

UL servomotors

EX series

1,75 to 35 Nm

c UL US LISTED

EX codification

EX motors - UL marked	Product code example										
	E	X	8	6	0	U	▪	JR1	▪	1	▪
FEEDBACK SENSOR											
2 poles resolver (Standard)							**A**				
Absolute singleturn HIPERFACE SKS36 Encoder (128 periods/rev)							R				
Absolute multiturn HIPERFACE SKM36 Encoder (128 periods/rev)							S				
Absolute singleturn HIPERFACE SRS50 encoder 1024 ppr (not available for EX3)							T				
Absolute multiturn HIPERFACE SRM50 encoder 1024 ppr (not available for EX3)							U				
Absolute singleturn ENDAT ECN 1113 encoder							V				
Absolute multiturn ENDAT EQN 1125 encoder							W				
Low cost encoder with 10 commutation tracks 2048 ppr							X				
Without feedback sensor							Y				
Other sensor							Z				
BRAKE											
Motor without brake + thermal switch sensor (standard)									**2**		
Motor with Brake + thermal switch sensor									5		
INGRESS PROTECTION LEVEL											
IP64										**0**	
IP65										1	
SHAFT END											
Smooth shaft											**0**
Keyed shaft											1

UL servomotors

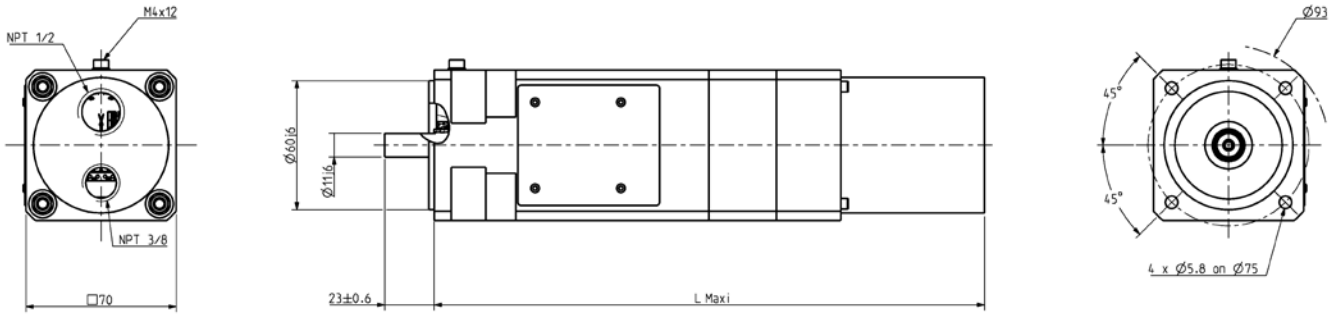
EX series

1,75 to 35 Nm

Dimensions (resolver version)

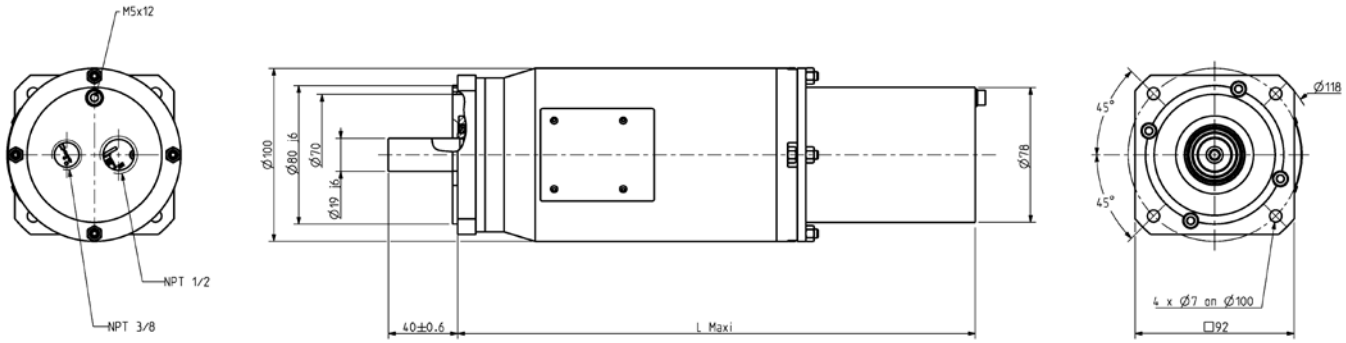
EX3 dimensions UL (mm))		
Motor	L Maxi	
	Without brake	With brake
E X 3 1 0	230	260

UL EX3 dimensions



EX4 dimensions UL (mm)		
Motor	L Maxi	
	Without brake	With brake
E X 4 2 0	260	305
E X 4 3 0	305	330

UL EX4 dimensions



UL servomotors

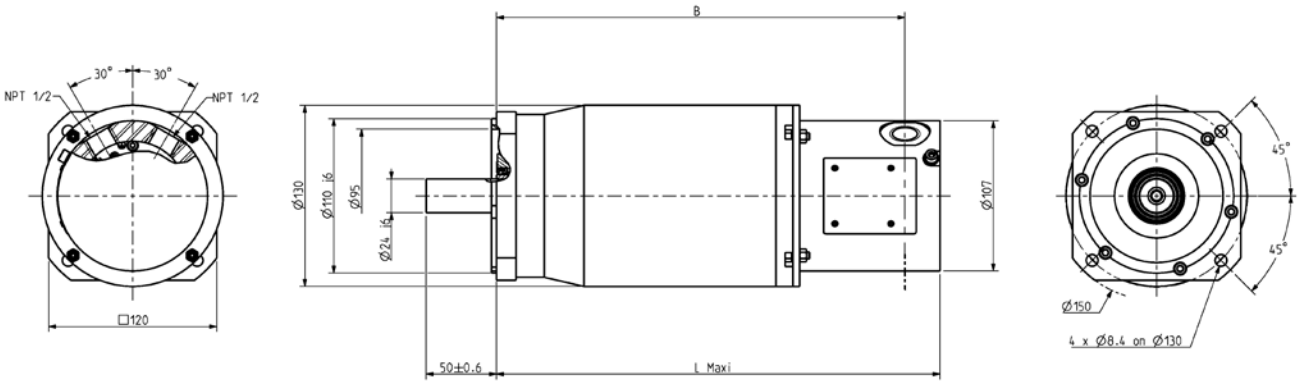
EX series

1,75 to 35 Nm

Dimensions (resolver version)

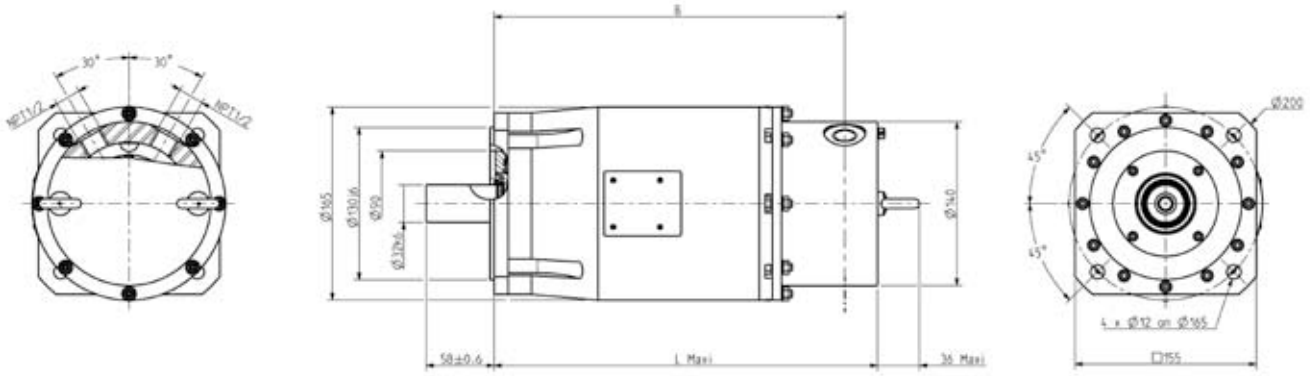
EX6 dimensions UL (mm)				
Motor	L Maxi		B	
	Without brake	With brake	Without brake	With brake
E X 6 2 0	290	320	262.5	291.5
E X 6 3 0	320	435	291.5	316.5

UL EX6 dimensions



EX8 dimensions UL (mm)				
Motor	L Maxi		B	
	Without brake	With brake	Without brake	With brake
E X 8 2 0	295	330	265	300
E X 8 4 0	355	390	325	360
E X 8 6 0	415	450	385	420

UL EX8 dimensions



Gearboxes

GX series

Description

Characterized by a low backlash, GX gearboxes are ideal for applications needing high torque and optimum motion quality.

In combination with NX servo motors, they offer a compact geared servo motor solution optimised to provide the best dynamic performances.

GX gearboxes are also available for explosive atmospheres in compliance with ATEX directive (please contact us).

Advantages

High performance geared servo motors

Large choice of speed ratio

Helical gearing : low backlash, smooth and quiet fonctioning

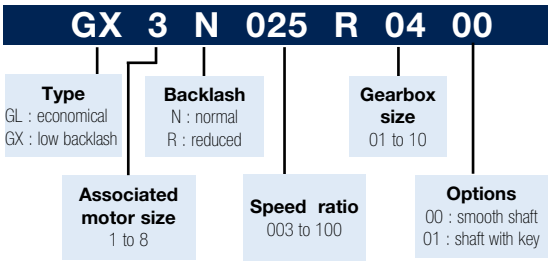
High stiffness

Life lubricated

Top quality finishing

Up to IP65 protection

GX Gearbox codification



Example : GX3N025R0300

GX gearbox, size 3, ratio 25 , normal backlash, smooth shaft, NX310 associated motor

Geared servo motor selection example	
Targeted output speed (Ns)	115 rpm
Targeted output torque (Cs)	445 N.m
Load inertia (Jch)	3 kgm^2
Calculation of the gearbox ratio r	Motor maximum speed NmaxM : 4000 rpm r = NmaxM / Ns => 4000 / 115 = 34,78 By choosing the existing ratio immediately above : R=35
Calculation of the motor torque	Torque at low speed = Cs / r / 0.85* => 445 / 35 / 0.85 = 14.9 N.m
Geared servo motor selection	Motor: NX820 (Torque : 16 N.m, inertia (Jmot) : 320 $kgm^2.10^{-5}$) Gearbox: GX8N035R0900 (size 9 ; speed ratio 35)
Calculation of the inertia ratio	Inertia ratio = Jch / (Jmot x r^2) => 3 / (320.10^{-5} x 35^2) = 0.77

IMPORTANT : please confirm the operating limit of the association selected above with our technical service centre.

Gearboxes

GX series

Mechanical associations

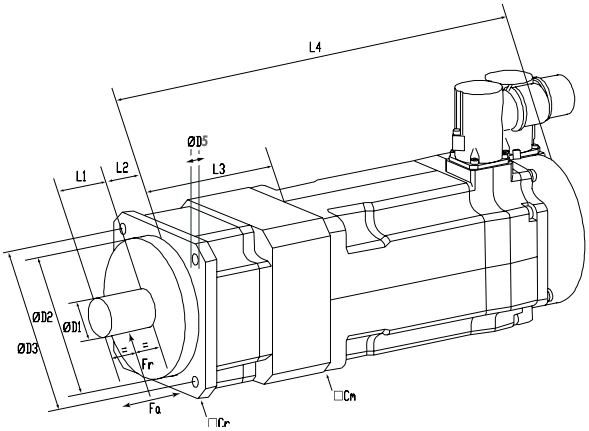
NX motor & GX gearbox selection table

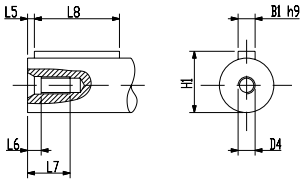
NX MOTOR FRAME SIZE	RATIO																		
	003	005	006	007	008	009	010	015	020	025	030	035	040	050	060	070	080	090	100
NX110	GX1N___R0100												GX1N___R0200						
NX2xx	GX2N___R0100								GX2N___R0200				GX2N___R0400						
NX310	GX3N___R0200									GX3N___R0400									
NX420	GX4N___R0400							GX4N___R0600								GX4N___R0700			
NX430	GX4N___R0400							GX4N___R0600					GX4N___R0700						
NX620	GX6N___R0600							GX6N___R0700											
NX630	GX6N___R0600							GX6N___R0700											
NX820	GX8N___R0600							GX8N___R0700				GX8N___R0900			GX8N___R1000				
NX840	GX8N___R0600						GX8N___R0700		GX8N___R0900			GX8N___R1000							
NX860	GX8N___R0600					GX8N___R0700		GX8N___R0900		GX8N___R1000									
NX860V	GX8N___R0600		GX8N___R0700			GX8N___R0900			GX8N___R01000										

Gearboxes

GX series

1 stage





Shaft with key option

L4 = L3 + L (associated NX length, NX drawings)
Example :GX1....R01 - Motor NX1 : L = 133 mm
L4 = 60.5 + 133 = 193.5 mm

Geared servo motor characteristics and dimensions - 1 stage GX
Ratio 3, 4, 5, 6, 7, 8, 9 and 10

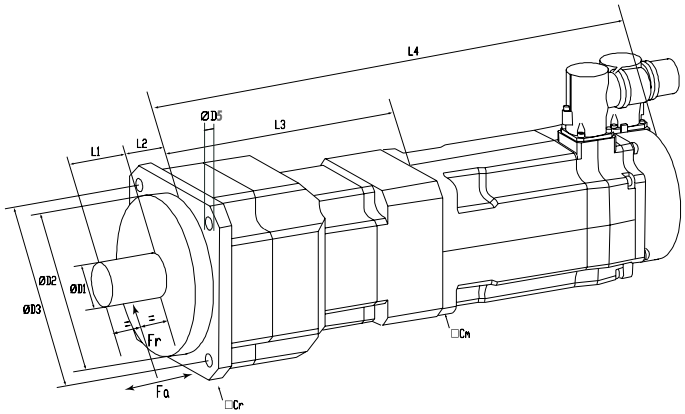
Type	Backlash* (min)	Stiffness (N.m/rad)	Fr** (daN)	Fa** (daN)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	Cr (mm)	Cm (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	B1 (mm)	H1 (mm)	D4 (mm)
GX1....R01	5	10000	78	39	20.5	5.5	60.5	13j6	35g6	46	42	42	2	3.2	10	16	5	15	M4x0.7
GX2....R01	5	10000	78	39	20.5	5.5	60.5	13j6	35g6	46	42	56	2	3.2	10	16	5	15	M4x0.7
GX3....R01	5	10000	78	39	20.5	5.5	60.5	13j6	35g6	46	42	71	2	3.2	10	16	5	15	M4x0.7
GX3....R02	5 or 3	24000	153	76	30	7	76.5	16j6	50g6	70	60	71	2	4	12.5	25	5	18	M5x0.8
GX4....R04	5 or 3	48000	325	162	38	10	96	22j6	80g6	100	90	91.5	3	6	19	32	6	24.5	M8x1.25
GX4....R06	5 or 3	80000	670	335	53	12	122	32j6	110g6	130	115	91.5	5	9.5	28	40	10	35	M12x1.75
GX6....R06	5 or 3	80000	670	335	53	12	122	32j6	110g6	130	115	121	5	9.5	28	40	10	35	M12x1.75
GX8....R06	5 or 3	80000	670	335	53	12	122	32j6	110g6	130	115	155	5	9.5	28	40	10	35	M12x1.75
GX8....R07	5 or 3	170000	940	470	82	15	142.5	40j6	130g6	165	142	155	5	12	36	63	12	43	M16x2
GX8....R09	5 or 3	500000	1450	725	85	20	180.5	55j6	160g6	215	180	155	6	15	42	70	16	59	M20x2.5

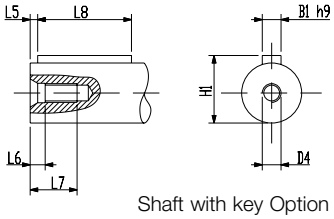
* Low backlash option : 3 min; ** at 100 rpm
Cr : Gearbox square - Cm : Motor square

Gearboxes

GX series

2 stages





Shaft with key Option

L4 = L3 + L (associated NX length, NX drawings)

Geared servo motor characteristics and dimensions - 2 stages GX
Ratio 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90 and 100

Type	Backlash* (min)	Stiffness (N.m/rad)	Fr** (daN)	Fa** (daN)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	Cr (mm)	Cm (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	B1 (mm)	H1 (mm)	D4 (mm)
GX1....R01	8	10000	78	39	20.5	5.5	88	13j6	35g6	46	42	42	2	3.2	10	16	5	15	M4x0.7
GX1....R02	8 or 6	24000	153	76	30	7	101.5	16j6	50g6	70	60	42	2	4	12.5	25	5	18	M5x0.8
GX2....R01	8 or 6	10000	78	39	20.5	5.5	88	13j6	35g6	46	42	56	2	3.2	10	16	5	15	M4x0.7
GX2....R02	8	24000	153	76	30	7	101.5	16j6	50g6	70	60	56	2	4	12.5	25	5	18	M5x0.8
GX2....R04	8 or 6	48000	325	162	38	10	127	22j6	80g6	100	90	56	3	6	19	32	6	24.5	M8x1.25
GX3....R02	8 or 6	24000	153	76	30	7	101.5	16j6	50g6	70	60	71	2	4	12.5	25	5	18	M5x0.8
GX3....R04	8 or 6	48000	325	162	38	10	127	22j6	80g6	100	90	71	3	6	19	32	6	24.5	M8x1.25
GX4....R06	8 or 6	80000	670	335	53	12	161	32j6	110g6	130	115	91.5	5	9.5	28	40	10	35	M12x1.75
GX4....R07	8 or 6	170000	940	470	82	15	196	40j6	130g6	165	142	91.5	5	12	36	63	12	43	M16x2
GX6....R07	8 or 6	170000	940	470	82	15	196	40j6	130g6	165	142	121	5	12	36	63	12	43	M16x2
GX8....R07	8 or 6	170000	940	470	82	15	196	40j6	130g6	165	142	155	5	12	36	63	12	43	M16x2
GX8....R09	8 or 6	500000	1450	725	85	20	232.5	55j6	160g6	215	180	155	6	15	42	70	16	59	M20x2.5
GX8....R10	8 or 6	770000	5000	2500	108	30	274.5	75j6	180g6	235	220	155	7	15	42	90	20	79.5	M20x2.5

* Low backlash option : 6 min; ** at 100 rpm
Cr : Gearbox square - Cm : Motor square

Gearboxes

GW series

Wheel and worm design for NX motors

Description

Characterized by a wheel and worm design, GW gearboxes are ideal for simple motion control applications.

In combination with NX brushless servo motors, GW angular gearboxes offer a very economical and robust range of geared motors.

They are associated to NX servo motors size 2 to 8.

Caracteristics and advantages

Very economical and robust solution

Angular mounting

Wheel and worm design

Possible irreversibility

Ratio 5 to 100

Associated to NX2-NX8 servo motors range

Output torque from 3.3 to 515 N.m

For simple motion control applications

Options : simple or double output shaft, specific output flange,...

Gearboxes

GW series

Wheel and worm design for NX motors

GW gearboxes - NX servo motors - input Speed : 1 400 rpm														
Ratio		5	7.5	10	15	20	25	30	40	50	60	80	100	
Output speed (rpm)		280	187	140	93	70	56	47	35	28	23	18	14	Dia.of NX shaft with key
Motor	Ref.													
N X 2 1 0	GW2N...R03..	3.3	4.8	6.1	8.6	10.9	12.7	14.6	15.2	16.2				11
N X 3 1 0	GW3N...R03..	6.5	9.5	12.1	13.3	14.3	14.1	14.7	15.2	16.2				11
N X 3 1 0	GW3N...R04..	6.6	9.7	12.6	18.3	23.2	27.9	29.2	31	34	35	33	29	11
N X 4 2 0	GW4N...R04..	13	19	24	28	30	31	29	31					14S pl
N X 4 3 0	GW4N...R04..	17	21	24	28	30	31	29	31					14S pl
N X 4 2 0	GW4N...R05..	13	19	25	36	45	47	46						19
N X 4 3 0	GW4N...R05..	18	27	35	41	45	47	46						19
N X 4 2 0	GW4N...R06..		19	25	36	47	57	64	81	84	85			19
N X 4 3 0	GW4N...R06..		27	35	51	66	77	74	81	84	85			19
N X 4 2 0	GW4N...R07..					48	58	66	83	100	113	139	142	19
N X 4 3 0	GW4N...R07..					67	82	93	118	129	129	139	142	19
N X 6 2 0	GW4N...R09..								87	104	120	146	171	19
N X 6 3 0	GW4N...R09..								122	147	169	206	229	19
N X 6 2 0	GW6N...R05..	24	33	36	41	45	47	46						19S pl
N X 6 3 0	GW6N...R05..	24	33	36	41	45	47	46						19 Spl
N X 6 2 0	GW6N...R06..		39	52	63	74	77	74	81*	84*	85*			24/19* Spl
N X 6 3 0	GW6N...R06..		48	58	63	74	77	74	81*	84*	85*			24/19* Spl
N X 6 2 0	GW6N...R07..		40	52	76	98	116	110	119	129*	129*	139*	142*	24/19*
N X 6 3 0	GW6N...R07..		52	69	99	106	116	110	119	129*	129*	139*	142*	24/19*
N X 6 2 0	GW6N...R09..		40	53	77	100	122	139	179	205	213			24
N X 6 3 0	GW6N...R09..		53	70	101	131	160	170	191	205	213			24
N X 8 2 0	GW8N...R06..		48	58	63	74	77	74						24 Spl
N X 8 4 0	GW8N...R06..		48	58	63	74	77	74						25 Spl
N X 8 2 0	GW8N...R07..		70	85	98.5	106	116	110	119					26 Spl
N X 8 4 0	GW8N...R07..		70	85	99	106	116	110	119					27 Spl
N X 8 2 0	GW8N...R09..		80	106	147	167	182	170	191	205	213			28 Spl
N X 8 4 0	GW8N...R09..		108	129	147	167	182	170	191	205	213			29 Spl
N X 8 2 0	GW8N...R11..		80	106	154	202	250	257	323	341	351			28 Spl
N X 8 4 0	GW8N...R11..		120	159	210	258	299	257	323	341	351			29 Spl
N X 8 2 0	GW8N...R13..						250	285	371	435	447	492	515	30 Spl
N X 8 4 0	GW8N...R13..						375	348	411	435	447	492	515	31 Spl

Couple de sortie (Nm) : recommended associations possible associations

Gearboxes

GW series

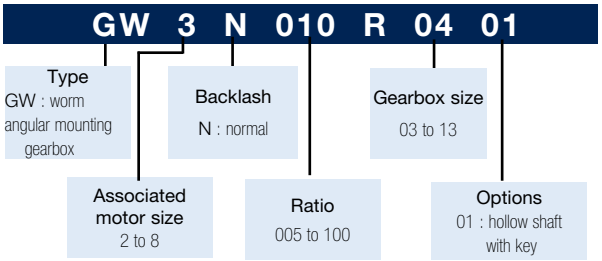
Wheel and worm design for NX motors

Associations characteristics

NX shaft diameter:
- NX shaft with key required
- Shaft diameter can be unlike standard values:
  Spl = Shaft with special diameter
  * = Shaft diameter 19

Associations characteristics:
Indicative data with a service factor equal to 1 (to confirm with technical dept according to the application).

GW gearbox codification



GW* max radial effort												
Ratio	5	7.5	10	15	20	25	30	40	50	60	80	100
Ref.												
GW.....R03..	597	683	752	861	948	1021	1085	1194	1286	1367	1504	
GW.....R04..	1149	1315	1447	1657	1824	1964	2087	2298	2475	2630	2895	3118
GW.....R05..	1577	1805	1987	2274	2503	2696	2865	3153	3397	3610	3973	4280
GW.....R06..		2359	2597	2973	3272	3524	3745	4122	4440	4719	5193	5595
GW.....R07..		2785	3065	3509	3862	4160	4421	4865	5241	5569	6130	6603
GW.....R09..		3081	3391	3882	4273	4603	4891	5383	5799	6163	6783	7306
GW.....R10..		3893	4285	4905	5399	5816	6181	6803	7328	7787	8571	9232
GW.....R11..		3893	4285	4905	5399	5816	6181	6803	7328	7787	8571	9232
GW.....R13..		5092	5605	6416	7062	7607	8084	8897	9584	10185	11210	12076

* Max radial effort at the middle of gearbox for NX input speed equal to 1400 rpm

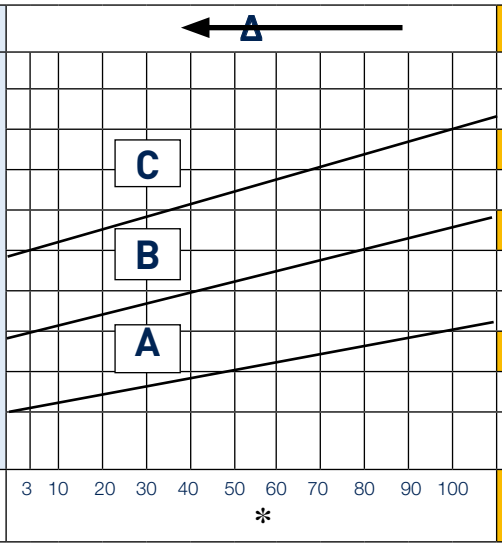
Gearboxes

GW series

Wheel and worm design for NX motors

GW service factor

24	16	8	2
2.3	2	1.8	1.6
2.2	1.9	1.7	1.5
2.1	1.8	1.6	1.4
2	1.7	1.5	1.3
1.9	1.6	1.4	1.2
1.8	1.5	1.3	1.1
1.7	1.4	1.2	1
1.6	1.3	1.1	0.9
1.5	1.2	1	0.8
f.s.			



Hours/day

C = Inertia ratio ≤ 10

B = Inertia ratio ≤ 3

A = Inertia ratio ≤ 0.3

Starts/hour

The service factor f.s. depends on the operating conditions the reduction unit is subjected to.
The parameters that need to be taken into consideration to select the most adequate service factor correctly comprise:

- Type of load of the operated machine :

A uniform , **B** moderate shocks , **C** heavy shocks
(If the inertia ratio is above 10 call our technical service)

- Length of daily operating time: **hours/day (Δ)**
- Start-up frequency: **starts/hour (*)**

A - Screw feeders for light materials, fans, assembly lines, conveyor belts for light materials, small mixers, lifts, cleaning machines, fillers, control machines.

B -Winding devices, woodworking machine feeders, goods lifts, balancers, threading machines, medium mixers, conveyor belts for heavy materials, winches, sliding doors, fertilizer scrapers, packing machines, concrete mixers, crane mechanisms, milling cutters, folding machines, gear pumps.

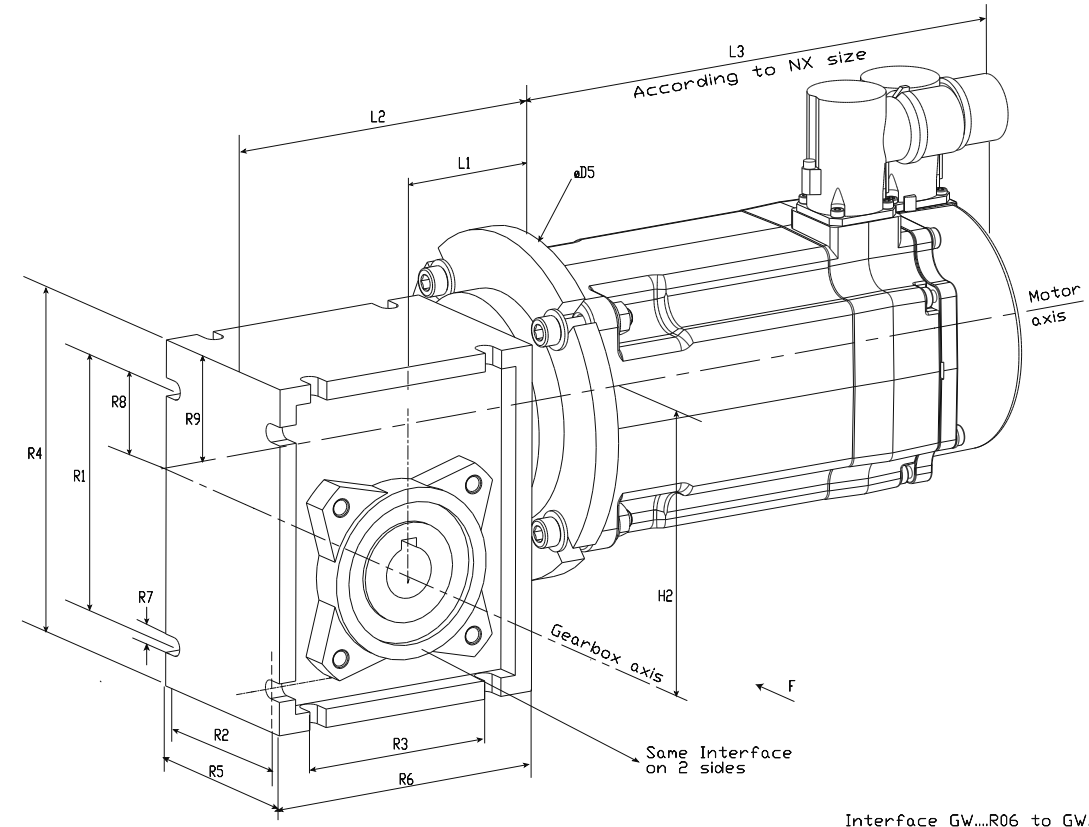
C -Mixers for heavy materials, shears, presses, centrifuges, rotating supports, winches and lifts for heavy materials, grinding lathes, stone mills, bucket elevators, drilling machines, hammer mills, cam presses, folding machines, turntables, tumbling barrels, vibrators, shredders.

Gearboxes

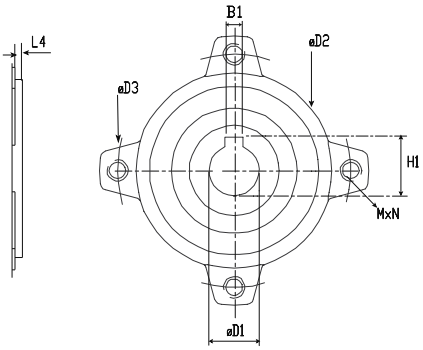
GW series

Wheel and worm design for NX motors

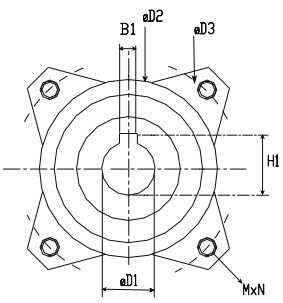
GW drawings



Interface GW....R03

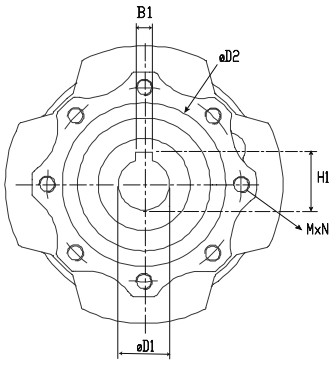


Interface GW....R04 to GW....R05



F view

Interface GW....R06 to GW....R13



Gearboxes

GW series

Wheel and worm design for NX motors

GW dimensions

GW Geared servo motor dimensions

Type	L1	L2	L4	D1h8	D2h8	D3	M	N	D5	H1	**H2**	R1	R2	R3	R4	R5	R6	R7	R8	R9	B1
GW2…R03	55	95	2.5	14	55	65	M6	4	80	16.3	**30**	71	44	54	97	56	81	6.5	44	57	5
GW3…R03	55	95	2.5	14	55	65	M6	4	90	16.3	**30**	71	44	54	97	56	81	6.5	44	57	5
GW3…R04	70	120	2.5	18	60	75	M6	4	90	20.8	**40**	90	60	70	121.5	71	101	6.5	55	71.5	6
GW4…R03	55	95	2.5	14	55	65	M6	4	120	16.3	**30**	71	44	54	97	56	81	6.5	44	57	5
GW4…R04	70	120	2.5	18	60	75	M6	4	120	20.8	**40**	90	60	70	121.5	71	101	6.5	55	71.5	6
GW4…R05	80	140	2.5	25	70	85	M8	4	120	28.3	**50**	104	70	80	144	85	121	8.5	64	84	8
GW4…R06	95	167	3	25	80	95	M8	8	120	28.3	**63**	130	85	100	174	103	146	8.5	80	102	8
GW4…R07	112.5	198.5	3	28	95	115	M8	8	120	31.3	**75**	153	90	120	205	112	174	11.5	93	119	8
GW4…R09	129.5	232.5	3	35	110	130	M10	8	120	38.3	**90**	172	100	140	238	130	208	13	102	135	10
GW6…R05	80	140	2.5	25	70	85	M8	4	160	28.3	**50**	104	70	80	144	85	121	8.5	64	84	8
GW6…R06	95	167	3	25	80	95	M8	8	160	28.3	**63**	130	85	100	174	103	146	8.5	80	102	8
GW6…R07	112.5	198.5	3	28	95	115	M8	8	160	31.3	**75**	153	90	120	205	112	174	11.5	93	119	8
GW6…R09	129.5	232.5	3	35	110	130	M10	8	160	38.3	**90**	172	100	140	238	130	208	13	102	135	10
GW8…R06	95	167	3	25	80	95	M8	8	200	28.3	**63**	130	85	100	174	103	146	8.5	80	102	8
GW8…R07	112.5	198.5	3	28	95	115	M8	8	200	31.3	**75**	153	90	120	205	112	174	11.5	93	119	8
GW8…R09	129.5	232.5	3	35	110	130	M10	8	200	38.3	**90**	172	100	140	238	130	208	13	102	135	10
GW8…R10	160	287.5	3.5	42	130	165	M10	8	200	45.3	**110**	210	115	170	295	144	252.5	14	125	167.5	12
GW8…R11	160	287.5	3.5	42	130	165	M10	8	200	45.3	**110**	210	115	170	295	144	252.5	14	125	167.5	12
GW8…R13	180	327.5	4	45	180	215	M12	8	200	48.8	**130**	240	120	200	335	155	292.5	16	140	187.5	14

Dimensions in mm

Torque motors

TMW series

1200 to 22 000 Nm

Description

Parker TMW torque motors are innovative direct drive solutions based on brushless technology.
Especially designed for low speed operation, they advantageously replace traditional gearbox based systems in applications such as extruders and injection molding machines, as well as winders, mixers, crushers, presses, etc.

Advantages

High torque at low speed

No gearbox

High torque density

Silent operation

Customized mechanical Interface

Integrated thrust bearing (option)

Technical characteristics	
Motor type	Permanent magnets synchronous motors
Magnet material	Nd-Fe-B
Number of poles	24 to 120 (according to the shaft height)
Type of construction	IMB3, IMB14, IMB34 (EN60034-7)
Shaft heights	200 mm 315 mm 400 mm
Degree of protection	IP54
Rated voltage	400 VAC and 480 VAC up to 600 V
Connections	Terminal box for power cable, PTC probes and KTY sensors, connector for encoder signals
Insulation of the stator winding	Class F according to EN 60034-1
Thermal protection	2 PTC probes and 1 KTY sensor
Temperature range	0…+40°C
Storage	-20… +60°C
Vibration severity	Grade A according to IEC60034-14
Paint finish	Black

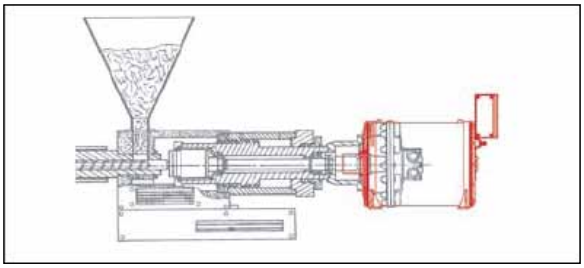
Variants and options	
Shaft end	▪ Solid or hollow shaft with key or keyway, spline profile DIN 5480 and DIN 5463. ▪ Customized interfaces available on request
Bearings	▪ Ball bearings ▪ Roller bearings (option)
Encoder systems	▪ Absolute single turn Endat encoder ▪ Resolver
Terminal box orientation	▪ At the rear on the top ▪ At the rear on the left or right side
Extruder specific features	▪ Integrated thrust bearing ▪ Screw extraction and cooling mechanisms ▪ Customized mechanical interface

Torque motors

TMW series

Applications and benefits

Injection molding machines



Allowing to reach up to 30% energy savings, as well as increased productivity, Parker TMW torque motors are the ideal replacement solution for hydraulic motors used to drive plasticization units on injection moulding machines.

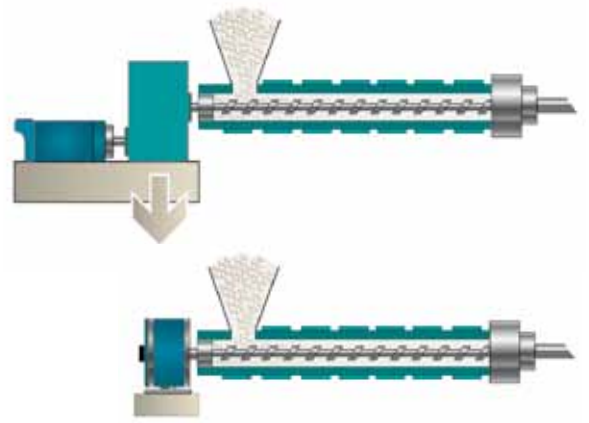
Especially designed to deliver high torques at low speeds with no gearbox, TMW torque motors allow for fast and easy replacement
of hydraulic motors from Parker MR series, thanks to compatible mechanical interfaces.

Advantages :

- **Up to 30% energy savings :**
  Contrary to hydraulic motors, electrical motors only consume energy when required. They also have better efficiencies.

- **Increased productivity :**
  Thanks to electrical motors, plasticization can be done in parallel with other operations, such as injection, clamping and ejection, which is not feasible with* hydraulic solutions.

Extruders



Parker torque motors are the perfect alternative to direct current or induction motors associated with gearboxes on extruders applications.

Result of a close cooperation with machine builders and end-users, Parker torque motors are available with various dedicated options for extruders applications, such as : integrated thrust bearing to support back pressure from the screw, specific mechanisms allowing for quick and easy removal of the screw from the motor...

Advantages :

- **Maintenance savings :**
  No gearbox means no more maintenance associated to it. Furthermore, as a brushless motor, the torque motor itself does not require any maintenance.

- **Energy savings :**
  In high power continuous process applications, the use of torque motors generates significant energy savings thanks to the suppression of mechanical losses of the gearbox.

- **Reduced footprint**

- **Simplified installation**

- **Silent operation and reduced vibrations**

Torque motors

TMW series

TMW codification

Torque motors TMW	Product code example																
	T	M	W	3	0	6	L	X	C	2	0	U	F	R	0	0	0	3
PRODUCT SERIES																		
TM : Torque motors	T	M																
COOLING METHOD																		
Water cooling (standard)			**W**															
Natural ventilation (available with derating, consult us)			A															
SHAFT HEIGHT																		
200 mm				2	0													
315 mm				3	0													
400 mm				4	0													
TORQUE/SPEED CHARACTERISTICS																		
(see motors data tables)						■	■	■										
FEEDBACK SENSOR																		
Endat Encoder (standard)									**C**									
Direct Endat encoder with hollow shaft									B									
Resolver (on request)									A									
Without sensor									K									
THRUST BEARINGS																		
Ball bearings										0	0							
Roller bearings										0	1							
Thrust bearing (SKF 294 ■ ■)										■	■							
TERMINAL BOX																		
Upper rear (standard)												**U**						
At the rear on the right side (front view)												R						
At the rear on the left side (front view)												L						
EXTRUDER SCREW EXTRACTION/COOLING																		
Frontside extruder screw extraction													F					
Frontside extruder screw extraction, screw cooling possibility													P					
Backside extruder screw extraction, screw cooling possibility (consult us)													R					
No screw extraction, no screw cooling possibility													Z					
SHAFT TYPE																		
Hollow shaft with keyway (standard)															**0**			
Hollow shaft with spline profile (DIN 5480)															1			
Hollow shaft with spline profile (DIN 5463)															2			
Full shaft with spline profile (DIN 5480)															5			
Full shaft with spline profile (DIN 5463)															6			
Full shaft, smooth															7			
Full shaft, with keyway															8			
Special shaft (consult us)															9			
MECHANICAL INTERFACE																		
(see motors data tables)																■	■	■

Torque motors

TMW series

Product code

400 VAC power supply [1]

Model	Pn (kW)	Nn (rpm)	Mn (Nm)	In (Arms)	Nmax (rpm)	Mmax [2] (Nm)	Inertia (kgm²)	Water flow rate (l/min)	Drive reference [2]
50 - 75 rpm									
T M W 3 0 5 L U	29	70	3940	68	80	5880	4,40	17	890SD-432730E
T M W 3 0 6 L V	38	75	4830	86	85	7200	4,55	20	890SD-432870E
T M W 4 0 6 L V	81	75	10300	169	90	15300	16,20	28	890SD-433180F
T M W 4 0 8 L W	90	60	14200	197	75	21000	19,40	37	890SD-433216G
T M W 4 0 A L W	95	50	18200	219	60	26800	25,10	47	890SD-433250G
T M W 4 0 C L W	116	50	22100	271	60	32500	25,90	56	890SD-433316G
T M W 4 0 C L S	161	70	22000	348	85	32500	25,90	56	890SD-433420H
75 - 100 rpm									
T M W 3 0 4 L R	32	100	3040	70	115	4550	3,45	14	890SD-432730E
T M W 3 0 5 L T	39	95	3930	84	115	5880	4,40	17	890SD-432870E
T M W 3 0 8 L U	59	85	6620	133	105	9870	6,50	27	890SD-433145F
T M W 3 0 A L U	71	80	8430	163	95	12500	6,80	34	890SD-433180F
T M W 3 0 A L S	88	100	8410	191	125	12500	6,80	34	890SD-433216G
T M W 4 0 6 L S	108	100	10300	216	125	15300	16,20	28	890SD-433250G
T M W 4 0 8 L S	126	85	14200	261	105	21000	19,40	38	890SD-433316G
T M W 4 0 8 L P	148	100	14100	306	120	21000	19,40	38	890SD-433361G
T M W 4 0 A L Q	151	80	18100	313	100	26800	25,10	47	890SD-433361G
T M W 4 0 C L K	207	90	21900	428	110	32500	25,90	57	890SD-433520H
100 - 125 rpm									
T M W 2 0 4 L U	15	120	1220	35	140	1810	0,75	9	890SD-532450D
T M W 2 0 5 L T	21	125	1570	47	155	2320	0,78	11	890SD-532590D
T M W 2 0 8 L U	30	110	2640	71	125	3910	1,03	18	890SD-432730E
T M W 3 0 4 L Q	40	125	3030	81	150	4550	3,45	14	890SD-432870E
T M W 3 0 6 L S	53	105	4810	115	130	7200	4,55	21	890SD-433105F
T M W 3 0 6 L R	63	125	4800	129	155	7200	4,55	21	890SD-433145F
T M W 3 0 8 L Q	79	115	6590	167	140	9870	6,50	28	890SD-433180F
T M W 3 0 A L Q	105	120	8380	216	150	12500	6,80	34	890SD-433250G
T M W 4 0 6 L P	134	125	10200	266	155	15300	16,20	29	890SD-433316G
T M W 4 0 A L M	198	105	18000	398	130	26800	25,10	47	890SD-433480H
T M W 4 0 A L K	225	120	17900	446	150	26800	25,10	48	890SD-433590J
T M W 4 0 C L I	274	120	21800	536	150	32500	25,90	57	890SD/4/0685K

[1] Other speeds available, consult us.

[2] This reference corresponds to the optimum drive for operation at the nominal point of the motor, without overload.
Warning : this drive does not allow to reach the maximum torque of the motor, and has to be adapted regarding the application requirements

Torque motors

TMW series

Product code

400 VAC power supply [1]

Model	Pn (kW)	Nn (rpm)	Mn (Nm)	In (Arms)	Nmax (rpm)	Mmax [2] (Nm)	Inertia (kgm²)	Water flow rate (l/min)	Drive reference [2]
125 - 150 rpm									
TMW2075LS	31	130	2280	70	160	3380	1,00	15	890SD-432730E
TMW2085LT	39	140	2630	86	175	3910	1,03	18	890SD-432870E
TMW3055LP	59	145	3900	118	180	5880	4,40	17	890SD-433105F
TMW3085LN	100	145	6560	198	180	9870	6,50	28	890SD-433216G
TMW4065LJ	160	150	10200	306	180	15300	16,20	29	890SD-433361G
TMW4085LL	198	135	14000	388	165	21000	19,40	38	890SD-433480H
TMW40ALH	270	145	17800	526	180	26800	25,10	48	890SD/4/0685K
TMW40CLG	318	140	21700	626	175	32500	25,90	57	890SD/4/0798K
150 - 175 rpm									
TMW2045LR	22	175	1210	47	215	1810	0,75	9	890SD-532590D
TMW2065LR	33	165	1920	71	205	2850	0,81	13	890SD-432730E
TMW2075LR	39	165	2270	85	205	3380	1,00	16	890SD-432870E
TMW3055LN	67	165	3880	133	205	5880	4,40	17	890SD-433145F
TMW3065LN	82	165	4760	161	205	7200	4,55	21	890SD-433180F
TMW3085LM	116	170	6530	225	210	9870	6,50	28	890SD-433250G
TMW30ALN	135	155	8330	268	190	12500	6,80	35	890SD-433316G
TMW4065LI	185	175	10100	353	215	15300	16,20	29	890SD-433420H
TMW4085LJ	226	155	13900	434	190	21000	19,40	38	890SD-433520H
TMW40ALE	324	175	17700	626	205	26800	25,10	48	890SD/4/0798K
175 - 200 rpm									
TMW2065LQ	40	200	1910	83	250	2850	0,81	13	890SD-432870E
TMW2085LQ	55	200	2620	114	250	3910	1,03	18	890SD-433105F
TMW3045LM	58	185	3000	114	230	4550	3,45	14	890SD-433105F
TMW3065LL	99	200	4730	191	240	7200	4,55	21	890SD-433216G
TMW3085LK	136	200	6490	261	250	9870	6,50	28	890SD-433316G
TMW30ALL	156	180	8290	305	225	12500	6,80	35	890SD-433361G
TMW4065LH	209	200	10000	391	250	15300	16,20	29	890SD-433480H
TMW4085LF	289	200	13800	538	250	21000	19,40	39	890SD/4/0685K
200 - 250 rpm									
TMW2055LQ	34	205	1560	70	255	2320	0,78	11	890SD-432730E
TMW2075LN	59	250	2260	119	310	3380	1,00	16	890SD-433105F
TMW2085LP	63	230	2620	128	280	3910	1,03	18	890SD-433145F
TMW3045LL	67	215	2980	128	265	4550	3,45	14	890SD-433145F
TMW3055LK	87	215	3840	165	265	5880	4,40	18	890SD-433180F
TMW3065LI	118	240	4690	224	300	7200	4,55	21	890SD-433250G
TMW3085LH	165	245	6420	311	305	9870	6,50	29	890SD-433361G
TMW30ALJ	185	215	8230	354	265	12500	6,80	35	890SD-433420H
TMW30ALH	210	245	8170	396	305	12500	6,80	36	890SD-433480H
TMW4065LG	239	230	9930	440	285	15300	16,20	30	890SD-433520H

[1] Other speeds available, consult us.

[2] This reference corresponds to the optimum drive for operation at the nominal point of the motor, without overload.
Warning : this drive does not allow to reach the maximum torque of the motor, and has to be adapted regarding the application requirements

Torque motors

TMW series

Product code

400 VAC power supply [1]

Model	Pn (kW)	Nn (rpm)	Mn (Nm)	In (Arms)	Nmax (rpm)	Mmax [2] (Nm)	Inertia (kgm²)	Water flow rate (l/min)	Drive reference [2]
250 - 300 rpm									
T M W 2 0 4 L P	35	280	1200	70	350	1810	0,75	9	890SD-432730E
T M W 2 0 5 L P	42	260	1550	85	325	2320	0,78	11	890SD-432870E
T M W 2 0 6 L M	60	300	1900	116	375	2850	0,81	14	890SD-433105F
T M W 2 0 7 L M	68	290	2250	134	360	3380	1,00	16	890SD-433145F
T M W 3 0 4 L H	90	295	2920	167	350	4550	3,45	15	890SD-433180F
T M W 3 0 5 L H	105	265	3800	196	325	5880	4,40	18	890SD-433216G
T M W 3 0 5 L F	116	295	3770	217	365	5880	4,40	18	890SD-433250G
T M W 3 0 8 L G	183	275	6370	343	340	9870	6,50	29	890SD-433420H
300 - 350 rpm									
T M W 2 0 4 L M	45	355	1200	85	440	1810	0,75	9	890SD-432870E
T M W 2 0 6 L L	69	350	1890	131	435	2850	0,81	14	890SD-433145F
T M W 2 0 8 L L	84	310	2600	163	385	3910	1,03	18	890SD-433180F
T M W 3 0 6 L G	147	305	4610	271	370	7200	4,55,	22	890SD-433316G
T M W 3 0 6 L F	154	320	4590	283	385	7200	4,55	22	890SD-433361G
350 - 400 rpm									
T M W 2 0 5 L L	60	370	1540	113	460	2320	0,78	11	890SD-433105F
T M W 2 0 5 L K	64	400	1530	128	500	2320	0,78	11	890SD-433145F
T M W 2 0 6 L J	79	400	1880	151	500	2850	0,81	14	890SD-433180F
T M W 2 0 7 L J	88	375	2240	167	465	3380	1,00	16	890SD-433180F
T M W 2 0 7 L I	93	400	2230	181	500	3380	1,00	16	890SD-433216G
T M W 2 0 8 L J	102	375	2580	193	465	3910	1,03	18	890SD-433216G
T M W 2 0 8 L H	108	400	2580	213	500	3910	1,03	18	890SD-433250G
T M W 3 0 4 L E	109	365	2860	199	425	4550	3,45	15	890SD-433216G
T M W 3 0 4 L C	119	400	2830	220	475	4550	3,45	15	890SD-433250G
T M W 3 0 5 L C	149	390	3660	271	450	5880	4,40	19	890SD-433316G

[1] Other speeds available, consult us.

[2] This reference corresponds to the optimum drive for operation at the nominal point of the motor, without overload.
Warning : this drive does not allow to reach the maximum torque of the motor, and has to be adapted regarding the application requirements

Torque motors

TMW series

Product code

480 VAC power supply [1]

Model	Pn (kW)	Nn (rpm)	Mn (Nm)	In (Arms)	Nmax (rpm)	Mmax [2] (Nm)	Inertia (kgm²)	Water flow rate (l/min)	Drive reference [2]
50 - 75 rpm									
T M W 4 0 8 L W	112	75	14200	196	90	21000	19,40	37	890SD-433216G
T M W 4 0 A L W	114	60	18100	219	70	26800	25,10	47	890SD-433250G
T M W 4 0 C L W	150	65	22000	271	75	32500	25,90	56	890SD-433316G
75 - 100 rpm									
T M W 3 0 5 L U	35	85	3930	67	95	5880	4,40	17	890SD-432730E
T M W 3 0 6 L V	45	90	4820	86	100	7200	4,55	20	890SD-432870E
T M W 3 0 A L U	88	100	8410	162	120	12500	6,80	34	890SD-433216G
T M W 4 0 6 L V	97	90	10300	169	105	15300	16,20	28	890SD-433216G
T M W 4 0 A L Q	179	95	18000	312	115	26800	25,10	47	890SD-433361G
T M W 4 0 C L S	195	85	22000	347	100	32500	25,90	56	890SD-433420H
100 - 125 rpm									
T M W 3 0 4 L R	40	125	3030	70	140	4550	3,45	14	890SD-432730E
T M W 3 0 5 L T	47	115	3920	84	135	5880	4,40	17	890SD-432870E
T M W 3 0 8 L U	76	110	6600	133	135	9870	6,50	27	890SD-433156F
T M W 3 0 A L S	110	125	8370	190	155	12500	6,80	34	890SD-433216G
T M W 4 0 6 L S	129	120	10200	215	145	15300	16,20	28	890SD-433250G
T M W 4 0 8 L S	155	105	14100	260	125	21000	19,40	38	890SD-433316G
T M W 4 0 8 L P	184	125	14100	304	145	21000	19,40	38	890SD-433361G
T M W 4 0 C L K	252	110	21800	426	130	32500	25,90	57	890SD-433520H
125 - 150 rpm									
T M W 2 0 4 L U	19	150	1210	35	170	1810	0,75	9	890SD-532450D
T M W 2 0 8 L U	37	135	2630	71	150	3910	1,03	18	890SD-432730E
T M W 3 0 4 L Q	47	150	3020	81	180	4550	3,45	14	890SD-432870E
T M W 3 0 6 L S	68	135	4790	114	165	7200	4,55	21	890SD-433145F
T M W 3 0 8 L Q	100	145	6560	167	175	9870	6,50	28	890SD-433216G
T M W 3 0 A L Q	127	145	8350	215	180	12500	6,80	34	890SD-433250G
T M W 4 0 A L M	243	130	17900	396	160	26800	25,10	47	890SD-433480H
T M W 4 0 A L K	271	145	17800	444	180	26800	25,10	48	890SD-433590J
T M W 4 0 C L I	329	145	21700	533	180	32500	25,90	57	890SD/4/0685K

[1] Other speeds available, consult us.

[2] This reference corresponds to the optimum drive for operation at the nominal point of the motor, without overload.
Warning : this drive does not allow to reach the maximum torque of the motor, and has to be adapted regarding the application requirements

Torque motors

TMW series

Product code

480 VAC power supply [1]

Model	Pn (kW)	Nn (rpm)	Mn (Nm)	In (Arms)	Nmax (rpm)	Mmax [2] (Nm)	Inertia (kgm²)	Water flow rate (l/min)	Drive reference [2]
150 - 175 rpm									
T M W 2 0 5 L T	25	155	1560	47	190	2320	0,78	11	890SD-532590D
T M W 2 0 7 L S	38	160	2270	70	195	3380	1,00	15	890SD-432730E
T M W 2 0 8 L T	48	175	2630	86	215	3910	1,03	18	890SD-432870E
T M W 3 0 5 L P	71	175	3880	117	215	5880	4,40	17	890SD-433145F
T M W 3 0 6 L R	77	155	4770	128	190	7200	4,55	21	890SD-433145F
T M W 3 0 8 L N	120	175	6520	197	215	9870	6,50	28	890SD-433216G
T M W 4 0 6 L P	165	155	10100	264	190	15300	16,20	29	890SD-433316G
T M W 4 0 8 L L	240	165	13900	385	200	21000	19,40	38	890SD-433480H
T M W 4 0 A L H	324	175	17700	522	215	26800	25,10	48	890SD/4/0685K
T M W 4 0 C L G	394	175	21500	621	215	32500	25,90	57	890SD/4/0798K
175 - 200 rpm									
T M W 3 0 6 L N	99	200	4730	160	245	7200	4,55	21	890SD-433216G
T M W 3 0 A L N	165	190	8270	267	230	12500	6,80	35	890SD-433316G
T M W 4 0 6 L J	190	180	10100	304	215	15300	16,20	29	890SD-433361G
T M W 4 0 8 L J	268	185	13800	431	225	21000	19,40	38	890SD-433520H
200 - 225 rpm									
T M W 2 0 4 L R	27	215	1210	47	260	1810	0,75	9	890SD-532590D
T M W 2 0 6 L R	41	205	1910	71	250	2850	0,81	13	890SD-432730E
T M W 2 0 7 L R	49	205	2270	84	250	3380	1,00	16	890SD-432870E
T M W 3 0 4 L M	70	225	2970	113	275	4550	3,45	14	890SD-433145F
T M W 3 0 5 L N	83	205	3850	132	250	5880	4,40	17	890SD-433156F
T M W 3 0 8 L M	139	205	6480	224	250	9870	6,50	28	890SD-433250G
T M W 3 0 A L L	189	220	8220	303	275	12500	6,80	35	890SD-433361G
T M W 4 0 6 L I	225	215	9970	349	260	15300	16,20	29	890SD-433420H
T M W 4 0 A L E	393	215	17500	619	250	26800	25,10	48	890SD/4/0798K
225 - 250 rpm									
T M W 2 0 6 L Q	50	250	1900	83	310	2850	0,81	13	890SD-432870E
T M W 2 0 8 L Q	68	250	2610	114	310	3910	1,03	18	890SD-433145F
T M W 3 0 6 L L	120	245	4680	189	290	7200	4,55	21	890SD-433216G
T M W 3 0 8 L K	162	240	6430	259	300	9870	6,50	28	890SD-433316G
T M W 4 0 6 L H	249	240	9890	387	300	15300	16,20	29	890SD-433480H
T M W 4 0 8 L F	342	240	13600	532	295	21000	19,40	39	890SD/4/0685K

(1) Other speeds available, consult us.

(2) This reference corresponds to the optimum drive for operation at the nominal point of the motor, without overload.
Warning : this drive does not allow to reach the maximum torque of the motor, and has to be adapted regarding the application requirements

Torque motors

TMW series

Product code

480 VAC power supply [1]

Model	Pn (kW)	Nn (rpm)	Mn (Nm)	In (Arms)	Nmax (rpm)	Mmax [2] (Nm)	Inertia (kgm²)	Water flow rate (l/min)	Drive reference [2]
250 - 300 rpm									
TMW205LQ	42	255	1550	69	315	2320	0,78	11	890SD-432730E
TMW208LP	78	285	2600	127	345	3910	1,03	18	890SD-433145F
TMW304LL	80	260	2950	127	320	4550	3,45	14	890SD-433145F
TMW305LK	104	260	3800	164	320	5880	4,40	18	890SD-433216G
TMW306LI	143	295	4620	221	365	7200	4,55	21	890SD-433250G
TMW308LH	199	300	6330	307	370	9870	6,50	29	890SD-433361G
TMW30ALJ	222	260	8140	351	320	12500	6,80	35	890SD-433420H
TMW30ALH	253	300	8060	391	370	12500	6,80	36	890SD-433480H
TMW406LG	281	275	9770	433	340	15300	16,20	30	890SD-433520H
300 - 350 rpm									
TMW204LP	43	345	1200	69	430	1810	0,75	9	890SD-432730E
TMW205LP	52	320	1550	84	400	2320	0,78	11	890SD-432870E
TMW207LN	73	310	2250	118	380	3380	1,00	16	890SD-433145F
TMW305LH	125	320	3740	194	390	5880	4,40	18	890SD-433216G
TMW308LG	220	335	6270	338	410	9870	6,50	29	890SD-433420H
350 - 400 rpm									
TMW206LM	72	365	1890	116	455	2850	0,81	14	890SD-433145F
TMW207LM	83	355	2240	134	440	3380	1,00	16	890SD-433156F
TMW208LL	102	375	2590	162	465	3910	1,03	18	890SD-433216G
TMW304LH	107	355	2870	164	420	4550	3,45	15	890SD-433216G
TMW305LF	139	360	3700	213	445	5880	4,40	18	890SD-433250G
TMW306LG	175	370	4520	266	445	7200	4,55	22	890SD-433316G
TMW306LF	181	385	4500	278	460	7200	4,55	22	890SD-433361G
400 - 450 rpm									
TMW204LM	54	435	1190	85	535	1810	0,75	9	890SD-432870E
TMW205LL	72	450	1530	113	555	2320	0,78	11	890SD-433145F
TMW206LL	83	420	1880	131	520	2850	0,81	14	890SD-433156F
TMW207LJ	106	455	2220	166	560	3380	1,00	16	890SD-433216G
TMW208LJ	122	455	2570	192	560	3910	1,03	18	890SD-433216G
TMW304LE	129	440	2790	194	510	4550	3,45	15	890SD-433216G
450 - 500 rpm									
TMW205LK	81	511	1520	127	630	2320	0,78	11	890SD-433145F
TMW206LJ	97	495	1860	150	615	2850	0,81	14	890SD-433216G
TMW207LI	116	500	2210	180	625	3380	1,00	16	890SD-433216G
TMW208LH	136	510	2550	211	635	3910	1,03	18	890SD-433250G
TMW304LC	143	500	2720	213	590	4550	3,45	15	890SD-433250G
TMW305LC	175	470	3550	264	540	5880	4,40	19	890SD-433316G

[1] Other speeds available, consult us.

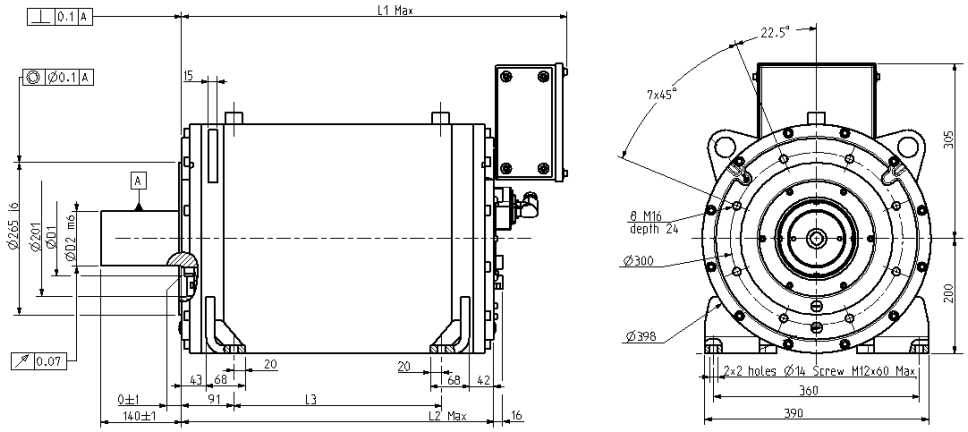
[2] This reference corresponds to the optimum drive for operation at the nominal point of the motor, without overload.
Warning : this drive does not allow to reach the maximum torque of the motor, and has to be adapted regarding the application requirements

Torque motors

TMW series

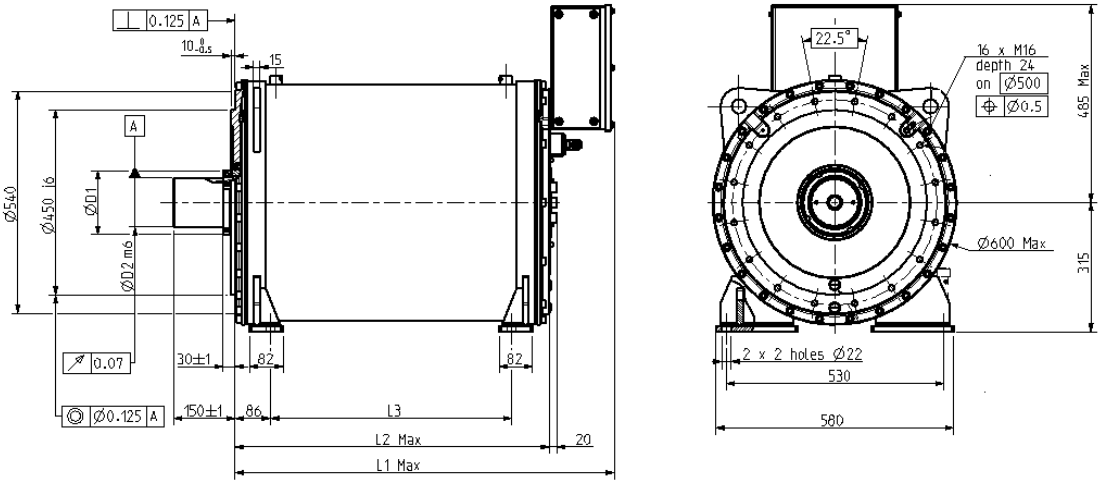
Dimensions and drawings

TMW200 with solid shaft



Model	L1 Max	L2 Max	L3	D1		D2		Weight
				Ball bearings	Roller bearings	Ball bearings	Roller bearings	
Mechanical interface				R7002	R7001	R7002	R7001	
T M W 2 0 4	675	545	362	145	130	110 m6	95 m6	335
T M W 2 0 5	675	545	362	145	130	110 m6	95 m6	350
T M W 2 0 6	675	545	362	145	130	110 m6	95 m6	365
T M W 2 0 7	775	645	462	145	130	110 m6	96 m6	405
T M W 2 0 8	775	645	462	145	130	110 m6	95 m6	420

TMW315 with solid shaft



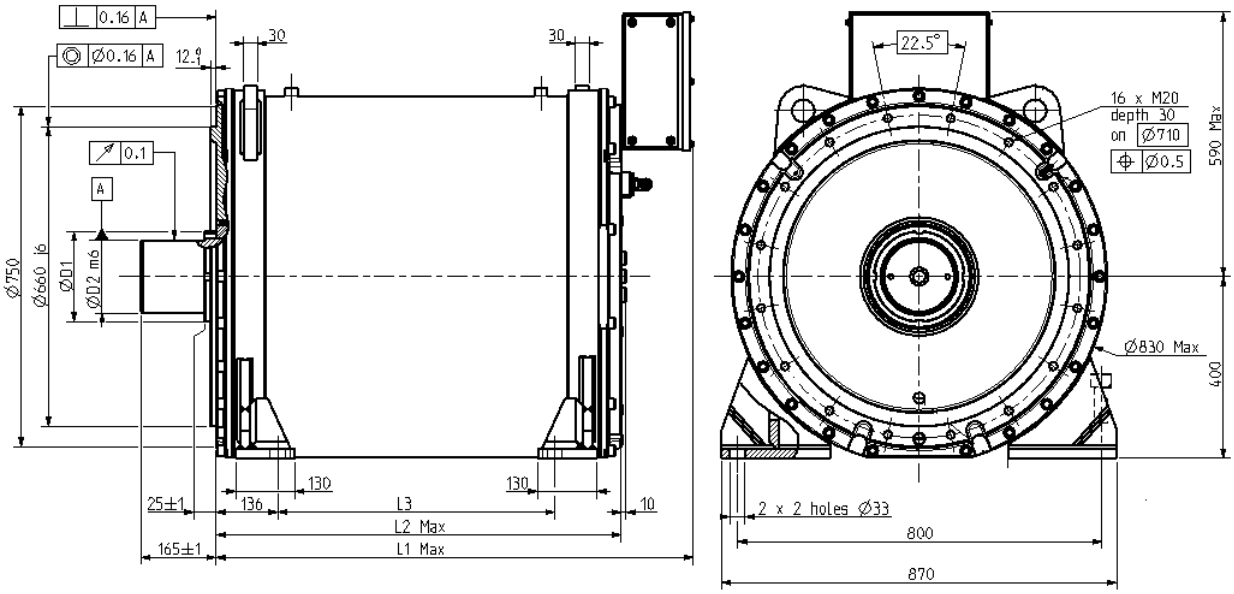
Model	L1 Max	L2 Max	L3	D1		D2		Weight
				Ball bearings	Roller bearings	Ball bearings	Roller bearings	
Mechanical interface				R7004	R7003	R7004	R7003	
T M W 3 0 4	630	470	288	180	155	140 m6	120 m6	515
T M W 3 0 5	730	570	388	180	155	140 m6	120 m6	575
T M W 3 0 6	730	570	388	180	155	140 m6	120 m6	595
T M W 3 0 8	930	770	588	180	155	140 m6	120 m6	710
T M W 3 0 A	930	770	588	180	155	140 m6	120 m6	750

Torque motors

TMW series

Dimensions and drawings

TMW400 with solid shaft



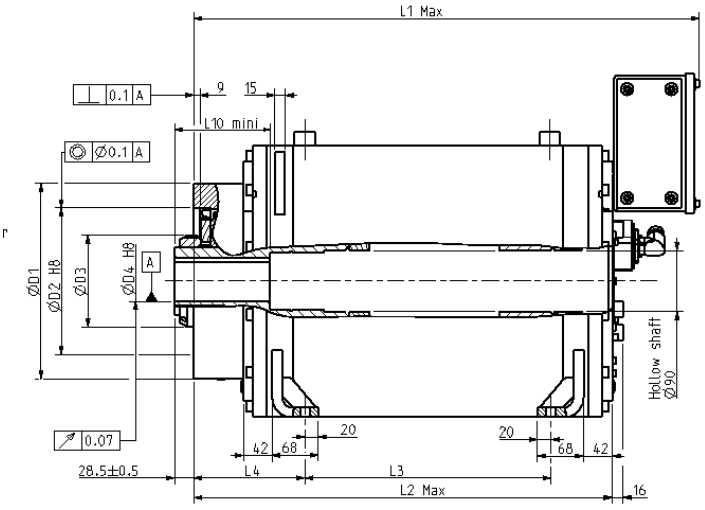
Model	L1 Max	L2 Max	L3	D1		D2		Weight
				Ball bearings	Roller bearings	Ball bearings	Roller bearings	
Mechanical interface				R7006	R7005	R7006	R7005	
T M W 4 0 6	754	594	310	240	200	190 m6	160 m6	1290
T M W 4 0 8	854	694	410	240	200	190 m6	160 m6	1430
T M W 4 0 A	1054	894	610	240	200	190 m6	160 m6	1620
T M W 4 0 C	1054	894	610	240	200	190 m6	160 m6	1700

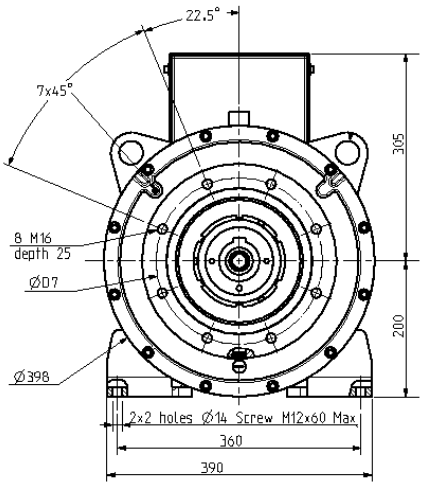
Torque motors

TMW series

Dimensions and drawings

TMW200 with thrust-bearing





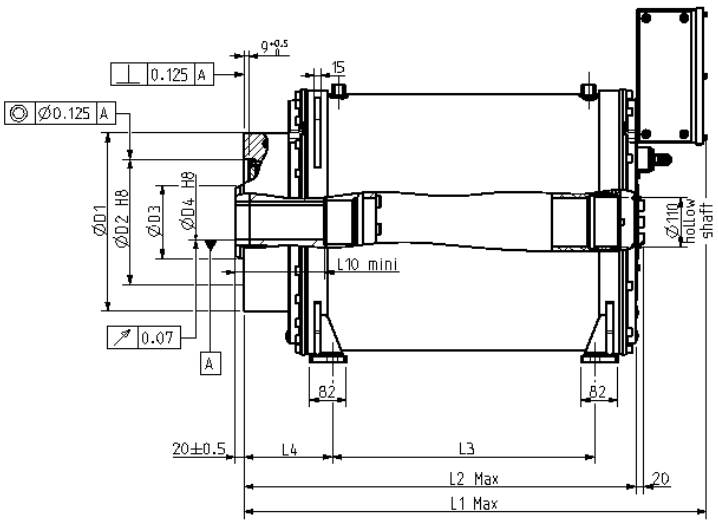
Model	Mechanical interface	Thrust bearing	L1 Max	L2 Max	L3	L4	L10 Mini	D1	D2	D3	D4	D7	Weight
TMW204	R0001	29420	750	620	362	163	140	286.5	215 H8	135	60h8	245	335
	R0002	29424	760	630	362	174	151	350	255 H8	155	80h8	300	365
TMW205	R0001	29420	750	620	362	163	140	286.5	215 H8	135	60h8	245	350
	R0002	29424	760	630	362	174	151	350	255 H8	155	80h8	300	380
TMW206	R0001	29420	750	620	362	163	140	286.5	215 H8	135	60h8	245	365
	R0002	29424	760	630	362	174	151	350	255 H8	155	80h8	300	395
TMW207	R0001	29420	850	720	462	163	140	286.5	215 H8	135	60h8	245	405
	R0002	29424	860	730	462	174	151	350	255 H8	155	80h8	300	435
TMW208	R0001	29420	850	720	462	163	140	286.5	215 H8	135	60h8	245	420
	R0002	29424	860	730	462	174	151	350	255 H8	155	80h8	300	450

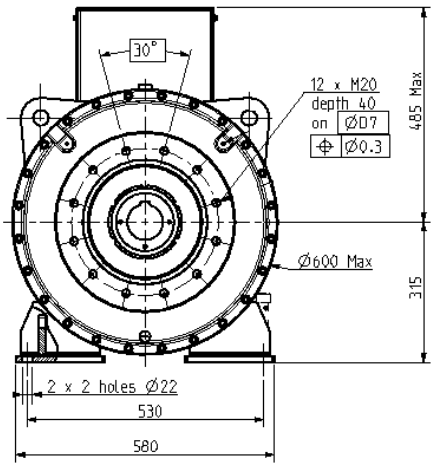
Torque motors

TMW series

Dimensions and drawings

TMW315 with thrust-bearing





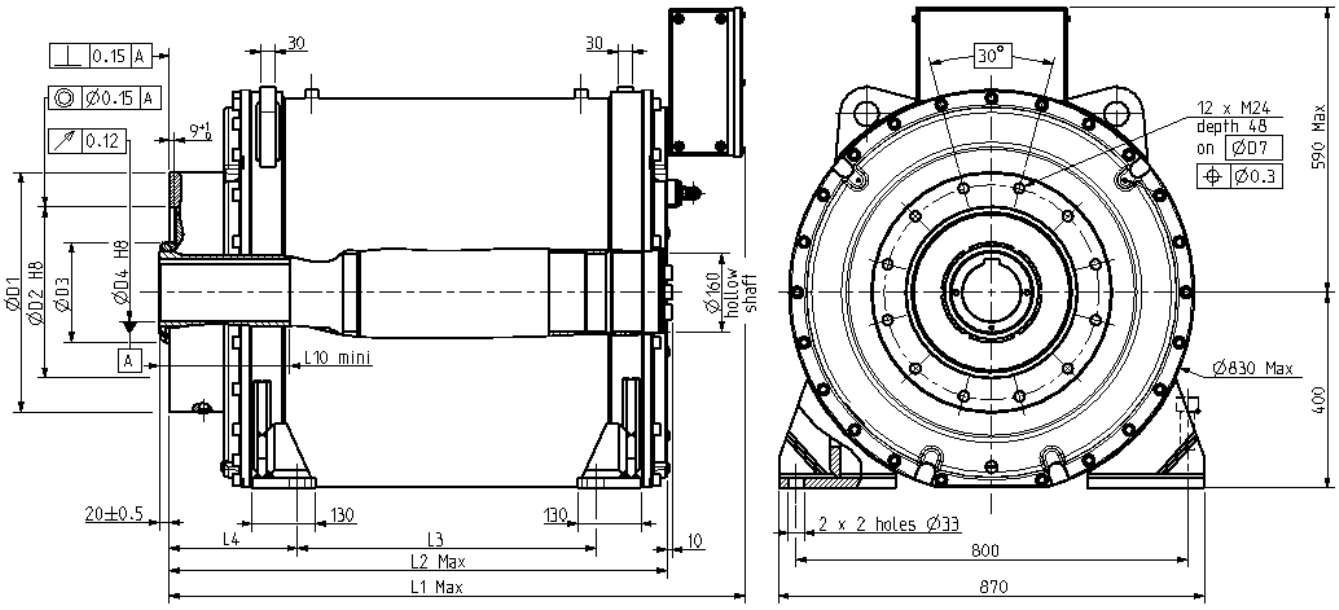
Model	Mechanical interface	Thrust bearing	L1 Max	L2 Max	L3	L4	L10 Mini	D1	D2	D3	D4	D7	Weight
TMW304	R0003	29422	730	570	288	186	120	362	240 H8	145	60 H8	330	585
	R0004	29426	740	580	288	198	160	362	280 H8	165	80 H8	330	585
	R0005	29430	745	585	288	203	180	400	310 H8	185	100 H8	350	605
TMW305	R0003	29422	830	670	388	186	120	362	240 H8	145	60 H8	330	645
	R0004	29426	840	680	388	198	160	362	280 H8	165	80 H8	330	645
	R0005	29430	845	685	388	203	180	400	310 H8	185	100 H8	350	665
TMW306	R0003	29422	830	670	388	186	120	362	240 H8	145	60 H8	330	665
	R0004	29426	840	680	388	198	160	362	280 H8	165	80 H8	330	665
	R0005	29430	845	685	388	203	180	400	310 H8	185	100 H8	350	685
TMW308	R0003	29422	1030	870	588	186	120	362	240 H8	145	60 H8	330	780
	R0004	29426	1040	880	588	198	160	362	280 H8	165	80 H8	330	780
	R0005	29430	1045	885	588	203	180	400	310 H8	185	100 H8	350	800
TMW30A	R0003	29422	1030	870	588	186	120	362	240 H8	145	60 H8	330	820
	R0004	29426	1040	880	588	198	160	362	280 H8	165	80 H8	330	820
	R0005	29430	1045	885	588	203	180	400	310 H8	185	100 H8	350	840

Torque motors

TMW series

Dimensions and drawings

TMW400 with thrust-bearing



Model	Mechanical interface	Thrust bearing	L1 Max	L2 Max	L3	L4	L10 Mini	D1	D2	D3	D4	D7	Weight
T M W 4 0 6	R0006	29430	867	707	310	249	250	490	310 H8	185	100 H8	380	1410
	R0007	29434	880	720	310	262	250	490	350 H8	205	120 H8	440	1410
	R0008	29440	899	739	310	281	250	510	410 H8	235	120 H8	460	1445
T M W 4 0 8	R0006	29430	967	807	410	249	250	490	310 H8	185	100 H8	380	1550
	R0007	29434	980	820	410	262	250	490	350 H8	205	120 H8	440	1550
	R0008	29440	999	839	410	281	250	510	410 H8	235	120 H8	460	1585
T M W 4 0 A	R0006	29430	1167	1007	610	249	250	490	310 H8	185	100 H8	380	1740
	R0007	29434	1180	1020	610	262	250	490	350 H8	205	120 H8	440	1750
	R0008	29440	1199	1039	610	281	250	510	410 H8	235	120 H8	460	1775
T M W 4 0 C	R0006	29430	1167	1007	610	249	250	490	310 H8	185	100 H8	380	1820
	R0007	29434	1180	1020	610	262	250	490	350 H8	205	120 H8	440	1820
	R0008	29440	1199	1039	610	281	250	510	410 H8	235	120 H8	460	1855

High-speed motors for test benches

MGV series

Up to 45 000 rpm

General characteristics	
Power	Up to 200 kW
Speed	Up to 45 000 rpm
Field weakening	Up to 10 x nominal speed
Mounting	Flange (B5) or foot (B3)
Protection degree	IP40 as standard
Cooling method	Water jacket
Supply voltage	400 VAC
Connections	▪ 1.2 m flying cable for power and thermal probe ▪ connector for feedback sensor signal
Stator winding isolation	Class F according to EN60034-1 standard (overmolding)
Thermal protection	1 PTC 150 probe as standard
Rotor balancing	G1 quality
Shaft end	Solid smooth shaft as standard
Bearings	Steel or ceramic depending on speed and load
Feedback sensor	2 poles resolver Sin/cos encoder

Description

MGV series servomotors are innovative direct drive solutions especially designed for applications that require high speeds and low inertias.

They are successfully employed in Automotive or Aerospace Components Test-Benches (starters, pumps, alternators, gearboxes...).

Thanks to the possibility to generate fast response operation cycles, MGV series servomotors meet different simulation requirements : speed in urban or race cycles, speed acyclism of an IC engine, etc.

Advantages

- **High maximum speeds allowing to avoid the use of mechanical speed multipliers**
- **Low inertias allowing very fast accelerations / decelerations**
- **Constant power operation above nominal speed, allowing to avoid to oversize the drive**
- **Water cooling ensuring high compactness and low noise level**
- **Thermal protection and resolver feedback as standard**

High-speed motors for test benches

MGV series

Up to 45 000 rpm

Overview

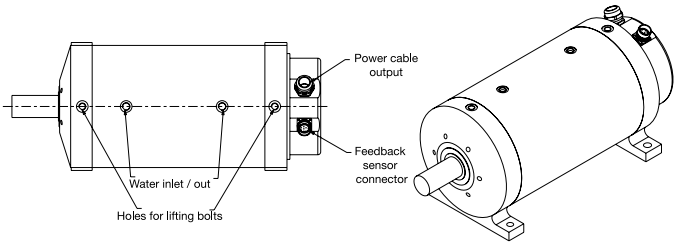
MGV series are permanent magnet bruhless servomotors integrated into a compact water cooled frame.

MGV Series servomotors are especially suitable for Automotive and Aerospace components testing, where they offer a large number of advantages over traditionnal fan ventilated induction motors :

- Increased maximum speeds
- Suppression of mechanical speed multipliers
- Reduced inertia
- Increased compactness
- Reduced noise

In combination with Parker AC890 Series drives, MGV take benefit of field weakening technique, which allows to deliver high torque at low speed, and constant power from nominal up to maximum speed.

A large number of winding variants are available, meeting any desired torque / speed characteristics up to 100 kW.



High-speed motors for test benches

MGV series

Up to 45000 rpm

Drive associations

Motor	PARKER DRIVE DIGIVEX	Base speed	DIGIVEX Speed limit due to the B.E.M.F or the frequency	Low speed torque	Low speed torque S6	S1 Power	S6 power	Bearings	Inertia
Name	Name	Nb (rpm)	NmaxDIGIVEX (rpm)	Mo (Nm)	MoS6 (Nm)	PS1 (kW)	PS6 (kW)		kg.m²
MGV420BAU	DIGIVEX 32/64	4480	45000	4,9	7,3	2,3	2,3	XLIFE	0,00058
MGV420BAP	DIGIVEX 32/64	10400	45000	4,5	6,1	4,9	4,9	XLIFE	0,00058
MGV420BAK	DIGIVEX 50/80	23200	45000	4,2	4,8	10,2	10,2	XLIFE	0,00058
MGV430BAQ	DIGIVEX 32/64	6070	45000	7,4	9,9	4,7	4,7	XLIFE	0,00078
MGV430BAL	DIGIVEX 32/64	13100	45000	6,7	6,7	10,0	10,0	XLIFE	0,00078
MGV430BAI	DIGIVEX 50/80	21900	45000	6,8	6,8	15,6	15,6	XLIFE	0,00078
MGV620CAN	DIGIVEX 32/64	4680	30000	10,0	15,0	4,9	4,9	XLIFE	0,00201
MGV620CAI	DIGIVEX 50/80	9930	30000	10,0	15,0	10,4	10,4	XLIFE	0,00201
MGV620CAF	DIGIVEX 50/80	15300	30000	10,0	10,9	16,0	16,0	XLIFE	0,00201
MGV635CAI	DIGIVEX 50/80	4870	30000	20,0	28,4	10,2	10,2	XLIFE	0,00336
MGV635CAF	DIGIVEX 50/80	7450	30000	19,3	19,3	15,6	15,6	XLIFE	0,00336
MGV635CAD	DIGIVEX 100/120	11900	30000	20,0	25,2	25,0	25,0	XLIFE	0,00336
MGV820CRR	DIGIVEX 32/64	3820	24000	22,0	27,1	8,8	8,8	XLIFE	0,00772
MGV820CRP	DIGIVEX 50/80	6080	24000	22,0	27,1	14,0	14,0	XLIFE	0,00772
MGV820CAR	DIGIVEX 50/80	3510	24000	28,0	42,0	10,3	10,3	XLIFE	0,00772
MGV820CAP	DIGIVEX 100/120	5500	24000	28,0	42,0	16,0	16,0	XLIFE	0,00772
MGV840CAR	DIGIVEX 50/80	1410	24000	68,0	97,4	10,0	10,0	XLIFE	0,01455
MGV840CAP	DIGIVEX 100/120	2250	24000	68,0	100,0	16,0	16,0	XLIFE	0,01455
MGV840CAH	DIGIVEX 150	4500	24000	68,0	93,9	32,0	32,0	XLIFE	0,01455
MGV840CAF	DIGIVEX 300	6370	24000	66,0	100,0	44,0	44,0	XLIFE	0,01455
MGV840CAD	DIGIVEX 300	10300	24000	58,0	93,5	63,0	63,0	XLIFE	0,01455
MGV930CAT	DIGIVEX 50/80	795	15900	120,0	134,9	10,0	10,0	XLIFE	0,03654
MGV930CAP	DIGIVEX 100/120	1280	20000	120,0	167,5	16,0	16,0	XLIFE	0,03654
MGV930CAM	DIGIVEX 100/120	1830	20000	120,0	121,2	23,0	23,0	XLIFE	0,03654
MGV930CAJ	DIGIVEX 100/120	2470	20000	112,1	112,1	31,0	31,0	XLIFE	0,03654
MGV930CAF	DIGIVEX 300	4140	20000	120,0	167,5	52,0	52,0	XLIFE	0,03654
MGV950CAM	DIGIVEX 100/120	1100	20000	200,0	202,1	23,0	23,0	XLIFE	0,05803
MGV950CAJ	DIGIVEX 100/120	1440	20000	186,8	186,8	30,0	30,0	XLIFE	0,05803
MGV950CAF	DIGIVEX 300	2490	20000	200,0	279,2	52,0	52,0	XLIFE	0,05803
MGV950CAE	DIGIVEX 300	3010	20000	200,0	232,3	63,0	63,0	XLIFE	0,05803
MGVA30DAN	DIGIVEX 100/120	510	10200	280,0	360,0	15,0	15,0	HYBRIDS	0,15229
MGVA30DAF	DIGIVEX 150	1130	12000	280,0	360,0	33,0	33,0	HYBRIDS	0,15229
MGVA30DAD	DIGIVEX 300	1710	12000	280,0	360,0	50,0	50,0	HYBRIDS	0,15229
MGVA30DAC	DIGIVEX 300	2330	12000	275,0	360,0	67,0	67,0	HYBRIDS	0,15229
MGVA50DAF	DIGIVEX 150	620	12000	480,0	600,0	31,0	31,0	HYBRIDS	0,24734
MGVA50DAD	DIGIVEX 300	975	12000	480,0	600,0	49,0	49,0	HYBRIDS	0,24734
MGVA50DAC	DIGIVEX 300	1330	12000	480,0	600,0	67,0	67,0	HYBRIDS	0,24734

High-speed motors for test benches

MGV series

Up to 45 000 rpm

Drive associations

Motor	PARKER DRIVE AC890SD	Base speed	AC890 Speed limit due to the B.E.M.F or the frequency	Low speed torque	Low speed torque S6	S1 Power	S6 power	Bearings	Inertia
Name	Name	Nb (rpm)	NmaxAC890 (rpm)	Mo (Nm)	Mo S6 (Nm)	PS1 (kW)	PS6 (kW)		kg.m²
MGV420BAU	890SD-532100B	4480	11283	4,3	4,3	2,3	2,3	STEEL	0,00058
MGV420BAP	890SD-53216SB	10400	22566	4,5	4,5	4,9	4,9	STEEL	0,00058
MGV420BAK	890SD-532300C	23200	30000	4,1	4,1	10,2	10,2	HYBRIDS	0,00058
MGV430BAQ	890SD-53216SB	6070	13973	7,4	7,4	4,7	4,7	STEEL	0,00078
MGV430BAL	890SD-532300C	13100	27869	6,5	6,5	10	10	HYBRIDS	0,00078
MGV430BAI	890SD-532450D	21900	30000	6,6	6,6	15,6	15,6	HYBRIDS	0,00078
MGV620CAN	890SD-53216SB	4680	9239	10,0	13,0	4,9	4,9	STEEL	0,00201
MGV620CAI	890SD-532300C	9930	18478	10,0	10,2	10,4	10,4	STEEL	0,00201
MGV620CAF	890SD-532450D	15300	20000	10,0	10,5	16	16	HYBRIDS	0,00201
MGV635CAI	890SD-532300C	4870	10537	18,0	18,0	10,2	10,2	STEEL	0,00336
MGV635CAF	890SD-532450D	7450	15839	18,6	18,6	15,6	15,6	STEEL	0,00336
MGV820CRR	890SD-532240C	3820	7064	22,0	23,9	8,8	8,8	STEEL	0,00772
MGV820CRP	890SD-53230SC	6080	11039	21,6	21,6	14	14	STEEL	0,00772
MGV820CAR	890SD-532300C	3510	5769	28,0	31,4	10,3	10,3	STEEL	0,00772
MGV820CAP	890SD-532450D	5500	9011	28,0	31,0	16	16	STEEL	0,00772
MGV840CAR	890SD-532300C	1410	2881	64,5	64,5	10	10	STEEL	0,01455
MGV840CAP	890SD-532450D	2250	4513	63,7	63,7	16	16	STEEL	0,01455
MGV840CAH	890SD-432730E	4500	9011	68,0	68,0	32	32	STEEL	0,01455
MGV840CAF	890SD-432870E	6370	10000	63,3	63,3	44	44	STEEL	0,01455
MGV930CAT	890SD-532300C	795	1753	101,1	101,1	10	10	STEEL	0,03654
MGV930CAP	890SD-532590D	1280	2833	120,0	120,0	16	16	STEEL	0,03654
MGV930CAM	890SD-432730E	1830	3923	120,0	130,3	23	23	STEEL	0,03654
MGV930CAJ	890SD-432730E	2470	5100	120,0	120,0	31	31	STEEL	0,03654
MGV930CAF	890SD-433105F	4140	8486	102,9	102,9	52	52	STEEL	0,03654
MGV930CAC	890SD-433216G	8770	10000	101,8	101,8	101	101	STEEL	0,03654
MGV950CAM	890SD-432730E	1100	2350	200,0	217,1	23	23	STEEL	0,05803
MGV950CAJ	890SD-432730E	1440	3054	200,0	200,0	30	30	STEEL	0,05803
MGV950CAF	890SD-433105F	2490	5100	171,4	171,4	52	52	STEEL	0,05803
MGV950CAE	890SD-433145F	3010	6108	178,8	178,8	63	63	STEEL	0,05803
MGV950CAC	890SD-433216G	5010	10000	166,7	166,7	105	105	STEEL	0,05803
MGV950CAX	890SD-433420H	8350	10000	168,7	168,7	175	175	STEEL	0,05803
MGVA30DAN	890SD-532450D	510	1043	255,9	255,9	15	15	STEEL	0,15229
MGVA30DAF	890SD-432730E	1130	2090	280,0	280,0	33	33	STEEL	0,15229
MGVA30DAD	890SD-433105F	1710	3129	270,0	270,0	50	50	STEEL	0,15229
MGVA30DAC	890SD-433145F	2330	4180	254,3	254,3	67	67	STEEL	0,15229
MGVA30DAB	890SD-433216G	3710	6258	260,0	260,0	101	101	STEEL	0,15229
MGVA50DAF	890SD-432730E	620	1253	475,0	475,0	31	31	STEEL	0,24734
MGVA50DAD	890SD-433105F	975	1875	450,8	450,8	49	49	STEEL	0,24734
MGVA50DAC	890SD-433145F	1330	2500	420,8	420,8	67	67	STEEL	0,24734
MGVA50DAB	890SD-433216G	2010	3750	438,3	438,3	101	101	STEEL	0,24734
MGVA50DAA	890SD-433480H	4150	7500	448,5	448,5	200	200	STEEL	0,24734

High-speed motors for test benches

MGV series

Up to 45 000 rpm

MGV codification

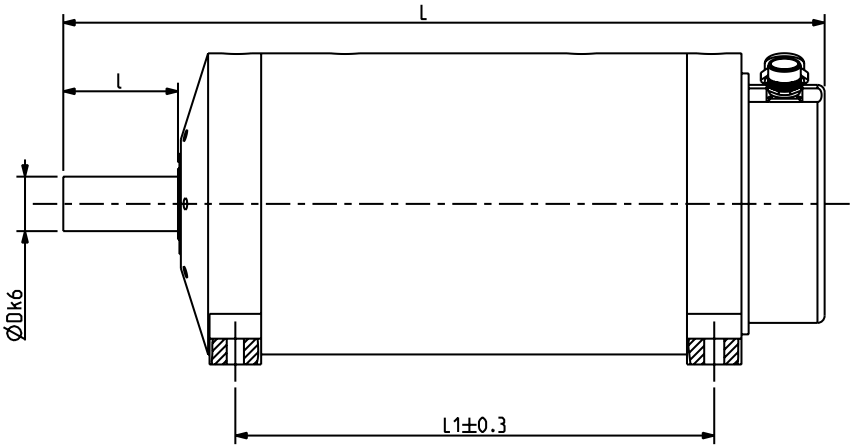
High speed motors MGV	Product code																
	M	**G**	**V**	**8**	**4**	**0**	**C**	**A**	**E**	**A**	**B**	**3**	**L**	**R**	**1**	**0**	**0**	**0**
Product series																		
MGV : Water cooling high speed motors	M	G	V															
Size																		
(see motors data tables)				▪	▪	▪												
Torque/Speed characteristics																		
(see motors data tables)							▪	▪	▪									
Feedback sensor																		
Resolver										A								
Sin/cos encoder										K								
Mounting																		
Horizontal, Foot mounting (standard)											B	3						
Horizontal, Flange mounting (option)											B	5						
Design																		
Low speed design (steel bearings)													L					
High speed design (ceramic bearings)													H					
Very high speed design (X-life bearings)													X					
Electrical connections																		
Power out cables 1.2m, PTC and connector for encoder signals (standard)															**1**			
Terminal box (option)															6			
Interface																		
Standard motor																0	0	0
Other code : customer specificity																		

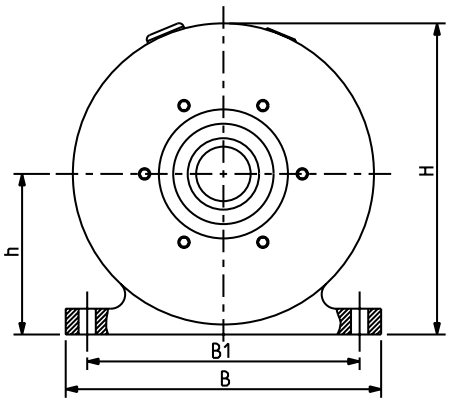
High-speed motors for test benches

MGV series

Up to 45000 rpm

Dimensions





Motor	Dimensions (mm)								Weight Kg
	L	L1	B	B1	H	h	l	Dk6	
M G V 4 2 0 U	343	192	150	125	150	80	50	24	30
M G V 4 2 0 P	343	192	150	125	150	80	50	24	30
M G V 4 2 0 K	343	192	150	125	150	80	50	24	30
M G V 4 3 0 Q	376	225	150	125	150	80	50	24	33
M G V 4 3 0 L	376	225	150	125	150	80	50	24	33
M G V 4 3 0 I	376	225	150	125	150	80	50	24	33
M G V 6 2 0 N	384	215	160	140	170	90	58	32	41
M G V 6 2 0 I	384	215	160	140	170	90	58	32	41
M G V 6 3 5 I	444	275	160	140	170	90	58	32	50
M G V 6 3 5 F	444	275	160	140	170	90	58	32	50
M G V 8 2 0 P	451	254	220	190	217	112	80	38	80
M G V 8 4 0 H	531	334	220	190	217	112	80	38	100
M G V 8 4 0 F	531	334	220	190	217	112	80	38	100
M G V 9 3 0 F	626	376	290	254	295	160	110	48	195
M G V 9 3 0 E	626	376	290	254	295	160	110	48	195
M G V 9 5 0 C	746	496	290	254	295	160	110	48	250

High speed servomotors

NV series

0.7 - 12 kW

Description

The NV series is a range of compact servomotors specially designed for high speed operation.

NV motors are balanced with high accuracy to minimize the level of vibration and to increase their lifetime, making them particularly suitable for auxiliary spindle applications on machine tools. NV motors feature high dynamic performances and torque densities, while taking advantage of a large variety of options and customization possibilities.

Available in kit version on request

Advantages

High-Speed capabilities

Precision and movement quality

High dynamic performances

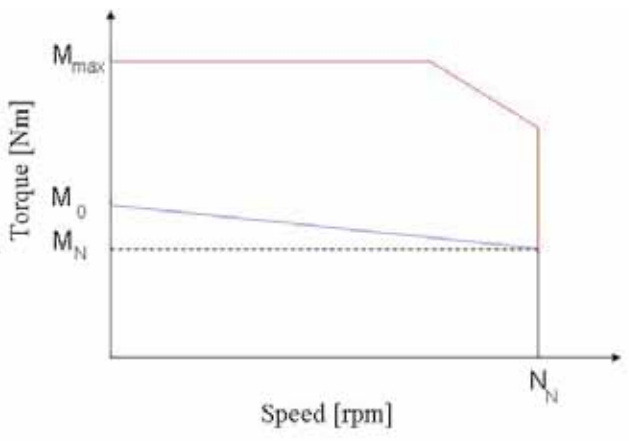
Compactness and robustness

Design flexibility

Application

- Machine-tools auxiliary spindles

General Technical Characteristics	
Motor type	- Synchronous permanent magnets servomotors
Poles number	10
Voltage supply	230 VAC or 400 VAC
Power range	0,7 to 12 kW
Torque range	0,4 to 11,5 Nm
Speed range	7000 to 17000 rpm
Mounting	- Flange with smooth holes
Mechanical interface	- Solid smooth shaft
Ingress protection level (IEC60034-5)	- IP64 (standard) - IP65 (option)
Cooling method	- Natural ventilation (standard) - Fan cooling (NX860V)
Temperature class (IEC60034-1)	- Class F
Feedback sensor	- 2 poles resolver (standard) - Absolute encoders : EnDat, Hiperface, Posivex (options) - without sensor (on request))
Connections	- Connectors - Terminal box (fan cooled motors)
Other options	- Thermal protection (PTC, Thermo Switch or KTY)



High speed servomotors

NV series

0.7 - 12 kW

Selection and ordering

Rated Speed N_N(2) (rpm)	Stall Torque M_0(1) (Nm)	Rated Torque M_N (Nm)	Stall Current I_0 (A_{RMS})	RatedI Current I_N (A_{RMS})	Rated power P_N (kW)	Moment of Inertia J (kg.m².10-5)	Product Code
230 VAC supply voltage - mono or three-phased							
17000	0.9	0.4	5.13	3.2	0.7	7 34 .	NV310EAWR7000
400 VAC supply voltage - three-phased							
14000	1.9	1	5.25	3.9	1.5	2 9	NV420EAIR7000
11000	2.5	1.3	5.63	4.1	1.5	4 62 .	NV430EAHR7000
11000	3.5	1.6	9.86	6.4	1.8	9 0	NV620EAJR7000
10000	5.5	1.9	11.1	5.4	2	1 3 0	NV630EAIR7000
9000	7.6	3.4	14.7	9.3	3.2	3 1 0	NV820EANR7000
8000	13.5	6.6	19.4	13.4	5.5	5 7 0	NV840EAJR7000
7000	18.5	9.9	28.3	21.4	7.3	8 4 0	NV860EAER7000
9000	30	11.5	57	30.9	10.8	8 4 0	NV860VACR8000

Drives associations

Standards Motors Réf.	Rated Speed N_N(2) (rpm)	Stall-Current I_0 (A_{RMS})	Rated Current I_N (A_{RMS})	Drives sizes (DRIVE > I0)					
				Compax3		AC890SD		Digivex	
				Compax3	Max. Speed Compax 3 (rpm)	AC890SD	Max.Sp eed AC890 (rpm)	Digivex	Max. Speed Digivex (rpm)
230 VAC supply voltage - mono or three-phased									
NV310EAWR7000	17000	5.13	3.2	C3S100V2...	12000	890SD-231700B0...	12000	DLD13007R	17000
400 VAC supply voltage - three-phased									
NV420EAIR7000	14000	5.25	3.9	C3S075V4...	12000	890SD-532100B0...	12000	DSD16008...	14000
NV430EAHR7000	11000	5.63	4.1	C3S075V4...	10700	890SD-532100B0...	11000	DSD16008...	11000
NV620EAJR7000	11000	9.86	6.4	C3S150V4...	11000	890SD-532160B0...	11000	DSD16016...	11000
NV630EAIR7000	10000	11.1	5.4	C3S150V4...	9800	890SD-532160B0...	10000	DSD16016...	10000
NV820EANR7000	9000	14.7	9.3	C3S150V4...	8780	890SD-53216SB0...	9000	DSD16032...	9000
NV840EAJR7000	8000	19.4	13.4	C3S300V4...	6760	890SD-532240C0...	8000	DSD16032...	8000
NV860EAER7000	7000	28.3	21.4	C3S300V4...	7000	890SD-53230SC0...	7000	DPD27050...	7000
NV860VACR8000	9000	57	30.9	C3H090V4...	8600	890SD-432730E0...	9000	DPD17100...	9000

High speed servomotors

NV series

0.7 - 12 kW

NV codification

NV series		Product code example										
		N	V	8	6	0	V	▪	C	▪	▪	▪	▪	0
FEEDBACK SENSOR	**MAX SPEED (rpm)**													
2 poles resolver (standard)	**17000**							**A**						
Cost effective absolute POSIVEX encoder	8000							M						
Absolute multi-turn HIPERFACE 16ppr SEL37 Absolute single-turn	12000							Q						
HIPERFACE encoder 128 ppr SKS36	12000							R						
Absolute multi-turn HIPERFACE encoder 128 ppr SKM36	9000							S						
Absolute single-turn HIPERFACE encoder 1024 ppt SRS50	12000							T						
Absolute multi-turn HIPERFACE encoder 1024 ppt SRM50	12000							U						
Absolute signle-turn ENDAT encoder ECN 1113	12000							V						
Absolute multi-turn ENDAT encoder EQN 1125	12000							W						
PAINTING														
Without painting (standard)										**R**				
Black mat										B				
CONNECTIONS	**VENTILATION**													
Shielded cables	No										1			
Connectors (standard)	**No**										**7**			
Terminal boxes	Yes										9			
THERMAL PROTECTION														
Without protection (standard)												**0**		
PTC on power connector												1		
Thermo switch on power connector												2		
PTC on sensor connector												A		
Thermo switch on sensor connector												B		
KTY on sensor connector												C		
PROTECTION DEGREE														
IP64 (standard)													**0**	
IP65													1	

* Mounting on aluminium flange : 280 x 280 x 8 mm (NX1-2), 400 x 400 x 12 mm (NX3-8)
Temperature < 40°C near motor's flange

High speed servomotors

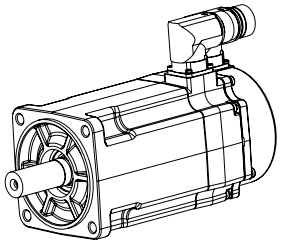
NV series

0.7 - 12 kW

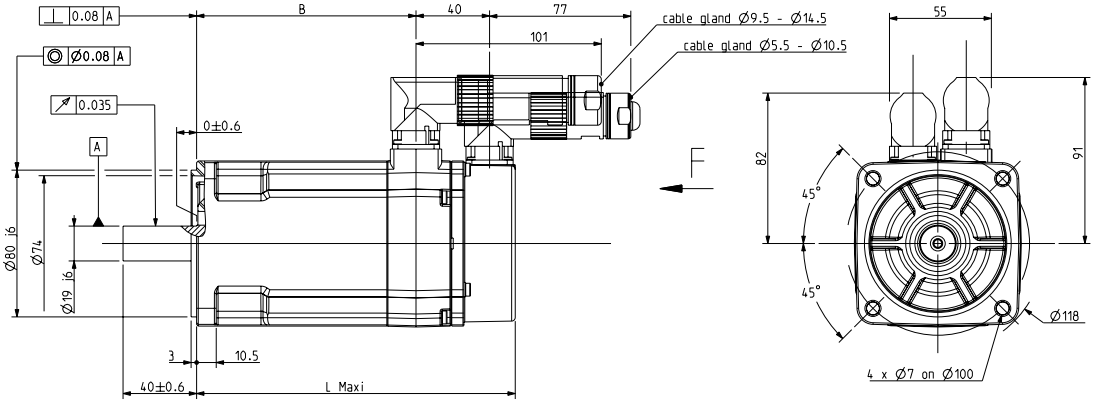
Dimensions and drawings (resolver version)

NV3, NV4, NV6 dimensions

Motor	N (mm)	M (mm)	D (mm)	E (mm)	T (mm)	P (mm)	S (mm)	Weight (kg)	L (mm)	Fr* (daN)	Fa* (daN)
NV310	60	75-80	11	23	2.5	71	5.5	2	147	36	20
NV420	80	100	19	40	3	91.5	7	3.7	175	72	24
NV430	80	100	19	40	3	91.5	7	4.6	200	82	24
NV620	110	130	24	50	3.5	121	9	6.9	181	82	52
NV630	110	130	24	50	3.5	121	9	8.8	210	86	54

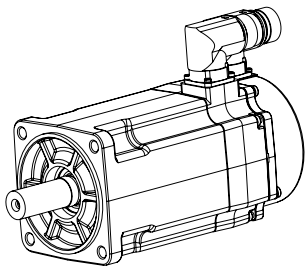


* Fr and Fa not cumulative : At 1500 rpm for a bearing service life of 20000 hours

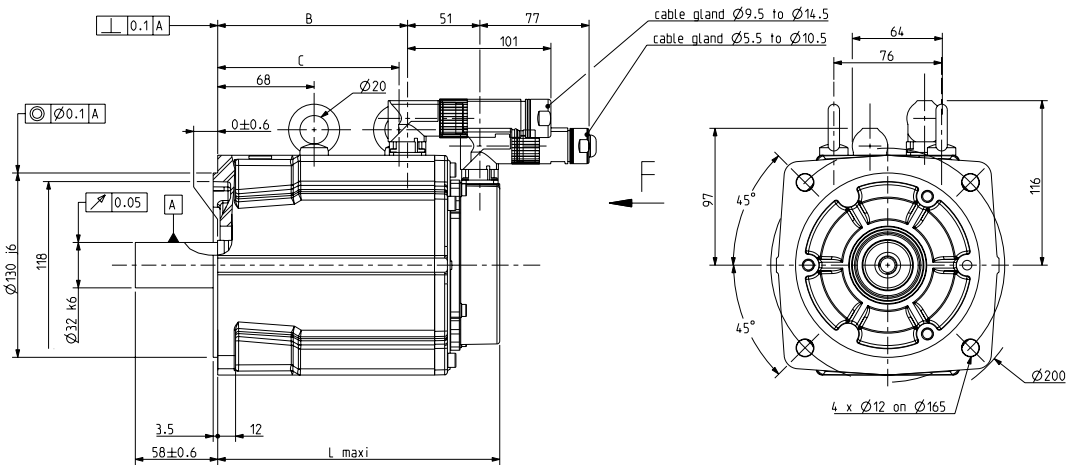


NV8 dimensions

Motor	Weight (kg)	L (mm)	Fr* (daN)	Fa* (daN)
NV820	13	200	151	28
NV840	20	260	165	33
NV860	27	320	172	37



* Fr and Fa not cumulative : At 1500 rpm for a bearing service life of 20000 hours



Frameless servomotors

NK series

0,4 to 72 Nm

Description

Servo motor Kit is an innovative and global approach enabling the complete integration of motor in a simplified mechanical system.

The size constraints are considered with a maximum effectiveness.

This approach provides accuracy, reliability and robustness benefits matchless with traditional construction.

A complete base is available to meet the design of many mechanical systems in different application domains. Other adaptation can be developed on request.

Advantages

Compactness and reduced weight of mechanical system

Reduced costs

Direct Drive : accurate and robust mechanics

complete and optimized solution including sensor, cooling system and drive

Integration assistance

Technical specifications

Frameless servomotors

Model	Low speed Torque (N.m)	Max. speed (rpm)	Max. constant power (kW)	Inertia ($kg.m^2.10^{-5}$)	Weight (kg)
NK110	0.4	8000	0.25	1.3	0.422
NK210	0.9	6000	0.4	3.8	0.72
NK310	2		0.9	7.9	0.885
NK420	4		1.75	29	1.68
NK430	5.5		2.25	42.6	2.305
NK620	8	5000	2.75	98	3.71
NK630	12	4500	3.7	147	5.355
NK820	15	5600	5.8	320	6.165
NK840	28	3500	6.8	620	11.7
NK860	42	2600	7.7	920	17.445

Frameless servomotors with water cooling

Model	Low speed Torque (N.m)	Max. speed (rpm)	Max. constant power (kW)	Inertia ($kg.m^2.10^{-5}$)	Weight (kg)
NK310W	3.4	15000	4.7	7.9	0.885
NK420W	7	12000	8	29	1.68
NK430W	10	10000	10	42.6	2.305
NK620W	14		14	98	3.71
NK630W	21	8000	17	147	5.355
NK820W	26		20	320	6.165
NK840W	48	6000	30	620	11.7
NK860W	72	4000		920	17.44

Frameless servomotors

NK series

0,45 to 72 Nm

Selection and ordering

(For frameless servomotors with water cooling, please contact us)

2

230 VAC power supply- mono or three-phased

Stall Torque M_0(1) (Nm)	Rated Torque M_N (Nm)	Max. Speed AC890 - 638 - Digivex N_{MAX} (rpm)	Max. Speed Compax 3 $N_{COMPAX3}$ (rpm)	Moment of Inertia J ($kg.m^2.10^{-5}$)	Product Code													
0.45	0.33	6000	6000	1.30	N	K	1	1	0	E	▪	P	R	1	▪	0	0
1.00	0.80	4000	3420	3.80	N	K	2	1	0	E	▪	T	R	1	▪	0	0
1.00	0.61	6000	5530	3.80	N	K	2	1	0	E	▪	P	R	1	▪	0	0
2.00	1.80	2300	1930	7.90	N	K	3	1	0	E	▪	P	R	1	▪	0	0
2.00	1.65	4000	3600	7.90	N	K	3	1	0	E	▪	K	R	1	▪	0	0
4.00	3.53	2300	1990	29.00	N	K	4	2	0	E	▪	P	R	1	▪	0	0
4.00	3.14	4000	3620	29.00	N	K	4	2	0	E	▪	J	R	1	▪	0	0
5.50	4.68	3200	2860	42.60	N	K	4	3	0	E	▪	J	R	1	▪	0	0
5.50	4.29	4000	3700	42.60	N	K	4	3	0	E	▪	F	R	1	▪	0	0
8.00	7.42	2200	1880	98.00	N	K	6	2	0	E	▪	R	R	1	▪	0	0
8.00	6.08	4000	3670	98.00	N	K	6	2	0	E	▪	J	R	1	▪	0	0
12.00	10.73	1450	1320	147.00	N	K	6	3	0	E	▪	R	R	1	▪	0	0
12.00	9.21	2800	2600	147.00	N	K	6	3	0	E	▪	K	R	1	▪	0	0
12.00	7.60	4000	3750	147.00	N	K	6	3	0	E	▪	G	R	1	▪	0	0
16.00	13.24	3600	3310	320.00	N	K	8	2	0	E	▪	L	R	1	▪	0	0
28.00	22.88	2200	2070	620.00	N	K	8	4	0	E	▪	J	R	1	▪	0	0
41.00	32.80	1900	1900	920.00	N	K	8	6	0	E	▪	F	R	1	▪	0	0
41.00	27.47	2600	2510	920.00	N	K	8	6	0	E	▪	D	R	1	▪	0	0

400 VAC power supply- three-phased

Stall Torque M_0(1) (Nm)	Rated Torque M_N (Nm)	Max. Speed AC890 - 637f - Digivex NMAX (rpm)	Max. Speed Compax 3 $N_{COMPAX3}$ (rpm)	Moment of Inertia J ($kg.m^2.10^{-5}$)	Product Code													
1.00	0.61	6000	6000	3.80	N	K	2	1	0	E	▪	T	R	1	▪	0	0
2.00	1.65	4000	3570	7.90	N	K	3	1	0	E	▪	P	R	1	▪	0	0
4.00	3.60	2000	1710	29.00	N	K	4	2	0	E	▪	V	R	1	▪	0	0
4.00	3.14	4000	3630	29.00	N	K	4	2	0	E	▪	P	R	1	▪	0	0
5.50	5.38	1000	1000	42.60	N	K	4	3	0	E	▪	V	R	1	▪	0	0
5.50	4.77	3000	2670	42.60	N	K	4	3	0	E	▪	P	R	1	▪	0	0
5.50	4.29	4000	3650	42.60	N	K	4	3	0	E	▪	L	R	1	▪	0	0
8.00	7.52	2000	1730	98.00	N	K	6	2	0	E	▪	V	R	1	▪	0	0
8.00	6.17	3900	3440	98.00	N	K	6	2	0	E	▪	R	R	1	▪	0	0
8.00	4.10	4500	5700	98.00	N	K	6	2	0	E	▪	J	R	1	▪	0	0
12.00	10.83	1350	1150	147.00	N	K	6	3	0	E	▪	V	R	1	▪	0	0
12.00	9.34	2700	2390	147.00	N	K	6	3	0	E	▪	R	R	1	▪	0	0
12.00	7.60	4000	3710	147.00	N	K	6	3	0	E	▪	N	R	1	▪	0	0
16.00	14.72	1900	1620	320.00	N	K	8	2	0	E	▪	K	R	1	▪	0	0
16.00	12.94	3900	3600	320.00	N	K	8	2	0	E	▪	R	R	1	▪	0	0
28.00	23.17	2100	1910	620.00	N	K	8	4	0	E	▪	Q	R	1	▪	0	0
28.00	18.56	3500	3270	620.00	N	K	8	4	0	E	▪	K	R	1	▪	0	0
41.00	27.47	2600	2440	920.00	N	K	8	6	0	E	▪	J	R	1	▪	0	0

* Mounting on aluminium flange : 280 x 280 x 8 mm (NK1-2), 400 x 400 x 12 mm (NK3-8)

Frameless servomotors

NK series

0,4 to 72 Nm

Drives associations

230 VAC power supply- mono or three-phased

Standards Motors Ref.	Low Speed Current I_0 (A_{RMS})	Nominal Current I_N (A_{RMS})	Drives sizes				
			Compax3	AC890SD	AC650S	638	Digivex
NK110E...P...	0.99	0.78	C3S025V2...	890SD-231300B0...	650S-22140010...	638A-01-3-F...	DSD13004...
NK210E...T...	1.34	1.11	C3S025V2...	890SD-231300B0...	650S-22140010...	638A-02-3-F...	DSD13004...
NK210E...P...	1.99	1.32	C3S025V2...	890SD-231300B0...	650S-22140010...	638A-02-3-F...	DSD13004...
NK310E...P...	1.39	1.27	C3S025V2...	890SD-231300B0...	650S-22140010...	638A-02-3-F...	DSD13004...
NK310E...K...	2.43	2.06	C3S025V2...	890SD-231550B0...	650S-22140010...	638A-04-3-F...	DSD13004...
NK420E...P...	2.71	2.41	C3S063V2...	890SD-231550B0...	650S-22140010...	638A-04-3-F...	DSD13004...
NK420E...J...	4.69	3.74	C3S063V2...	890SD-231700B0...	650S-22170020...	638A-04-3-F...	DSD13007...
NK430E...J...	5.24	4.53	C3S063V2...	890SD-231700B0...	650S-22170020...	638A-06-3-F...	DSD13007...
NK430E...F...	6.64	5.28	C3S100V2...	890SD-232110B0...	650S-22170020...	-	DSD13015...
NK620E...R...	5.31	4.99	C3S063V2...	890SD-231700B0...	650S-22170020...	638A-06-3-F...	DSD13007...
NK620E...J...	9.89	7.82	C3S100V2...	890SD-232165B0...	-	-	DSD13015...
NK630E...R...	5.25	4.75	C3S063V2...	890SD-231700B0...	650S-22170020...	638A-06-3-F...	DSD13007...
NK630E...K...	9.86	7.80	C3S100V2...	890SD-232165B0...	-	-	DSD13015...
NK630E...G...	13.90	9.31	C3S150V2...	890SD-232240C0...	-	-	DSD13015...
NK820E...L...	17.50	14.82	-	890SD-232240C0...	-	-	DSD13030...
NK840E...J...	18.90	15.70	-	890SD-232240C0...	-	-	DSD13030...
NK860E...F...	27.00	22.00	-	890SD-232300C0...	-	-	DSD13060...
NK860E...D...	33.00	22.72	-	-	-	-	DSD13060...

400 VAC power supply- three-phased

Standards Motors Ref.	Low Speed Current I_0 (A_{RMS})	Nominal Current I_N (A_{RMS})	Drives sizes				
			Compax3	AC890SD	AC650S	637f	Digivex
NK210E...T...	1.34	0.89	C3S015V4...	890SD-531200B0...	650S-43125020...	637f/K02-6	DSD16002...
NK310E...P...	1.39	1.18	C3S015V4...	890SD-531200B0...	650S-43125020...	637f/K02-6	DSD16002...
NK420E...V...	1.36	1.23	C3S015V4...	890SD-531200B0...	650S-43125020...	637f/K02-6	DSD16002...
NK420E...P...	2.71	2.16	C3S038V4...	890SD-531450B0...	650S-43155020...	637f/K04-6	DSD16004...
NK430E...V...	1.41	1.38	C3S015V4...	890SD-531200B0...	650S-43125020...	637f/K02-6	DSD16002...
NK430E...P...	2.82	2.48	C3S038V4...	890SD-531450B0...	650S-43155020...	637f/K04-6	DSD16004...
NK430E...L...	3.78	3.01	C3S038V4...	890SD-531600B0...	650S-43155020...	637f/K04-6	DSD16008...
NK620E...V...	2.83	2.69	C3S038V4...	890SD-531450B0...	650S-43155020...	637f/K04-6	DSD16004...
NK620E...R...	5.31	4.25	C3S075V4...	890SD-532100B0...	650S-43155020...	637f/K06-6	DSD16008...
NK620E...J...	9.89	5.56	C3S150V4...	890SD-532160B0...	650S-43216030...	637f/K10-6	DSD16016...
NK630E...V...	2.62	2.40	C3S038V4...	890SD-531450B0...	650S-43155020...	637f/K04	DSD16004...
NK630E...R...	5.25	4.20	C3S075V4...	890SD-532100B0...	650S-43155020...	637f/K06	DSD16008...
NK630E...N...	7.92	5.30	C3S150V4...	890SD-532120B0...	650S-43190030...	637f/K10	DSD16016...
NK820E...K...	5.16	4.79	C3S075V4...	890SD-532100B0...	650S-43155020...	637f/K06	DSD16008...
NK820E...R...	11.00	9.07	C3S150V4...	890SD-532160B0...	650S-43216030...	637f/K16	DSD16016...
NK840E...Q...	10.10	8.47	C3S150V4...	890SD-532160B0...	650S-43216030...	637f/K16	DSD16016...
NK840E...K...	16.80	11.51	C3S300V4...	890SD-532240C0...	-	637f/K22	DSD16032...
NK860E...J...	18.50	12.78	C3S300V4...	890SD-532240C0...	-	637f/K22	DSD16032...

Frameless servomotors

NK series

0,4 to 72 Nm

NK codification

NK series			Product code example								
			NK	4	20	E	Y	K	R	1	0	00
MOTORS FAMILY												
10 Poles Frameless Brushless Motors			**NK**									
SIZES												
See Drawings				1 - 8								
LENGTHS												
See Drawings					10 - 60							
COOLING												
Natural cooling						**E**						
Water cooling						W						
FEEDBACK SENSORS	**SUPPLY**	**MOTORS**										
2 poles resolver (standard)	**Standard**	**NK1 - 8**					**A**					
Cost effective absolute POSIVEX encoder	Option	NK2 - 8					M					
Absolute single-turn HIPERFACE encoder 128 ppt SKS36	Option	NK2 - 8					R					
Absolute multi-turn HIPERFACE encoder 128 ppt SKM36	Option	NK2 - 8					S					
Absolute single-turn HIPERFACE encoder 1024 ppt SRS50	Option	NK3 - 8					T					
Absolute multi-turn HIPERFACE encoder 1024 ppt SRM50	Option	NK3 - 8					U					
Absolute signle-turn ENDAT encoder ECN 1113	Option	NK2 - 8					V					
Absolute multi-turn ENDAT encoder EQN 1125	Option	NK2 - 8					W					
Low cost encoder with 10 commutation tracks 2048 ppr	Option	NK2 - 8					X					
Without feedback sensor (standard)	Option	NK1 - 8					**Y**					
Other sensor	Option	NK1 - 8					Z					
Absolute multi-turn HIPERFACE 16ppr SEL37 (NX1 on request)	Option	NK2 - 8					Q					
THERMAL PROTECTION + BRAKE	**SUPPLY**	**MOTORS**										
Without	Standard	NK1 - 8									**0**	
PTC	Option	NK1 - 8									1	
Thermo switch	Option	NK1 - 8									2	
Brake	Option	NK1 - 8									3	
Brake + PTC	Option	NK1 - 8									4	
Brake + Thermo switch	Option	NK1 - 8									5	
MECHANICAL CHARACTERISTICS	**SUPPLY**	**MOTORS**										
Standard (see drawings)	Standard	NK1 - 8										**00**
Customization	On demand	NK1 - 8										xx

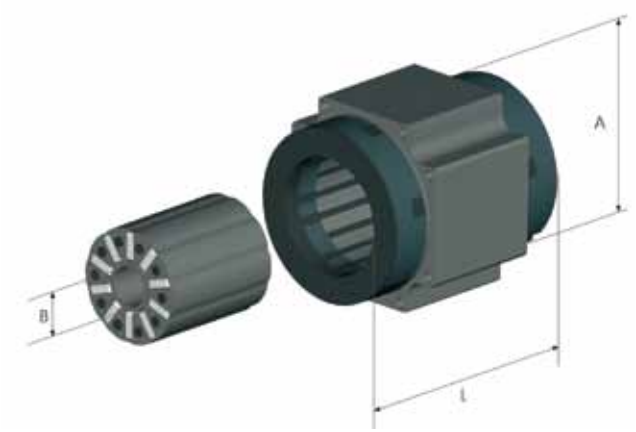
Frameless servomotors

NK series

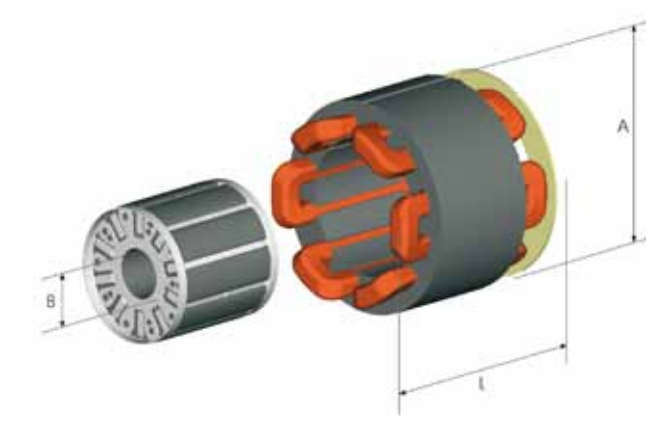
0,4 to 72 Nm

Dimensions

Motor	A (mm)	B (mm)	L (mm)
N K 1 1 0	4 2	9	65
N K 2 ▪ ▪	56	12	68



Motor	A (mm)	B (mm)	L (mm)
N K 3 1 0	6 2	1 4	75
N K 4 2 0	80	20	92
N K 4 3 0			117
N K 6 2 0	111	26	104
N K 6 3 0			133
N K 8 2 0	143	40	110
N K 8 4 0			170
N K 8 6 0			230
N K 3 1 0 W	8 2	1 4	85
N K 4 2 0 W	100	20	102
N K 4 3 0 W			127
N K 6 2 0 W	131	26	114
N K 6 3 0 W			143
N K 8 2 0 W	143	40	120
N K 8 4 0 W			180
N K 8 6 0 W			240



Option

Several types of sensors are combined with servo motor kit according to the application requirements such as robustness, resolution, and accuracy: resolver, high resolution sensor, optical encoder…

Frameless torque motors

TK series

Up to 21000 Nm

TK series general characteristics	
Shaft-heights	200 - 315 - 400 mm
Mounting	tapped holes on rotor and stator periphery
Power supply	400 VAC three-phased
Torque	up to 21000 Nm
Stator winding's insulation according to CEI 60034-1	Class F
Cooling method	Water cooling (standard) or natural ventilation (available with derating, consult us)
Thermal protection	PTC and KTY probes fitted into the stator winding
Feedback sensor	To be chosen taking into account mechanical conditions, accuracy required and drive's specificities : resolver, sin/cos encoder…
Electrical connections	Flying cables without connectors, 2m length

Description

Delivered as separate rotor and stator to be integrated into the mechanical structure of the machine, TK series torque motors lead to simplified designs, reduced costs, and increased accuracy.

TK series distinguishes from existing solutions by an exceptional robustness, making them particularly adapted to harsh environments.

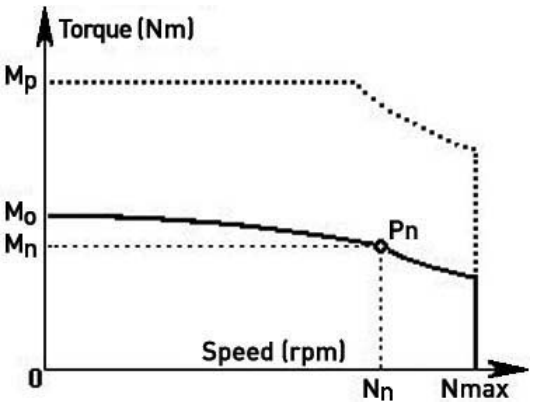
Benefiting from unprecedented know-how in the design and manufacture of torque motors, TK series can also be delivered as complete sub-assemblies including frame, cooling system, bearings, feedback sensor...

Applications

- Rotary transfer systems
- Indexing tables
- Machine-tools axis
- Mixers, Crushers...

Advantages

- **Simplified mechanical designs**
- **Reduced sizes and weights**
- **Reduced maintenance**
- **Increased stiffness and accuracy**



Frameless torque motors

TK series

Up to 21000 Nm

Drives associations

Product code							
400V power supply							
Motor	Nominal power Pn (kW)	Nominal speed Nn (rpm)	Nominal torque Mn (Nm)	Max speed (rpm)	Low speed torque (Nm)	Low speed current Io (Arms)	Drive AC890
TKW131HL	6,7	750	85,2	935	88	14	AC890SD-532240C
TKW131HC	17,5	2500	67	2500	88	40,9	AC890SD-532590D
TKW132HL	9,8	480	194	720	198	21,3	AC890SD-532300C
TKW132HF	21,6	1120	184	1680	198	46,1	AC890SD-532590D
TKW133HN	14,4	450	305	675	311	32,3	AC890SD-532390D
TKW133HH	30	980	292	1470	311	64,5	AC890SD-432730E
TKW133HD	44,3	1550	273	2190	311	96,8	AC890SD-433145F
TKW134HN	14,9	340	419	510	425	35,1	AC890SD-532450D
TKW134HJ	27,1	630	410	945	425	59,6	AC890SD-432730E
TKW134HF	45,4	1100	393	1650	425	99,3	AC890SD-433145F
TKW135HM	27	490	526	735	540	60,6	AC890SD-432730E
TKW135HG	52,8	1000	503	1500	540	114	AC890SD-433156F
TKW136HM	30,1	450	639	675	650	67,6	AC890SD-432730E
TKW136HF	69,6	1100	603	1650	650	152	AC890SD-433216G
TKW201HF	20,6	900	219	1000	275	48,6	AC890SD-532590D
TKW201HM	10,0	365	262	540	275	21,6	AC890SD-532300C
TKW202HF	45	895	480	1040	610	108	AC890SD-433145F
TKW202HS	15,8	255	592	380	610	35,3	AC890SD-532450D
TKW203HD	57,5	670	819	940	960	133	AC890SD-433156F
TKW203HE	53,8	615	835	905	960	123	AC890SD-433156F
TKW203HR	18,2	185	936	275	960	43,2	AC890SD-532590D
TKW204HI	71,2	595	1140	890	1300	163	AC890SD-433250G
TKW204HV	18,9	140	1280	170	1300	46,5	AC890SD-532590D
TKW205HH	80,7	520	1480	780	1650	184	AC890SD-433316G
TKW205HM	51,8	315	1570	470	1650	118	AC890SD-433156F
TKW205HU	22,2	130	1630	195	1650	55,1	AC890SD-432730E
TKW206HG	92,1	485	1810	725	2000	209	AC890SD-433316G
TKW206HM	51,3	255	1920	380	2000	120	AC890SD-433156F
TKW206HS	30,9	150	1960	225	2000	76,1	AC890SD-432870E
TKW208HF	106	405	2500	605	2700	242	AC890SD-433361G
TKW208HM	51	185	2630	275	2700	121	AC890SD-433156F
TKW208HS	29,4	105	2670	135	2700	77,1	AC890SD-432870E
TKW301HB	36,1	695	497	695	680	87,6	AC890SD-433145F
TKW301HJ	14,7	215	651	320	680	31,1	AC890SD-532390D
TKW302HE	64	475	1290	605	1520	143	AC890SD-433216G
TKW302HJ	46	315	1390	470	1520	98,2	AC890SD-433145F
TKW302HP	23,2	150	1480	220	1520	50,7	AC890SD-432730E
TKW303HC	83,1	375	2120	550	2380	183	AC890SD-433316G
TKW303HJ	47,8	200	2270	295	2380	103	AC890SD-433145F
TKW303HN	30,5	125	2330	185	2380	68,4	AC890SD-432730E

Frameless torque motors

TK series

Up to 21000 Nm

Drives associations

Product code							
Power supply							
Motor	Nominal power Pn (kW)	Nominal speed Nn (rpm)	Nominal torque Mn (Nm)	Max speed (rpm)	Low speed torque (Nm)	Low speed current Io (Arms)	Drive AC890
TKW304HG	96,4	310	2970	465	3250	211	AC890SD-433316G
TKW304HM	51,1	155	3150	230	3250	112	AC890SD-433156F
TKW304HN	44,8	135	3160	195	3250	99,1	AC890SD-433145F
TKW305HG	99,1	245	3870	360	4100	213	AC890SD-433316G
TKW305HN	50,6	120	4030	175	4100	113	AC890SD-433156F
TKW305HO	42,4	100	4050	125	4100	100	AC890SD-433145F
TKW306HF	113	230	4710	340	4950	245	AC890SD-433361G
TKW306HM	53,9	105	4900	150	4950	122	AC890SD-433156F
TKW306HO	41,3	80	4930	120	4950	101	AC890SD-433145F
TKW308HC	141	210	6400	315	6740	309	AC890SD-433480H
TKW308HL	55,7	80	6650	115	6740	135	AC890SD-433216G
TKW308HO	39,2	56	6690	80	6740	103	AC890SD-433145F
TKW30AHD	162	190	8110	280	8450	351	AC890SD-433520H
TKW30AHL	52	59	8420	70	8450	135	AC890SD-433216G
TKW30AHO	35,4	40	8450	60	8450	103	AC890SD-433145F
TKW401HA	45,6	380	1150	415	1460	108	AC890SD-433145F
TKW401HG	24,4	170	1370	255	1460	53	AC890SD-432730E
TKW402HG	78,8	265	2840	375	3270	180	AC890SD-433316G
TKW402HI	69	225	2930	335	3270	155	AC890SD-433250G
TKW402HP	42,5	130	3110	195	3270	94,8	AC890SD-433145F
TKW403HC	106	220	4590	325	5100	237	AC890SD-433361G
TKW403HJ	66,3	130	4860	195	5100	148	AC890SD-433216G
TKW403HL	56,7	110	4910	160	5100	127	AC890SD-433156F
TKW404HI	124	185	6400	275	6900	278	AC890SD-433420H
TKW404HQ	63,7	90	6760	135	6900	151	AC890SD-433250G
TKW404HR	60,3	85	6770	125	6900	139	AC890SD-433216G
TKW405HH	134	155	8270	200	8800	308	AC890SD-433480H
TKW405HQ	65,1	72	8630	105	8800	154	AC890SD-433250G
TKW406HG	148	140	10100	210	10600	338	AC890SD-433520H
TKW406HP	71,4	65	10500	95	10600	169	AC890SD-433250G
TKW406HQ	63,9	58	10500	70	10600	155	AC890SD-433250G
TKW408HF	166	115	13800	170	14400	379	AC890SD-433590J
TKW408HN	84,8	57	14200	85	14400	211	AC890SD-433316G
TKW408HQ	59,9	40	14300	60	14400	158	AC890SD-433250G
TKW40AHE	184	100	17500	145	18100	424	AC890SD/5/0685K
TKW40AHM	88,3	47	17900	70	18100	225	AC890SD-433361G
TKW40AHQ	54,9	29	18100	40	18100	159	AC890SD-433250G
TKW40CHD	207	93	21200	135	21900	482	AC890SD/5/0798K
TKW40CHK	97,5	43	21700	60	21900	257	AC890SD-433420H

Frameless torque motors

TK series

Up to 21000 Nm

Options

Frameless torque motors TKW	Product code															
	T	K	W	2	0	4	H	G	Y	C	R	2	R	1	0	0	0
PRODUCT SERIES																	
Frameless torque motors	**T**	**K**															
COOLING METHOD																	
Water cooling (standard)			**W**														
Natural ventilation (available with derating, consult us)			A														
SHAFT HEIGHTS																	
200 mm				2	0												
315 mm				3	0												
400 mm				4	0												
Torque/Speed characteristics																	
(see motors data tables)						▪	▪	▪									
FEEDBACK SENSOR																	
Without sensor									**Y**								
Direct Endat encoder									B								
TRANSPORTATION BRIDGE																	
Bridges on both sides										B							
Bridges on cables output side										C							
Bridges on cables output opposite side										D							
Without bridges (standard)										**Z**							
CABLES OUTPUT																	
Output towards the rear											B						
CABLE LENGTH																	
2m												**2**					
CONNECTIONS																	
Flying cables (3 phases + ground)														**1**			
Terminal box														9			
THERMAL PROTECTION																	
1 PTC 140°C + 1 PTC 150°C + 1 KTY (+1 in reserve)															**0**		
MECHANICAL INTERFACE																	
Standard motor																**0**	**0**

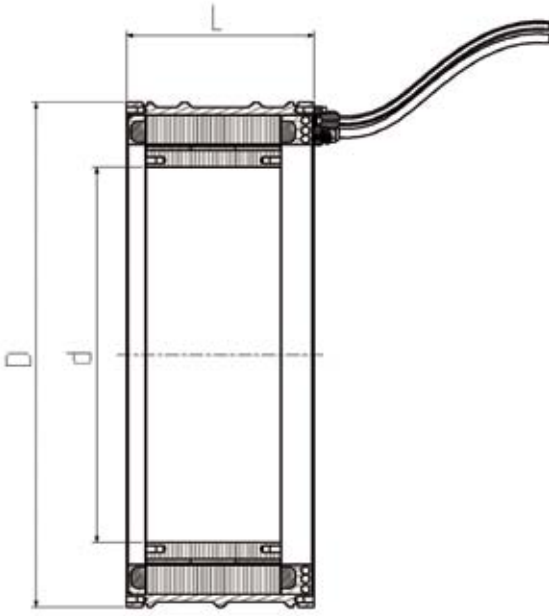
Frameless torque motors

TK series

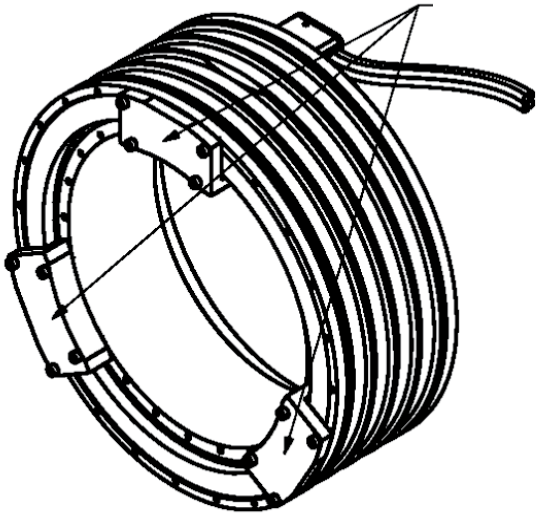
Up to 21000 Nm

Dimensions and drawings

TK series dimensions			
Motor	L	d	D
TK131HL	90	132	230
TK131HC	100		
TK132HL/HN	140		
TK132HF	150		
TK133HN	190		
TK133HH	205		
TK133HD	215		
TK134HN	246		
TK134HJ	256		
TK134HF	261		
TK135HM	306		
TK135HG	311		
TK136HM	356		
TK136HF	376		
TK201	110	250	385
TK202HS	160		
TK202HF	170		
TK203HR	210		
TK203HE/HD	220		
TK204	270		
TK205	340		
TK206	390		
TK208	480		
TK301	110	420	565
TK302HP/HJ	160		
TK302HE	170		
TK303HN/HJ	210		
TK303HC	220		
TK304	275		
TK305	340		
TK306HO/HM	380		
TK306HF	395		
TK308HO/HL	485		
TK308HC	520		
TK30AHO/HL	590		
TK30AHD	650		
TK401	130	620	795
TK402	180		
TK403	230		
TK404	280		
TK405	350		
TK406	400		
TK408	500		
TK40A	605		
TK40C	710		



Transportation flanges



AC synchronous spindle motors

HV series

From 10 to 50 kW

Technical specifications - 400V power supply

Motor	Torque S1/S6 (N.m)	Power S1/S6 (2) (kW)	Permanent current at low speed (ARMS)	Base/max speed (rpm)	Inertia (kgm²)
HV930EQ	63.6/70	10/11	19.9	1480/7000	0.018
HV930EI	64/72.5	14.5/16.5	30.5	2170/7000	0.018
HV950EQ	95	10	21.8	1020/7000	0.029
HV950EK	95	15.6	33.2	1570/7000	0.029
HVA30JO	149	16.4	35.1	1050/6000	0.027
HVA30JH	140/157	28/32	60.8	1940/6000	0.027
HVA40JH	200	31	66.4	1500/6000	0.035
HVA40JG	200/240	31/37	75.7	1480/6000	0.035
HVA50JH	250	31	64.9	1180/6000	0,043
HVA50JE	210/237	41/47	82.0	1880/6000	0,043

(2) 540V bus Voltage

Description

The HV series are permanent magnet synchronous motors used for machine tools spindle of traditional type (lathes, grinding machines, milling machines).

The control of synchronous technology gives the possibility to reach a speed range ratio at constant power up to 10.

Moreover the HV series present the same characteristics at low speed as an axis servo motor : high torque to weight ratio, low inertia, high torque at low speed...

Speed up to 8000 rpm

Torque from 63 to 250N.m

Robust and compact design

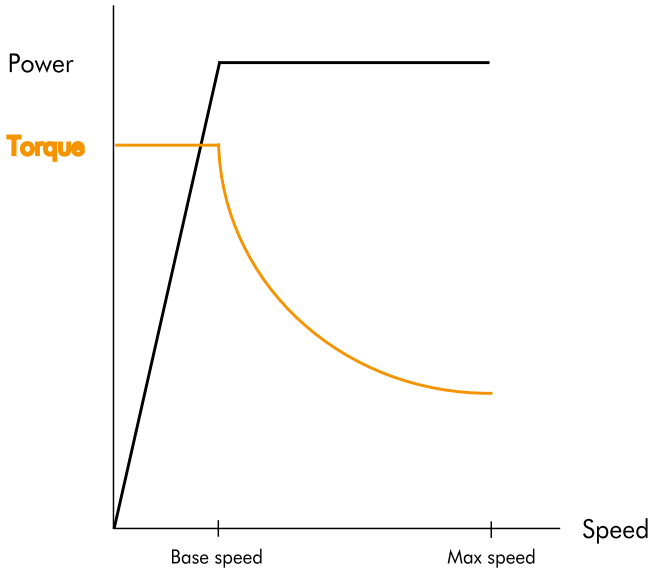
Speed range ratio at constant power up to 10

High torque at low speed

Low inertia for high acceleration, fast changes in speed for reduced tool changing time

IP 54 protection

Class F Insulation



Synchronous spindle motors

HV series

From 10 to 50 kW

Selection and ordering

AC Synchronous spindle motors	Product code									
	H	**V**	**9**	**3**	**0**	**E**	**M**	**R**	**9**	**0**	**0**	**0**
PRODUCT SERIES												
HV : Permanent magnet synchronous motors	**H**	**V**										
FRAME + LENGTH												
see motors table			▪	▪	▪							
SPEED CHARACTERISTICS												
(see motors data tables)						▪	▪					
CONNECTION												
Terminal box (standard)									**9**	**0**		
Connectors socket									8	0		
MECHANICAL												
Smooth shaft (standard)											**0**	**0**
Other shaft dimensions											▪	▪

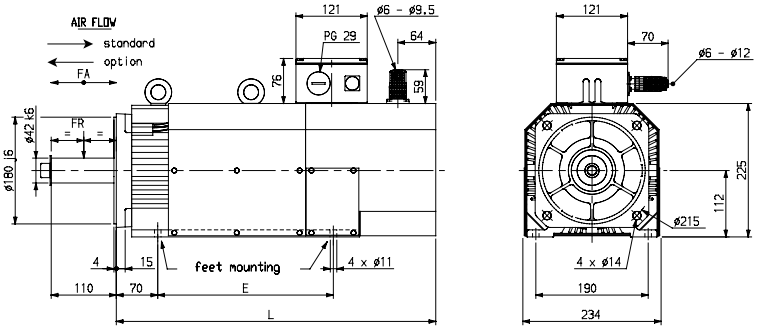
AC synchronous spindle motors

HV series

From 4 to 50 kW

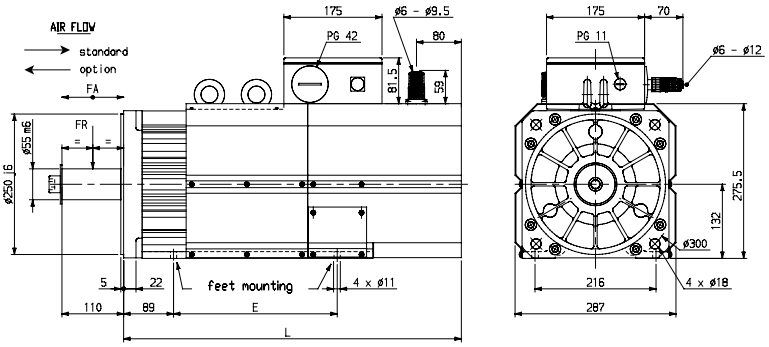
HV9 dimensions					
Motor	L (mm)	E (mm)	Weight (kg)	Fr* (daN)	Fa* (daN)
HV920E	416	171	51	240	40
HV950E	516	271	69	270	45

*Fr and Fa not cumulative ; at 3000 rpm



HVA dimensions					
Motor	L (mm)	E (mm)	Weight (kg)	Fr* (daN)	Fa* (daN)
HVA30J	582	271	100	530	100
HVA40J	660	349	110	550	100

*Fr and Fa not cumulative ; at 3000 rpm



Frameless spindle servomotors

SKW series

From 2 to 20 kW

Description

SK motors are compact and high dynamic permanent magnet synchronous servomotors for spindle applications up to 20 kW.

Delivered as separate components to be integrated into the mechanical structure of the machine, SK motors offer constant torque capabilities over a wide speed range.

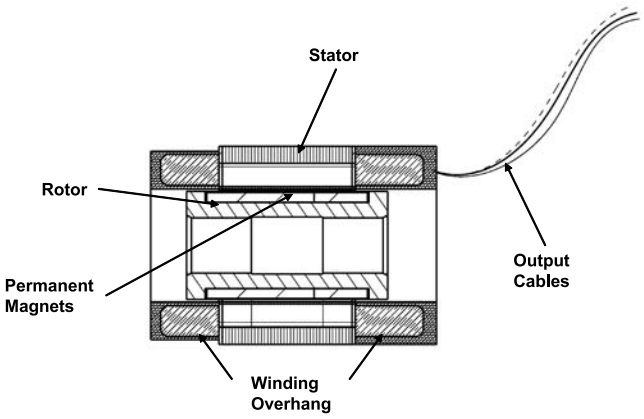
Features and Benefits

- Kit solution leading to simplified mechanical designs
- High dynamic performances and power density : increased productivity and compactness compared to induction motors
- Cold permanent magnets technology : reduced heating in the bearings compared to induction motors, no dilatation effect
- Increased internal diameter compared to other solutions of same external dimensions : increased stiffness, advantage for the passage a metal bars in automatic lathes
- Compatibility with cost effective sensorless drives from Parker

Applications

- Multi-spindle Lathes
- Milling
- Turning

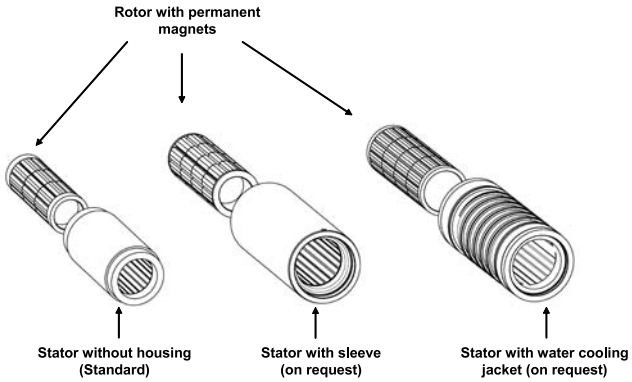
General technical characterisitics	
Motor Type	Permanent magnets synchronous motors
Power supply	3ph - 400 VAC
Power range	up to 20 kW
Speed range	- up to 12000 rpm - higher speeds on request
Insulation (CEI 60034-1)	Class F
Cooling	- Water cooling (standard) - Natural convection on request
Conections	2m flying cables without connectors
Construction type	Individual components (rotor, stator, feedback sensor)



Design

Parker SK Series Kit Spindle Motors include :

- a rotor with permanent magnets which can, on request, be mounted on customer's shaft
- a wounded stator which can, on request, be designed with a cooling jacket or integrated into customer's mechanics



Frameless spindle servomotors

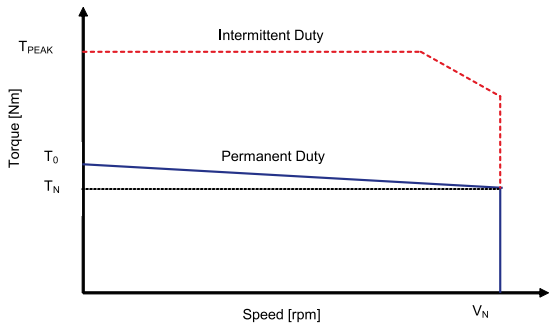
SKW series

From 2 to 20 kW

Selection and ordering

Electric characteristics - water cooled motors

Nominal Power PN [kW]	Nominal Torque TN [Nm]	Nominal Speed VN [rpm]	Number of Poles	Torque at low speed T0 [Nm]	Peak Torque TPEAK [Nm]	Nominal Current IN [ARMS]	Current at low speed I0 [ARMS]	Motor Reference
2.85	2.27	12000	10	2.9	7	6.27	7.48	SKW073 ▪ 037LALR0001
6.8	5.41	12000	10	6.8	14	13.9	16.5	SKW073 ▪ 075LAER0001
10.2	9.26	10500	10	11	21	20.9	23.7	SKW073 ▪ 112LAHR0001
13.5	13.5	9500	10	15.5	28	27.3	30.1	SKW073 ▪ 150LAER0001
2.15	1.71	12000	10	2.3	6.5	4.37	5.53	SKW082 ▪ 033LBPR0001
3.9	3.1	12000	10	4.5	12	8.18	11	SKW082 ▪ 045LAHR0001
5.2	4.14	12000	10	5.5	13	10.4	13.2	SKW082 ▪ 065LBGR0001
7.55	6.01	12000	10	9	19.5	14.5	20.6	SKW082 ▪ 098LBIR0001
8.94	8.13	10500	10	10.6	24	17.5	21.6	SKW082 ▪ 091LAHR0001
11.5	9.96	11000	10	12.5	26	22.6	27.3	SKW082 ▪ 130LBDR0001
12.3	14.6	8000	10	17	36	24.2	27.3	SKW082 ▪ 137LADR0001
5.5	4.38	12000	10	6.1	24	11.7	15.2	SKW091 ▪ 045LAHR0001
12.9	10.7	11500	10	14.4	48	25.7	32.6	SKW091 ▪ 091LACR0001
18.1	19.2	9000	10	23	72	35.9	41.5	SKW091 ▪ 137LAAR0001
3.15	2.5	12000	10	3.1	12	6.15	7.13	SKW091 ▪ 033LBPR0001
7.7	6.13	12000	10	7.6	24	15.6	18.3	SKW091 ▪ 065LBGR0001
12.6	10	12000	10	12.4	36	24.1	28.5	SKW091 ▪ 098LBER0001
17.5	13.9	12000	10	17.3	48	35.2	41.8	SKW091 ▪ 130LBAR0001
3.6	4.3	8000	14	5.4	25	7.38	8.66	SKW096 ▪ 045MAJR0001
8.4	10	8000	14	12.5	50	17	20	SKW096 ▪ 090MAJR0001
12.3	16.7	7000	14	20	75	23.4	26.7	SKW096 ▪ 135MAGR0001
15.4	24.4	6000	14	28	100	30.2	33.4	SKW096 ▪ 180MAER0001



Frameless spindle servomotors

SKW series

From 2 to 20 kW

Drives associations - power supply 400 VAC

Motor Reference	Nominal Power PN [kW]	Nominal Speed VN [rpm]	Number of Poles	Drive Reference	
				AC650S (max. speed 6000 rpm)	AC890
SKW073_037LALR0001	2.85	12000	10	650S-43190030	890SD-532120B0...
SKW073_075LAER0001	6.8	12000	10	-	890SD-532240B0...
SKW073_112LAHR0001	10.2	10500	10	-	890SD-532300C0...
SKW073_150LAER0001	13.5	9500	10	-	890SD-53230SC0...
SKW082_033LBPR0001	2.15	12000	10	650S-43190030	890SD-532100B0...
SKW082_045LAHR0001	3.9	12000	10	650S-43216030	890SD-532160B0...
SKW082_065LBGR0001	5.2	12000	10	650S-43216030	890SD-53216SB0...
SKW082_098LBIR0001	7.55	12000	10	-	890SD-532240C0...
SKW082_091LAHR0001	8.94	10500	10	-	890SD-532300C0...
SKW082_130LBDR0001	11.5	11000	10	-	890SD-53230SC0...
SKW082_137LADR0001	12.3	8000	10	-	890SD-53230SC0...
SKW091_045LAHR0001	5.5	12000	10	650S-43216030	890SD-53216SB0...
SKW091_091LACR0001	12.9	11500	10	-	890SD-532390D0...
SKW091_137LAAR0001	18.1	9000	10	-	890SD-532590D0...
SKW091_033LBPR0001	3.15	12000	10	650S-43190030	890SD-532120B0...
SKW091_065LBGR0001	7.7	12000	10	-	890SD-532240C0...
SKW091_098LBER0001	12.6	12000	10	-	890SD-53230SC0...
SKW091_130LBAR0001	17.5	12000	10	-	890SD-532590D0...
SKW096_045MAJR0001	3.6	8000	14	-	890SD-532120B0...
SKW096_090MAJR0001	8.4	8000	14	-	890SD-532240C0...
SKW096_135MAGR0001	12.3	7000	14	-	890SD-53230SC0...
SKW096_180MAER0001	15.4	6000	14	-	890SD-532390D0...

Frameless spindle servomotors

SKW series

From 2 to 20 kW

SKW codification

Frameless spindle motors SKW	Product code																
	S	K	W	0	8	2	S	1	3	7	L	A	G	R	0	0	0	0
PRODUCT SERIES																		
HK : Frameless permanent magnet servomotors	S	K																
COOLING METHOD																		
Water cooling (standard)			W															
Natural ventilation (available with derating, consult us)			A															
EXTERNAL DIAMETER																		
61 mm				0	6	1												
73 mm				0	7	3												
82 mm				0	8	2												
91 mm				0	9	1												
96 mm				0	9	6												
103 mm				1	0	3												
ELEMENT																		
Motor							–											
Stator							S											
Rotor							R											
LENGTH																		
(see motors data tables)								▪	▪	▪								
TORQUE/SPEED CHARACTERISTICS																		
(see motors data tables)											▪	▪	▪					
INTERFACE																		
Standard motor															0	0	0	0

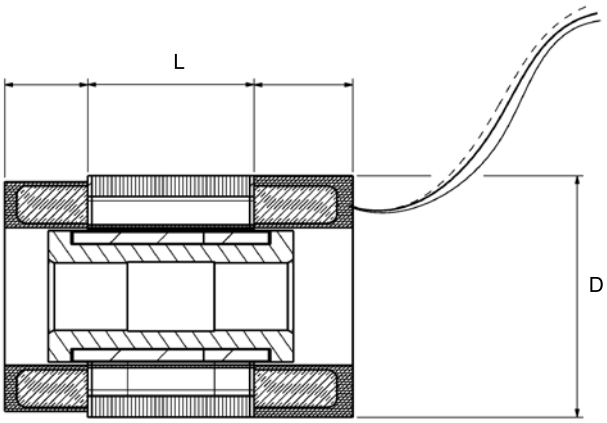
Frameless spindle servomotors

SKW series

From 2 to 20 kW

Dimensions

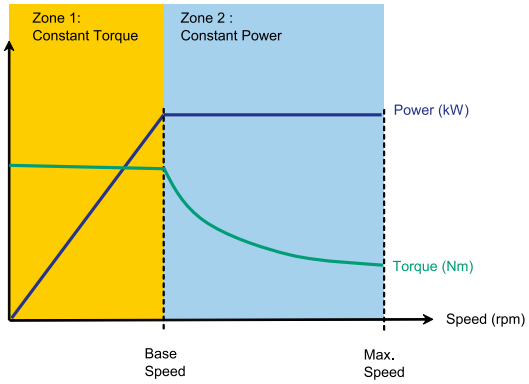
Dimensions		
Product Code	D [mm]	L [mm]
SKW073_037LALR0001	73	37
SKW073_075LAER0001	73	75
SKW073_112LAHR0001	73	112
SKW073_150LAER0001	73	150
SKW082_033LBPR0001	82	33
SKW082_045LAHR0001	82	45
SKW082_065LBGR0001	82	65
SKW082_098LBIR0001	82	98
SKW082_091LAHR0001	82	91
SKW082_130LBDR0001	82	130
SKW082_137LADR0001	82	137
SKW091_045LAHR0001	91	45
SKW091_091LACR0001	91	91
SKW091_137LAAR0001	91	137
SKW091_033LBPR0001	91	33
SKW091_065LBGR0001	91	65
SKW091_098LBER0001	91	98
SKW091_130LBAR0001	91	130
SKW096_045MAJR0001	96	45
SKW096_090MAJR0001	96	90
SKW096_135MAGR0001	96	135
SKW096_180MAER0001	96	180



Watercooled frameless spindle AC brushless

HKW series

up to 230 kW



Description

HKW motors are high performances permanent magnet synchronous servomotors for spindle applications up to 230 kW.

Delivered as separate components to be integrated into the mechanical structure of the machine, HKW motors take benefit from field weakening technique, in order to achieve both high torque at slow speed, and very high maximum speed at constant power.

Features and Benefits

Kit solution leading to simplify mechanical designs

Very high speed capabilities - up to 50 000 rpm

Constant power operation up to 10 x base speed : no oversizing of the drive

High dynamic performances and power density : increased productivity and compactness compared to induction motors

Cold permanent magnets technology : reduced heating in the bearings compared to induction motors, no dilatation effect

Compatibility with third-party drives : Siemens, Fanuc

General Technical Characteristics	
Motor type	Permanent magnets synchronous motors
Type of construction	Individual components : rotor, stator and feedback sensor
Power supply	3ph - 400 VAC
Power range	up to 230 kW
Speed range	up to 50 000 rpm
Insulation of stator winding according to CEI 60034-1	Class F
Ambiant temperature	40°C maxi
Altitude	< 1000 m
Cooling	- Water cooling (standard) - Natural convection on request
Stator design variants	- Stator without housing (standard) - Stator housing on request, with or without water cooling circuit
Rotor design variants	- Rotor without hub (standard) - Rotor with hub on request
Connections	2m flying cables without connectors

Applications

- Milling
- Turning
- Grinding

Watercooled frameless spindle AC brushless

HKW series

up to 230 kW

2

Technical specifications HKW series - 540V DC voltage supply

Motor	S1 / S6 Power PS1 (kW)	Low speed torque Mo (Nm)	Low speed S6 torque MoS 6 (Nm)	Base speed Nb (rpm)	Max speed N (rpm)	Permanent current at low speed Io (Arms)	S6 current at low speed Io S6 (Arms)	Rotor inertia J (kg.m²)	Thermal time constant Tth (min)	Motor mass M (kg)	Cooling water flow (Tmax 25°C) water flow (l/min)	Back emf constant at 1000 rpm Ke (Vrms)	Frequency at max speed
HKW085_066BAU	2,3	4,9	7,3	4480	50000	6,8	13,5	0,00	1	3,9	2	45,20	1667
HKW085_066BAP	4,9	4,5	7,3	10400	50000	12,2	27,0	0,00	1	3,9	2	22,60	1667
HKW085_066BAK	10,2	4,2	7,3	23200	50000	22,4	54,0	0,00	1	3,9	2	11,30	1667
HKW085_099BAQ	4,7	7,4	11	6070	50000	12,6	25,1	0,00	1	5,2	3	36,50	1667
HKW085_099BAL	10	7,3	11	13100	50000	24,7	50,2	0,00	1	5,2	3	18,30	1667
HKW085_099BAI	15,6	6,8	11	21900	50000	35,0	78,1	0,00	1	5,2	3	11,70	1667
HKW108_080CAN	4,9	10	15	4680	30000	10,6	16,2	0,00	1,5	6,5	3	55,20	1500
HKW108_080CAI	10,4	10	15	9930	30000	21,3	32,4	0,00	1,5	6,5	3	27,60	1500
HKW108_080CAF	16	10	15	15300	30000	31,9	48,6	0,00	1,5	6,5	3	18,40	1500
HKW108_140CAI	10,2	20	30	4870	30000	24,4	37,4	0,00	1,5	11	5	48,40	1500
HKW108_140CAF	15,6	20	30	7450	30000	36,6	56,1	0,00	1,5	11	5	32,20	1500
HKW108_140CAD	25	20	30	11900	30000	54,8	84,2	0,00	1,5	11	5	21,50	1500
HKW108_200CAJ	9	30	45	2870	30000	23,1	35,6	0,00	1,5	14	5	76,80	1500
HKW108_200CAF	15,5	30	45	4940	30000	38,4	59,3	0,00	1,5	14	7	46,10	1500
HKW108_200CAD	25	30	45	7960	30000	57,7	88,9	0,00	1,5	14	7	30,70	1500
HKW155_080CRR	8,8	22	33	3820	24000	18,2	27,6	0,01	2,4	8	5	72,20	1200
HKW155_080CRP	14	22	33	6080	24000	28,5	43,1	0,01	2,4	8	5	46,20	1200
HKW155_080CAR	10,3	28	42	3510	18000	19,0	29,4	0,01	2,4	8	5	88,40	900
HKW155_080CAP	16	28	42	5500	18000	29,6	46,0	0,01	2,4	8	5	56,60	900
HKW155_120CAR	10	48	75	1990	24000	21,8	36,3	0,01	2,4	12	5	133,00	1200
HKW155_120CAK	23	48	75	4600	24000	49,5	82,5	0,01	2,4	12	8	58,30	1200
HKW155_120CAH	32	46	75	6640	24000	65,1	113,0	0,01	2,4	12	8	42,40	1200
HKW155_120CAF	43	44	75	9330	24000	82,9	151,0	0,01	2,4	12	8	31,80	1200
HKW155_160CAR	10	68	100	1410	24000	23,2	36,3	0,01	2,4	16	5	177,00	1200
HKW155_160CAP	16	68	100	2250	24000	36,3	56,7	0,01	2,4	16	6	113,00	1200
HKW155_160CAH	32	68	100	4500	24000	72,6	113,0	0,01	2,4	16	10	56,60	1200
HKW155_160CAF	44	66	100	6370	24000	93,8	151,0	0,01	2,4	16	10	42,40	1200
HKW155_160CAD	63	58	100	10300	24000	123,0	227,0	0,01	2,4	16	10	28,30	1200
HKW195_120CAV	7,2	80	120	860	18000	19,4	35,1	0,02	3,2	23	7	261,00	900
HKW195_120CAP	16	80	120	1910	20000	42,1	76,0	0,02	3,2	23	7	120,00	1000
HKW195_120CAI	34	80	120	4050	20000	84,1	152,0	0,02	3,2	23	7	60,10	1000
HKW195_120CAF	52	75	120	6620	20000	117,0	228,0	0,02	3,2	23	7	40,10	1000
HKW195_120CAE	62	75	120	7900	20000	140,0	274,0	0,02	3,2	23	7	33,40	1000
HKW195_180CAT	10	120	180	795	16000	26,1	47,2	0,03	3,2	35	10	291,00	800
HKW195_180CAP	16	120	180	1280	20000	42,1	76,0	0,03	3,2	35	10	180,00	1000
HKW195_180CAM	23	120	180	1830	20000	58,2	105,0	0,03	3,2	35	10	130,00	1000
HKW195_180CAJ	31	120	180	2470	20000	75,7	137,0	0,03	3,2	35	10	100,00	1000
HKW195_180CAF	52	120	180	4140	20000	126,0	228,0	0,03	3,2	35	10	60,10	1000
HKW195_180CAC	101	110	180	8770	20000	227,0	456,0	0,03	3,2	35	10	30,10	1000
HKW195_300CAM	23	200	300	1100	20000	58,2	105,0	0,06	3,2	58	16	217,00	1000
HKW195_300CAJ	30	200	300	1440	20000	75,7	137,0	0,06	3,2	58	16	167,00	1000
HKW195_300CAF	52	200	300	2490	20000	126,0	228,0	0,06	3,2	58	16	100,00	1000
HKW195_300CAE	63	200	300	3010	20000	151,0	274,0	0,06	3,2	58	16	83,50	1000
HKW195_300CAC	105	200	300	5010	20000	252,0	456,0	0,06	3,2	58	16	50,10	1000
HKW195_300CAX	175	200	300	8350	20000	454,0	821,0	0,06	3,2	58	16	27,80	1000
HKW242_225DAN	15	280	360	510	11000	37,2	49,9	0,14	4	70	18	489,00	733
HKW242_225DAF	33	280	360	1130	13000	74,4	99,7	0,14	4	70	18	244,00	867
HKW242_225DAD	50	280	360	1710	13000	112,0	150,0	0,14	4	70	18	163,00	867
HKW242_225DAC	67	275	360	2330	13000	146,0	199,0	0,14	4	70	18	122,00	867
HKW242_225DAB	101	260	360	3710	13000	206,0	299,0	0,14	4	70	18	81,50	867
HKW242_375DAF	30	480	600	600	13000	76,8	99,7	0,24	4	120	25	407,00	867
HKW242_375DAD	49	480	600	975	13000	115,0	150,0	0,24	4	120	25	272,00	867
HKW242_375DAC	67	480	600	1330	13000	154,0	199,0	0,24	4	120	25	204,00	867
HKW242_375DAB	101	480	600	2010	13000	230,0	299,0	0,24	4	120	25	136,00	867
HKW242_375DAA	200	460	600	4150	13000	439,0	598,0	0,24	4	120	25	67,90	867
HKW310_200HAJ	37	600	900	590	8000	87,1	141,0	0,35	5	120	15	431,00	1067
HKW310_200HAH	46	580	900	760	8000	105,0	177,0	0,35	5	120	15	345,00	1067
HKW310_200HAE	77	575	900	1280	8000	166,0	282,0	0,35	5	120	15	215,00	1067
HKW310_200HAD	95	565	900	1610	8000	204,0	353,0	0,35	5	120	15	172,00	1067
HKW310_200HAC	115	550	900	2000	8000	265,0	471,0	0,35	5	120	15	129,00	1067
HKW310_300HAJ	35,4	940	1350	360	8000	91,2	141,0	0,49	5	170	20	646,00	1067
HKW310_300HAH	45	940	1350	460	8000	114,0	177,0	0,49	5	170	20	517,00	1067
HKW310_300HAE	76	930	1350	780	8000	180,0	282,0	0,49	5	170	20	323,00	1067
HKW310_300HAD	95	920	1350	990	8000	223,0	353,0	0,49	5	170	20	258,00	1067
HKW310_300HAC	120	900	1350	1270	8000	290,0	471,0	0,49	5	170	20	194,00	1067
HKW310_400HAJ	34	1250	1800	260	6000	91,0	141,0	0,64	5	220	21	861,00	800
HKW310_400HAH	44,5	1250	1800	340	8000	114,0	177,0	0,64	5	220	25	689,00	1067
HKW310_400HAF	62	1250	1800	475	8000	152,0	235,0	0,64	5	220	25	517,00	1067
HKW310_400HAE	75	1250	1800	575	8000	182,0	282,0	0,64	5	220	25	431,00	1067
HKW310_400HAD	94	1250	1800	720	8000	227,0	353,0	0,64	5	220	25	345,00	1067
HKW310_400HAC	120	1250	1800	910	8000	303,0	471,0	0,64	5	220	25	258,00	1067
HKW310_400HAY	230	1080	1800	2030	8000	520,0	942,0	0,64	5	220	30	129,00	1067

Watercooled frameless spindle AC brushless

HKW series

up to 230 kW

Associated drives for HKW series - 540V DC voltage supply

Motor	Winding resistance line-line (25°C) Rb (Ohms)	Winding inductance line-line Ld (mH)	Winding inductance line-line Lq (mH)	Number of poles	Short-circuit current Icc (Arms)	PARKER drive DIGIVEX	DIGIVEX Speed limit due to the B.E.M.F or the frequency DIGIVEX (rpm)	Low speed torque Mo (Nm)	Low speed torque S6 Mo S6 (Nm)	PARKER Drive AC890SD	AC890 Speed limit due to the B.E.M.F or the frequency Nmax AC890 (rpm)	Low speed torque Mo (Nm)	Low speed torque S6 Mo S6 (Nm)
HKW085_066BAU	5,37	52,20	45,5	4	5,5	DIGIVEX 32/64	45000	4,9	7,3	890SD-532100B	11283	4,3	4,3
HKW085_066BAP	1,35	13,00	11,4	4	10,9	DIGIVEX 32/64	45000	4,5	6,1	890SD-53216SB	22566	4,5	4,5
HKW085_066BAK	0,337	3,26	2,84	4	21,9	DIGIVEX 50/80	45000	4,2	4,8	890SD-532300C	30000	4,1	4,1
HKW085_099BAQ	2,16	22,70	19,8	4	10,2	DIGIVEX 32/64	45000	7,4	9,9	890SD-53216SB	13973	7,4	7,4
HKW085_099BAL	0,541	5,68	4,96	4	20,3	DIGIVEX 32/64	45000	6,7	6,7	890SD-532300C	27869	6,5	6,5
HKW085_099BAI	0,205	2,35	2,05	4	31,5	DIGIVEX 50/80	45000	6,8	6,8	890SD-532450D	30000	6,6	6,6
HKW108_080CAN	2,78	22,40	19,7	6	10,3	DIGIVEX 32/64	30000	10,0	15,0	890SD-53216SB	9239	10,0	13,0
HKW108_080CAI	0,694	5,61	4,92	6	20,6	DIGIVEX 50/80	30000	10,0	15,0	890SD-532300C	18478	10,0	10,2
HKW108_080CAF	0,309	2,49	2,19	6	30,9	DIGIVEX 50/80	30000	10,0	10,9	890SD-532450D	20000	10,0	10,5
HKW108_140CAI	0,96	9,79	8,6	6	20,7	DIGIVEX 50/80	30000	20,0	28,4	890SD-532300C	10537	18,0	18,0
HKW108_140CAF	0,427	4,35	3,82	6	31,0	DIGIVEX 50/80	30000	19,3	19,3	890SD-532450D	15839	18,6	18,6
HKW108_140CAD	0,189	1,93	1,7	6	46,5	DIGIVEX 100/120	30000	20,0	25,2	890SD-532240C	6641	26,0	26,0
HKW108_200CAJ	1,5	17,30	15,2	6	18,6	DIGIVEX 32/64	30000	29,4	29,4	890SD-532450D	11063	26,6	26,6
HKW108_200CAF	0,545	6,21	5,46	6	31,0	DIGIVEX 50/80	30000	27,6	27,6	890SD-432730E	10000	30,0	38,5
HKW108_200CAD	0,241	2,76	2,43	6	46,4	DIGIVEX 100/120	30000	30,0	35,8				
HKW155_080CRR	1,45	18,80	15,6	6	17,0	DIGIVEX 32/64	24000	22,0	27,1	890SD-532240C	7064	22,0	23,9
HKW155_080CRP	0,575	7,68	6,4	6	26,5	DIGIVEX 50/80	24000	22,0	27,1	890SD-53230SC	11039	21,6	21,6
HKW155_080CAR	1,45	18,80	15,6	6	20,8	DIGIVEX 50/80	24000	28,0	42,0	890SD-532300C	5769	28,0	31,4
HKW155_080CAP	0,575	7,68	6,4	6	32,5	DIGIVEX 100/120	24000	28,0	42,0	890SD-532450D	9011	28,0	31,0
HKW155_120CAR	1,76	28,10	23,4	6	20,9	DIGIVEX 50/80	24000	48,0	73,1	890SD-532300C	3835	48,0	48,0
HKW155_120CAK	0,32	5,45	4,54	6	47,2	DIGIVEX 100/120	24000	48,0	64,3	890SD-432730E	8748	48,0	69,1
HKW155_120CAH	0,177	2,88	2,4	6	64,9	DIGIVEX 150	24000	46,0	70,4	890SD-432730E	10000	46,0	50,4
HKW155_120CAF	0,0994	1,62	1,35	6	86,6	DIGIVEX 300	24000	44,0	75,0	890SD-432870E	10000	44,0	44,7
HKW155_160CAR	2,07	37,50	31,3	6	20,8	DIGIVEX 50/80	24000	68,0	97,4	890SD-532300C	2881	64,5	64,5
HKW155_160CAP	0,823	15,40	12,8	6	32,4	DIGIVEX 100/120	24000	68,0	100,0	890SD-532450D	4513	63,7	63,7
HKW155_160CAH	0,209	3,84	3,2	6	65,0	DIGIVEX 150	24000	68,0	93,9	890SD-432730E	9011	68,0	68,0
HKW155_160CAF	0,117	2,16	1,8	6	86,6	DIGIVEX 300	24000	66,0	100,0	890SD-432870E	10000	63,3	63,3
HKW155_160CAD	0,0522	0,96	0,8	6	130,0	DIGIVEX 300	24000	58,0	93,5				
HKW195_120CAV	2,38	67,50	60,8	6	15,8	DIGIVEX 32/64	17200	80,0	80,0	890SD-532240C	1954	80,0	80,0
HKW195_120CAP	0,492	14,40	13	6	33,9	DIGIVEX 100/120	20000	80,0	111,7	890SD-532590D	4250	80,0	80,0
HKW195_120CAI	0,122	3,60	3,24	6	68,2	DIGIVEX 150	20000	80,0	83,7	890SD-432730E	8486	72,3	72,3
HKW195_120CAF	0,0563	1,60	1,44	6	102,4	DIGIVEX 300	20000	75,0	111,7	890SD-433105F	10000	69,2	69,2
HKW195_120CAE	0,0381	1,11	1	6	122,8	DIGIVEX 300	20000	75,0	92,9	890SD-433145F	10000	72,3	72,3
HKW195_180CAT	1,66	54,60	50,5	6	21,2	DIGIVEX 50/80	15900	120,0	134,9	890SD-532300C	1753	101,1	101,1
HKW195_180CAP	0,617	21,00	19,4	6	34,1	DIGIVEX 100/120	20000	120,0	167,5	890SD-532590D	2833	120,0	120,0
HKW195_180CAM	0,332	11,00	10,1	6	47,3	DIGIVEX 100/120	20000	120,0	121,2	890SD-432730E	3923	120,0	130,3
HKW195_180CAJ	0,191	6,49	6	6	61,3	DIGIVEX 100/120	20000	112,1	112,1	890SD-432730E	5100	120,0	120,0
HKW195_180CAF	0,0706	2,34	2,16	6	102,3	DIGIVEX 300	20000	120,0	167,5	890SD-433105F	8486	102,9	102,9
HKW195_180CAC	0,017	0,58	0,54	6	204,9	DIGIVEX 100/120	20000	200,0	202,1	890SD-433216G	10000	101,8	101,8
HKW195_300CAM	0,466	17,90	16,9	6	47,2	DIGIVEX 100/120	20000	186,8	186,8	890SD-432730E	2350	200,0	217,1
HKW195_300CAJ	0,269	10,60	10	6	61,4	DIGIVEX 300	20000	200,0	279,2	890SD-432730E	3054	200,0	200,0
HKW195_300CAF	0,0993	3,82	3,6	6	102,1	DIGIVEX 300	20000	200,0	232,3	890SD-433105F	5100	171,4	171,4
HKW195_300CAE	0,0672	2,65	2,5	6	122,8					890SD-433145F	6108	178,8	178,8
HKW195_300CAC	0,0239	0,95	0,9	6	204,6					890SD-433216G	10000	166,7	166,7
HKW195_300CAX	0,00747	0,29	0,278	6	367,6					890SD-433420H	10000	168,7	168,7
HKW242_225DAN	1,52	41,90	41,5	8	32,5	DIGIVEX 100/120	10200	280,0	360,0	890SD-532450D	1043	255,9	255,9
HKW242_225DAF	0,381	10,50	10,4	8	64,7	DIGIVEX 150	13000	280,0	360,0	890SD-432730E	2090	280,0	280,0
HKW242_225DAD	0,169	4,66	4,61	8	97,5	DIGIVEX 300	13000	280,0	360,0	890SD-433105F	3129	270,0	270,0
HKW242_225DAC	0,0952	2,62	2,59	8	129,8	DIGIVEX 300	13000	275,0	360,0	890SD-433145F	4180	254,3	254,3
HKW242_225DAB	0,0424	1,16	1,15	8	195,4					890SD-433216G	6258	260,0	260,0
HKW242_375DAF	0,566	17,40	17,3	8	64,9	DIGIVEX 150	12000	480,0	600,0	890SD-432730E	1253	475,0	475,0
HKW242_375DAD	0,251	7,74	7,68	8	97,6	DIGIVEX 300	13000	480,0	600,0	890SD-433105F	1875	450,8	450,8
HKW242_375DAC	0,141	4,36	4,32	8	130,2	DIGIVEX 300	13000	480,0	600,0	890SD-433145F	2500	420,8	420,8
HKW242_375DAB	0,063	1,94	1,92	8	195,3					890SD-433216G	3750	438,3	438,3
HKW242_375DAA	0,0157	0,48	0,476	8	393,2					890SD-433480H	7500	448,5	448,5
HKW310_200HAJ	0,392	9,25	7,8	16	76,2	DIGIVEX 150	8000	600,0	677,1	890SD-432870E	1183	600,0	600,0
HKW310_200HAH	0,235	5,92	4,99	16	95,3	DIGIVEX 300	8000	580,0	900,0	890SD-433105F	1478	580,0	580,0
HKW310_200HAE	0,0929	2,31	1,95	16	152,0	DIGIVEX 300	8000	575,0	677,1	890SD-433156F	2372	533,4	533,4
HKW310_200HAD	0,0588	1,48	1,25	16	189,7	DIGIVEX 300	3314	565,0	565,0	890SD-433216G	2965	565,0	565,0

Watercooled frameless spindle AC brushless

HKW series

up to 230 kW

Motor	Winding resis-tance line-line (25°C) Rb (Ohms)	Winding inductance line-line Ld (mH)	Winding inductance line-line Lq (mH)	Number of poles	Short-circuit current Icc (Arms)	PARKER drive DIGIVEX	DIGIVEX Speed limit due to the B.E.M.F or the frequency DIGIVEX (rpm)	Low speed torque Mo (Nm)	Low speed torque S6 Mo S6 (Nm)	PARKER Drive AC890SD	AC890 Speed limit due to the B.E.M.F or the frequency Nmax AC890 (rpm)	Low speed torque Mo (Nm)	Low speed torque S6 Mo S6 (Nm)
HKW310_200HAC	0,0331	0,83	0,702	16	253,3					890SD-433316G	3750	550,0	550,0
HKW310_300HAJ	0,525	13,90	11,7	16	76,1	DIGIVEX 150	7200	940,0	1015,7	890SD-432870E	789	927,6	927,6
HKW310_300HAH HKW310_300HAE	0,315 0,124	8,88 3,47	7,49 2,93	16 16	95,1 151,9	DIGIVEX 300 DIGIVEX 300	8000 8000	940,0 930,0	1350,0 1015,7	890SD-433105F 890SD-433156F	986 1579	890,5 795,7	890,5 795,7
HKW310_300HAD	0,0788	2,22	1,87	16	190,2	DIGIVEX 300	2209	875,3	875,3	890SD-433216G	1977	866,4	866,4
HKW310_300HAC	0,0443	1,25	1,05	16	254,7					890SD-433316G	2629	887,6	887,6
HKW310_400HAJ	0,658	18,50	15,6	16	76,1	DIGIVEX 150	5200	1250,0	1354,2	890SD-432870E	592	1236,3	1236,3
HKW310_400HAH	0,395	11,80	9,98	16	95,2	DIGIVEX 300	6800	1250,0	1800,0	890SD-433105F	740	1184,2	1184,2
HKW310_400HAF HKW310_400HAE	0,222 0,156	6,66 4,62	5,62 3,9	16 16	126,8 152,3	DIGIVEX 300 DIGIVEX 300	8000 8000	1250,0 1250,0	1625,1 1354,2	890SD-433145F 890SD-433156F	986 1183	1110,2 1057,7	1110,2 1057,7
HKW310_400HAD	0,0987	2,96	2,5	16	190,2	DIGIVEX 300	1652	1168,3	1168,3	890SD-433216G	1478	1156,4	1156,4
HKW310_400HAC	0,0555	1,66	1,4	16	254,0					890SD-433316G	1977	1179,9	1179,9
HKW310_400HAY	0,0139	0,42	0,351	16	506,6					890PX/0580/ B/00/A	3750	1080,0	1080,0

Correspondence table between HW and HKW

HW	HKW
HW420BU	HKW085_066BAU
HW420BP	HKW085_066BAP
HW420BK	HKW085_066BAK
HW430BQ	HKW085_099BAQ
HW430BL	HKW085_099BAL
HW430BI	HKW085_099BAI
HW620CN	HKW108_080CAN
HW620CI	HKW108_080CAI
HW620CF	HKW108_080CAF
HW635CI	HKW108_140CAI
HW635CF	HKW108_140CAF
HW635CD	HKW108_140CAD
HW650CJ	HKW108_200CAJ
HW650CF	HKW108_200CAF
HW650CD	HKW108_200CAD
HW820RR	HKW155_080CRR
HW820RP	HKW155_080CRP
HW820CR	HKW155_080CAR
HW820CP	HKW155_080CAP
HW830CR	HKW155_120CAR
HW830CK	HKW155_120CAK
HW830CH	HKW155_120CAH
HW830CF	HKW155_120CAF
HW840CR	HKW155_160CAR

HW	HKW
HW840CP	HKW155_160CAP
HW840CH	HKW155_160CAH
HW840CF	HKW155_160CAF
HW840CD	HKW155_160CAD
HW920CV	HKW195_120CAV
HW920CP	HKW195_120CAP
HW920CI	HKW195_120CAI
HW920CF	HKW195_120CAF
HW920CE	HKW195_120CAE
HW930CT	HKW195_180CAT
HW930CP	HKW195_180CAP
HW930CM	HKW195_180CAM
HW930CJ	HKW195_180CAJ
HW930CF	HKW195_180CAF
HW930CC	HKW195_180CAC
HW950CM	HKW195_300CAM
HW950CJ	HKW195_300CAJ
HW950CF	HKW195_300CAF
HW950CE	HKW195_300CAE
HW950CC	HKW195_300CAC
HW950CX	HKW195_300CAX
HWA30DN	HKW242_225DAN
HWA30DF	HKW242_225DAF
HWA30DD	HKW242_225DAD

HW	HKW
HWA30DC	HKW242_225DAC
HWA30DB	HKW242_225DAB
HWA50DF	HKW242_375DAF
HWA50DD	HKW242_375DAD
HWA50DC	HKW242_375DAC
HWA50DB	HKW242_375DAB
HWA50DA	HKW242_375DAA
HWB20HJ	HKW310_200HAJ
HWB20HH	HKW310_200HAH
HWB20HE	HKW310_200HAE
HWB20HD	HKW310_200HAD
HWB20HC	HKW310_200HAC
HWB30HJ	HKW310_300HAJ
HWB30HH	HKW310_300HAH
HWB30HE	HKW310_300HAE
HWB30HD	HKW310_300HAD
HWB30HC	HKW310_300HAC
HWB40HJ	HKW310_400HAJ
HWB40HH	HKW310_400HAH
HWB40HF	HKW310_400HAF
HWB40HE	HKW310_400HAE
HWB40HD	HKW310_400HAD
HWB40HC	HKW310_400HAC
HWB40HY	HKW310_400HAY

Watercooled frameless spindle AC brushless

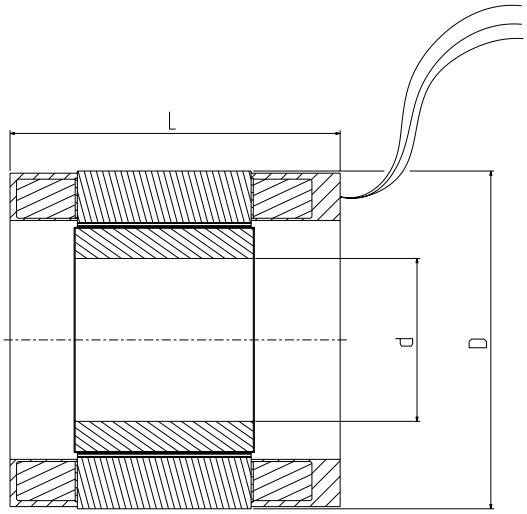
HKW series

up to 230 kW

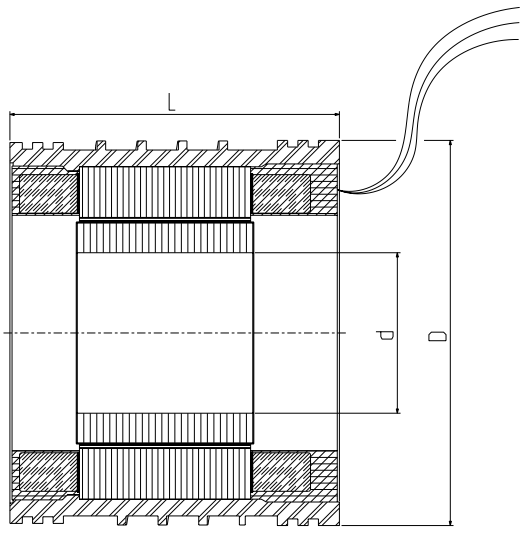
Dimensions

Dimensions	Without housing			With cooling jacket		
Product	d(mm)	D[mm]	L[mm]	d(mm)	D[mm]	L[mm]
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
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
HKW242_375DAN/F	130	242	313	130	270	315
HKW242_375DAD			322			324
HKW242_375DAC			330			332
HKW242_375DAB			333			335
HKW242_226DAF			463			465
HKW242_226DAD			472			474
HKW242_226DAC			480			482
HKW242_226DAB			477			479
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_400HAZ			540			542

Stator without housing



Stator with cooling jacket



Watercooled frameless spindle AC brushless

HKW series

up to 230 kW

HKW codification

Electrospindle motors HKW	Product code															
	H	**K**	**W**	**1**	**5**	**5**	**_**	**1**	**2**	**0**	**C**	**A**	**P**	**R**	**0**	**0**	**0**	**0**
PRODUCT SERIES																		
HK : Frameless permanent magnet servomotors	**H**	**K**																
COOLING METHOD																		
Water cooling (standard)			**W**															
Natural ventilation (available with derating, consult us)			A															
EXTERNAL DIAMETER																		
85 mm				0	8	5												
108 mm				1	0	8												
155 mm				1	5	5												
195 mm				1	9	5												
242 mm				2	4	2												
310 mm				3	1	0												
ELEMENT																		
Motor							_											
Stator							S											
Rotor							R											
LENGTH																		
(see motors data tables)								▪	▪	▪								
TORQUE/SPEED CHARACTERISTICS																		
(see motors data tables)											▪	▪	▪					
MECHANICAL OPTIONS																		
Without housing, without hub															0			
With housing, without hub															1			
Without housing, with hub															2			
With housing, without hub															3			
INTERFACE																		
Standard motor																0	0	0

DC servomotors with disc rotor

AXEM series

0.1 to 20 Nm

Description

The AXEM motor, with more than 2 million units produced, is one of the most widely spread servo motors in the world.

Its disk rotor, composed solely of copper and insulator, achieves high dynamics and excellent regulation of motion at low speed, as well as silent and vibration-free functioning.

Robust and efficient, low maintenance.

Very low speed modulation

Exceptional regulation at low speed

High dynamic characteristics :
low rotor inertia

Silent and vibration-free functioning

Maintenance free

Disk rotor

Protection : IP44
IP20 for ventilated models

Class F insulation

AXEM characteristics

Motor	Nominal torque (N.m)	Nominal current (A)	Nominal voltage (V)	Nominal speed (rpm)	Inertia ($kgm^2.10^{-5}$)
F 9 M 4 R	0.14	6.4	22	4800	3.5
F 9 M 2	0.282	11	14	3000	2.9
F 9 M 4	0.346	6.7	26	3000	3.5
F 9 M 4 H	0.537	6.5	35	3000	3.4
F12M4R	0.42	8	37	4800	15
F 1 2 M 2	0.61	11.7	24	3000	10.5
F 1 2 M 4	0.77	7.7	43	3000	15
F12M4H	1.1	7.2	61	3000	16
M C 1 3 S	1.2	7.6	64	3000	23.5
M C 1 7 H	1.8	6.9	102	3000	79
M C 1 7 B	1.2	24	23.5	3200	79
M C 1 9 P	3.2	14.5	83	3000	100
M C 1 9 P*	5.1	22.2	87	3000	100
M C 1 9 S	3.2	7.3	165	3000	100
M C 1 9 S*	5.1	11.1	171	3000	100
M C 1 9 B	2.8	46	23.5	3000	100
M C 2 3 S	6.1	13	170	3000	230
M C 2 3 S*	10.5	21.8	178	3000	230
M C 2 4 P	7.3	18.9	136	3000	320
M C 2 4 P*	14.3	36	142	3000	320
M C 2 7 P	14.3	33	152	3000	740
M C 2 7 P*	19.2	44	154	3000	740

*Cooling by external fan 10 l/sec

Encoder

Type	Associated motor	Pulse /rev.		Inertia	Weight (kg)
		standard	option	($kgm^2.10^{-5}$)	
C2	F	500 250	1000	0.01	0.035
C4	F	500	1000 2500	0.23	0.2
C6B	MC	500	1000 2500 5000	0.3	0.45

Tachy

Type	Associated motor	EMF (V/1000 rpm)
F9T	F9	3
FC12T	F12 / MC	6
TBN 206	F9 / F12	6
TBN 420	MC	20

Brake (24Vdc ±10%)

Associated motor	Holding torque		Inertia ($kgm^2.10^{-5}$)	Weight (kg)
	Magnet brake (N.m)	Spring brake (N.m)		
F9 - F12	-	1.5	1	0.47
MC13	2	-	2.3	0.3
MC17 / MC19	5	-	6.5	0.6
MC23 / MC24	12	-	21.4	1.1
MC27	20	-	57	1.9
MC17	-	4	2.5	1.4
MC19	-	8	7	1.9
MC23 / 24 / 27	-	16	13.5	2.8

DC servomotors with disc rotor

AXEM series

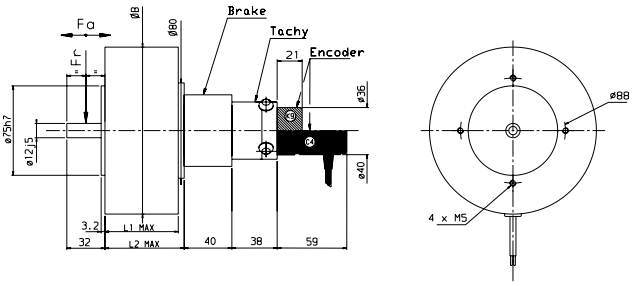
0.1 to 20 Nm

F9 - F 12 dimensions

Motor	L1 (mm)	L2 (mm)	Weight (kg)	Fr* (daN)	Fa* (daN)
F 9 M 4 R	34	46.5	1.1	14	2.5
F 9 M 2	52.5	65	2.3	14	2.5
F 9 M 4	52.5	65	2.3	14	2.5
F 9 M 4 H	64	76.5	2.8	14	2.5
F 1 2 M 4 R	37.5	51	2.9	14	2.5
F 1 2 M 2	61.5	71.5	3.85	14	2.5
F 1 2 M 4	61.5	71.5	3.85	14	2.5
F 1 2 M 4 H	74	84	5	14	2.5

F9 : øB = ø110
F12 : øB = ø140

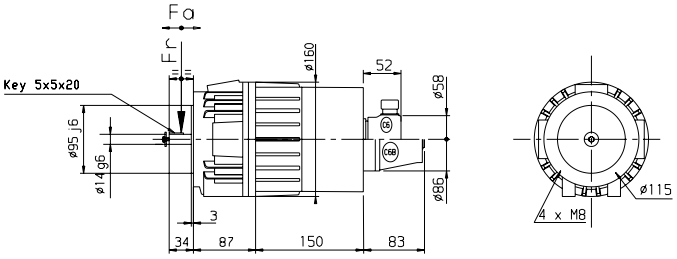
*Fr and Fa not cumulative



MC13 dimensions

Motor	Weight (kg)	Fr* (daN)	Fa* (daN)
M C 1 3	4	35	13

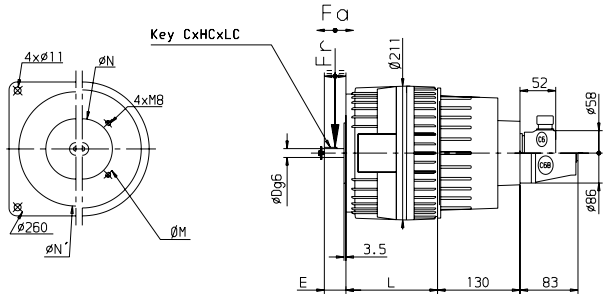
*Fr and Fa not cumulative



MC17 - 19 dimensions

Motor	M (mm)	N (mm)	N* (mm)	E (mm)	L (mm)	Weight (kg)	Fr* (daN)	Fa* (daN)
M C 1 7	115	95	180	34	163	6.5	60	35
M C 1 9	165	130	130	50	163	9.7	60	35

MC17 : C x HC x LC = 5 x 5 x 20
MC19 : C x HC x LC = 8 x 7 x 32

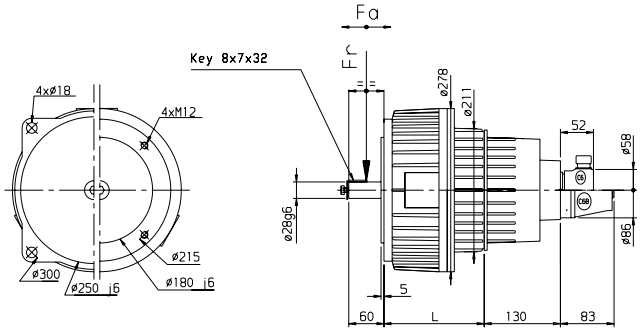


MC23 - 24 - 27 Dimensions

Motor	L (mm)	B (mm)	Weight (kg)	Fr* (daN)	Fa* (daN)
M C 2 3	173	278	17	75	40
M C 2 4	185	278	23	80	45
M C 2 7	198	316	35	90	50

*Fr and Fa not cumulative

Dimensions including brake, tachy and encoder



High performances DC servomotors

RS series

0,05 to 13 Nm

Description

Using high energy magnets, RS DC motors combined with RTS drives are particularly suitable for applications which require a very compact solution or a high dynamic level.

Characteristics and advantages

High performance characteristics

Excellent low-speed functioning

High compactness

Very long lifetime

Rare earth magnets

Tachy, encoder resolver and brake in option

Main technical characteristics	
Motor type	CC motors with rare earth magnets
Poles number	4
Protection degree	- RS1 to RS4 : IP40 - RS5 and RS6 : IP54
Insulation	Class F
Shaft	- RS1 to RS4 : Smooth full shaft - RS5 and RS6 : Full keyed shaft
2nd Shaft end	- RS1 to RS3 : possibility to mount standard tacho or encoder - RS5 and RS6 : possibility to mount standard tacho, adaptation for encoder mounting in option
Connection	Output cables 1 m without connector
Options	- Brake (RS2 to RS6) - Tachometer - Adaptation 2nd shaft end for encoder mounting (RS5 and RS6)

Tachometeers and Brakes

Motors	Tachometer		Brakes (Voltage 24VDC +/- 10%)			
	Model	EMF (V/1000 rpm)	Holding torque (Nm)		Inertia	Weight
			20°C	100°C	($kg.m^2.10^{-5}$)	(kg)
R S 1	TBN 103	3 V/1000 rpm	-	-	-	-
R S 2	TBN 206	6 V/1000 rpm	0.6	0.55	0.2	0.2
R S 3	TBN 206	6 V/1000 rpm	1.5	1.4	1	0.18
R S 4	TBN 206	6 V/1000 rpm	1.5	1.4	1	0.18
R S 5	TBN 306	6 V/1000 rpm	6	5.5	5.3	0.45
R S 6	TBN 306	6 V/1000 rpm	12	11.5	15.7	0.9

Encoders

Model	Associated Motors	Pulse per rev	Encoder Reference	Mounting kit Reference	Connector Référence
C2	RS1	500	220215P0002	220071R0025	
	RS1	1000	220215P0012	220071R0025	
	RS2 / RS3 / RS4	500	220215P0001	220071R0025	
	RS2 / RS3 / RS4	1000	220215P0004	220071R0025	
C6	RS5 / RS6	500	220024P0001	220071R0002	220065R4621
	RS5 / RS6	1000	220024P0003	220071R0002	220065R4621
	RS5 / RS6	2000	220024P0006	220071R0002	220065R4621
	RS5 / RS6	5000	220024P0005	220071R0002	220065R4621
C6B	RS5 / RS6	500	220031R0001	220071R0004	220065R4621
	RS5 / RS6	1000	220031R0003	220071R0004	220065R4621
	RS5 / RS6	2000	220031R0008	220071R0004	220065R4621
	RS5 / RS6	2500	220031R0004	220071R0004	220065R4621
	RS5 / RS6	5000	220031R0005	220071R0004	220065R4621

High performances DC servomotors

RS series

0,05 to 13 Nm

Selection and ordering

Torque at low speed M_0 (N.m)	Permanent current at low speed I_0 (A)	Rated Voltage U (V)	Rated Speed N (rpm)	Rotor Inertia ($kgm^2.10^{-5}$)	Motor	Typical combination
0.05	1.5	20.7	3000	0.24	RS110MR1▪00	RTS 3/10-40M
0.092	2.3	21.2	3000	0.41	RS120GR1▪00	RTS 3/10-40M
0.13	2.7	23.7	3000	0.58	RS130ER1▪00	RTS 3/10-40M
0.11	2.5	24	3000	1.3	RS210LR1▪00	RTS 3/10-40M
0.225	4.1	25.4	3000	1.95	RS220FR1▪00	RTS 10/20-60 *
0.232	2.8	38.6	3000	1.95	RS220KR1▪00	RTS 3/10-40M
0.31	5.6	24	3000	2.6	RS230CR1▪00	RTS 10/20-60 *
0.39	6	27.6	3000	3.25	RS240BR1▪00	RTS 10/20-60 *
0.28	2.6	49	3000	5.4	RS310NR1▪00	RTS 10/20-60 *
0.54	4.5	49	3000	8.3	RS320HR1▪00	RTS 10/20-60 *
0.78	5.9	51	3000	11	RS330ER1▪00	RTS 10/20-60 *
0.98	6.9	53	3000	14	RS340CR1▪00	RTS 10/20-60 *
0.48	3.6	60	3000	13.7	RS410RR1▪00	RTS 10/20-60 *
0.93	6.2	60	3000	22.5	RS420JR1▪00	RTS 10/20-60 *
1.3	8.1	43	2000	31	RS430FR1▪00	RTS 10/20-60 *
1.36	6.6	78	3000	31	RS430HR1▪00	RTS 12/24-130 T
1.74	7	90	3000	40	RS440GR1▪00	RTS 12/24-130 T
1.9	7.9	82	2700	100	RS510LR1▪00	RTS 12/24-130 T
3.1	10.9	92	2700	135	RS520GR1▪00	RTS 12/24-130 T
4	13	97	2700	170	RS530ER1▪00	RTS 20/40-130 T
5	15	104	2700	205	RS540CR1▪00	RTS 20/40-130 T
8	22.3	100	2400	530	RS620GR1▪00	RTS 40/80-190 T
10.8	25	100	2000	680	RS630FR1▪00	RTS 40/80-190 T
13	28	105	2000	830	RS640ER1▪00	RTS 40/80-190 T

* M = single phase, T = three phase

High performances DC servomotors

RS series

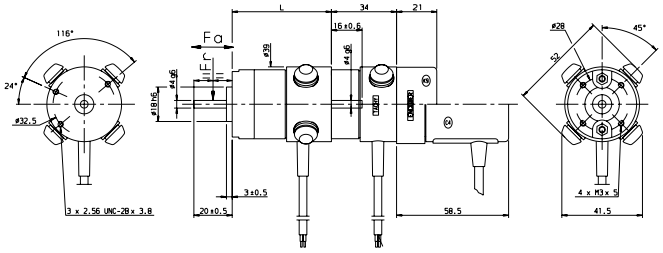
0,05 to 13 Nm

Dimensions and drawings

RS1 dimensions

Motor	L	Weight (kg)	Fr* (daN)	Fa* (daN)
R S 1 1 0	52.1	0.27	6	3
R S 1 2 0	68.1	0.36	6	3
R S 1 3 0	84.1	0.45	6	3

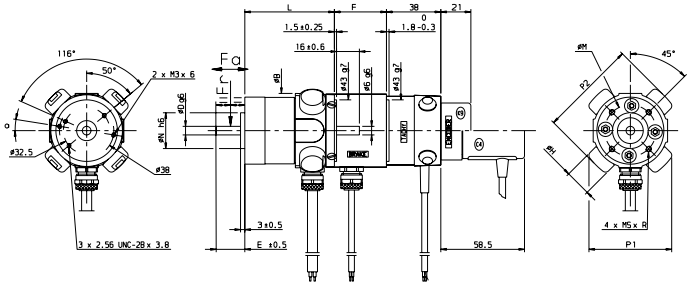
*Fr and Fa not cumulative
Dimensions in mm - Weight in kg



RS2, RS3 and RS4 with brake, tachy and encoder dimensions

Motor	a	N	D	E	B	L	F	P1	P2	H	MSxR	M	Weight (kg)	Fr* (daN)	Fa* (daN)
R S 2 1 0	9°	25	6	20	52	63	36.4	58	68	18.5	M4x6	36	0.54	18	10
R S 2 2 0	9°	25	6	20	52	79	36.4	58	68	18.5	M4x6	36	0.7	18	10
R S 2 3 0	9°	25	6	20	52	95	36.4	58	68	18.5	M4x6	36	0.86	18	10
R S 2 4 0	9°	25	6	20	52	111	36.4	58	68	18.5	M4x6	36	1	18	10
R S 3 1 0	-	32	9	25	68	80.5	41	69	83	18.5	M5x8	45	0.9	28	15
R S 3 2 0	-	32	9	25	68	100.5	41	69	83	18.5	M5x8	45	1.3	28	15
R S 3 3 0	-	32	9	25	68	120.5	41	69	83	18.5	M5x8	45	1.6	28	15
R S 3 4 0	-	32	9	25	68	140.5	41	69	83	18.5	M5x8	45	2	28	15
R S 4 1 0	-	50	11	32	83	95.5	40	82	98	22	M5x8	65	1.2	40	20
R S 4 2 0	-	50	11	32	83	115.5	40	82	98	22	M5x8	65	1.8	40	20
R S 4 3 0	-	50	11	32	83	135.5	40	82	98	22	M5x8	65	2.4	40	20
R S 4 4 0	-	50	11	32	83	155.5	40	82	98	22	M5x8	65	3	40	20

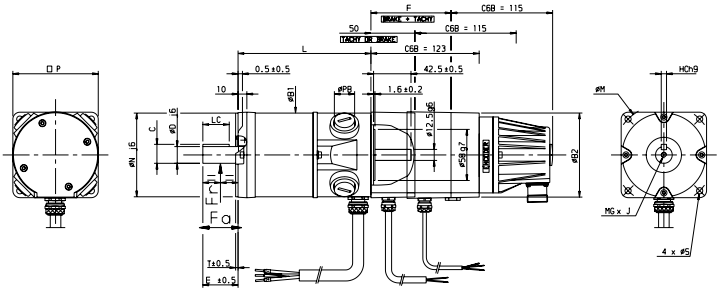
*Fr and Fa not cumulative
Dimensions in mm - Weight in kg



RS5 and RS6 with brake, tachy and encoder dimensions

Motor	P	N	C	D	LC	E	T	B1	PB	L	F	B2	S	M	MGxJ	HC	Weight (kg)	Fr* (daN)	Fa* (daN)
R S 5 1 0	97	95	21.5	19	30	40	3	96	25	151	91	96	7	115	M6x18	6	5.1	70	23
R S 5 2 0	97	95	21.5	19	30	40	3	96	25	180	91	96	7	115	M6x18	6	6.3	70	23
R S 5 3 0	97	95	21.5	19	30	40	3	96	25	209	91	96	7	115	M6x18	6	7.5	70	23
R S 5 4 0	97	95	21.5	19	30	40	3	96	25	238	91	96	7	115	M6x18	6	8.7	70	23
R S 6 2 0	120	110	27	24	40	50	3.5	117	30	246	93	117	10	130	M8x20	8	11.5	80	26
R S 6 3 0	120	110	27	24	40	50	3.5	117	30	284	93	117	10	130	M8x20	8	14	80	26
R S 6 4 0	120	110	27	24	40	50	3.5	117	30	321	93	117	10	130	M8x20	8	16.3	80	26

*Fr and Fa not cumulative
Dimensions in mm - Weight in kg



Economical DC servomotors

RX series

0,3 to 8 Nm

Main technical characteristics	
Motor type	CC Motors with rare ferrite magnets
Protection degree	- RX1 and RX3 : IP40 - RX5 and RX6 : IP54
Insulation	Class F
Shaft	- RX1 and RX3 : Smooth full shaft - RX5 and RX6 : Full keyed shaft
2nd Shaft end	- RX1 and RX3 : possibility to mount standard tacho or encoder - RX5 and RX6 : possibility to mount standard tacho, adaptation for encoder mounting in option
Connection	Output cables 1 m without connector
Options	- Brake - Tachometer - Adaptation 2nd shaft end for encoder mounting (RX5 and RX6)

Description

The RX DC motors, combined with RTS drives, provide an economical solution for any servo mechanism applications.

They are particularly suitable for low power systems in clean atmospheres.

Advantages

Excellent price / performances ratio

Very low torque modulation

Construction quality

Very long life time

2nd shaftend for tacho and encoder mounting

Tachy and brake as option

Tachy			Brake (24Vdc ±10%)			
Associated motor	Type	EMF (V/1000 rpm)	Holding torque (N.m)		Inertia ($kgm^2.10^{-5}$)	Weight (kg)
			at 20° C	at 100° C		
R X 1	TBN 206	6	1	0.9	1	0.4
R X 3	TBN 206	6	1.5	1.4	1	0.18
R X 5	TBN 306	6	6	5.5	5.3	0.45
R X 6	TBN 306	6	12	11.5	15.7	0.9

Encoders					
Model	Associated Motors	Pulse per rev	Encoder Reference	Mounting kit Reference	Connector Reference
C 2	RX1 / RX3 RX1 / RX3	500 1000	220215P0001 220215P0004	220071R0025 220071R0025	- -
C 6	RX5 / RX6 RX5 / RX6 RX5 / RX6 RX5 / RX6	500 1000 2000 5000	220024P0001 220024P0003 220024P0006 220024P0005	220071R0002 220071R0002 220071R0002 220071R0002	220065R4621 220065R4621 220065R4621 220065R4621
C 6 B	RX5 / RX6 RX5 / RX6 RX5 / RX6 RX5 / RX6 RX5 / RX6	500 1000 2000 2500 5000	220031R0001 220031R0003 220031R0008 220031R0004 220031R0005	220071R0004 220071R0004 220071R0004 220071R0004 220071R0004	220065R4621 220065R4621 220065R4621 220065R4621 -

Economical DC servomotors

RX series

0,3 to 8 Nm

Selection and ordering

Torque at low speed M_0 (N.m)	Permanent current at low speed I_0 (A)	Rated Voltage U (V)	Rated Speed N (rpm)	Rotor Inertia ($kgm^2.10^{-5}$)	Moteur			Typical combination
0.285	2.8	44.5	3000	5	R X 1 2 0 L R 1	▪	00	RTS 3/10-40 M
0.4	3.6	46	3000	6.8	R X 1 3 0 H R 1	▪	00	RTS 10/20-60 *
1.08	7.8	54	3000	50	R X 3 2 0 E R 1	▪	00	RTS 10/20-60 *
1.54	9.4	59	2900	72	R X 3 3 0 C R 1	▪	00	RTS 10/20-60 *
2.7	7.7	119	2800	128	R X 5 2 0 K R 1	▪	00	RTS 12/24-130 T
3.7	10.3	116	2700	174	R X 5 3 0 F R 1	▪	00	RTS 12/24-130 T
5	10.5	134	2400	350	R X 6 2 0 J R 1	▪	00	RTS 12/24-130 T
7.8	16	134	2400	500	R X 6 3 0 E R 1	▪	00	RTS 20/40-130 T

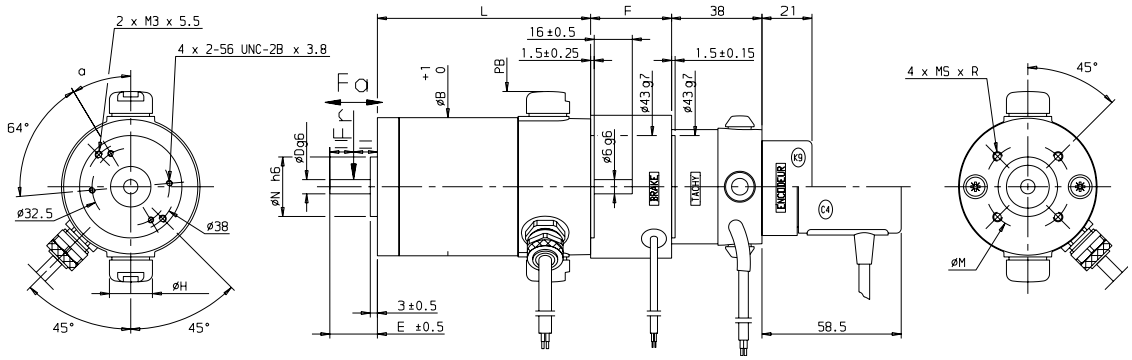
* M = single phase, T = three phase

Economical DC servomotors

RX series

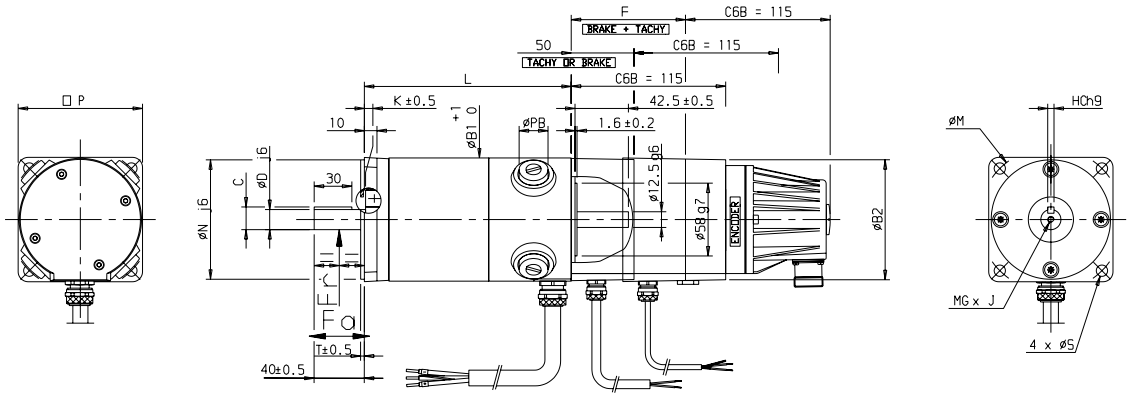
0,3 to 8 Nm

Dimensions and drawings



RX1 and RX3 with brake, tachy and encoder dimensions														
Motor	H	a	N	D	E	B	PB	L	F	MSxR	M	Weight (kg)	Fr* (daN)	Fa* daN)
R X 1 2 0	18.5	31°	25	6	20	58	80	122.5	34	M4x6	36	1.35	18	16
R X 1 3 0	18.5	31°	25	6	20	58	80	147.5	34	M4x6	36	1.6	20	16
R X 3 2 0	23	26°	50	11	32	84	100	178.5	40	M5x10	65	4	45	23
R X 3 3 0	23	26°	50	11	32	84	100	218.5	40	M5x10	65	5.2	50	23

*Fr and Fa not cumulative
Dimensions in mm - Weight in kg



RX1 and RX3 with brake, tachy and encoder dimensions																		
Motor	P	N	C	D	T	K	B1	PB	L	F	B2	S	M	MGxJ	HC	Weight (kg)	Fr* (daN)	Fa* daN)
R X 5 2 0	100	95	18	16	3	1	98	25	216	91	96	9	115	M5x15	5	6.6	80	30
R X 5 3 0	100	95	18	16	3	1	98	25	266	91	96	9	115	M5x15	5	8.7	85	30
R X 6 2 0	120	110	21.5	19	3.5	0.5	116	30	272	93	117	10	130	M6x18	6	13	95	40
R X 6 3 0	120	110	21.5	19	3.5	0.5	116	30	358	93	117	10	130	M6x18	6	18.5	100	40

*Fr and Fa not cumulative
Dimensions in mm - Weight in kg

DC servomotors

RS and RX series

RS-RX codification

DC servomotors	Product code example										
	R	**X**	**3**	**2**	**0**	**E**	**R**	**0**	**0**	**0**	**5**
SERIES											
Ferrite magnets	R	X									
Neodyme magnets	R	S									
MOTOR SIZE AND LENGTH											
(see motors data tables)			■	■	■						
WINDING											
Depend of motor size, speed and voltage/current						■					
MECHANICAL FEATURES											
Output cables (standard)								**1**			
Terminal box								2			
Motor with resolver								3			
Special motor								5			
ACCESSORIES											
No accessories (standard)									**0**		
Motor + tacho									1		
Motor + brake (RS2 to RS6)									2		
Motor + tacho + brake (RS2 to RS6)									3		
Motor + encoder adaptation * (size 5 and 6 only)									4		
Motor + Tacho + Encoder adaptation (size 5 and 6 only)									5		
Motor + Brake + Encoder adaptation (size 5 and 6 only)									6		
Motor + Tacho + Brake + Encoder adaptation (size 5 and 6 only)									7		
CUSTOMER SPECIFICATION											
Standard catalogue definition - smooth shaft (size 1 -> 4) - shaft with key way (size 5-6)										**0**	**0**
Specific mechanical definition										■	■

* Encoder adaptation is standard for RX1 and RX3.
Encoder adaptation is standard for RS1, RS2, RS3 and RS4.

DC servodrives

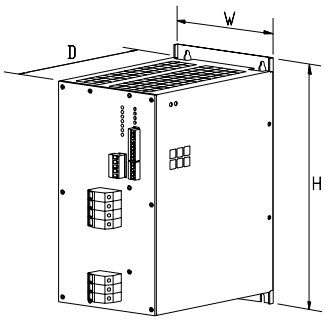
RTS series

3 to 40 A

Technical characteristics	
Power supply	Single phase, three phase or battery
Operating temperature	0-40°C (derate by 35% per 10°C >40°C to 60°C max.)
Altitude	1000m (derate by 10% >1000m per 1000m to 4000m max.)
Protection	IP00, IP20 for versions with covering cap

Dimensions				
Type	H (mm)	W* (mm)	D (mm	M (kg)
Panel mounting				
3/10-40M	150	65	212	1
10/20-60 (single/three)	180/150	65	212	1.2
12/24-130T	150	95	212	1.6
20/40-130T	150	121	221	1.9
16/32-190T	150	121	221	1.9
40/80-190T	247	139	205	6
12/24-..B	150	65	212	1
40/80-..B	247	70	205	2.5
Rack mounting				
3/10-40M	130	51	216	0.8
10/20-60 (three phase)	130	51	216	0.8
12/24-130T	130	61	216	0.85
12/24-..B	130	51	216	0.8

* maximum dimensions with covering cap



Description

The RTS servo amplifiers are designed for driving DC servo motors and are available in numerous ratings up to 6.5 kW.

These products enable speed control of DC motors with or without tachometers.

They integrate main supply, auxiliary supply and braking resistor circuits in a compact package.

Battery, single-phase or three-phase power supply

U-RI or tachometer control

Integrated braking resistor

Full protecting features

High compactness

Panel or rack mounting

3U Eurocard

Standards

CE Marked

RTS characteristics						
Type	Supply	Nominal supply voltage ±10%	Nominal output voltage (Vdc)	Nominal output current (A)	Peak output current (A)	Associated transformer (minimum power)
3/10-40M	single phase	32Vac	40	3	10	TT_11133
10/20-60*	single phase	48Vac	60	10	20	TT_11135/36
12/24-130T	three phase	100Vac	130	12	24	TT_11145
20/40-130T	three phase	100Vac	130	20	40	TT_11140
16/32-190T	three phase	135Vac	190	16	32	TT_11117
40/80-190T	three phase	150Vac	200	40	80	TT_11119
12/24-..B	battery	24-48Vdc	U battery-2V	12	24	-
40/80-..B	battery	36-72Vdc	U battery-2V	40	80	-

* single or three phase M or T

Sensorless control of permanent magnet AC motors

AC650S series

0.25 to 7.5 kW

Description

The Parker SSD AC650S series offers simple and effective control of sensorless permanent-magnet AC motors up to 7 kW without the need for additional speed sensors.

Cost-Effective motor control
Permanent-magnet motors are inherently more compact and energy-efficient than AC induction motors but have traditionally required more complex speed control.

Easy installation and commissionning
The AC650S provides preset parameters suitable for most commun uses. When used in conjunction with the Parker NX series of brushless motors, the AC650S provides optimum control in a wide range of applications such as pumps, fans, compressors, conveyors and machine tools.

Designed for optimum performance with Parker SSD Parvex NX or NX range of brushless servomotors

Power ranges 0.25 to 7.5 kW

Supply voltage 230Vac or 400Vac

Designed to operate without additional speed sensor

Pre-programmed application macros allowing quick and simple setup

Profibus-DP and Modbus RTU connectivity available

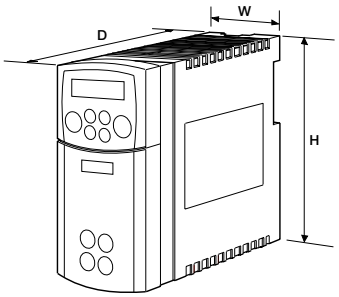
Integrated operator/programming controls with option for remote mounting

Fully configurable with graphical software tools such as DSE lite

Meets CE and UL

Technical specifications	
Power supply	Single phase units : 220-240Vac ±10%, 50-60Hz ±5% Three phase units : 380-460Vac ±10%, 50-60Hz ±5%
Ambient	0.-40°C (derate to 50°C) Up to 1000m ASL (derate >1000m) IP20 protected
Output frequency	0-500Hz
Inputs / outputs	2 x 0-10V, 0-10V/4-20mA (summing) AI 2 x 0-10V, AO, 5 x DI, 2 x DI/O, 1 x RO
Communications Options	RS485/RS232 PROFIBUS DP, Modbus RTU
Standards	The AC650S series meets the following standards when installed in accordance with the relevant product manual. • CE Marked to EN50178 (Safety, Low Voltage Directive). • CE Marked to EN61800-3 (EMC Directive). • UL Listed to US standard UL508C). • cUL Listed to Canadian standard C22.2 #14.

Dimensions			
Frame size	H	W	D
1	137	73	142
2	192	73	173
3	257	96	195



Frame 1, 2, 3

Sensorless control of AC motors

AC650S series

0.25 to 7.5 kW

Drive ratings

Product code	Supply voltage	Rated power (kW / HP)	Output current (A)	Frame	Overload
650S-21140010-0▪1P00-A1	230V 1ph.	0.75 / 1.0	4	1	150% x 30 sec
650S-21170020-0▪1P00-A1		1.5 / 2.0	7	2	
650S-43125020-B▪1P00-A1	400V 3ph.	0.75 / 1.0	2,5	2	
650S-43155020-B▪1P00-A1		2.2 / 3.0	5,5	2	
650S-43190030-B▪1P00-A1		4.0 / 5.0	9	3	
650S-43216030-B▪1P00-A1		7.5 / 10	16	3	
See below other models available for special order (minimum quantities apply) – Please consult your nearest Parker contact					
650S-21115010-0▪1P00-A1	230V 1ph.	0.25 / 0.3	1,5	1	150% x 30 sec
650S-21122010-0▪1P00-A1		0.37 / 0.5	2,2	1	
650S-21130010-0▪1P00-A1		0.55 / 0.75	3	1	
650S-21155020-0▪1P00-A1		1.1 / 1.5	5,5	2	
650S-43115020-B▪1P00-A1	400V 3ph.	0.37 / 0.5	1,5	2	
650S-43120020-B▪1P00-A1		0.55 / 0.75	2	2	
650S-43135020-B▪1P00-A1		1.1 / 1.5	3,5	2	
650S-43145020-B▪1P00-A1		1.5 / 2.0	4,5	2	
650S-43168030-B▪1P00-A1		3.0 / 4.0	6,8	3	
650S-43212030-B▪1P00-A1		5.5 / 7.5	12	3	

▪ = 0 for drives without EMC filter ; ▪ = F for drives fitted with built-in EMC filter

NX Permanent-Magnet motors

- Compact framesize
- High torque density
- Speeds up to 30.000 rpm
- Lower energy consumption
- Power range : 0.25 kW to 7 kW

EX - Atex PM motors

- “d” flameproof equipment compliant with ATEX 94/9/CE
- Compact framesize
- Integrated thermal protection
- Lower energy consumption
- Power range : 0.25 kW to 4 kW

Sensorless control of AC motors

AC650S series

0.25 to 7.5 kW

Product coding scheme

650S series

					Block 1	Block 2	Block 3	Block4
					650S	-	-	-
Family	650S drive for sensorless servo control (frame 1-3)				650S			
	Supply voltage	kW	Output Current	Frame Size				
Rating data	230v 1ph					**21**		
		0.25	1.5	1		1150 1		
		0.37	2.2	1		1220 1		
		0.55	3.0	1		1300 1		
		0.75	**4.0**	**1**		**1400 1**		
		1.1	5.5	2		1550 2		
		1.5	**7.0**	**2**		**1700 2**		
	400/460v 3ph					**43**		
		0.37	1.5	2		1150 2		
		0.55	2.0	2		1200 2		
		0.75	**2.5**	**2**		**1250 2**		
		1.1	3.5	2		1350 2		
		1.5	4.5	2		1450 2		
		2.2	**5.5**	**2**		**1550 2**		
		3.0	6.8	3		1680 3		
		4.0	**9.0**	**3**		**1900 3**		
		5.5	12.0	3		2120 3		
		7.5	**16.0**	**3**		**2160 3**		
Auxiliary supply	Not required						**0**	
Brake switch	Not Fitted (mandatory on Frame 1 & 2 products)						**0**	
	Brake switch fitted (mandatory on frame 2 400V products and all frame 3)						**B**	
Filter	Not fitted (Optional on frames 1-3)							**0**
	Filter fitted (Optional on frames 1-3 only)							**F**
Comms	RS232 port fitted							**1**
Mechanical style	Panel Mount							**P**
Special option	None							**00**
	Documented special options (01-99)							
Destination	English (50Hz)							**A**
Keypad	6511 TTL fitted (standard)							**1**

Modular systems drives

AC890 systems drive

0.55kW - 1200kW

Description

The AC890 is a compact, modular systems drive engineered to control speed and position of open-loop and closed-loop, single- or multi-motor AC or servo motor applications.

Features

The AC890 can be configured for 4 different modes of operation

Open-loop (volts / frequency) control

This mode is ideal for basic, single or multi-motor speed control.

Sensorless vector control

With its ultra high performance sensorless vector algorithm, the AC890 delivers a combination of both high torque and close speed regulation without the need for any speed measuring transducer.

Closed-loop vector control

Full closed-loop flux vector performance can be achieved with the AC890 by simply adding an encoder feedback 'technology box'. This provides 100% continuous full load standstill torque, plus a highly dynamic speed loop more than sufficient for the most demanding applications.

4 Quadrant active front-end power supply module

With this configuration, the energy is fed back into the mains supply with sinusoidal currents and unity power factor; a very low current harmonic content is achieved (THD < 5%).

Compatible with a wide range of feedback options

The AC890 is compatible with any AC motor and virtually any speed/position feedback options. With this flexibility you may not even need to replace your existing AC motor to achieve high performance, saving you time and money.

- Incremental encoder
- EnDat 2.1 (SinCos) encoder
- Resolver

International standards

Complies with :
- EN61800-3 (EMC) directive
- CE marked to EN50178 (Low Voltage) directive
- UL Listedto US safety standard UL508C

Demanding environments

For environments that have dusty, humid or corrosive atmospheres, the AC890 can optionally be supplied with conformally coated circuit boards that improve the drives resistance to corrosion, thereby increasing reliability and service life.
Industries that would typically benefit from conformal coating could include :

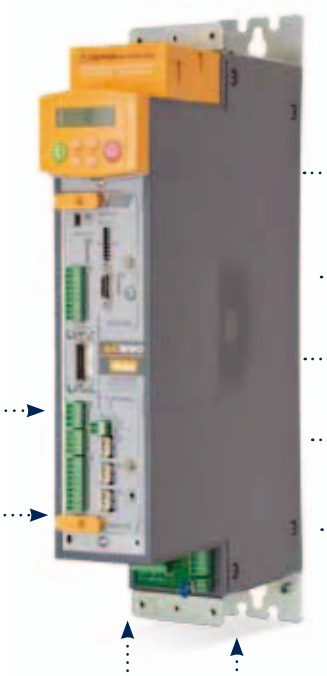
- **Water and wastewater**
- **Paper and pulp processing**
- **Steel**
- **Marine and offshore**
- **Outdoor cranes**
- **Wind & wave power generation**
- **Food processing.**

AC Modular system drives

AC890 series

A High performance design

* Stand alone version shown



Features

High speed feedback

- Incremental encoder
- EnDat® 2.1 (SinCos) encoder
- Resolver

Open FireWire IEEE 1394 process port

- 125µs Cycle time
- Real-time synchronization between drives

Open communications

EtherNet/IP conformance tested · ControlNet · PROFIBUS · DeviceNet · CANopen

Ultra-fast control loops

- Torque loop: 62.5µs
- Speed loop: 62.5µs
- Position loop: 62.5µs

Serves the most demanding applications

Taking advantage of leading edge control algorithms running on a fast 150Mhz microprocessor, the AC890 drive can achieve very high-bandwidth control loops.

This allows you to use the drive for the most demanding industrial applications e.g. printing, cut-to-length, rotary shear, converting and slitting.

Benefits

Minimal delay between the fieldbus setpoints and the control loops

Designed to integrate in existing automation systems, the AC890 features high performance ports linked directly to the fast control loops of the drive.

Minimum delay exists between your digital setpoint sent through a fieldbus and the control loops.

Replacement of analogue solutions

Your existing analogue setpoint-based solutions can be replaced by a digital fieldbus-based solution with minimal bandwidth loss.

Flexible feedback

The AC890 offers system designers complete flexibility in their choice of feedback technology.

Open standards for protection of investment

The AC890 has been deliberately designed to integrate seamlessly into your automation network.

To connect to your PLC or fieldbus network you can simply choose from the wide range of communication technology boxes.

4

Two performance level options for your needs :

Advanced performance

Motion control with added position loop, motion control function blocks, move incremental, move absolute, move home, line drive master ramp and section control, winder blocks (speed winder, current winder), full function PID, machine state and others.

High performance

All advanced features plus : Library of pre-engineered application specific LINK VM function blocks such as : Shaftless Printing, cut-to-length, adanced winding, advanced traversing and others.

Modular systems drives

AC890 systems drive

Space saving compact footprint thanks to modular design concept

Stand Alone version

The complete drive

The AC890SD series Stand Alone drive provides a complete AC input to AC motor output, with power input and output terminals.

Other characteristics of the AC890SD include:

- Power output up to 900kW
- 208-500 VAC input supply
- access to all feedback and networking options
- Built-in dynamic brake switch provisions to add external braking resistor
- 24Vdc control board supply for programming without power
- torque and speed outputs
- USB programming port

Common Bus version

Common bus drive

The AC890 is also available in a common bus platform, where individual motor output drives are easily connected to a common bus supply.

Characteristics of the common bus drive (AC890CD) :

- Power output to 900kW (1200HP) in 9 frame sizes
- Power Supply : 320 to 705 VDC
- Access to all feedback and networking options
- 24VDC control board supply for programming without power
- Torque and speed analogue outputs
- USB programming port

Characteristics of the common bus supply module (AC890CS) :

- Power output 7.5 to 110kW
- Power Supply : 208-500 VAC
- Built-in dynamic braking unit (external braking resistor required)
- Operator display for diagnostics
- Up to 162A output per module

Removable terminal block connections for easier installation and maintenance

Reduced dimensions, compact footprint

The AC890 has been designed to be compact and require the minimum possible cabinet space. Boasting the latest innovations in semiconductor cooling the AC890 is a class leader in terms of its size.

The control terminals are pluggable, simplifying connection to the drive during installation and allowing a fast swap-out for maintenance purposes.

The common DC bus also helps to keep the overall size of the system to a minimum. Simply open the bus terminal cover, connect the busbars and close.

Fast connection of the common DC bus

Modular systems drives

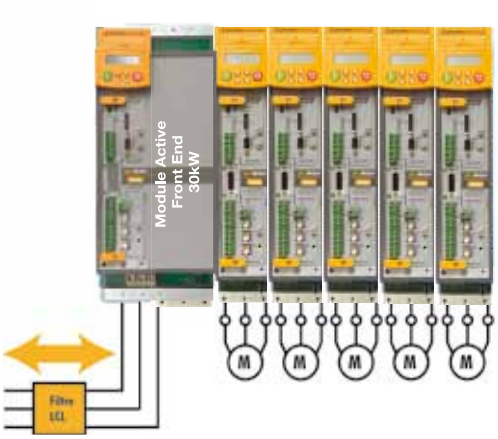
AC890 systems drive

Active front end

4 Quadrant active front-end power supply

with regeneration to the supply network

The AC890CD and AC890SD can be configured to feed energy back into the mains supply with sinusoidal currents and unity power factor; with very low levels of harrmonic current distortion.



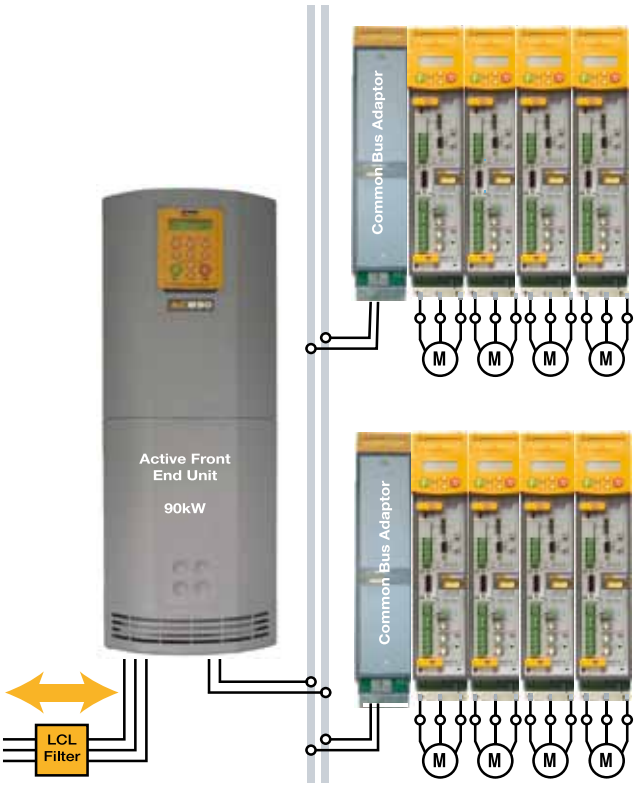
Required parts

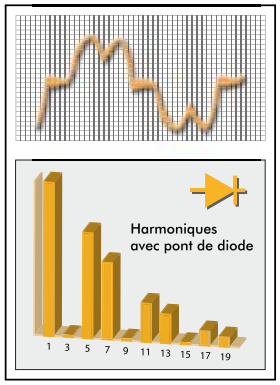
Pre-load circuit
LCL filter

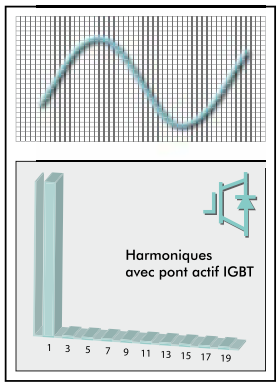
Fully bidirectionnel power flow
150% overload for 60 sec
Sinusoidal input current
Harmonic levels meet requirements of IEEE 519

Note :

It is possible to use a larger separate active front-end module for higher power AC890 systems. In this case, several AC890's can be connected to the AFE using the AC890CA common bus adapter.







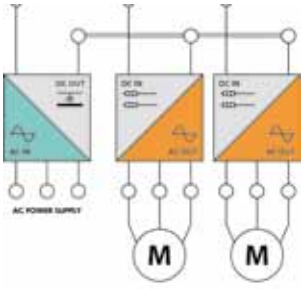
DC system power supply unit

AC890CS series

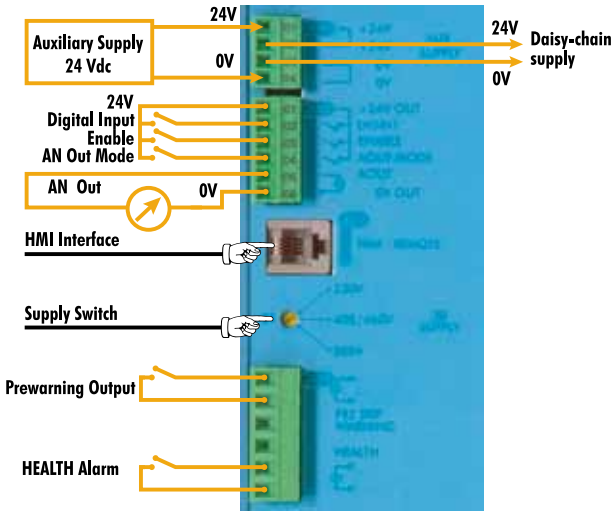
40A - 200A

Description

The AC890CS power module is able to provide dual output voltages to power one or more AC890CD or stand alone AC890SD drives connected to a common DC bus.
This modularity provides significant space saving in the enclosure.



Power Supply 208-500Vac
Built-in dynamic braking unit
Dual DC bus power output terminals
Operator display for diagnostics.



"Drive Healthy" contact
24Vdc auxiliary supply (optional)
HMI Interface
Power supply selector
Configurable analogue outputs

4

Electrical characteristics - AC890CS drives

Old order reference**	New order reference	Frame	Input voltage (Vac)	Power (kW)	AC input current (A)	DC output current (A)
890CS5-0032B-B	890CS-532320B0-000-U	Frame B	230	7.5	32	40
			400 / 460	15		
			500	18		
890CS5-0054B-B	890CS-532540B0-000-U		230	15	54	65
			400 / 460	30		
			500	37		
890CS5-0108D-D	890CS-533108D0-000-U	Frame D	230	30	108	135
			400 / 460	60		
			500	75		
890CS5-0162D-D	890CS-533162D0-000-U		230	45	162	200
			400 / 460	90		
			500	110		

Note: For increased power, additional units can be connected in parallel.
For further details, contact our technical support department
** Old reference refers to legacy part references prior to 2009

Modular AC systems drives

AC890CD series systems drive

1.5A - 180A

Power supply 320, 650, 705Vdc
Operator display supplied as standard
Common options as AC890SD
Fiedlbus options : Profibus, DeviceNet, ControlNet, CANOpen

Electrical characteristics - AC890CD drive

Old order reference**	New order reference	Frame	Input Voltage (Vdc)	Power (kW)	DC input current (A)	Output current (A)	
						Vector mode	Servo mode
890C2-0003B-B0x	890CD-231300B0-000-...	Frame B	320	0.55	4.2	3	2.2
890C2-0005B-B0x	890CD-231550B0-000-...			1.1	7.6	5.5	4
890C2-0007B-B0x	890CD-231700B0-000-...			1.5	9.3	7	6
890C2-0011B-B0x	890CD-232110B0-000-...			2.2	14.9	11	8
890C2-0016B-B0x	890CD-232165B0-000-...			4	22.2	16.5	12
890C4-0002B-N0x	890CD-531200B0-000-...		560	0.55	2.9	2	1.5
890C4-0003B-N0x	890CD-531350B0-000-...			1.1	5	3.5	2.5
890C4-0004B-N0x	890CD-531450B0-000-...			1.5	6.6	4.5	3.5
890C4-0006B-N0x	890CD-531600B0-000-...			2.2	8.6	6	4
890C4-0010B-N0x	890CD-532100B0-000-...			4	14.1	10	6
890C4-0012B-N0x	890CD-532120B0-000-...			5.5	16.8	12	9
890C4-0016B-N0x	890CD-532160B0-000-...			7.5	22.2	16	12
890C2-0024C-B0x	890CD-232240C0-000-...	Frame C	320	5.5	31	24	24
890C2-0030C-B0x	890CD-232300C0-000-...			7.5	39	30	30
890C4-0024C-N0x	890CD-532240C...		560	11	33	24	20
890C4-0030C-N0x	890CD-532300C...			15	43	30	25
890C4-0039D-N0x	890CD-532390D0-000-...	Frame D	560	18.5	37	39	35
890C4-0045D-N0x	890CD-532450D0-000-...			22	43	45	38
890C4-0059D-N0x	890CD-532590D0-000-...			30	59	59	50
890C4-0073E-N0x	890CD-432730E0-0...	Frame E	560	37	82	73	55
890C4-0087E-N0x	890CD-432870E0-0...			45	100	87	65
890C5-0073E-N0x	890CD-532730E0-0...		705	37	66	67	Data not available*
890C5-0087E-N0x	890CD-532870E0-0...			45	80	79	
890C4-0105F-N0x	890CD-433105F...	Frame F	560	55	123	105	78
890C4-0145F-N0x	890CD-433145F...			75	166	145	108
890C4-0156F-N0x	890CD-433156F...			90	203	180	135
890C4-0180F-N0x	890CD-433180F...			90	203	180	Data not available*
890C5-0105F-N0x	890CD-533105F...		705	55	98	100	
890C5-0145F-N0x	890CD-533145F...			75	133	125	
890C5-0156F-N0x	890CD-533156F...			90	162	156	

x : Version "A" (Advanced) or "H" (High performance)
* For future developments, please contact us or visit our website www.parker.com/ssd
Note : For higher powers, refer to AC890SD series supplied from a DC bus.
Note : Power ratings are given for 320 and 560Vdc
** Old reference refers to legacy part references prior to 2009

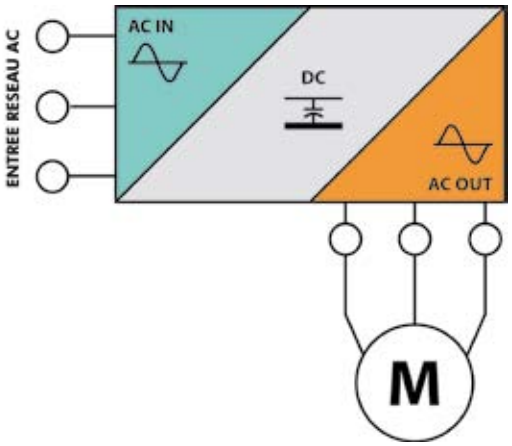
Modular AC systems drives

AC890SD series systems drive

1.5A - 1681A

Description

The AC890SD (Standalone) drives are independent modules with integrated three-phase supply inputs. With its wide range of sizes available, the AC890SD is suitable for every type of application from a small machine to a large industrial high power process line (eg rolling mill). It is also suitable for applications requiring sectional control and assembly of independent modules (eg printing systems).



Directly supplied AC or DC common bus
Built-in dynamic braking module
Operator display fitted as standard
Common options as AC890CD
Fieldbus options: Profibus, DeviceNet, ControlNet, CANOpen

4

Electrical characteristics - AC890SD drive - 230V

Old order reference**	New order reference	Frame	Input voltage (Vac)	Power (kW)	Input current (A)		Output current (A)	
					Vector mode	Servo mode	Vector mode	Servo mode
890D2-0003B-B0x	890SD-231300B0-B00-...	Frame B	230	0.55	4.2	4.2	3	2.2
890D2-0005B-B0x	890SD-231550B0-B00-...			1.1	7.7	7.3	5.5	4
890D2-0007B-B0x	890SD-231700B0-B00-...			1.5	9.3	9.9	7	6
890D2-0011B-B0x	890SD-232110B0-B00-...			2.2	15.2	12.9	11	8
890D2-0016B-B0x	890SD-232165B0-B00-...			4	21.8	18.2	16.5	12
890D2-0024C-B0x	890SD-232240C0-B00-...	Frame C		5.5	31	31	24	24
890D2-0030C-B0x	890SD-232300C0-B00-...			7.5	40	40	30	30

x : Version "A" (Advanced) or "H" (High performance)
Note : Power ratings are given for 230Vac
Permitted overload : 150% for 60 sec in vector mode - 200% for 4 sec in servo mode.
** Old reference refers to legacy part references prior to 2009

Electrical characteristics - AC890SD drive (contd.)

Old order reference**	New order reference	Frame	Input voltage (Vac)	Power (kW)	Input current (A)		Output current (A)	
					Vector mode	Servo mode	Vector mode	Servo mode
890D4-0002B-BOx	890SD-531200B0-B00-...	Frame B	380-500	0,55	2,9	2.9	2	1,5
890D4-0003B-BOx	890SD-531350B0-B00-...			1,1	5	4.7	3,5	2,5
890D4-0004B-BOx	890SD-531450B0-B00-...			1,5	6,8	6.4	4,5	3,5
890D4-0006B-BOx	890SD-531600B0-B00-...			2.2	9	7.2	6	4
890D4-0010B-BOx	890SD-532100B0-B00-...			4	14	14	10	6
890D4-0012B-BOx	890SD-532120B0-B00-...			5.5	16.5	13.8	12	9
890D4-0016B-BOx	890SD-532160B0-B00-...			7.5	21.7	17.9	16	12
890D4-0024C-BOx	890SD-232240C0-B00-...	Frame C	380-500	11	32	32	24	20
890D4-0030C-BOx	890SD-232300C0-B00-...			15	40	40	30	25
890D4-0039D-BOx	890SD-532390D0-B00-...	Frame D	380-500	18.5	42	38	39	35
890D4-0045D-BOx	890SD-532450D0-B00-...			22	50	45	45	38
890D4-0059D-BOx	890SD-532590D0-B00-...			30	62	54	59	50
890D4-0073E-BOx	890SD-432730E0-0...	Frame E	380-460	37	81	81	73	73
890D4-0087E-BOx	890SD-432870E0-0...			45	95	95	87	87
890D4-0105F-Box	890SD-433105F...	Frame F	380-460	55	114	114	105	78
890D4-0145F-BOx	890SD-433145F...			75	143	143	145	110
890D4-0156F-BOx	890SD-433156F...			90	164	164	180	135
890D4-0216G-BOx	890SD-433216G...	Frame G	380-460	110	216	Data not available*	216	151
890D4-0250G-BOx	890SD-433250G...			132	246		250	175
890D4-0316G-BOx	890SD-433316G...			160	305		316	221
890D4-0361G-BOx	890SD-433361G...			180	336		361	257
890D4-0375H-BOx	890SD-433375H...	Frame H	380-460	200	367		375	262
890D4-0420H-BOx	890SD-433420H...			220	400		420	294
890D4-0480H-BOx	890SD-433480H...			250	466		480	336
890D4-0520H-BOx	890SD-433520H...			280	516		520	364
890D4-0590J-BOx	890SD-433590J...	Frame J	380-460	315	576	Data not available*	590	413
890D5-0073E-BOx	890SD-532730E0-0...	Frame E	380-500	37	69	69	66	66
890D5-0087E-BOx	890SD-532870E0-0...			45	82	82	79	79
890D5-0105F-BOx	890SD-533105F...	Frame F	380-500	55	93	93	100	74
890D5-0145F-BOx	890SD-533145F...			75	118	118	125	95
890D5-0156F-BOx	890SD-533156F...			90	140	140	156	117
890SD/5/0685K/ * /1F/A/US	890SD/5/0685K/ * /1F/A/US	K(2xG)	380-460	355	Data not available*	Data not available*	685	480
890SD/5/0798K/ * /1F/A/US	890SD/5/0798K/ * /1F/A/US	K(2xH)		400			798	570
890SD/5/0988K/ * /1F/A/US	890SD/5/0988K/ * /1F/A/US	K(2xH)		500			1028	720
890SD/5/1028K/ * /1F/A/US	890SD/5/1028K/ * /1F/A/US	K(3xG)		600			988	699
890SD/5/1120K/ * /1F/A/US	890SD/5/1120K/ * /1F/A/US	K(2xJ)		550			1120	780
890SD/5/1197K/ * /1F/A/US	890SD/5/1197K/ * /1F/A/US	K(3xH)		630			1197	855
890SD/5/1482K/ * /1F/A/US	890SD/5/1482K/ * /1F/A/US	K(3xH)		800			1482	1049
890SD/5/1681K/ * /1F/A/US	890SD/5/1681K/ * /1F/A/US	K(3xJ)		900			1681	1171

x : Version "A" (Advanced) or "H" (High performance)
* For future developments please contact us, or visit our website
Note : Power ratings are given for 400Vac.
** Old reference refers to legacy part references prior to 2009

Permitted overload : 150% for 60 sec in vector mode
200% for 4 sec in servo mode (Frames B,C,D)
150% for 60 sec in servo mode (Frames E, F, G, H, J)

Modular AC systems drives

AC890 alternative input power configurations

1.5A - 1681A

The modular design of the AC890 makes it easy to connect parallel input modules and multi-phase configurations. By using 12-pulse or 18-pulse configurations, harmful line harmonics can be greatly reduced. For thew utimate in harmonic abatement, an Active Front End (AFE) may be selected.

6 pulse Model	Power rating	Constant torque : 355 - 900 kW Variable torque : 400 - 1000 kW
	Supply voltage	380-460Vac (±10%) 3-phase
	Disconnect switch	Standard
	Input inductance	Standard for limiting harmonic current
	Output choke	Standard
	Operator panel	6901 operator keypad mounted on enclosure door
12 pulse model (optional)	Harmonics	Reduced harmonic current
	Power rating	Constant torque : 355 - 600 kW Variable torque : 400 - 650 kW
	Supply voltage	380-460Vac (±10%) 3-phase
	Disconnect switch	Standard
	Input transformer	(not included in the enclosure) optional 2 secondaires U/D
	Output choke	Standard
	Operator panel	6901 operator keypad mounted on enclosure door
18 pulse model (option)	Harmonics	Total harmonic distortion (current) in accordance with limits of IEEE 519 (1992)
	Power rating	Constant torque : 630 - 900 kW Variable torque : 750 - 1000 kW
	Supply voltage	380-460Vac (±10%) 3-phase
	Disconnect switch	Standard
	Input transformer	(not included in the enclosure) optional 3 secondaires phase shifted by 20°
	Output choke	Standard
	Operator panel	6901 operator keypad mounted on enclosure door

Standards

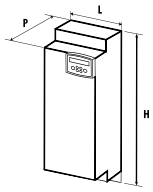
The AC890 series meets the following standards when installed in accordance with the relevant product manual.

CE marked to EN50178 (safety, low voltage directive)
CE marked to EN61800-3 (EMC directive)
UL listed to US safety standard L508C.
cUL listed to Canadian standard C22.2 #14.

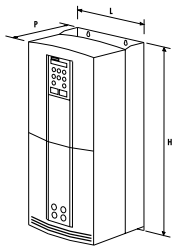
Valid at time of print.

Dimensions

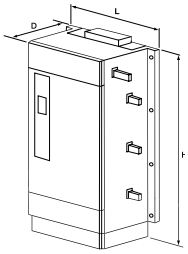
AC890 series systems drives



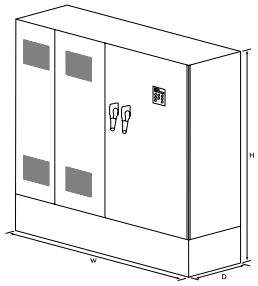
Frames B/C/D



Frames E/F



Frames G/H/J



Frame K

Dimensions and weights

Model	W (mm)	H (mm)	D (mm)	Weight (kg)		
				890CS	890CD	890SD
890 Frame B	72.4	433	258	3.5	5	6
890 Frame C	116			Data not available	6.6	7.6
890 Frame D	160			8.7	12.1	13.1
890 Frame E	257	668	312	Data not available	32.5	33.5
890 Frame F		720	355		41	42
890 Frame G	456	1.042	465		Data not available	108
890 Frame H	572	1.177				138
890 Frame J	675	1.288				176
Frame K 355/400kW*	1600	2000	600	Data not available	Data not available	Data not available
Frame K 400/475kW*	1600	2000	600			
Frame K 500/600kW*	1600	2000	600			
Frame K 600/650kW*	2000	2000	600			
Frame K 550/630kW*	2400	2000	600			
Frame K 630/750kW*	2400	2000	600			
Frame K 800/900kW*	2400	2000	600			
Frame K 900/1000kW*	3000	2000	600			

AC modular system drives

AC890 series

Selection and order code

AC890CS series - AC-DC for DC bus connection

				Block 1		Block 2				Block 3			Block 4
			Example ▶	890CS	-	53	2320	B	0	-	B	00	-	U
Product family	AC890 Common Bus Supply Unit			890CS										
	Supply voltage	Current (A)	Frame Size											
	400/500V three-phase					53								
Current / power ratings		32	B				2320	B						
		54	B				2540	B						
		108	D				3108	D						
		162	D				3162	D						
Auxiliary supply	None								0					
Brake switch	Fitted										B			
Special option	None											00		
Language	English (50/60Hz)													U

4

AC890CA series - common bus adapter

				Block 1		Block 2				Block 3			Block 4
			Example ▶	890CA	-	53	2500	B	0	-	R	00	-	U
Product family	AC890 common bus adapter			890CA										
	Supply voltage	Current (A)	Frame Size											
	400/500V three-phase					53								
Current / power ratings		50	B				2500	B						
		80	B				2800	B						
Auxiliary supply	None								0					
Hardware characteristics	None (80A only)										0			
	(Ride through capacitors only (50A only)										R			
Special options	None											00		
Language	English (50/60Hz)													U

AC modular system drives

AC890 series

Selection and order code

AC890CD series - commun bus drive < 37kW

		Block 1		Block 2				Block 3		Block 4				
	Example ▶	890CD	-	23	1300	B	0	-	B	00	-	1	A	0	0	0
Product family	Standalone AC890 drive	890CD														
Power / current ratings	230V nominal			23												
	Vector Mode kW/A 230Vca / HP/A 230Vca; Servo Mode kW/A 230Vca / HP/A 230Vca	Frame														
	0.55/3.0 / 0.75/3.0 / 0.55/2.2 / 0.75/2.2	B			1300	B										
	1.1/5.5 / 1.5/5.5 / 1.1/4.0 / 1.5/4.0	B			1550	B										
	1.5/7.0 / 2.0/7.0 / 1.5/6.0 / 2.0/6.0	B			1700	B										
	2.2/11 / 3.0/11 / 2.2/8.0 / 3.0/8.0	B			2110	B										
	4.0/16.5 / 5.0/16.5 / 4.0/12 / 5.0/12	B			2165	B										
	5.5/24 / 7.5/24 / 5.5/24 / 7.5/24	C			2240	C										
	7.5/30 / 10/30 / 7.5/30 / 10/30	C			2300	C										
Power /current ratings	500V nominal			53												
	Vector Mode kW/A 400Vca / HP/A 460Vca; Servo Mode kW/A 400Vca / HP/A 460Vca	Taille														
	0.55/2.0 / 0.75/2.0 / 0.55/1.5 / 0.75/1.5	B			1200	B										
	1.1/3.5 / 1.5/3.5 / 1.5/2.5 / 1.5/2.5	B			1350	B										
	1.5/4.5 / 2.0/4.5 / 1.5/3.5 / 2.0/3.5	B			1450	B										
	2.2/6.0 / 3.0/5.0 / 2.2/4.0 / 3.0/4.0	B			1600	B										
	4.0/10 / 5.0/8.0 / 4.0/6.0 / 5.0/6.0	B			2100	B										
	5.5/12 / 7.5/12 / 5.5/9.0 / 7.5/9.0	B			2120	B										
	7.5/16 / 10/14 / 7.5/12 / 10/10	B			2160	B										
	7.5/16 / 10/14 / 7.5/16 / 10/14	B			216S	B										
	11/24 / 15/24 / 11/20 / 15/20	C			2240	C										
	15/30 / 20/27 / 15/25 / 20/22	C			2300	C										
	15/30 / 20/30 / 15/30 / 20/28	C			230S	C										
	18.5/39 / 25/35 / 18.5/35 / 25/29	D			2390	D										
	22/45 / 30/40 / 22/38 / 30/34	D			2450	D										
	30/59 / 40/52 / 30/50 / 40/45	D			2590	D										
Auxiliary supply	not required (not available on frames B-E)						0									
Brake switch	Not Fitted							B								
Special options	None								00							
	Documented special options (01-99) (Refer to local sales office)															
Performance	Advanced										1					
	High										2					
Language	English (50Hz)											A				
	English (60Hz)											B				
Option F	None												0			
	SinCos Encoder (Endat 2.1)												1			
	Incremental Quadrature Encoder												3			
	Resolver												5			
	8902/M1 Sin/Cos Registration												7			
Option A	Not Fitted													0		
	CaNOpen													N		
	ControlNet													C		
	DeviceNet													D		
	Profibus													P		
	8903/M1 Sin/Cos Registration													7		
Option B	Not Fitted														0	
	Firewire 1394A														A	

AC modular system drives

AC890 series

Selection and order code

AC890CD series - commun bus drive > 37kW

		Block 1	Block 2	Block 3	Block 4
	Example ▶	890CD	- 43 2730 E 0	- 0 00	- 1 A 0 0 0
Product family	AC890 common bus drive	890CD			

400V nominal — 43

Power / current ratings	Induction Mode Constant kW/A 560Vcc	Induction Mode Constant HP/A 650Vcc	Induction Mode Quadratic kW/A 560Vcc	Induction Mode Quadratic HP/A 650Vcc	Servo Mode Constant kW/A 560Vcc	Servo Mode Constant HP/A 650Vcc	Servo Mode Quadratic kW/A 560Vcc	Servo Mode Quadratic HP/A 650Vcc	Frame	Block 2
	37/73	50/73	45/87	60/87	37/73	50/73	45/76	60/76	E	2730 E
	45/87	60/87	55/105	75/105	45/87	60/87	55/90	75/90	E	2870 E
	55/105	75/100	75/145	100/125	55/78	75/74	75/126	100/108	F	3105 F
	75/145	100/130	90/165	125/156	75/110	100/99	90/143	125/135	F	3145 F
	90/180	125/156	110/205	150/180	90/135	125/117	110/176	150/154	F	3156 F
	90/180	150/180	-	-	90/135	150/135	-	-	F	3180 F

500V nominal — 53

Power / current ratings	Induction Mode Constant kW/A 705Vcc	Induction Mode Constant HP/A 705Vcc	Induction Mode Quadratic kW/A 705Vcc	Induction Mode Quadratic HP/A 705Vcc	Servo Mode Constant kW/A 705Vcc	Servo Mode Constant HP/A 705Vcc	Servo Mode Quadratic kW/A 705Vcc	Servo Mode Quadratic HP/A 705Vcc	Frame	Block 2
	37/67	-	45/79	-	37/67	-	45/69	-	E	2730 E
	45/79	-	55/98	-	45/79	-	55/84	-	E	2870 E
	55/100	-	75/125	100/125	55/74	-	75/93	100/93	F	3105 F
	75/125	-	90/156	125/156	75/95	-	90/118	125/118	F	3145 F
	90/156	-	-	-	90/117	-	-	-	F	3156 F

Auxiliary supply	Not required (Frames B-E)	0
	115V 1-phase (Frame F only)	1
	230V 1-phase (Frame F only)	2
Brake switch	Not Fitted	0
Special options	None	00
	Active Front End ('Y' caps removed - only available on frames E-F)	07
	Documented special options (01-99) (Refer to local sales office)	
Performance	Advanced	1
	High	2
Language	English (50Hz)	A
	English (60Hz)	B
Option F	None	0
	SinCos encoder (Endat 2.1)	1
	Incremental Quadrature encoder	3
	Resolver	5
	8902/M1 Sin/Cos Register	7
Option A	Not Fitted	0
	CaNOpen	N
	ControlNet	C
	DeviceNet	D
	Profibus	P
	8903/M1 Sin/Cos registration	7
Option B	Not Fitted	0
	Firewire 1394A	A

AC modular system drives

AC890 series

Selection and order code

AC890SD series - Standalone drive < 37kW

		BlocK 1	BlocK 2	BlocK 3	BlocK 4
	Example ▶	890SD	- 23 1300 B 0	- B 00	- 1 A 0 0 0
Product family	Standalone AC890 drive	890SD			
Power / current ratings	230V nominal		23		
	Induction Mode kW/A 230Vca / HP/A 230Vca; Servo Mode kW/A 230Vca / HP/A 230Vca	Frame			
	0.55/3.0 / 0.75/3.0 / 0.55/2.2 / 0.75/2.2	B	1300 B		
	1.1/5.5 / 1.5/5.5 / 1.1/4.0 / 1.5/4.0	B	1550 B		
	1.5/7.0 / 2.0/7.0 / 1.5/6.0 / 2.0/6.0	B	1700 B		
	2.2/11 / 3.0/11 / 2.2/8.0 / 3.0/8.0	B	2110 B		
	4.0/16.5 / 5.0/16.5 / 4.0/12 / 5.0/12	B	2165 B		
	5.5/24 / 7.5/24 / 5.5/24 / 7.5/24	C	2240 C		
	7.5/30 / 10/30 / 7.5/30 / 10/30	C	2300 C		
Power / current ratings	500V nominal		53		
	Induction Mode kW/A 400Vca / HP/A 460Vca; Servo Mode kW/A 400Vca / HP/A 460Vca	Frame			
	0.55/2.0 / 0.75/2.0 / 0.55/1.5 / 0.75/1.5	B	1200 B		
	1.1/3.5 / 1.5/3.5 / 1.5/2.5 / 1.5/2.5	B	1350 B		
	1.5/4.5 / 2.0/4.5 / 1.5/3.5 / 2.0/3.5	B	1450 B		
	2.2/6.0 / 3.0/5.0 / 2.2/4.0 / 3.0/4.0	B	1600 B		
	4.0/10 / 5.0/8.0 / 4.0/6.0 / 5.0/6.0	B	2100 B		
	5.5/12 / 7.5/12 / 5.5/9.0 / 7.5/9.0	B	2120 B		
	7.5/16 / 10/14 / 7.5/12 / 10/10	B	2160 B		
	7.5/16 / 10/14 / 7.5/16 / 10/14	B	216S B		
	11/24 / 15/24 / 11/20 / 15/20	C	2240 C		
	15/30 / 20/27 / 15/25 / 20/22	C	2300 C		
	15/30 / 20/30 / 15/30 / 20/28	C	230S C		
	18.5/39 / 25/35 / 18.5/35 / 25/29	D	2390 D		
	22/45 / 30/40 / 22/38 / 30/34	D	2450 D		
	30/59 / 40/52 / 30/50 / 40/45	D	2590 D		
Auxiliary supply	Not Required (Not available on frames B-D)		0		
Brake switch	Brake switch fitted			B	
Special options	None			00	
	Documented special options (01-99) (Refer to local sales office)				
Performance	Advanced				1
	High				2
Language	English (50Hz)				A
	English (60Hz)				B
F Option	None				0
	SinCos encoder (Endat 2.1)				1
	Incremental quadrature encoder				3
	Resolver				5
	8902/M1 Sin/Cos registration				7
A Option	Not Fitted				0
	CaNOpen				N
	ControlNet				C
	DeviceNet				D
	Profibus				P
	8903/M1 Sin/Cos registration				7
B Option	Not installed				0
	1394A Firewire				A

AC modular system drives

AC890 series

Selection and order code

AC890SD series - Standalone drive > 37 Kw

		Block 1	Block 2	Block 3	Block 4
Example ►		890SD	- 43 2730 E 0	- 0 00	- 1 A 0 0 0
Product family	Standalone AC890 drive	890SD			

400V nominal — 43

Power / current ratings	Induction Mode Constant kW/A 400Vac	Induction Mode Constant HP/A 460Vac	Induction Mode Quadratic kW/A 400Vac	Induction Mode Quadratic HP/A 460Vac	Servo Mode Constant kW/A 400Vac	Servo Mode Constant HP/A 460Vac	Servo Mode Quadratic kW/A 400Vac	Servo Mode Quadratic HP/A 460Vac	Frame	
	37/73	50/73	45/87	60/87	37/73	50/73	45/76	60/76	E	2730 E
	45/87	60/87	55/105	75/105	45/87	60/87	55/90	75/90	E	2870 E
	55/105	75/100	75/145	100/125	55/78	75/74	75/126	100/108	F	3105 F
	75/145	100/130	90/165	125/156	75/110	100/99	90/143	125/135	F	3145 F
	90/180	125/156	110/205	150/180	90/135	125/117	110/176	150/154	F	3156 F
	90/180	150/180	-	-	90/135	150/135	-	-	F	3180 F
	110/216	175/216	132/260	200/260	110/153	175/153	132/210	200/210	G	3216 G
	132/250	200/250	150/302	250/302	132/171	200/171	150/237	250/237	G	3250 G
	160/316	250/316	180/361	300/361	160/224	250/224	180/286	300/286	G	3316 G
	180/361	300/361	220/420	350/420	180/253	300/253	220/331	350/331	G	3361 G
	200/375	-	250/480	-	200/268	-	250/343	-	H	3375 H
	220/420	350/420	250/480	400/480	220/300	350/300	250/383	400/383	H	3420 H
	250/480	400/480	300/545	450/545	250/336	400/336	300/428	450/428	H	3480 H
	280/520	450/520	315/590	500/590	280/368	450/368	315/368	500/465	H	3520 H
	315/590	500/590	355/650	550/650	315/411	500/411	355/471	550/471	J	3590 J

500V nominal — 53

Power / current ratings	Induction Mode Constant kW/A 500Vac	Induction Mode Constant HP/A 500Vac	Induction Mode Quadratic kW/A 500Vac	Induction Mode Quadratic HP/A 500Vac	Servo Mode Constant kW/A 500Vac	Servo Mode Constant HP/A 500Vac	Servo Mode Quadratic kW/A 500Vac	Servo Mode Quadratic HP/A 500Vac	Frame	
	37/67	-	45/79	-	37/67	-	45/69	-	E	2730 E
	45/79	-	55/98	-	45/79	-	55/84	-	E	2870 E
	55/100	-	75/125	100/125	55/74	-	75/93	100/93	F	3105 F
	75/125	-	90/156	125/156	75/95	-	90/118	125/118	F	3145 F
	90/156	-	-	-	90/117	-	-	-	F	3156 F

Auxiliary supply	Not fitted (not available on frames B-E)	0
	115V 1ph (option on frames F-J only)	1
	230V 1ph (option on frames F-J only)	2
Brake switch	Not fitted	B
Special options	None	00
	Active Front End ('Y' caps removed - option on frames E-F only)	07
	Documented special options (01-99) (Refer to local sales office)	
Performance	Advanced	1
	High	2
Langue	English (50Hz)	A
	English (60Hz)	B
Option F	None	0
	SinCos Encoder (Endat 2.1)	1
	Incremental quadrature encoder	3
	Resolver	5
	8902/M1 Sin/Cos registration	7
Option A	Not fitted	0
	CanOpen	N
	ControlNet	C
	DeviceNet	D
	Profibus	P
	8903/M1 Sin/Cos registration	7
Option B	Not fitted	0
	Firewire 1394A	A

High power modular AC drives

AC890PX series

110kW - 400kW

Description

The AC890PX is a high power standalone modular systems drive designed for industrial applications. It is especially fitted to retrofit applications where a complete standard enclosed drive system is required. It is particularly suited to the following applications :

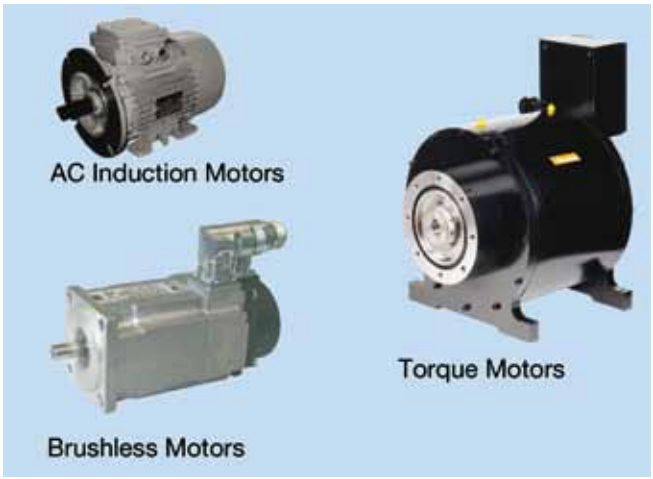
- Energy-saving pump and fan applications
- Extruders,
- Mixers, centrifuges
- Engine Dynamometers

Features

Suitable for use with all types of AC motor

The AC890PX can control all types of AC motor :

- Induction motors
- PMAC servo motors
- Torque Motors



Operation with or without feedback

The drive can be configured for the following operating modes :

- V/F speed control
- Sensorless or full flux vector control
- PMAC Servo motor control

Compatible with a wide range of feedback options

Thanks to a range of optional feedback cards, the AC890PX works with all types of popular feedback systems :

- Incremental encoder
- Resolver
- SinCos (Endat 2.1) encoder
- Absolute encoder EnDat

Conforming to international standards

Suitable for supply voltages of 380Vac to 690Vac, the AC890PX can be connected to different supply networks around the world without any additional equipment. Meeting the requirements of key international standards, the AC890PX is supported in over 60 countries around the world through the Parker SSD Drives support network.

High power modular AC drive

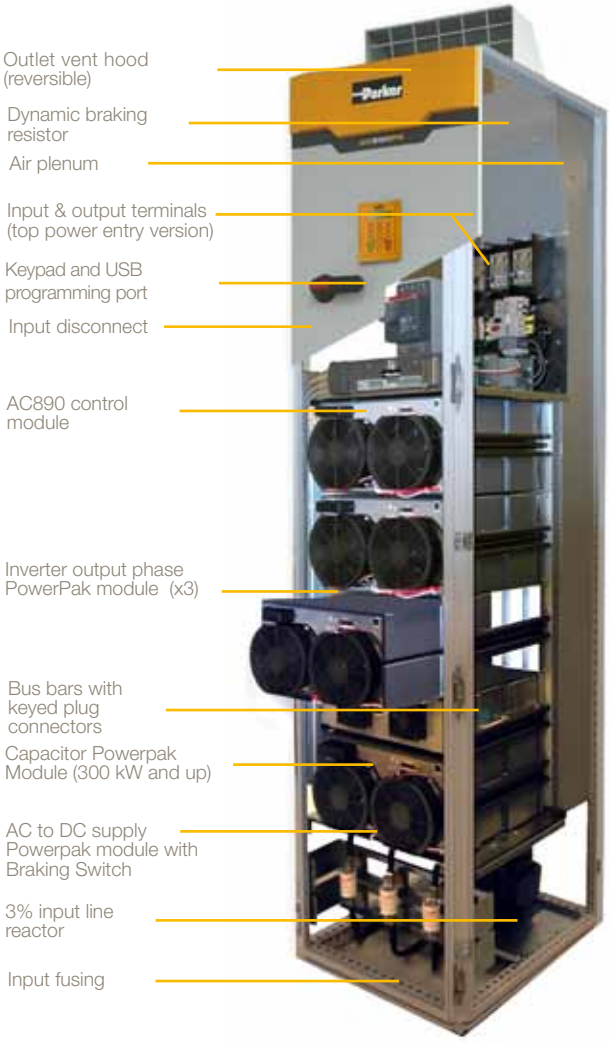
AC890PX series

110kW - 400kW

Features (contd.)

Ultra-compact drive

The extremely compact footprint of the AC890PX is unmatched in the high power AC drives market. Within its small frame it integrates all of the standard equipment necessary for your installation: line choke, switch, fuses, second enviroment line filter (compliant to EN 61800-3). Configuration and start-up of the drive can be performed using the operator keypad in a matter of minutes.



Low-maintenance ensures maximum machine availablilty and productivity

Thanks to a plug in design, the power modules of the AC890PX have been designed to be replaceable in minutes by any technician, even a non-specialist. This helps to reduce machine downtime and lost productivity in the event of a fault occurring.

PowerPak Phase Module – Front View

PowerPak Phase Module - Rear View

Total flexibility for easy factory integration

To facilitate maximum integration into the factory or existing buildings the AC890PX is available in a number of different variants :

- Top or bottom cable entry/exit to suit existing arrangements
- 12 or 18 pulse configuration
- Active Front-End with negligable harmonic distortion
- Integrated contactors, fuses, chokes etc.

Note : Certain variants require an additional enclosure bay.

TOP CABLE ENTRY / EXIT

BOTTOM CABLE ENTRY / EXIT

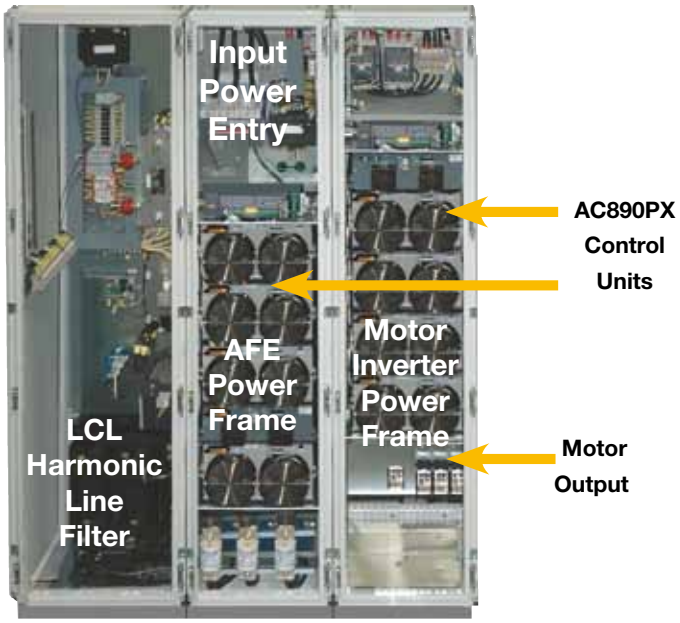
High Power modular AC drive

AC890PX series

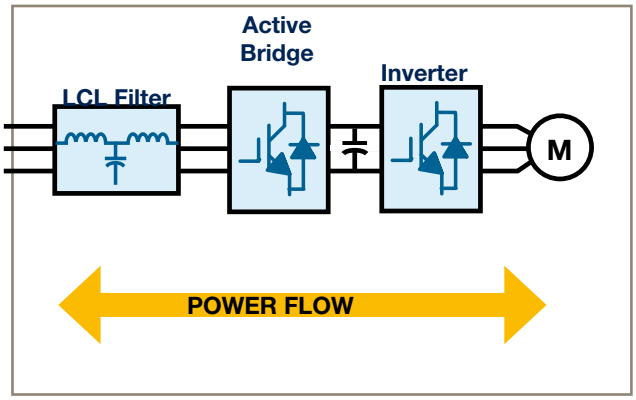
110kW - 400kW

Features (contd.)

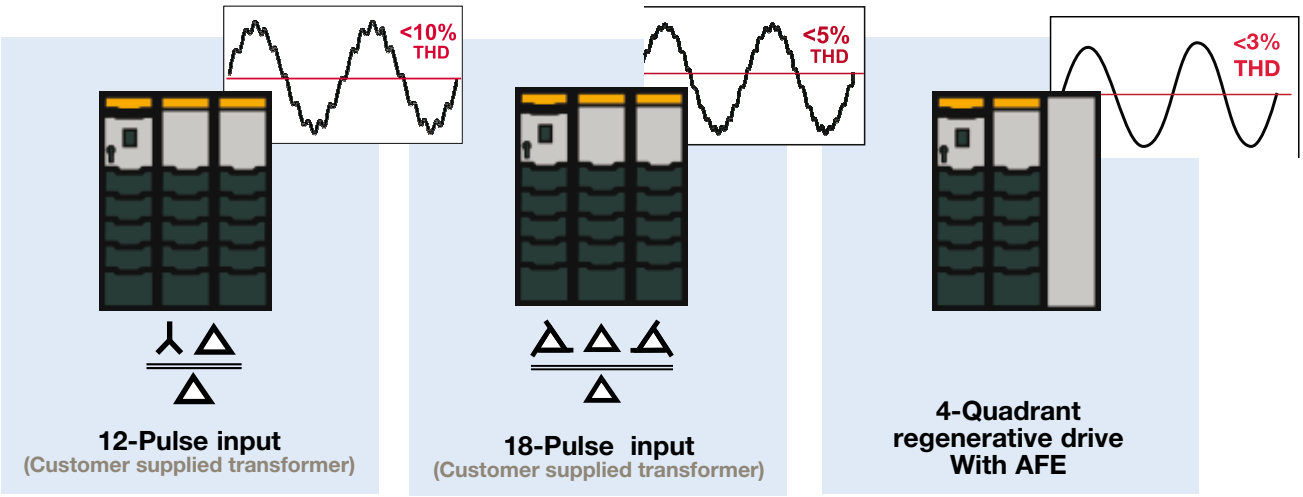
Active Front-End (AFE) version - energy regeneration with low harmonic distortion



Fully line regenerative drive
Continuous duty at full torque - motoring or braking
Negligible power line harmonics - meets IEEE519
Unity power factor
Compact 3 bay (1600 mm) enclosure



12 and 18 pulse input



High power modular AC drive

AC890PX series

110kW - 400kW

Technical specifications

Range	Asynchronous motors	Servo motors
Supply voltage - 380 to 460Vac 3ph +/-10% - 500 to 575Vac 3ph +/-10% - 600 to 690Vac 3ph +/-10%	Standard duty [heavy] 132-400kW [110-315kW] 149-373kW [112-298kW] / 200-500HP [150-400HP] 132-400kW [110-315kW]	Heavy duty 155-410 Amps 60-155 Amps
Overload capacity Asynchronous motor - standard duty Asynchronour motor - heavy duty Servo motor - heavy duty	 110% for 60 sec 150% for 60 sec 150% for 60 sec	
Output frequency	0 - 1000 Hz in V/F mode 0 - 350 Hz in Closed loop vector mode 0 - 120 Hz in Sensorless vector mode	
Switching frequency	2 kHz (standard) - Adjustable 4 kHz (derating required, consult factory). Suppression of audible frequencies	
Dynamic braking	Dynamic braking module integrated as standard (limited service) External braking resistor (option)	
Ambient temperature	0°C to 40°C	
IP rating	IP 21 / NEMA 1 as standard. IP 52 or greater available upon demand.	
Insulation	Cabinet provides an attenuation of 15dB to emissions between 30-100 MHz	
Humidity	90% maximum humidty at 40°C, without condensation	
Atmosphere	Non flammable, non corrosive, no dust	
Climate	Class 3k3, as defined by EN50178 (1998)	
Vibrations	Test Fc meeting EN60068-2-6	

Standards

Pollution index	Level II (non-conductive pollution, except for temporary condensation)
Europe	Low voltage directive 73/23/EEC with amendment 93/68/EEC, article 13 and annex III, EN50178 (1998) Conforms to EN61800-3 (second environment)
North America / Canada	Product conforms to UL specifications.

High power modular AC drive

AC890PX series

110kW - 400kW

Electrical characteristics

Product code	Asynchronous motors					Servo motors	
Model	Heavy duty / Constant torque	Standard duty / Variable torque	Heavy duty / Constant torque (Amps	Standard duty / Variable torque (Amps)	Maximum current without overload	Standard duty / Variable torque (Amps)	Heavy duty / Constant torque (Amps)
400Vac Modules							
890PX/4/0215/B/00/A	110 kW	132 kW	215 A	260 A	265 A	190 A	155 A
890PX/4/0260/B/00/A	132 kW	160 kW	260 A	340 A	347 A	245 A	185 A
890PX/4/0300/B/00/A	160 kW	200 kW	300 A	390 A	398 A	285 A	210 A
890PX/4/0420/B/00/A	200 kW	250 kW	420 A	480 A	487 A	350 A	295 A
890PX/4/0480/B/00/A	250 kW	315 kW	480 A	600 A	609 A	435 A	340 A
890PX/4/0520/B/00/A	280 kW	355 kW	520 A	660 A	670 A	475 A	365 A
890PX/4/0580/B/00/A	315 kW	400 kW	580 A	720 A	731 A	520 A	410 A
460Vac Modules							
890PX/4/0215/B/00/A	120 kW/150HP	149 kW/200HP	200 A	250 A	255 A	190 A	155 A
890PX/4/0260/B/00/A	149 kW/200HP	187 kW/250HP	250 A	320 A	326 A	245 A	155 A
890PX/4/0300/B/00/A	187 kW/250HP	224 kW/300HP	300 A	380 A	388 A	285 A	210 A
890PX/4/0420/B/00/A	224 kW/300HP	298 kW/400HP	380 A	480 A	487 A	350 A	295 A
890PX/4/0480/B/00/A	298 kW/400HP	298 kW/400HP	460 A	590 A	599 A	435 A	340 A
890PX/4/0580/B/00/A	373 kW/500HP	448 kW/600HP	580 A	700 A	711 A	520 A	410 A
575Vac Modules							
890PX/6/0130/B/00/A	112 kW/150HP	149 kW/200HP	160 A	210 A	214 A	60 A	855 A
890PX/6/0160/B/00/A	149 kW/200HP	187 kW/250HP	210 A	250 A	255 A	75 A	105 A
890PX/6/0190/B/00/A	224 kW/300HP	224 kW/300HP	215 A	310 A	316 A	85 A	130 A
890PX/6/0280/B/00/A	120 kW/150HP	298 kW/400HP	310 A	420 A	426 A	125 A	185 A
890PX/6/0340/B/00/A	298 kW/400HP	298 kW/400HP	410 A	480 A	487 A	155 A	235 A
690Vac Modules							
890PX/7/0130/B/00/A	110 kW	132 kW	130 A	160 A	163 A	60 A	85 A
890PX/7/0160/B/00/A	132 kW	160 kW	160 A	190 A	194 A	75 A	105 A
890PX/7/0190/B/00/A	160 kW	200 kW	190 A	240 A	245 A	85 A	130 A
890PX/7/0230/B/00/A	200 kW	250 kW	230 A	280 A	286 A	105 A	150 A
890PX/7/0280/B/00/A	250 kW	315 kW	280 A	340 A	347 A	125 A	185 A
890PX/7/0320/B/00/A	280 kW	355 kW	320 A	390 A	398 A	145 A	210 A
890PX/7/0340/B/00/A	315 kW	400 kW	340 A	430 A	436 A	155 A	235 A

Selection and order code

Modular AC drives - AC890PX series

					Example ▶ 890 PX / 4 / 0580 / B / 00 / A / UK
Product family	AC890PX standard high power drive				890
	AC890PX conformal coated PCB high power drive				891
Product type	Modular Standalone drive				PX
	Supply Voltage	kW	Output Current (A)	HP	
Power / current ratings	380-460V AC nominal				4
		110	215	150	
		132	260	200	0215
		160	300	250	0260
		200	420	300	0300
		250	480	400	0420
		280	520	-	0520
		315	580	500	0580
	500-575V AC nominal				6
	600-690V AC nominal				7
		110	130	150	0130
		132	160	200	0160
		160	190	250	0190
		200	230	-	0230
		250	280	300	0280
		280	320	-	0320
		315	340	400	0340
Brake switch	No brake switch				N
	Braking control including internal brake resistor (200kJ/2.4kW) and thermal OL protection fitted				B
Build options	Top cable entry				00
	Bottom cable entry				01
	Top entry no line choke				02
	Bottom entry no line choke				03
Performance	Advanced performance				A
	High performance				H
Language	French				FR
	German				GR
	Italian				IT
	Polish				PL
	Portuguese				PO
	Spanish				SP
	Swedish				SW
	English (50Hz)				UK
	English (60Hz)				US

Servodrives

637f series

2 to 30 A

Description

637F series servodrives with integrated motion controller have been designed for the most demanding servo systems. Ultra-fast control loops and process bus make them adapted to single or multi axis applications.

Optional EN954-1 category 3 safety input and second application bus simplify their integration into machine.

637f Series Servodrives integrate advanced PLC functions which can be built-up with various input/output options.

Features and Benefits

- **1500 steps integrated motion controller**
- **400 VAC direct power supply**
- **Ultra-fast current, speed and position loops (105us)**
- **Embedded PLC functions**
- **Programmable electronic cam**
- **3 configurable trajectory generators**
- **Multi-axis synchronisation through process bus**
- **EN954-1 category 3 safety input option**
- **Standard fieldbuses options**
- **Hiperface and SSI encoder inputs options**
- **Simple commissioning and programming Software**

General technical characteristics	
Power Supply	380/460 VAC three-phase (+/-10%) 50/60 Hz
Control Supply	24 VDC
Overload	200% during 5 sec
Operating temperature	0-40°C (2% derating per °C between up to 50°C)
Humidity	< 85% relative humidity non-condensing
Altitude	1000 m (1% derating per 100m up to 4000 m)
Ingress Protection	IP20

Product codes	Permanent current [Arms]	Peak current [Arms]	Drive size
637FKD6R027... 637FKD6R047... 637FKD6R067... 637FKD6R107...	2.0 4.0 6.0 10	4.0 8.0 12 20	A
637FKD6R167... 637FKD6R227... 637FKD6R307...	16 22 30	32 44 60	B

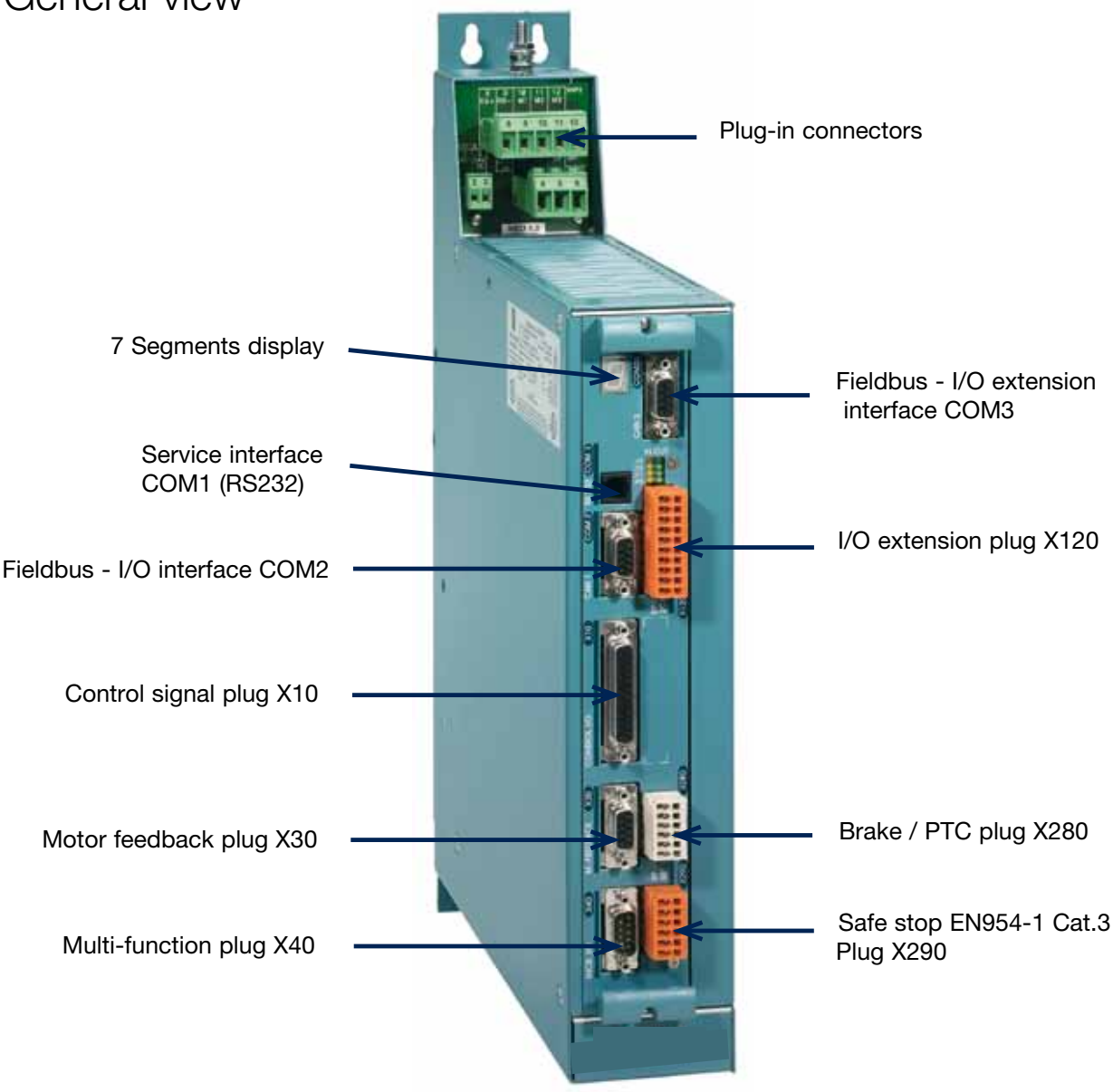
Input / outputs (X10 Plug)	- 8 Digital Inputs (24V) including 2 interrupts - 5 Digital Outputs (24V) including 3 opto-coupled (configurable) and 2 relays (1 configurable, 1 for drive ready) - 2 Analog Inputs (0-10V, +/-10 V) - 2 Analog Outputs (+/-10V)
Configurable feedback interface (X30 Plug)	- Resolver input (standard) - Hiperface encoder input (option) - Sinus / Cosinus encoder input (option)
Configurable multi-function interface (X40 Plug)	- Incremental encoder input - Incremental encoder output - Stepper-motor input - Absolute single or multi-turn SSI encoder input
Serial communication (COM1 Interface)	- RS232
Application communication (COM2 Interface)	- Profibus-DP - DeviceNet - CANopen DS402 - Interbus S - SUCOnet K - RS232 - RS422 - RS485
Inter axis communication (COM3 Interface)	- CANopen - CANopen / RS485 - Interbus S
I/O expansion	- 5 Digital Inputs / 2 Digital Outputs (COM2 Interface) - 14 Digital Inputs / 10 Digital Outputs (X200 Plug) - 4 Digital Inputs / 4 Digital Outputs (X120 Plug)
Safety board	- Safe Stop Input EN954-1 Category 3 (X290 Plug) - Brake control output (X280 Plug) - PTC sensor output (X280 Plug)

Servodrives

637f series

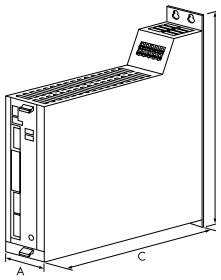
2 to 30 A

General view



Dimensions			
Drive	Current	A	B	C*
6 3 7 f	1 to 10 A	61.5	400	280
6 3 7 f	16 to 30 A	104	400	280

*Allow extra 70mm in front of unit for plugs/cables



Standards

CE marked
EN61800-3 (EMC compliance) with integral filter
EN50178 (safety, low voltage)

UL and cUL

Servodrives

637f codification

637F Product code		Standard			Option			Special
		6 3 7 f K D 6 R	x x	x	x	x x x	x x x	x x x	x x x
RATED CURRENT									
2 A			0 2						
4 A			0 4						
6 A			0 6						
10 A			1 0						
16 A			1 6						
22 A			2 2						
30 A			3 0						
INTERMEDIATE VOLTAGE									
650V (460V AC)				7					
FILTER									
Without EMC filter (standard)					**0**				
With integrated EMC filter					E				
ADDITIONAL OPTION MODULE RP XXX VIA COM2									
No option						0 0 0			
RS 232 interface	Slot A (A, B)					2 3 2			
RS 422 interface	Slot A (B)					4 2 2			
RS 485 interface	Slot A (B)					4 8 5			
CAN-Bus interface	Slot A (B)					C A N			
2 x CAN (without I/O)	Slot B (A) / [C*]					2 C A			
2 x CAN + 4 Inputs and 4 Outputs	Slot B (A) / [C*]					2 C 8			
2 x CAN + RS 485	Slot B (A)					C C A			
2 x CAN + 4 Inputs and 4 Outputs + RS 485	Slot B (A)					C C 8			
CAN - Bus / DeviceNet	Slot B (A)					D E V			
SUCOnet K	Slot B (A)					S U C			
Profibus DP	Slot B (A)					P D P			
Interbus S	Slot B (A)					I B S			
Profibus DP + CAN2 + 4 entrées et 4 sorties + RS 485	Slot B (A)					P C 8			
Profibus DP + CAN2 + RS 485	Slot B (A)					P C A			
Interface E/S (5 Inputs, 2 Outputs)	Slot B (A)					E A 5			
ADDITIONAL OPTIONS MODULE ON THE DRIVE VIA X200									
No option							0 0 0		
I/O Interface (14 inputs, 10 outputs)	Slot C						E A E		
Safety Module	Slot C						S B T		
X300 FUNCTIONS MODULE									
Standard resolver X30 – Module 2nd version	Slot D							R D 2	
HIPERFACE – Module 2nd version	Slot D							H F 2	
Sinus / Cosinus - Module 2nd version	Slot D							S C 2	
ENTER ONLY WHEN USED									
Special - brake resistor - setting / 7500; ED 40%									S 0 1
Special - brake resistor - setting / 9900; ED 50%									S 0 2
Broad-band contact X10.7 - X10.8									X 7 x
Protection moisture condensation									B S x
Protection moisture condensation + Broad-band contact X10.7 - X10.8									B 7 x
Jumper 209 / 2 - 3 closed , by SBT - Option Thermo - Contact X30 (PTC / NTC									9 2 3
Custom-specific software + Jumper 209 / 2 - 3 closed , by SBT - Option, Thermo - Contact X30 (PTC / NTC)									Z 2 3
Without front panel (blue)									0 B F

* At assignment [C] Interface you can used CAN2

Servodrives

637f series

2 to 30 A

Combination possibilities

Slots ⇒				A				B										C			
Option modules ⇒				232	422	485	CAN	2CA	2C8	CCA	CC8	DEV	SUC	PDP	IBS	EA5	PC8	PCA	EAE	SBT	*2 CA	*2 C8
Type code ⇓																						
637FKD6Rxxxx	232	000	xxx	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	232	EAE	xxx	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	232	SBT	xxx	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-
637FKD6Rxxxx	232	2CA	xxx	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-
637FKD6Rxxxx	232	2C8	xxx	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
637FKD6Rxxxx	422	000	xxx	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	422	EAE	xxx	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	422	SBT	xxx	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-
637FKD6Rxxxx	422	2CA	xxx	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-
637FKD6Rxxxx	422	2C8	xxx	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
637FKD6Rxxxx	485	000	xxx	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	485	EAE	xxx	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	485	SBT	xxx	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-
637FKD6Rxxxx	485	2CA	xxx	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-
637FKD6Rxxxx	485	2C8	xxx	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
637FKD6Rxxxx	CAN	000	xxx	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	CAN	EAE	xxx	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	CAN	SBT	xxx	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-
637FKD6Rxxxx	2CA	000	xxx	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	2CA	EAE	xxx	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	2CA	SBT	xxx	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-
637FKD6Rxxxx	2C8	000	xxx	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	2C8	EAE	xxx	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	2C8	SBT	xxx	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	●	-	-
637FKD6Rxxxx	CCA	000	xxx	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	CCA	EAE	xxx	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	CCA	SBT	xxx	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	●	-	-
637FKD6Rxxxx	CC8	000	xxx	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	CC8	EAE	xxx	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	CC8	SBT	xxx	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	DEV	000	xxx	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	DEV	EAE	xxx	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	DEV	SBT	xxx	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	SUC	000	xxx	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	SUC	EAE	xxx	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	SUC	SBT	xxx	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-
637FKD6Rxxxx	PDP	000	xxx	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-
637FKD6Rxxxx	PDP	EAE	xxx	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-	-
637FKD6Rxxxx	PDP	SBT	xxx	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-
637FKD6Rxxxx	PDP	2CA	xxx	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	●	-
637FKD6Rxxxx	PDP	2C8	xxx	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	●
637FKD6Rxxxx	IBS	000	xxx	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-
637FKD6Rxxxx	IBS	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	●	-	-	-
637FKD6Rxxxx	IBS	SBT	xxx	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-
637FKD6Rxxxx	EA5	000	xxx	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-
637FKD6Rxxxx	EA5	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	●	-	-	-
637FKD6Rxxxx	EA5	SBT	xxx	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-
637FKD6Rxxxx	PC8	000	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-
637FKD6Rxxxx	PC8	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	●	-	-	-
637FKD6Rxxxx	PC8	SBT	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-
637FKD6Rxxxx	PCA	000	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-
637FKD6Rxxxx	PCA	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-	-
637FKD6Rxxxx	PCA	SBT	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-
637FKD6Rxxxx	000	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-
637FKD6Rxxxx	000	SBT	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-

000 = none Option ● possible combination

* at assignment [C] Interface you can used CAN2

Servodrives

638 series

1 to 15 A

Description

638 series servodrives are suitable for all servo applications, from simple speed or current control to most complex positioning applications.
The new processor of 638 Series Servodrives allows to have time to answer the control circuits in 105µs.
Numerous expansion slots allow 638 Series Servodrives to reach a high degree of versatility, opening access to a wide variety of fieldbus communication and feedback sensors options.

Features and Benefits

Integrated motion controller
230 or 400 VAC direct power supply
EN954-1 category 3 safety input in standard
Ultra-fast control loops (105us)
Embedded PLC functions
Programmable electronic cam
3 configurable trajectory generators
Multi-axis synchronisation through process bus
Numerous fieldbuses options
Hiperface and SSI encoder inputs options
Optional flash memory chip for data storage
Simple commissioning and programming Software

Standards

CE marked
EN61800-3 (EMC compliance) with integral filter
EN50178 (safety, low voltage)

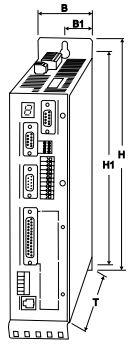
and

General technical characteristics	
Power supply	- 230 VAC Single/Three-phase (+/-10%) - 50/60 Hz - 400/480 VAC Three-phase (+/-10%) - 50/60 Hz
Control supply	24 VDC
Overload	200% during 5 sec
Operating temperature	0-40°C (2% derating per °C between up to 50°C)
Humidity	< 85% relative humidity non-condensing
Altitude	1000 m (1% derating per 100m up to 4000 m)
Ingress Protection	IP20

Drives ratings			
Product codes	Permanent current [Arms]	Peak current [Arms]	Drive size
230 VAC Power Supply			
638A013F0STO... 638A023F0STO... 638A043F0STO... 638A063F0STO...	1 2 4 6	2 4 8 12	A
400 VAC Power Supply*			
638B036F0STO... 638B056F0STO... 638B086F0STO... 638B106F0STO... 638B156F0STO...	2.5 5 7.5 10 15	5 10 15 20 30	B
*Also available with 230 and 480 VAC Power Supply			

Dimensions (mm) and Weight (kg)							
Model	Current Ratings	B	H	T	B1	H1	Weight
6 3 8 A	1 to 6A	56	250	232	28	211	1.6
6 3 8 B	2,5 to 5 A	66	318.6		44	281.25	2.7
	7,5 to 15 A	86			64		4.4

638A



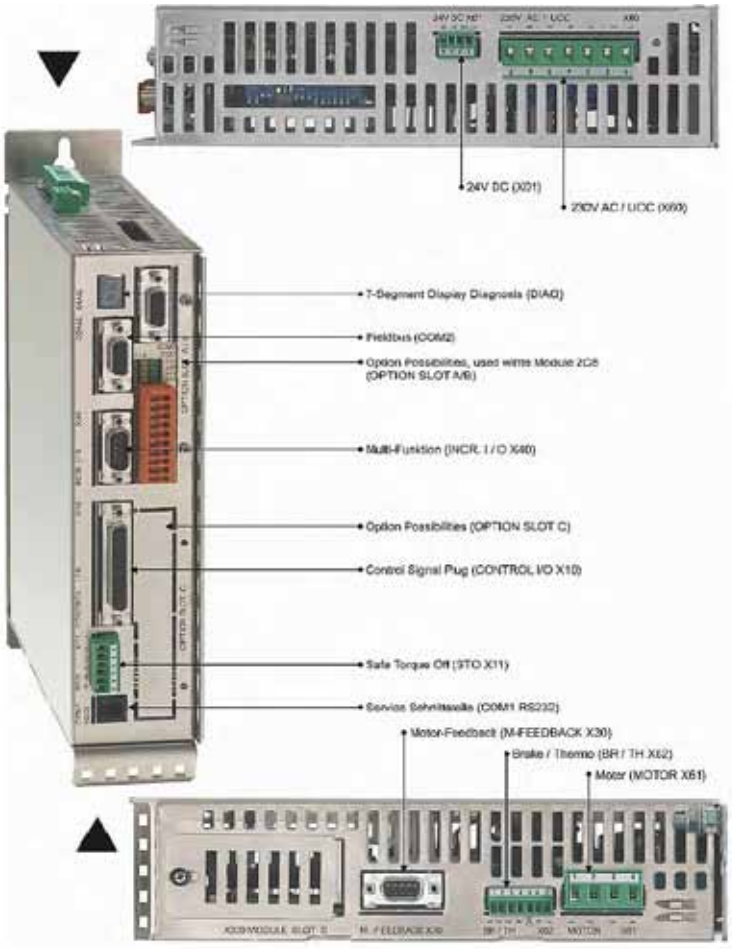
638B

Servodrives

638 series

1 to 15 A

General view



4

Input / outputs (X10 Plug)
- 8 Digital inputs (24V) including 2 interrupts
- 5 Digital outputs (24V) including 3 opto-coupled (configurable) and 2 relays (1 configurable, 1 for drive ready)
- 2 Analog inputs (0-10V, +/-10 V)
- 2 Analog outputs (+/-10V)

Configurable feedback interface (X30 plug)
- Resolver input (standard)
- Hiperface encoder input (option)
- Sinus / Cosinus encoder input (option)

Optional Flash memory vhip (X300 - module)
- Storage of complete drive data (firmware, function code, parameters, applications programme)

Configurable multi-function interface (X40 plug)
- Incremental encoder input
- Incremental encoder output
- Stepper motor input
- Absolute single or multi-turn SSI encoder input

Serial communication (COM1 interface)
- RS232

Application communication (COM2 interface)
- Profibus-DP
- DeviceNet
- CANopen DS402
- Interbus S
- SUCOnet K
- RS232
- RS422
- RS485

Inter axis communication (COM3 interface)
- CANopen
- CANopen / RS485
- Interbus S

I/O expansion
- 5 Digital Inputs / 2 Digital Outputs (COM2 Interface)
- 14 Digital Inputs / 10 Digital Outputs (X200 Plug)
- 4 Digital Inputs / 4 Digital Outputs (X120 Plug)

Safety
- Safe Stop Input EN954-1 Category 3 (STO X11 Plug)
- Brake / PTC output (BR/TH X62 Plug)

Servodrives

638 series Codification

638 Product code		Standard									Special
		6 3 8	x	xx	x	F	O	STO	xxx	xxx	xxx	xxx
SIZE												
Size A			A									
Size B			B									
Size C (being prepared)			C									
RATED CURRENT												
1 Amp	Size A			0 1								
2 Amps	Size A			0 2								
4 Amps	Size A			0 4								
6 Amps	Size A			0 6								
2.5 Amps	Size B			0 3								
5 Amps	Size B			0 5								
7.5 Amps	Size B			0 8								
10 Amps	Size B			1 0								
15 Amps	Size B			1 5								
INTERMEDIATE VOLTAGE												
325 VDC / 230 VAC	Size A and B				3							
565 VDC / 400 VAC	Size B				6							
678 VDC / 480 VAC	Size B				7							
FILTER												
With integrated filter (standard) Less leakage current (AC side Y capacitors desactivated, JP600 open						**F** A						
Without EMC - clip (standard)							**O**					
SAFETY PERFORMANCE												
Safe Torque Off (standard)								**STO**				
ADDITIONAL OPTION MODULE RP xxx VIA COM2												
No option	Slot A (A, B)								0 0 0			
RS 232 interface	Slot A (B)								2 3 2			
RS 422 interface	Slot A (B)								4 2 2			
RS 485 interface	Slot A (B)								4 8 5			
CAN-Bus interface	Slot B (A) / [C*]								C A N			
2 x CAN (without I/O's)	Slot B (A) / [C*]								2 C A			
2 x CAN + 4 inputs and 4 outputs	Slot B (A)								2 C 8			
2 x CAN + RS 485	Slot B (A)								C C A			
2 x CAN + 4 inputs et 4 outputs + RS 485	Slot B (A)								C C 8			
CAN - Bus / DeviceNet	Slot B (A)								D E V			
SUCOnet K	Slot B (A)								S U C			
Profibus DP	Slot **B (A)**								P D P			
Interbus S	Slot B (A)								I B S			
Profibus DP + CAN2 + outputs and 4 inputs + RS 485	Slot B (A)								P C 8			
Profibus DP + CAN2 + RS 485	Slot B (A)								P C A			
I/O Interface (5 inputs, 2 outputs)									E A 5			
ADDITIONAL OPTIONS MODULE ON THE DRIVE VIA X200												
No option										0 0 0		
I/O Interface (14 inputs, 10 outputs)	Slot C									E A E		
X300 FUNCTIONS MODULE												
Standard X30 resolver – Module 2nd version	Slot D										**R D 2**	
HIPERFACE – Module 2nd version	Slot D										H F 2	
Sine / Cosine - Module 2nd version	Slot D										S C 2	
With Memorychip as of firmware V8.35												
Resolver + Memory - Module 2nd version	Slot D										R M 1	
HIPERFACE + Memory - Module 2nd version	Slot D										H M 1	
Sine / Cosine + Memory - Module 2nd version	Slot D										S M 1	
ENTER ONLY WHEN USED												
Broad-band contacts X10.7 - X10.8												X 7 x
Moisture / condensation protection												B S x

* Only CAN2 can be employed when utilizing the option module located at slot C (internal BUS / COM3 B)

Servodrives

638 series

1 to 15 A

Combination possibilities

Slots ⇒				A				B										C		
Option modules ⇒				232	422	485	CAN	2CA	2C8	CCA	CC8	DEV	SUC	PDP	IBS	EA5	PC8	PCA	EAE	*2CA	*2C8
Type code ⇓																					
638xxxxF0STO	232	000	xxx	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
638xxxxF0STO	232	EAE	xxx	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-
638xxxxF0STO	232	2CA	xxx	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-
638xxxxF0STO	232	2C8	xxx	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
638xxxxF0STO	422	000	xxx	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
638xxxxF0STO	422	EAE	xxx	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-
638xxxxF0STO	422	2CA	xxx	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-
638xxxxF0STO	422	2C8	xxx	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
638xxxxF0STO	485	000	xxx	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
638xxxxF0STO	485	EAE	xxx	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-
638xxxxF0STO	485	2CA	xxx	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-
638xxxxF0STO	485	2C8	xxx	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●
638xxxxF0STO	CAN	000	xxx	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-
638xxxxF0STO	CAN	EAE	xxx	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	●	-	-
638xxxxF0STO	2CA	000	xxx	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
638xxxxF0STO	2CA	EAE	xxx	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	●	-	-
638xxxxF0STO	2C8	000	xxx	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-
638xxxxF0STO	2C8	EAE	xxx	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	●	-	-
638xxxxF0STO	CCA	000	xxx	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-
638xxxxF0STO	CCA	EAE	xxx	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	●	-	-
638xxxxF0STO	CC8	000	xxx	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-	-
638xxxxF0STO	CC8	EAE	xxx	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	●	-	-
638xxxxF0STO	DEV	000	xxx	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-	-
638xxxxF0STO	DEV	EAE	xxx	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	●	-	-
638xxxxF0STO	SUC	000	xxx	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-
638xxxxF0STO	SUC	EAE	xxx	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-	-
638xxxxF0STO	PDP	000	xxx	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-
638xxxxF0STO	PDP	EAE	xxx	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-	-
638xxxxF0STO	PDP	2CA	xxx	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●	-
638xxxxF0STO	PDP	2C8	xxx	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	●
638xxxxF0STO	IBS	000	xxx	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-
638xxxxF0STO	IBS	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	●	-	-
638xxxxF0STO	IBS	2CA	xxx	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	●	-
638xxxxF0STO	IBS	2C8	xxx	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	●
638xxxxF0STO	EA5	000	xxx	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-
638xxxxF0STO	EA5	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	●	-	-
638xxxxF0STO	PC8	000	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-
638xxxxF0STO	PC8	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	●	-	-
638xxxxF0STO	PCA	000	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-	-
638xxxxF0STO	PCA	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●	-	-
638xxxxF0STO	000	EAE	xxx	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	●	-	-

000 = none Option ● possible combination

* at assignment [C] Interface you can used CAN2

DIGIVEX drives

DLD series

2 to 7.5A

Description

DLD is specifically developed for low power applications where optimum quality of control and very compact design are needed.

Combined with NX servo motors, they offer a powerful and economical servo system solution.

Direct 230 Vac power supply
Integrated EMC filter
Integrated braking resistor
High compacity
7-seg LCD display
Easy parameter setting with Parvex Motion Explorer

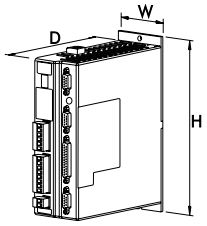
Technical specifications	
Power supply	230Vac ±10%, single or three phase ; 50/60Hz
Temperature	0-40°C (derate by 20% per 10°C to 60°C max).
Altitude	1000m (derate by 1% per 100m to 4000m max.)
Braking	Integrated resistor, connection of DC bus voltage in multi DLD applications for higher braking capacity.

Electrical specifications			
Type	Output current continuous (A)	Output current peak (A)	Mechanical power (W)
DLD - 230 V single phase 50/60 Hz			
DLD13M02R	2	4	375
DLD13M04R	4	8	750
DLD - 230 V three phase 50/60 Hz			
DLD13002R	2	4	375
DLD13004R	4	8	750
DLD13007R	7.5	15	1500

DLD

Inputs/Outputs
2- Analogue inputs (14 bits and 10 bits ; ±10V diff.)
2- Analogue outputs (±10V), free assignment
5- Opto-isolated digital inputs
3- Opto-isolated digital outputs
Resolver input
230Vac auxiliary input
Incremental encoder emulation output

Dimensions				
Type	H (mm)	W (mm)	D (mm)	Weight (kg)
D L D	195	60	161	1.3



Standards

CE marked

UL and cUL (DLD)

DIGIVEX drives

DSD / DMD / DPD series

2 to 300 A

Technical specifications	
Power supply	230Vac ±10%, single phase or three phase, 400Vac ±10%, three phase ; 50/60Hz
Ambient	0-40°C (derate by 20% per 10°C to 60°C max).
Altitude	1000m (derate by 1% per 100m to 4000m max.)
Braking	DSD : Integrated or external resistor DMD : Integrated or external resistor or regenerative DPD : Regenerative
Inputs/outputs	2- Analogue inputs (16 bits and 10 bits ; ±10V diff.) 2- Analogue outputs (±10V), free assignment 4- Opto-isolated digital inputs 3- Opto-isolated digital outputs Resolver input Incremental encoder emulation output ; SSI ; SinCos 230Vac or 400Vac auxiliary input

Description

DIGIVEX drives are available for power range from 0.37kW to 120kW and for 230V and 400V power supply.

Dedicated to the torque or speed control of axis or spindle brushless motors, DIGIVEX drive can be delivered in single-axis or multi-axis format.

Direct 230Vac and 400Vac power supply

Single-axis or multi-axes version

Integrated resistor or regenerative braking

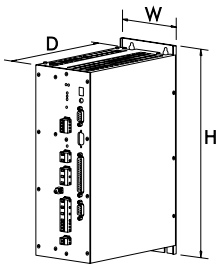
High resolution analogue input

Integrated filters and feed forward

Complete integrated monitoring

with Parvex Motion Explorer

Dimensions			
Type	H (mm)	W (mm)	D (mm)
DSD rating			
2,4 and 7,5 A	328	78	222
8 and 15 A	328	109.5	222
16 A	328	133	222
30 A	328	133	226
32 A	328	168	226
60 A	328	168	235
DMD rack			
DRA3165 - 3 axes	303	315	270
DRA3168 - 6 axes	303	483	270
DRA3128 - 13 axes	597	483	271
DPD rating			
50 A	438	202	244
100 and 150 A	474	483	343
200 A and 300 A	878	540	343



Range			
Type	Output current	Structure	Control
DSD	2 to 60A	Single-axis	Speed
DMD	2 to 32A	Mutli-axis	Speed
DPD	50 to 300A	Single-axis	Speed

Standards

CE Marked

DIGIVEX motion drives

DSM / DMM / DPM series

2 to 300 A

Description

The DIGIVEX motion servo drives integrate in one compact unit the functions of speed controller, motion controller and PLC as well as powerful CANopen or PROFIBUS network possibilities.

The DIGIVEX motion have the same electrical characteristics as the DIGIVEX Drive and are available in single or multi axes version.

Complete positioning drive
Integrated PLC and motion program
Real time multi-tasking structure
Direct 230Vac and 400Vac power supply
Single and multi-axes version
Integrated or regenerative braking
Posivex® absolute encoder compatible
CANopen and PROFIBUS fieldbus

Range			
Type	Output current	Structure	Control
DSx*	2 to 60 A	Single-axis	Position
DMx*	2 to 32 A	Multi-axes	Position
DPx*	50 to 300 A	Single-axis	Position

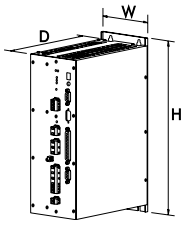
* x=D for Digivex Drive serie
x=M for Digivex Motion serie

Standards

CE marked

Technical specifications	
Power supply	230Vac ±10%, single phase or three phase, 400Vac ±10%, three phase ; 50/60Hz
Ambient	0-40°C (derate by 20% per 10°C to 60°C max).
Altitude	1000m (derate by 1% per 100m to 4000m max.)
Braking	DSM : Integrated or external resistor DMM : Integrated or external resistor or regenerative DPM : Regenerative
Inputs/Outputs	1- Analogue input (14 bits ; ±10V diff.) 1- Analogue output (±10V), free assignment 16- Opto-isolated digital inputs (from which 4 interruptive inputs), free assignment 8- Opto-isolated digital inputs, free assignment Resolver input Posivex® Absolute encoder input Incremental encoder input ; SinCos Incremental encoder emulation output 230Vac or 400Vac auxiliary supply
Fieldbus	CANopen (DS 301 and DSP 402) PROFIBUS (DP-V0 and DP-V1; PROFIdrive V2.0 and PROFIdrive V3.0 Class 3 and 4)

Dimensions			
Type	H (mm)	W (mm)	D (mm)
DSM rating			
2.4 and 7.5 A	328	78	222
8 and 15 A	328	109.5	222
16 A	328	133	222
30 A	328	133	226
32 A	328	168	226
60 A	328	168	235
DMM rack			
DRA3165	303	315	270
DRA3168 - 6 axes	303	483	270
DRA3128 - 13 axes	597	483	271
DPM rating			
50 A	438	202	244
100 and 150 A	474	483	343
200 A and 300 A	878	540	343



DIGIVEX drives / motion

Characteristics

Single-axis DSD / DSM						
Series				Permanent current (Arms)	Peak current (Arms)	Mechanical power (W)
Drive	Motion					
230VAC three phase - 50/60 Hz						
DSD13004	DSM13004	▪	M	2.8	5.7	750
DSD13007	DSM13007	▪	M	5.3	10.6	1500
DSD13015	DSM13015	▪	M	10.6	21.2	3000
DSD13030	DSM13030	▪	M	21.2	42.4	6000
400VAC three phase - 50/60 Hz						
DSD16002	DSM16002	▪	M	1.4	2.8	750
DSD16004	DSM16004	▪	M	2.8	5.7	1500
DSD16008	DSM16008	▪	M	5.7	11.3	3000
DSD16016	DSM16016	▪	M	11.3	22.6	6000
DSD16032	DSM16032	▪	M	22.6	45.3	12000

	Communication (Motion Series only)
C	CanOpen
P	Profibus

Multi-axis DMD / DMM - 400 VAC three phase - 50 / 60 Hz						
Series				Permanent current (Arms)	Peak current (Arms)	Width (E*)
Drive	Motion					
DXD06002	DMM06002	▪	M	1.4	2.8	Simple 11E
DXD06004	DMM06004	▪	M	2.8	5.7	Simple 11E
DXD06008	DMM06008	▪	M	5.7	11.3	Simple 11E
DXD06016	DMM06016	▪	M	11.3	22.6	Double 22E
DXD06032	DMM06032	▪	M	22.6	45.3	Triple 33E

	Communication (Motion Series only)
C	CanOpen
P	Profibus

Power supply	Power (kW)	Braking	Width (E*)
DPS0612	12	Internal	18E
DPS0625	25	Internal/External	18E
DPS0615	15	Regenerative	18E

*1E=5.08mm - example : 1x13 axes (DRA 3128) will integrate 1 power supply and 13 simple modules.

Power sngle-axis (regenerative) DPD / DPM - 400 VAC three phase - 50 / 60 Hz						
Series				Permanent current (Arms)	Peak current (Arms)	Mechanical power (W)
Drive	Motion					
DPD27050	DPM27050	▪	M	35	71	20
DPD17100	DPM17100	▪	M	71	141	40
DPD17150	DPM17150	▪	M	106	212	60
DPD17200L	DPM17200	▪	ML	141	283	80
DPD17300L	DPM17300	▪	ML	212	424	120

	Communication (motion series only)
C	CanOpen
P	Profibus

Touch screens operators

TS8000 series

Description

TS8000 is a high-performance Touch Screen operator panel with many built-in functions. This TS8000 offers most of the features typically available on PC-based SCADA systems.

TS8000 can communicate with different hardwares through 10/100 Base-T Ethernet ports and high-speed RS232/485. In addition, the new operator panel
features a USB port for fast downloading of configuration files and access to stored trending data.

TS8000 also includes the slot to accommodate a CompactFlash card, for storing process data and expanding memory available for configuration files.

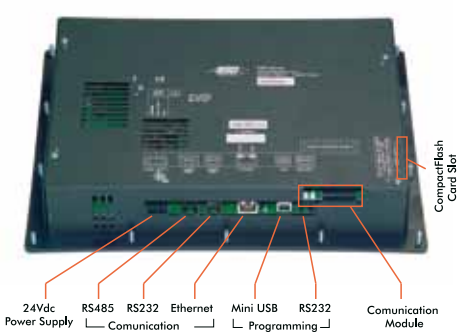
Multilingual graphical interface
Pre-engineered projects
Built-in Web server
CompactFlash card slot
Integrated protocol conversion
Software and programming cable included

Technical specifications

Power supply	24Vdc ±20%
Operating temperature	0-50°C
Maximum humidity	80% without condensation
Altitude	2000 m
Degree of protection	IP66 / Nema 4
Touchscreen	Resistive Analog **TS8003 :** . 8 programmable . 5 navigation . 12 numerical . 7 dedicated keys
	TS8006 : 5 keys for on-screen menu
	TS8008 : 7 keys for on-screen menu
	TS8010 : 8 keys for on-screen menu
	TS8015 : 10 keys for on-screen menu
Memory card	Slot suitable for CompactFlash Type I Type II cards (2 Gbytes maximum)
Communication ports	Programming USB 1.1 - Type B Connection Programming Serial RS232 - via RJ12
	Communication Serial **. RS232 - via RJ12** . RS485 - via RJ45 **. Ethernet 10/100 Base T -** RJ45 connector with wiring for PC network card

Monitor specifications

Type	Screen	Colors	Pixels
TS8003	32"/FSTN	2	128 x 64
TS8006	5.7"/STN	256 QVGA	320 x 240
TS8008	7.7"/DSTN	256 VGA	640 x 480
TS8010	10.4"/TFT		
TS8015	15"/TFT	32k XGA	1024 x 768



Touch screens operators

TS8000 series

TS8003

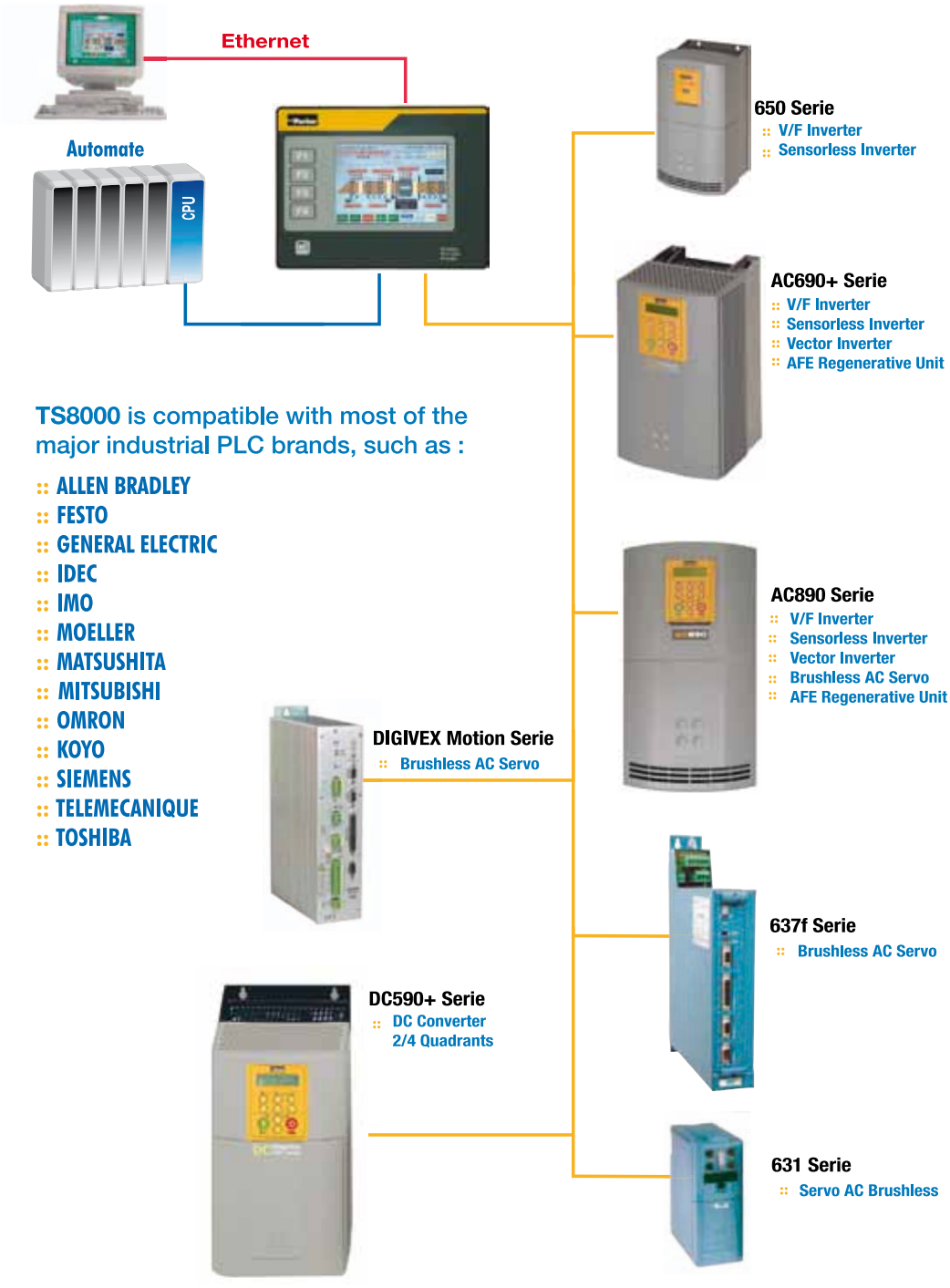
TS8006

TS8008

TS8010

TS8015

Application diagram



TS8000 is compatible with most of the major industrial PLC brands, such as :

:: ALLEN BRADLEY
:: FESTO
:: GENERAL ELECTRIC
:: IDEC
:: IMO
:: MOELLER
:: MATSUSHITA
:: MITSUBISHI
:: OMRON
:: KOYO
:: SIEMENS
:: TELEMECANIQUE
:: TOSHIBA

Touch screens operators

TS8000 series

HMI features

Pre-engineered projects

- Library with over 4000 symbols
- Support for BMP, JPG, WMF graphics files
- Database
- Graphical trends
- Alarm logs
- Machine synoptics

Multilingual interface

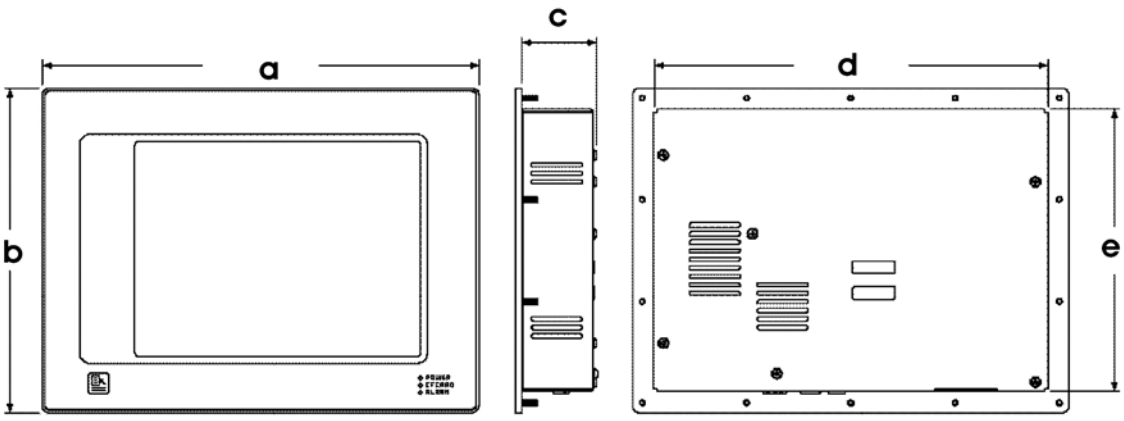
Programming and display in :	
Dutch	German
English	Italian
French	Spanish

Unicode* support for :	
Japaese	Chinese (Tradition.l
Thaï	Chinese (Simplified)
Korean	Others on request

* (Unicode support requires Windows language packs to be installed)

Dimensions and weights

Type	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	Weight (kg)
TS8003	189.2	148.6	52	153.4	112.8	0.89
TS8006	224.3	179.8	58.4	188.5	144	1.36
TS8008	262	207.8	56	226.3	172	1.74
TS8010	325.8	241.3	56	293.3	210.1	2.51
TS8015	406.4	330.2	71.5	370.6	294.4	5.17



International standards

Complies with standard :

- EN61010-1
- EN61326
- EN55011 classe A

CE marked

Communication cards

TS8000 series

Description

The TS8000 communication cards allow connection and integration of the TS800 into many popular fieldbus communication networks.

Features

Configuration	by means of DSI8000 configuration software
Power supply	Connection by pluggable 3-pin terminals
Operating Temperature	0 to 50°C
Storage Temperature	-20 to 80°C
Humidity	80% max. relative humidity (non-condensing) from 0 to 50°C
Altitude	2000 metres Max.

CANopen communications interface	
Order code: 8000/CB/00	
Supported protocols	• CANopen SDO master
Communication speed	• Selectable by software up to 1 Mbits/s
Communication	• With Drive System Explorer software using RTNX protocol
Suitable for drives	• AC890 version 3.2+

DeviceNet communications interface	
Order code: 8000/DN/00	
Supported protocols	• DeviceNet – slave group 2 only
Communication speed	• Selectable by software up to 500 kbits/s

Profibus interface 8000/PB/00	
Order code: 8000/PB/00	
Supported protocols	• Profibus DP EN 50 170, I
Communication speed	• up to 12 Mbits/s

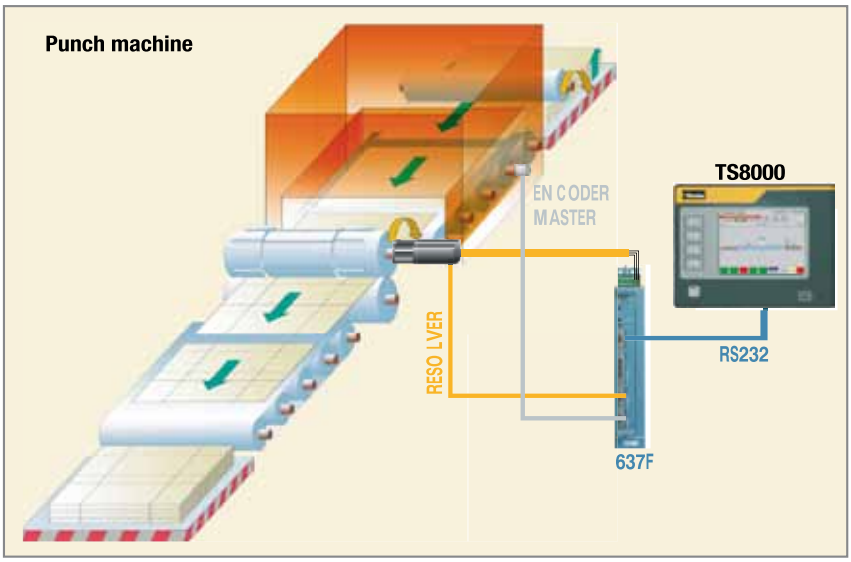
Firewire communications interface	
Order code: 8000/FA/00	
This card allows data exchange between the TS8000 and an AC890 fitted with an 8903-FA-00 interface	
Communication ports	Port A : IEEE 1394A Port B : IEEE 1394B
Note : The TS8000 must use a Class 2 or SELV rated power supply	

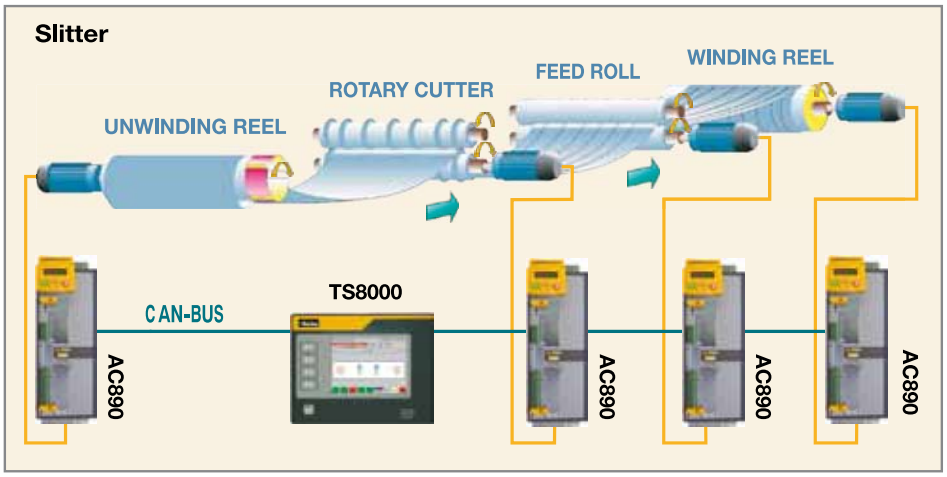
Link communications interface	
Order code: 8000/LK/00	
Supported protocols	LINK
Communication speed	2.7Mbits/s
Allows data exchange between TS8000 and SSD LINK fibre optic network	

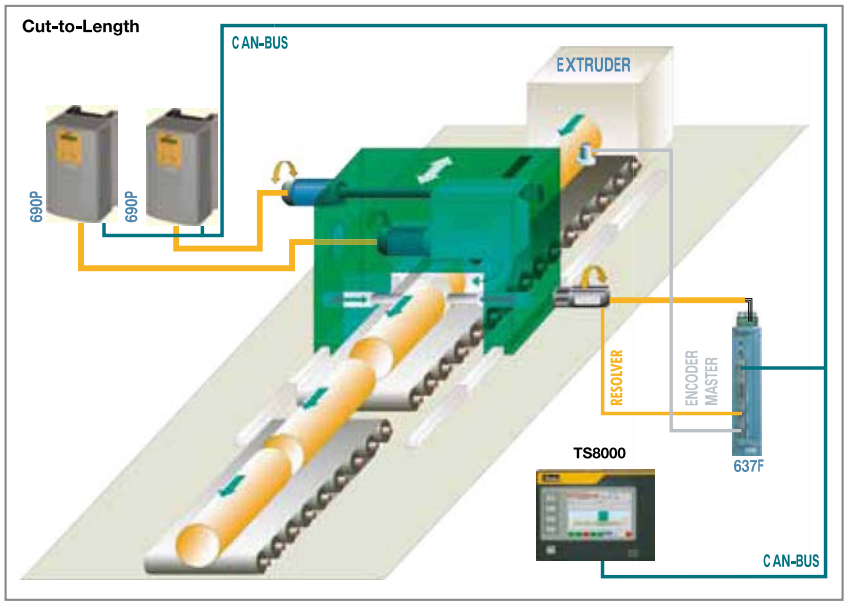
Touch screens operators

TS8000 series

Applications







5

Cables and accessories

NX series - brushless motors

Feedback sensors for NX servomotors	
2 pole resolver :	Encoder 2048 ppr
▪ Position precision : ± 10' maxi ▪ Report of transformation : 0,5 ± 5% ▪ Maximum speed : 17 000 rpm ▪ Temperature range : -55 to +155° C ▪ Compatibility : NX2 to NX8	▪ Standard Operating temperature -40 ... +120 °C ▪ Maximum speed 12000 rpm ▪ Vibration proof (IEC 68-2-6) 25 m/s2 (5 ... 2,000 Hz) ▪ Output signals: A, B, N incremental channels with index standard ▪ Compatibility : NX2 to NX8
Absolute encoder single/multiturn HIPERFACE SKS/SKM 36	Absolute encoder single/multiturn HIPERFACE SRS/SRM 50
▪ Number of sine/cosine periods per revolution : 128 ▪ Absolute position resolution per revolution : 4096 (12 bits) ▪ Absolute position within 4096 revolutions ▪ Max. operating speed SKS36 : 12000 rpm ▪ Max. operating speed SKM36 : 9000 rpm ▪ Temperature range : + 5 to +110 °C ▪ Compatibility : NX2 to NX8	▪ Number of sine/cosine periods per revolution : 1024 ▪ Absolute position resolution per revolution) : 32768 (15 bits) ▪ Absolute position within 4096 revolutions ▪ Working speed up to wich the absolute position can be reliably produced : 6000 rpm ▪ Max. operating speed : 12000 rpm ▪ Working temperature range : -20 to +115 °C ▪ Compatibility : NX3 to NX8
Absolute encoder single/multiturn EnDat ECN1113/EQN1125	Absolute POSIVEX encoder
▪ Number of sine/cosine periods per revolution: 512 ▪ Precision : +60' ▪ Absolute position values EnDat 2.2 ▪ Positons per revolution : 8192 (13 bits) ▪ Max. operating speed : 12 000 rpm ▪ Working temperature range : -40 to 115° C ▪ Compatibility : NX2 to NX8	▪ Absolute position : ± 15 000 revolutions ▪ Position precision : ± 10' maxi ▪ Maximum speed : 8 000 rpm ▪ Resolution : 14 bits ▪ Temperature range : -20 to 110° C ▪ Compatibility : NX2 to NX8 with Digivex Motion
Absolute multiturn HIPERFACE SEL37	
▪ Number of sine/cosine periods per revolution: 16 ▪ Absolute Precision within 4096 revolutions ▪ Working speed up to wich the absolute position can be reliably produced : 6000 rpm ▪ Positons per revolution : 8192 (13 bits) ▪ Max. operating speed SEL37 : 12000 rpm ▪ Temperature range : -20 to 115° C ▪ Compatibility : NX2 to NX8	

Cables and accessories

NX series - brushless motors

Modules and accessories

Cables for NX ↔ DIGIVEX	
Feedback cable	Description
CD1UA1F1R0005 (*)	Resolver or Posivex cable with connectors, length = 5m
220065R4621	Resolver connector (motor side)

Power cable	Description
CD1UP1F1R0005 (*)	Cable with connectors standard for Digivex ≤ 16Â, length = 5m
CD1UQ1F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for Digivex ≤ 16Â, length = 5m
CD1UP2F1R0005 (*)	Cable with connectors for Digivex ≤ 32Â, length = 5m
CD1UQ2F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for Digivex ≤ 32Â, length = 5m
6537P0051	Cable per meter (4 x 6 mm² + 2 x 2 x 1,5 mm²) for Digivex 50Â
220065R1610	Power connector size 1 (motor side)

Cables for NX ↔ 890	
Feedback cable	Description
CS4UA1F1R0005 (*)	Resolver cable with connectors, length = 5m
220065R4621	Resolver connector (motor side)
CS4UV1F1R0005 (*)	Endat encoder cable with connectors - 12pts (**), length = 5m
CS4UV1F3R0005 (*)	Endat encoder cable with connectors - 17pts (**), length = 5m
CS4UX1F1R0005 (*)	Incremental encoder cable with connectors -, length = 5m

Power cable	Description
CS4UP1F1R0005 (*)	Cable with connectors standard for 890 ≤ 12 Arms, length = 5m
CS4UQ1F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for 890 ≤ 12 Arms length = 5m
CS4UP2F1R0005 (*)	Cable with connectors for 890 ≤ 30 Arms, length = 5m
CS4UQ2F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for 890 ≤ 30 Arms, length = 5m
6537P0051	Cable per meter (4 x 6 mm² + 2 x 2 x 1,5 mm²) for 890 < 42 Arms
220065R1610	Power connector size 1 (motor side)

Cables for NX ↔ COMPAX3	
Feedback cable	Description
CC3UA1F1R0005 (*)	Resolver cable with connectors, length = 5m
220065R4621	Resolver connector (motor side)
CC3UR1F1R0005 (*)	Hiperface encoder cable with connectors, length = 5m
CC3UV1F1R0005 (*)	Endat encoder cable with connectors - 12pts (**), length = 5m
CC3UV1F3R0005 (*)	Endat encoder cable with connectors - 17pts (**), length = 5m
CC3UX1F1R0005 (*)	Incremental encoder cable with connectors -, length = 5m

Power cable	Description
CC3UP1F1R0005 (*)	Cable with connectors standard for COMPAX 3 ≤ 10 Arms, length = 5m
CC3UQ1F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for COMPAX 3 ≤ 10 Arms length = 5m
CC3UP2F1R0005 (*)	Cable with connectors for COMPAX 3 ≤ 15 Arms, length = 5m
CC3UQ2F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for COMPAX 3 ≤ 15 Arms, length = 5m
6537P0051	Cable per meter (4 x 6 mm² + 2 x 2 x 1,5 mm²) for COMPAX 3 ≤ 30 Arms
220065R1610	Power connector size 1 (motor side)

(*) the 3 last digits indicate cable length in meters ± 5%max
For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.
Example CD1UP1F1R0015 : power cable, length = 15 m.

Cables and accessories

NX series - brushless motors

Modules and accessories

Cables for NX ↔ 631	
Feedback cable	Description
CS1UA1F1R0005 (*)	Resolver cable with connectors, length = 5m
CS1UA1F9R0005 (*)	Resolver cable with Molex connectors for NX1 & NX2, length = 5m
220065R4621	Resolver connector (motor side)
220004R1000	Molex connectors set (feedback + power, motor side)
220004R2000	Molex connectors with housing set (feedback + power, motor side)

Power cable	Description
CS1UP1F1R0005 (*)	Cable with connectors standard for 631 ≤ 12 Arms, length = 5m
CS1UP1F9R0005 (*)	Cable with connectors Molex for NX1 & NX2, length = 5m
220065R1610	Power connector size 1 (motor side)

Cables for NX ↔ 637 / 638	
Feedback cable	Description
CS1UA1F1R0005 (*)	Resolver cable with connectors, length = 5m
220065R4621	Resolver connector (motor side)
CS2UR1F1R0005 (*)	Hiperface encoder cable with connectors, length = 5m

Power cable	Description
CS2UP1F1R0005 (*)	Cable with connectors standard for 637 / 638 Stand Alone ≤ 12 Arms, length = 5m
CS2UQ1F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for 637 / 638SA ≤ 12 Arms length = 5m
CS2UP2F1R0005 (*)	Cable with connectors for 637 / 638 Stand Alone ≤ 20 Arms, length = 5m
CS2UQ2F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for 637 / 638SA ≤ 20 Arms, length = 5m
CS3UP1F1R0005 (*)	Cable with connectors standard for 637 Rack ≤ 12 Arms, length = 5m
CS3UP2F1R0005 (*)	Cable with connectors for 637 Rack ≤ 20 Arms, length = 5m
220065R1610	Power connector size 1 (motor side)
6537P0051	Cable per meter (4 x 6 mm² + 2 x 2 x 1,5 mm²) for 637 ≤ 30 Arms

Extension cables for NX	
Feedback extension	Description
PD1UA1F1R0005 (*)	Resolver extension cable, length = 5m

Power extension	Description
PD1UQ1F1R0005 (*)	Power extension cable for NX avec Io ≤ 16 Â / 12 Arms, length = 5m

*) the 3 last digits indicate cable length in meters ± 5%max
For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.
Example CD1UP1F1R0015 : power cable, length = 15 m.

Cables and accessories

NV series - brushless motors

Modules and accessories

Cables for NV ↔ DIGIVEX	
Feedback cable	Description
CD1UA1F1R0005 (*) 220065R4621	Resolver or Posivex cable with connectors, length = 5m Resolver connector (motor side)

Power cable	Description
CD1UP1F1R0005 (*) CD1UQ1F1R0005 (*) CD1UP2F1R0005 (*) CD1UQ2F1R0005 (*) 6537P0051 220065R1610	Cable with connectors standard for Digivex ≤ 16Â, length = 5m Cable (NX connector with brake and temp. sensor) for Digivex ≤ 16Â, length = 5m Cable with connectors for Digivex ≤ 32Â, length = 5m Cable (NX connector with brake and temp. sensor) for Digivex ≤ 32 Â, length = 5m Cable per meter (4 x 6 mm² + 2 x 2 x 1,5 mm²) for Digivex 50Â Power connector size 1 (motor side)

Cables for NV ↔ 890	
Feedback cable	Description
CS4UA1F1R0005 (*) 220065R4621 CS4UV1F1R0005 (*) CS4UV1F3R0005 (*) CS4UX1F1R0005 (*)	Resolver cable with connectors, length = 5m Resolver connector (motor side) Endat encoder cable with connectors - 12pts (**), length = 5m Endat encoder cable with connectors - 17pts (**), length = 5m Incremental encoder cable with connectors -, length = 5m

Power cable	Description
CS4UP1F1R0005 (*) CS4UQ1F1R0005 (*) CS4UP2F1R0005 (*) CS4UQ2F1R0005 (*) 6537P0051 220065R1610	Cable with connectors standard for 890 ≤ 12 Arms, length = 5m Cable (NX connector with brake and temp. sensor) for 890 ≤ 12 Arms length = 5m Cable with connectors for 890 ≤ 30 Arms, length = 5m Cable (NX connector with brake and temp. sensor) for 890 ≤ 30 Arms, length = 5m Cable per meter (4 x 6 mm² + 2 x 2 x 1,5 mm²) for 890 < 42 Arms Power connector size 1 (motor side)

*) the 3 last digits indicate cable length in meters ± 5%max
For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.
Example CD1UP1F1R0015 : power cable, length = 15 m.

Cables and accessories

NV series - brushless motors

Modules and accessories

Cables for NV ↔ COMPAX 3	
Feedback cable	Description
CC3UA1F1R0005 (*)	Resolver cable with connectors, length = 5m
220065R4621	Resolver connector (motor side)
CC3UR1F1R0005 (*)	Hiperface encoder cable with connectors, length = 5m
CC3UV1F1R0005 (*)	Endat encoder cable with connectors - 12pts (**), length = 5m
CC3UV1F3R0005 (*)	Endat encoder cable with connectors - 17pts (**), length = 5m
CC3UX1F1R0005 (*)	Incremental encoder cable with connectors -, length = 5m

Power cable	Description
CC3UP1F1R0005 (*)	Cable with connectors standard for COMPAX 3 ≤ 10 Arms, length = 5m
CC3UQ1F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for COMPAX 3 ≤ 10 Arms length = 5m
CC3UP2F1R0005 (*)	Cable with connectors for COMPAX 3 ≤ 15 Arms, length = 5m
CC3UQ2F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for COMPAX 3 ≤ 15 Arms, length = 5m
6537P0051	Cable per meter (4 x 6 mm^2 + 2 x 2 x 1,5 mm^2) for COMPAX 3 ≤ 30 Arms
220065R1610	Power connector size 1 (motor side)

Cables for NV ↔ 631	
Feedback cable	Description
CS1UA1F1R0005 (*)	Resolver cable with connectors, length = 5m
220065R4621	Resolver connector (motor side)

Power cable	Description
CS1UP1F1R0005 (*)	Cable with connectors standard for 631 ≤ 12 Arms, length = 5m
220065R1610	Power connector size 1 (motor side)

*) the 3 last digits indicate cable length in meters ± 5%max
For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.
Example CD1UP1F1R0015 : power cable, length = 15 m.

Cables and accessories

NV series - brushless motors

Modules and accessories

Cables for NV ↔ 637 / 638	
Feedback cable	Description
CS1UA1F1R0005 (*)	Resolver cable with connectors, length = 5m
220065R4621	Resolver connector (motor side)
CS2UR1F1R0005 (*)	Hiperface encoder cable with connectors, length = 5m

Power cable	Description
CS2UP1F1R0005 (*)	Cable with connectors standard for 637 / 638 Stand Alone ≤ 12 Arms, length = 5m
CS2UQ1F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for 637 / 638SA ≤ 12 Arms length = 5m
CS2UP2F1R0005 (*)	Cable with connectors for 637 / 638 Stand Alone ≤ 20 Arms, length = 5m
CS2UQ2F1R0005 (*)	Cable (NX connector with brake and temp. sensor) for 637 / 638SA ≤ 20 Arms, length = 5m
CS3UP1F1R0005 (*)	Cable with connectors standard for 637 Rack ≤ 12 Arms, length = 5m
CS3UP2F1R0005 (*)	Cable with connectors for 637 Rack ≤ 20 Arms, length = 5m
220065R1610	Power connector size 1 (motor side)
6537P0051	Cable per meter (4 x 6 mm^2 + 2 x 2 x 1,5 mm^2) for 637 ≤ 30 Arms

Extension cables for NV	
Feedback extension	Description
PD1UA1F1R0005 (*)	Resolver extension cable, length = 5m

Power extension	Description
PD1UQ1F1R0005 (*)	Power extension cable for NV avec Io ≤ 16 Â / 12 Arms, length = 5m

*) the 3 last digits indicate cable length in meters ± 5%max
For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.
Example CD1UP1F1R0015 : power cable, length = 15 m.

Cables and accessories

EX series - brushless motors for explosive atmospheres

Modules and accessories

Cables for EX ↔ DIGIVEX	
Feedback cable	Description
CD1UA1D1R0005 (*)	Resolver or Posivex cable with connectors, length = 5m

Power cable	Description
CD1UQ1D1R0005 (*)	Cable with connectors standard for Digivex ≤ 16Â, length = 5m
CD1UQ2D1R0005 (*)	Cable with connectors for Digivex ≤ 32Â, length = 5m
6537P0051	Cable per meter (4 x 6 mm² + 4 x 1,5 mm²) for Digivex 50Â

Cables for EX ↔ 890	
Feedback cable	Description
CS4UA1D1R0005 (*)	Resolver cable with connectors, length = 5m
CS4UV1D1R0005 (*)	Endat encoder cable with connectors - 12pts, length = 5m

Power cable	Description
CS4UQ1D1R0005 (*)	Cable with connectors standard for 890 ≤ 12 Arms, length = 5m
CS4UQ2D1R0005 (*)	Cable with connectors for 890 ≤ 30 Arms, length = 5m
6537P0051	Cable per meter (4 x 6 mm² + 4 x 1,5 mm²) for 890 < 42 Arms

Cables for EX ↔ COMPAX 3	
Feedback cable	Description
CC3UA1D1R0005 (*)	Resolver cable with connectors, length = 5m
CC3UV1D1R0005 (*)	Endat encoder cable with connectors - 12pts, length = 5m
CC3UR1D1R0005 (*)	Hiperface encoder cable with connectors - length = 5m

Power cable	Description
CC3UQ1D1R0005 (*)	Cable with connectors standard for COMPAX3 ≤ 10 Arms, length = 5m
CC3UQ2D1R0005 (*)	Cable with connectors for COMPAX3 ≤ 15 Arms, length = 5m
6537P0051	Cable per meter (4 x 6 mm² + 4 x 1,5 mm²) for COMPAX 3 ≤ 30 Arms

*) the 3 last digits indicate cable length in meters ± 5%max
For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.
Example CD1UP1F1R0015 : power cable, length = 15 m.

Cables and accessories

EX series - brushless motors for explosive atmospheres

Modules and accessories

Cables for EX ↔ 631	
Feedback cable	Description
CS1UA1D1R0005 (*)	Resolver cable with connectors, length = 5m

Power cable	Description
CS1UQ1D1R0005 (*)	Cable with connectors standard for 631 ≤ 12 Arms, length = 5m

Cables for EX ↔ 637 / 638	
Feedback cable	Description
CS1UA1D1R0005 (*)	Resolver cable with connectors, length = 5m
CS2UR1D1R0005 (*)	Hiperface encoder cable with connectors - length = 5m

Power cable	Description
CS2UQ1D1R0005 (*)	Cable with connectors standard for 637 / 638 Stand Alone ≤ 12 Arms, length = 5m
CS2UQ2D1R0005 (*)	Cable with connectors for 637 / 638 Stand Alone ≤ 20 Arms, length = 5m
CS3UQ1D1R0005 (*)	Cable with connectors standard for 637 Rack ≤ 12 Arms, length = 5m
CS3UQ2D1R0005 (*)	Cable with connectors for 637 Rack ≤ 20 Arms, length = 5m
6537P0051	Cable per meter (4 x 6 mm^2 + 4 x 1,5 mm^2) for 637 ≤ 30 Arms

*) the 3 last digits indicate cable length in meters ± 5%max
For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.
Example CD1UP1F1R0015 : power cable, length = 15 m.

Cables and accessories

TMW series - torque motors

Cables for TMW ↔ 890	
Feedback cable	Description
CS4UV1F3R0005(*)	Endat encoder cable with connectors - 12pts, length = 5m

Cables for TMW ↔ COMPAX3	
Feedback cable	Description
CC3UV1F3R0005(*)	Endat encoder cable with connectors - 12pts, length = 5m

*) the 3 last digits indicate cable length in meters ± 5%max

For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.

Example CD1UP1F1R0015 : power cable, length = 15 m.

Accessories

DC servomotors and servodrives

Tacho generators

Mounted directly on the shaft, making them very rigid, the tacho generators designed with high precision give a very good image of instantaneous speed, of zero speed and of rotation direction

Power-off holding brake

Static use : motor locking in the stopped position
Dynamic use : for emergency braking only

Encoder

Particularly compact, the K10 encoder is mounted directly on the shaft, accordingly axial loads on the shaft are not permitted.

The C2 encoder with its hollow shaft and flexible mounting arrangement allows a very compact design

The C6B encoder is well-adapted to highly industrial environment thanks to its reinforced thermal and mechanical protection.

Transformer (230V/400V primary)

Type	Secondary (±5%)	Power (kVA)
TT 11133	32V Single phase	0.12
TT 11134	32V Single phase	0.63
TT 11135	48V Single phase	0.63
TT 11136	48V Three phase	0.5
TT 11137	48V Three phase	1.6
TT 11138	48V Three phase	2.5
TT 11144	100V Three phase	0.63
TT 11145	100V Three phase	1
TT 11139	100V Three phase	1.6
TT 11140	100V + 48V Three phase	2.5
TT 11141	100V + 48V Three phase	4
TT 11115	135V Three phase	1
TT 11116	135V Three phase	1.6
TT 11117	135V Three phase	2.5
TT 11118	135V Three phase	4
TT 11119	135V Three phase	6.3
TT 11120	135V Three phase	10

Filter

Type	Description
FR 13020	20A single/three phase main filter

Transformer and choke

The transformer and choke ranges offer a large choice for all applications of the RTS series.

Option choke for AXEM Motor

Type	Induit (mH)	Courant nominal (A)	Borne (mm^2)	Dimensions			Poids (kg)
				Largeur (mm)	Profondeur (mm)	Hauteur (mm)	
SF 02031	1	12	1.5	60	70	63	0.56
SF 02022	2.5	16	4	126	105	115	4.2
SF 02023	1.5	25	10	126	130	135	5.9
SF 02024	1	40	-	126	180	110	8.9

Accessories

637f servodrives series

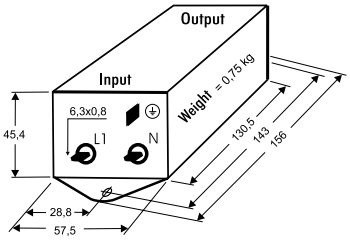
Description	Type
FERRITES	
Ferrite for cable length > 15m (I<10A)	FR3
Ferrite for cable length > 15m (I>10A)	FR6
COM2 COMMUNICATION OPTION	
RS232 Communication board	RP232
RS422 Communication board	RP422
RS485 Communication board	RP485
CAN / CANopen Communication board	RPCAN
PROFIBUS DP Communication board	RPPDP
DeviceNet Communication board	RPDEV
SUCOnet-K Communication board	RPSUC
INTERBUS-S Communication board	RPIBS
COM3 COMMUNICATION OPTION FOR 637f	
RPM2CA/637f-8 CANopen for 637f 02A to 10A	RP 2CA-8
RPM2CA/637f-16 CANopen for 637f 16A to 30A	RP 2CA-16
RPM2C8/637f-8 CANopen for 637f 02A to 10A	RP 2C8-8
RPM2C8/637f-16 CANopen for 637f 16A to 30A	RP 2C8-16
EXTENDED I/O OPTION BOARD	
14 I/ 10 O digital for 637f	RPEAE
External plug 26 pins for RPEAE	SUB D-HD 26 S/M
SAFETY MODULE OPTION FOR 637f	
EN954-1 Cat.3 Safety module	RP SBT
EMC FILTERS FOR 637f	
230V 12A 1 phase RFI filter	LNFE1-230/012
230 ou 400V 8A 3 phases RFI filter	LNFB3-480/008
230 ou 400V 18A 3 phases RFI filter	LNFB3-480/018
400V 33A 3 phases RFI filter	LNFB3-480/033
400V 46A 3 phases RFI filter	LNFB3-480/046
400V 60A 3 phases RFI filter	LNFB3-480/060
400V 82A 3 phases RFI filter	LNFB3-480/082
400V 142A 3 phases RFI filter	LNFB3-480/142
EMC KITS	
02A to 10A Kit for 637f	EMVBU-D6K08V1
16A to 30A Kit for 637f	EMVBU-D6K16V1
OUTPUT CHOKE (POWER CABLE LENGTH > 50m)	
Remark: Ferrite has also to be mounted	
Output choke In£8A	E32-0011
Output choke In£24A	E32-0031
Output choke In£35A	E32-0046
BRAKE RESISTOR	
Resistor 100W 100W	B100/100-6
Resistor 300W 33W	B300/33-6
Resistor 560W 26W	B560/26-6
SOFTWARE	
EASYRIDER / TESIWIN / PROGRAMMING EXAMPLES	CD SERVO
PC to 631 and 637f drive cable	Kn PC/631-03.0
MMI (MAN MACHINE INTERFACE)	

Accessories

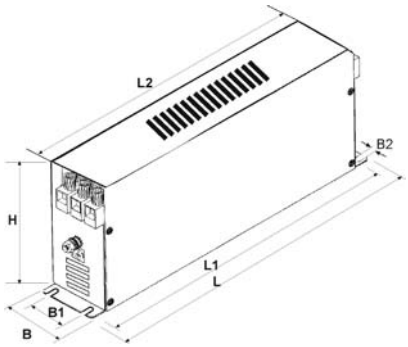
635 / 637f series

EMC filters and inductances

Single phase filter : LNF E 1 *230/012



Three phase filter :LNF B 3480/xxx



EMC filters - dimensions and weight

Type	Dimensions				Entre-axe			Weight (kg)	Earth connection	Terminal connection (mm^2)
	B (mm)	L (mm)	L2 (mm)	H (mm)	B1 (mm)	L1 (mm)	B2 (mm)			
LNF B 3*480/008	40	190	160	70	20	180	4.5	0.5	M5	6
LNF B 3*480/018	45	250	220	70	25	235	5.4	0.8	M5	6
LNF B 3*480/033	50	270	240	85	30	255	5.4	1.2	M5	16
LNF B 3*480/060	85	250	220	90	60	235	5.4	1.8	M6	25
LNF B 3*480/082	80	270	240	135	60	255	6.5	3.2	M6	25

EMC Filters selector

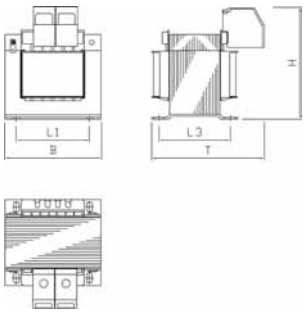
Single phase servo drives 16 to 230 VAC		**EMC Filters characteristics**				
Type	Current (A)	Type	Current (A)	Power (W)	Current (mA)	Max Voltage. (V)
635	2.5 - 6	LNF E 1*230/012	12.0	5.0	9.4	250
Three phase servo drives 16 to 460VAC		**EMC Filters characteristics**				
Type	Current (A)	Type	Current (A)	Power (W)	Current (mA)	Max Voltage. (V)
635 / 637f	2.5 - 6.5 / 2 -16	LNF B 3*480/008	8.0	4.0	33.0	480
635 / 637f	10 /10 -16	LNF B 3*480/018	18.0	6.0	33.0	480
637f	22 - 30	LNF B 3*480/033	33.0	12.0	33.0	480
Power supply Module (Rack version)	40	LNF B 3*480/060	60.0	26.0	33.0	480
	75	LNF B 3*480/082	82.0	32.0	33.0	480

Accessories

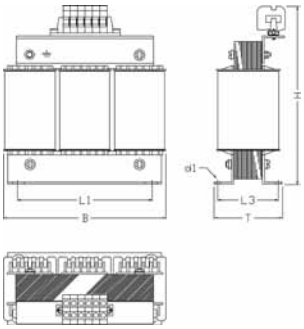
635 / 637f series

EMC filters and inductances

Single phase inductance



Three phase inductance



Inductances - dimensions and weight

Inductances		Dimensions						Terminal connection (mm^2)	Weight (kg)	Earth connection
	Type	B (mm)	T (mm)	H (mm)	L1 (mm)	L3 (mm)	d1 (mm)			
Single phase	E 12-0008KL	66	87	70	50	51	4.8x9	2.5	0.9	Faston
	E 12-0018KL	84	96	86	64	62	4.8x9	4.0	1.8	Faston
Three phase	E 32-0011KL	123	75	130	100	55	5x7	2.5	2.5	M6
	E 32-0018KL	155	95	150	130	70	8x12	2.5	5.4	M6
	E 32-0031KL	155	100	150	130	70	8x12	4.0	5.3	M6
	E 32-0060KL	190	145	215	170	78	7x11	10.0	9.7	M6
	E 32-0154KL	230	180	305	180	122	8x12	35.0	18.0	M8

Main inductance selector

Single phase servo drives, 16 to 230 VAC		Inductances "Power supply" characteristics	
Type	Current (A)	Type	Current (A)
631 635	1 - 2 1 - 2.5	E 12-0008KL	8
631 635	4 - 6 5 - 6.5	E 12-0018KL	18
Three phase servo drives, 16 to 460V			
Type	Current (A)	Type	Current (A)
635	10	E 32-0011KL	11
Three phase servo drives, 16 to 460V			
Type	Current (A)	Type	Current (A)
637f	1 - 10 16	E 32-0011KL E 32-0018KL	11 18
	22 - 30 17 - 30	E 32-0031KL	31
Power supply Module (Rack version)	50 75	E 32-0060KL E 32-0154KL	60 94

5

Accessories

DIGIVEX drives / motion

DIGIVEX drive and DIGIVEX motion accessories

INPUT/OUTPUT CABLES AND COMMUNICATION CABLES

Encoder emulation encoder (except DµD) 1 Sub-D	DIG04546R2xx
Input/Output cable 1 Sub-D	DIG04544R2xx
RS232C equipped cable for DLD, DSD, DMD and DPD 2 Sub-D	CB 90001
RS232C equipped cable for DµD 1 Sub-D and 1 RJ9	CB 90002
CANopen cable for DIGIVEX Motion 2 Sub-D	DIG05982R1xx
120 ohms CAN terminator plug	DIG05984R100
PROFIBUS cable for DIGIVEX Motion	CB 08320
PROFIBUS 90° plug	AC 62001
PROFIBUS 180° plug	AC 62002
USB cable for PC - USBPRO interface connection	CB 90003

*xx = cable length in mm ; standard xx = 01, 02, 05, 10 m

EMC FILTER FOR DIGIVEX (except DµD and DLD)

EMC Filter 1Ph xx A (xx = 06 or 16)	FR 010xx
EMC Filter 3Ph xx A (xx = 16, 36 or 64)	FR 030xx
EMC Filter 3Ph book-sized xxA (xx = 08, 16 or 36)	FR 036xx
EMC Filter 3Ph xxx A (xxx = 100 or 200)	FR 03xxx

EXTERNAL BRAKING RESISTOR FOR DIGIVEX

2kW 27ohms external resistor	RE 91001
4.5kW 12ohms external resistor	RE 91002

BOARD AND ACCESSORIES FOR DIGIVEX Drive (except DµD and DLD)

Encoder emulation board	SC 6631
SSI Encoder board	SC 6637
Indexing board	SH 6601
Indexing board+SinCos Encoder emulation board	SC 6643
7-seg display	SS 6611
Dialog terminal	DTP001

BOARD AND COMMUNICATION INTERFACE FOR DIGIVEX Motion

Encoder input board	SC 6638
Encoder emulation board	SC 6639
SinCos input board	SC 6645
RS232C - CAN interface	CRS232B
RS232C - CAN interface (DIN mounting)	CIM03B
RS232-CAN adaptator	RS232CAN
USB - PROFIBUS interface	USBPRO
PCI board for PC PCI - PROFIBUS interface	PCIPRO
PCMCIA board for PC PCMCIA - PROFIBUS interface	PCMCIAPRO
RS232-PROFIBUS Adaptator	RS232PRO

SOFTWARE

Parvex Motion Explorer software	PMEMCD
CAM function license	DMLCAM
Position control with interpolation license	DMLPI

* Nota : Possibility to use a cable with 2 pairs for accessories (example : brake, thermic)

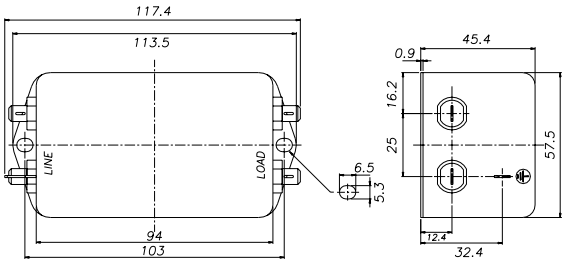
Accessories

DIGIVEX series

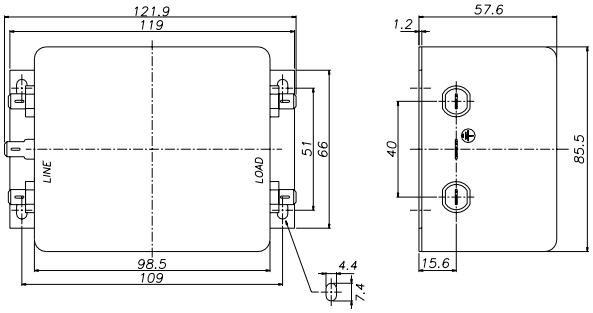
EMC filters and inductances

Single phase filter

FR 01006



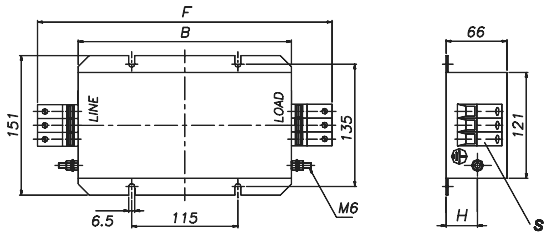
FR 01016



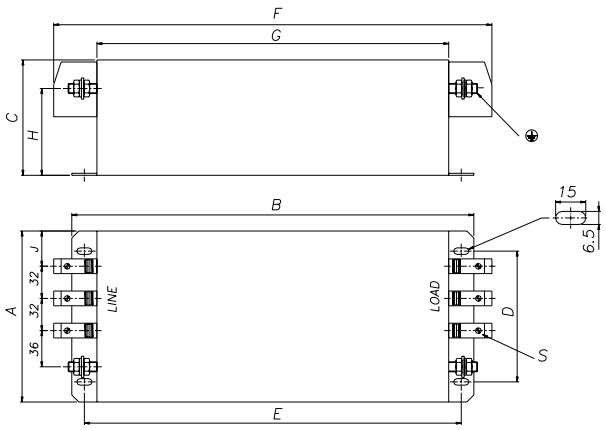
Characteristics			
Type	Current (Â)	Max leakage current (mA)	Weight (kg)
FR 01006	6	3	0.42
FR 01016	16	3	1

Three phase filter

FR 030xx



FR 03x00



Characteristics and dimensions													
Type	Current (Â)	Max leakage current (mA)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	J (mm)	S max (mm^2)	Weight (kg)
FR 03016	16	10	-	201	-	-	-	241	-	17	-	4	3
FR 03036	36	3	-	201	-	-	-	251	-	17	-	10	3
FR 03064	64	3	-	231	-	-	-	308	-	34	-	25	4
FR 03100	100	3	170	400	65	130	375	436	350	40	35	50	8.3
FR 03200	200	3	220	550	153	180	500	549	450	70	60	95	26.5

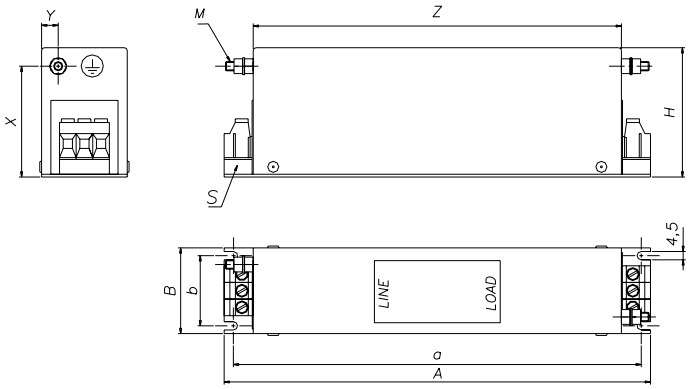
Accessories

DIGIVEX series

EMC filters and inductances

Three phase filter “book-sized”

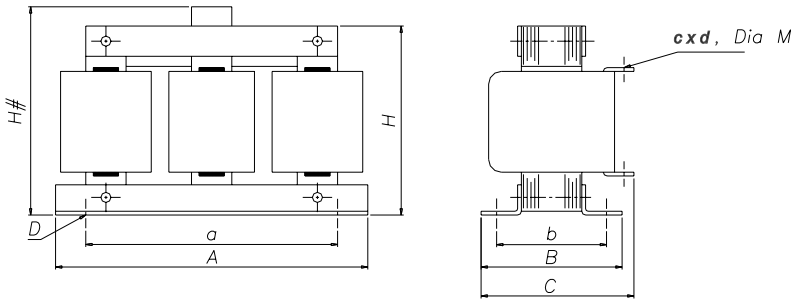
FR 036xx



Characteristics and dimensions												
Type	Current (Â)	Leakage current (mA)	A (mm)	B (mm)	H (mm)	axb (mm)	X (mm)	Y (mm)	Z (mm)	M (mm)	S max (mm²)	Weight (kg)
FR 03608	8	13	165	51.4	63	155x38	50	8	133.7	M4 x11	4	0.58
FR 03616	16	15	231	46.4	70	221x38	60	9	199.5	M5 x15	4	0.90
FR 03636	36	15	265	58	90	255x35	70	8	200	M6 x24	10	1.75

Three phase inductances

SF 020xx



Characteristics and dimensions												
Type	Current (Â)	Inductance (µH)	A (mm)	B (mm)	C (mm)	H (mm)	H# (mm)	axb (mm)	D (mm)	Connection mm² or cxd (mm)	M (mm)	Weight (kg)
SF 02025	26	850	150	95	110	-	135	112x80	6	# 6mm²	-	4.5
SF 02026	65	340	175	95	95	165	180	53x68	6.5	* 16x16	6.5	9
SF 02027	118	190	290	116	135	210	-	230x100	8	* 20x20	9	13
SF 02028	17	1300	160	95	-	-	115	112x71	6	# 6mm²	-	4.2
SF 02029	91	245	220	135	160	160	-	166x114	6	* 20x20	9	15
SF 02030	170	130	235	120	165	240	-	185x100	9	* 25x28	11	19
SF 02032	7.5	400	132	75	85	-	103	94x55	6x10	# 4mm²	-	1.9

Terminal connection

* Output on bar cxd section, M diameter

Accessories and options

AC890/AC890PX series

Options	Frame	Fitted	Reference	Page
Filter				
EMC filter	B	Option		167
Options cards				
Firewire peer-to-peer		Option	8903-FA-00	170
CAN peer-to-peer		Option	8903-CC-00	
Ethernet Modbus/TCP		Option	8903-IM-00	
Ethernet Ethernet/IP		Option	8903-IP-00	
Profinet		Option	8903-PN-00	
Profibus-DP		Option	8903-PB-00	
DeviceNet		Option	8903-DN-00	
CANopen		Option	8903-CB-00	
ControlNet		Option	8903-CN-00	
Resolver feedback		Option	8902-RE-00	172
Resolver feedback with simulated incremental encoder		Option	8902-RR-00	
SinCos Endat 2.1 feedback		Option	8902-E1-00	171
Incremental quadrature encoder		Option	8902-EQ-00	
Incremental pulse encoder		Option	8902-EP-00	
SinCos Endat 2.1 feedback and registration		Option	8902-M1-00	172
SinCos Endat 2.1 master and registration		Option	8903-M1-00	
Incremental master encoder		Option	8903-EP-00	
High resolution analogue input		Option	8903-AI-00	
Accessories				
Standard compact keypad		Standard	6511-RS232-00-B	169
Alphanumeric keypad		Option	6901-00-B	
Graphical operator station		Option	6911-01-00-G	
Remote mounting kit for keypad		Option	6052-00-B	
Configuration tool software including USB cable		Option		175
System Busbars - frame B-D	B-D	Option	BH465850	169
Installation kit frame B-d	B-D	Standard	LA468430Uxx3	
Ventilation duct kit (1M exhaust for frames B,C,D)	B-D	Option	8905-DUCTKIT-190	
Ventilation fan kit frame B-D	B-D	Option	8905-DUCTFAN-190	

Accessories

AC890/AC890PX series

Keypad

Model	Description
6511-TTL-00	4 Digit LCD keypad*
6901/00	Alphanumeric multilingual keypad**
6911-01-00-G	Graphical operator station
6052/00	Remote mounting kit for 6901 with 3m cable

*Standard equipment for frames B - D
** Standard equipment for frames E - K

6511 6901 6911

Screened power cables with connectors

Model	Description
CD1UA1F9R00xx	Power cable with motor connector for NX motor and Io ≤ 14A rms
CD1UP2F1R00xx	Power cable with motor connector for NX motor and Io ≤ 22A rms
CS4UA1F1R00xx	Resolver cable with motor connector and Sub-D connector for NX motor

Assembly kit

Model	Description
LA468430U003	Assembly kit for 890CS/CA
LA468430U103	Assembly kit for 890CD, B to D
LA468430U203	Assembly kit for 890SD, B to D
8905-DUCTKIT-00	Ventilation duct kit
8905-DUCTFAN-00	Ventilation duct fan

Cables

Model	Description
8905-USBCL1-00	USB programming cable for 890
8905-FWCBL200-00	FireWire cable 200 mm
8905-FWCBL280-00	FireWire cable 280 mm
8905-FWCBL1000-00	FireWire cable 1000mm
8905-FWCBL4500-00	FireWire cable 4.5 m

Busbar System

Model	Description
BH465850	DC SSD Rail/Bus Bar 140A (UL) 1m
BC465938U200	Insulator for DC bus bars 200mm

Options

AC890/890PX series

Communication interfaces

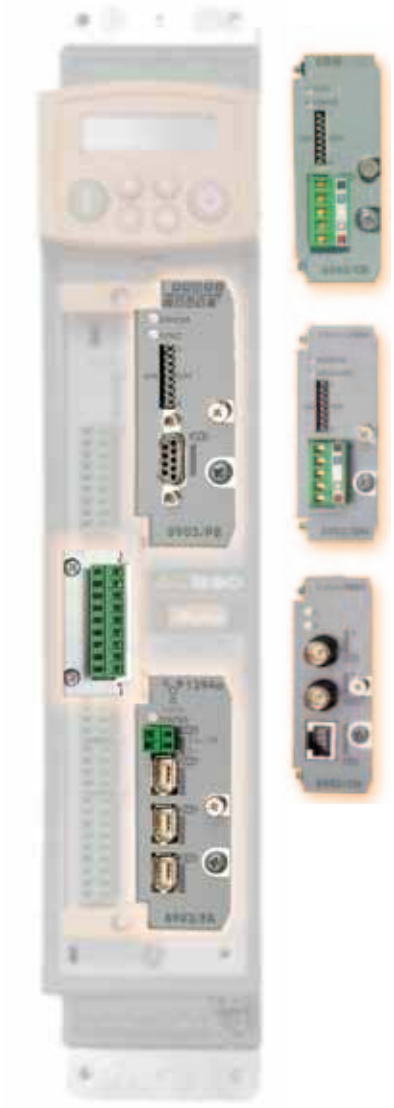
Modbus/TCP (8903-IM-00) and Ethernet IP (8903-IP-00)	
Supported protocols	Card 8903-IM-00 : Modbus/TCP Card 8903-IP-00 : Ethernet IP
Communication speed	10/100M bits/s
Station Address	By Drive System Explorer software via RTNX protocol
Suitable for Drives	AC890 version 3.2+

DeviceNet (8903-DN-00)	
Supported protocols	Supports the group 2 only slave subset of the DeviceNet protocol
Supported messages	Polled I/O, cyclic outputs, change of state (COS), Explicit messaging
Communication speed	125K, 250K et 500K bits/s
Station address (MACID)	Dip switch or software setting of station address and network speed
Suitable for drives	AC890 version 1.9+

CanOpen (8903-CB-00)	
Profile	DS402
Supported messages	SDO, PDO, NMT, SYNC
Communication speed	20K, 50K, 125K, 250K, 500K, 1M bits/s selectable by software or dip switch setting
Station address	Dip switch or software setting of station address and network speed
Suitable for drives	AC890 version 1.3+

ControlNet (8903-CN-00)	
Supported messages	Polled I/O
Station address	Selectable by software
Station address	Selectable by dip switch
Suitable for drives	AC890 version 1.4+

Profibus-DP (8903-PB-00)	
Supported protocols	Profibus-DP ; demand data and data exchange
Communication speed	Up to 12M bits/s selected by the master
Station address	Dip switch or software setting of station address
Suitable for drives	AC890 version 1.4+



FireWire IEEE 1394 (8902-FA-00)	
Communication Supported	peer-to-peer communication between drives

Profinet (8903-PN-00 and 8903-PN-FF)	
Supported protocols	Profinet I/O RT protocol
Station address (IP)	Software setting of IP address via DSE
Suitable for drives	AC890 version 3.3+

Peer to peer (8903-SP-00 and 8903-SP-FF)	
Supported protocols	Peer to peer data exchange with other drives
Communications speed	up to 1M bits/s selectable by dip switch
Suitable for drives	AC890 version 3.3+

Options

AC890/890PX series

Incremental quadrature encoder card 8902-EQ

Description

The HTTL 8902-EQ speed feedback option allows incremental encoders to be connected directly to the drive to provide highly accurate speed feedback measurement. Supplies variable voltage isolated encoder power supply.

Product codes

Code	Description
8902-EQ-00-00	Optional HTTL incremental encoder
8902-EQ-00-FF	Option HTTL encoder factory-fitted

Features

Maximum pulse rate	250kHz (differential) 200kHz (single ended)
Receiver current	≤10mA per channel
Input format	Two differential channels in quadrature (Clock/direction or clock only)
Input voltage	±30V (differential), 0-30V (single-ended)
Input voltage differential	±30V maximum
Input voltage threshold dip switch settings	3V ± 1V (differential) 8V ± 1V (single-ended)
Encoder power supply	Maximum load 200mA or 2W

Options

AC890/890PX series

Resolver feedback card 8902-RE

Description

The 8902-RE resolver speed feedback option allows the resolver to be connected directly to the drive to provide highly accurate speed feedback measurement. Contains a carrier output signal to power the resolver.

Features

Maximum speed	Up to 50 000 RPM (with 2 pole resolver)
Carrier output signal	7V rms, 8kHz
Maximum carrier supply	70mA rms
Maximum input voltage	±12V peak
Accuracy	< 5 minutes
Resolution	Equivalent to 16 bits in one revolution of resolver
Inputs	Differential inputs Zin ~2 kΩ
Maximum input voltage	12Vpeak

Product codes

Code	Description
8902-RE-00-00	Optional resolver feedback card
8902-RE-00-FF	Option resolver feedback factory-fitted

SinCos Endat 2.1 feedback card 8902-E1

Description

The SinCos speed feedback option 8902-E1 allows a 1V p-p Sin/Cos encoder to be connected directly to the drive to provide highly accurate speed feedback measurement. Decodes Heidenhain Endat 2.1 absolute position encoders and supplies 5V or 10V for the encoder.

Product codes

Code	Description
8902-EI-00-00	Optional SinCos encoder card
8902-EI-00-FF	Optional SinCos card factory-fitted

Features

Maximum pulse rate	250kHz
Receiver impedance	120Ω
Input format	two differential 1V p-p signals in quadrature
Encoder supply	Maximum load 250mA Adjustable Voltage 5V/10V

Options

AC890/890PX series

SinCos registration position 8902-M1 and 8903-M1

Description

The 8903-M1-00 and 8902-MA-00 feedback cards allow operation without external registration position, thanks to the connection of the encoder to the drive. They provide highly accurate speed feedback measurement and regstration. Nevertheless registration applications are best achieved when both cards are used.

- Registration achieved in the drive
- Interpolates each encoder line with 11-bit accuracy giving 4 million counts / rev. on a 2048 line encoder
- Optional 1V input from 'Z' index pulse for use with registration
- Supplies 5V or 10V to the encoder
- Decodes Heidenhain Endat 2.1 absolute position encoders
- 4 optically isolated auxiliary digital outputs that can be used either for general purpose inputs, or for inputs from registration mark sensor (8903-M1 only)
- 3 non-isolated auxiliary digital outputs that can be either for general purpose outputs or for synthesizing an encoder output (8903-M1 only)

Product codes

Code	Description
8902-M1-00	Slave SinCos registration
8903-M1-00	Master SinCos registration
8902-M1-FF	Slave SinCos registration factory-fitted
8903-M1-FF	Master SinCos registration factory-fitted

Approved encoders

	1V p-p	Endat 2.1	Single Turn ABS	Multi-turn ABS
Heidenhain :				
EQN425	√	√		√
ECN413	√	√	√	
ERN480	√			
Stegmann :				
HG660 AKR (xxxx)S	√			
HG660 DKR (xxxx)S	√			
Hengstler :				
RIS58-H	√			

Specification

Encoder inputs (8902-M1... and 8903-M1...)

Maximum pulse rate	250kHz
Receiver impedance	120Ω
Input format	2 differential 1V p-p signals in quadrature
Encoder supply	250mA Maximum load
Supply voltage	5V/10V adjustable
Terminal type	Sub-D15 connector
Maximum cable length	150m screened cable
Serial protocol	Endat 2.1

Additional digital inputs (8903-M1... only)

Low logic level High logic level Absolute Max. input Voltage	0V to 5V relative to X63 pin 5 15V to 26V relative to X63 pin 5 30V relative to X63 pin 5
Input current	Low logic level < 1mA High logic level > 3mA, < 10mA Typical input at 24V : 7mA
Isolation withstand relative to drive chassis	30V
Input safety category	SELV
Terminal type	6-way pluggable 3.5mm terminal block
Maximum cable length	150m. screened cable is reccomended for all lengths, but essential if over 30m in order to comply with EMC regulations

Auxiliary digital outputs (8903-M1... only)

Input voltage (VS)	5V to 24V
Maximum input voltage	30V
Maximum output current	± 100mA per output
Output voltage	Low logic level < 3V to 100mA High logic level > VS – 4V to 100mA
Overload and short circuit duration	Indefinite withstand
Max. output frequency	250kHz per output
Terminal type	8-way pluggable 3.5mm terminal block
Maximum cable length	150m. screened cable is reccomended for all lengths, but essential if over 30m in order to comply with EMC regulations

Options

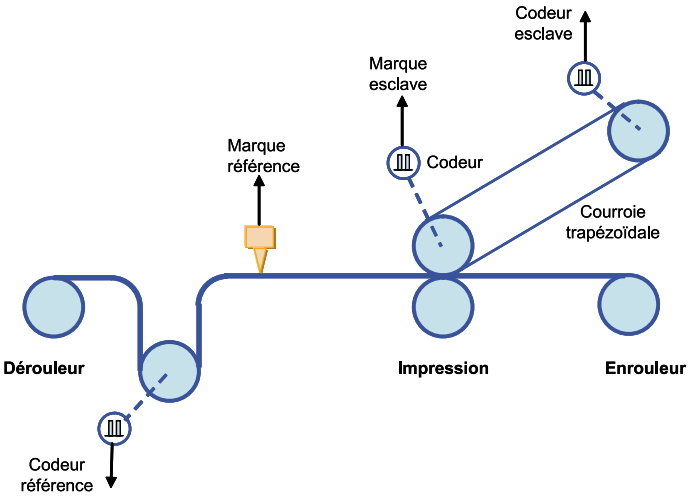
AC890/890PX series

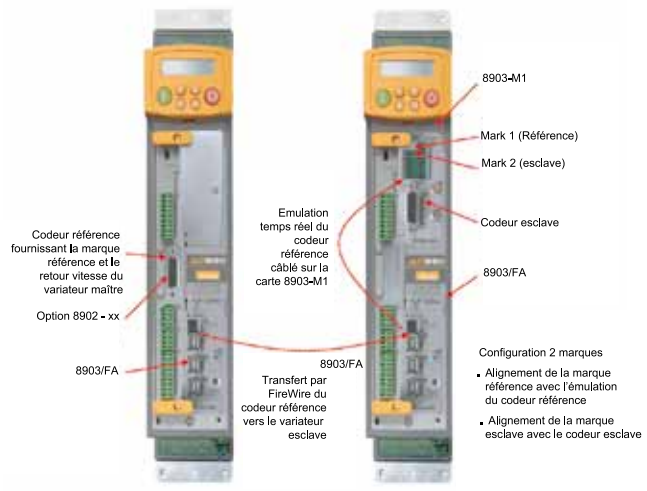
SinCos registration position 8902-M1 and 8903-M1

Possible configurations

	8902-M1... fitted in slot C 8903-M1... not fitted	8902-M1... not fitted 8903-M1... fitted in slot A	8902-M1... fitted in slot C 8903-M1... fitted in slot A
Speed feedback Encoder	Via 8902-M1 card	Via 8903-M1 card	Via 8902-M1… card
Reference encoder signal		In this combination, a reference encoder position would normally be supplied by a FireWire option interface (8903/FA)	Supplied by 8903-M1… card
Registration	Available only using the encoder's 1V index pulse.	Auxiliary digital inputs and the encoder's index pulse (if supplied by the encoder) for registration even inputs	Auxiliary digital inputs and the encoder's index pulse (if supplied by the encoders) from both encoders are available for registration even inputs
Inputs/outputs		The auxiliary digital inputs are also available for general purpose digital inputs. Auxiliary digital inputs are also for simulated pulse encoder output, or for general purpose digital output	The auxiliary digital inputs are also available for general purpose digital inputs. Auxiliary digital inputs are also for simulated pulse encoder output, or for general purpose digital output

Example of two-mark registration





Accessories

For AC890/890PX series

Drive System Explorer (DSE) software

Description

DSE890 is the programming, monitoring and diagnostic software platform for AC890 and AC890PX series variable speed drives.

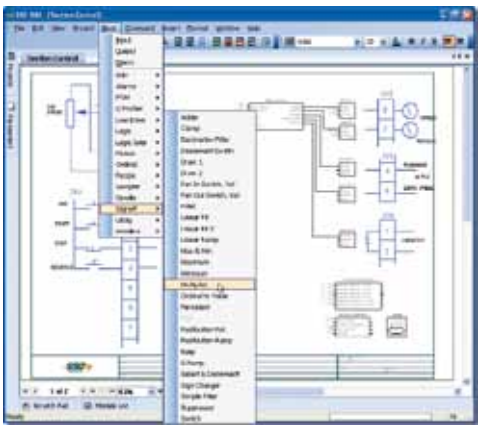
Communication between the drive and PC is via a mini USB port located on the front of the drive.
Thanks to the on-line help, users can achieve the optimum drive configuration without the need to navigate through complicated parameter menus.
Advanced programming is carried out through a set of pre-engineered templates in order ro create the required configuration.
It is possible to monitor every parameter of the drive either as a digital value or as a function in the “chart recorder” during normal operation.

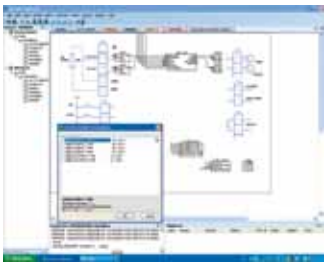
Creates projects quickly and easily
Graphical tool based on a block diagram approach
Integrated digital oscilloscope
On-line configuration and monitoring
System identification tool

Product codes

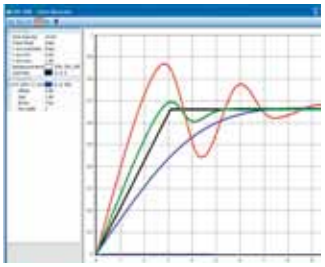
8906-DSELITE-00	DSE Lite software (single axis) + USB cable
8906-DSEDEV-00	DSE Development software + USB cable
8906-DSERUN-00	DSE Runtime/Maintenance + USB cable
8906-DSEDEVUPG-00	DSD Development to DSE Development Upgrade + USB cable
906-DSERUNUPG-00	DSD Runtime to DSE Runtime Upgrade + USB cable

DSE890 programming software

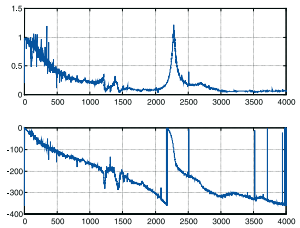




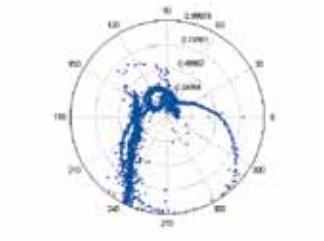
Parameter adjustment and project creation



real-time data acquisition oscilloscope



System identification tool



Accessories and options

For all AC drives

Drive System Explorer Lite (DSE Lite) software

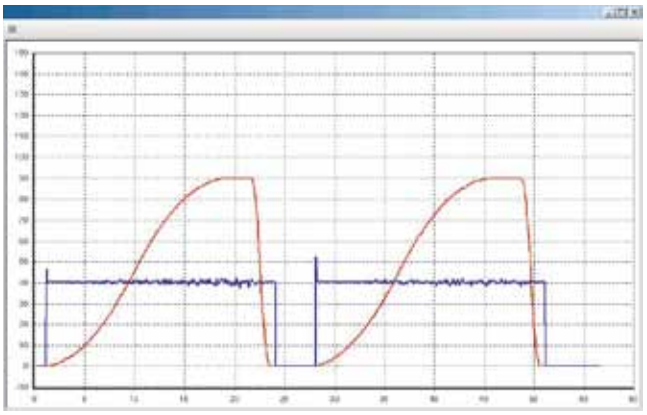
Description

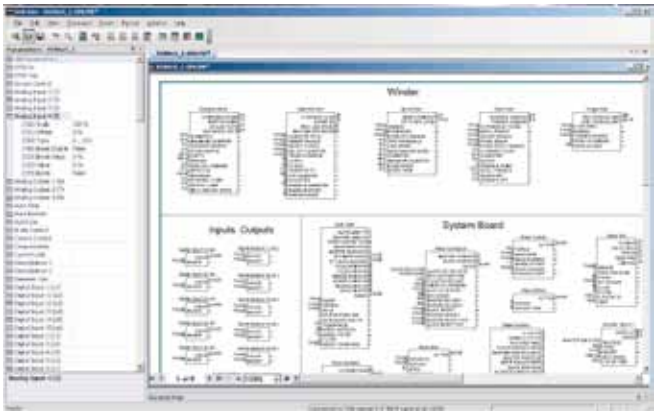
DSE LITE software is an easy to use configuration, commissioning and monitoring tool with graphical interface for the Parker SSD drives range of AC and DC drives.

While the drive is in running mode the oscilloscope function allows ‘‘on-line’’ monitoring of selected parameters and the recording of trends.

DSE LITE, allows the user to create, parameterize and configure user defined applications thanks to function blocks dedicated to speed control, Winder, PID, diameter calculator, Shaftless...

DSE LITE is downloadable from our website.
www.parker.com





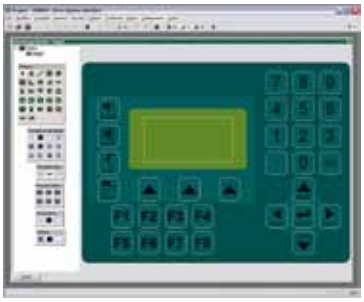
Accessories and options

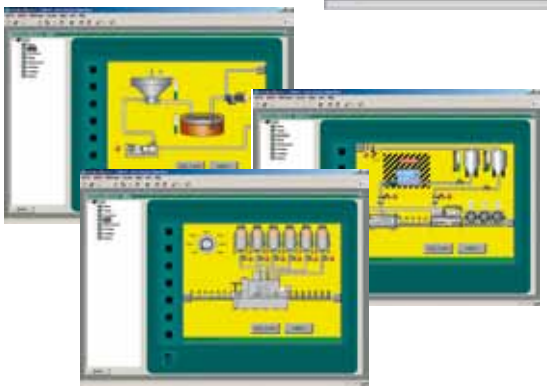
DSI8000 series
programming software platform

Description

It is the icon-based programming software platform for all operator panels of the TS8000 Series.
DSI8000 includes all configuration, display, control and data logging tools. Applications can be set up using the step-by-step procedure to configure protocols, define data tags and create a graphical interface by means of the drag-and-drop icon structure and the pre-loaded symbol libraries.

DSI8000 also incorporates a tag database that allowes users to organize and customize communications with converters and any other device connected to the system, and a Virtual Panel that enables real-time data display by using a standard browser.



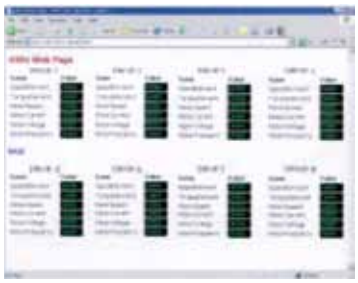


Easy visual design
Recipes, trending, histograms and alarm logs
Buit-in symbol library with over 4000 symbols
Web server
Built-in Data logger

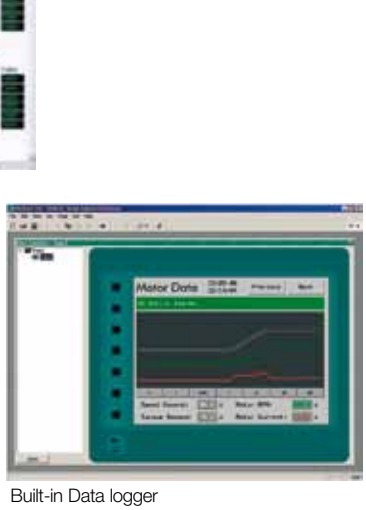
Codification	
Type	Description
DSI8000	Programming software package including USB cable and using licence.

Buit-in symbol library available for several machines

The software is included with every TS8000.



Web server



Built-in Data logger

Accessories and options

EasyRider series

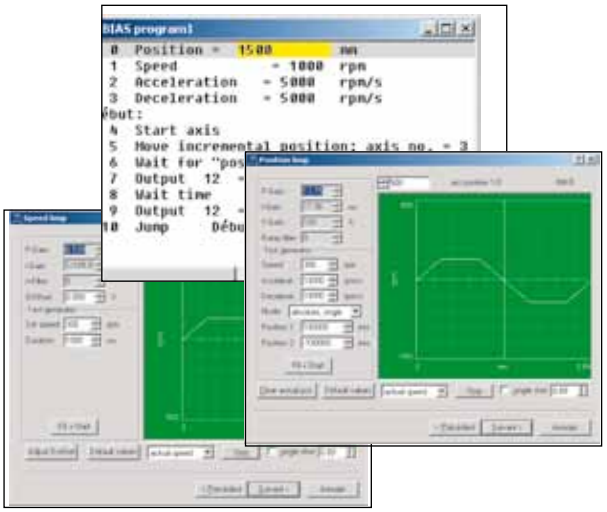
Graphical software

Description

EasyRider is a graphical software for the 630 Series providing a single user interface for accessing all drive parameters, programming motion and calibrating the drive.

This unique assistant offers an autopilot mode helping user in all phases of application set-up : from the choice of the motor in the motor library to the drive auto-adjustment. All set-up steps are extremely simplified.

Easyrider gives also the possibility to develop advanced motion in an intuitive way using its BIAS language.



Intuitive and easy use
Set-up assistant
Integrated motor library
Oscilloscope function
Drive and fieldbus diagnostic
Drive advanced programming

Accessories and options

Parvex Motion Explorer

Powerful Windows based software

Description

Parvex Motion Explorer is a powerful Windows based software for the DIGIVEX range.

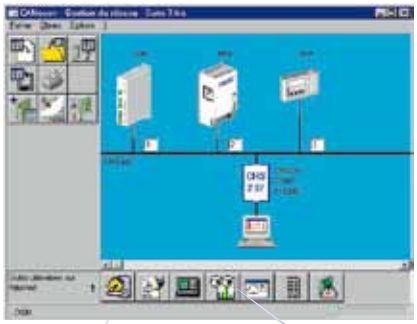
This software provides a convenient and straightforward working environment due to its graphic display of functions and an easy choice of different headings, in the form of thumbnails and menus.

Program editor, compilation with error localisation

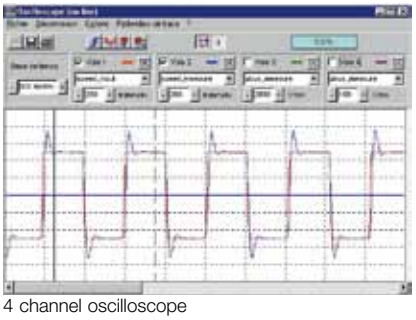
Stimuli generator

Program development debugger

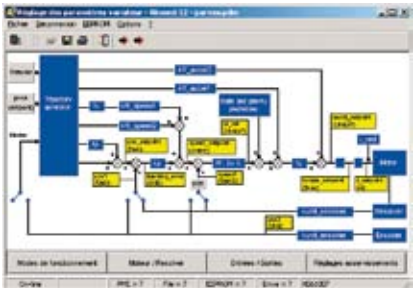
Cam editor



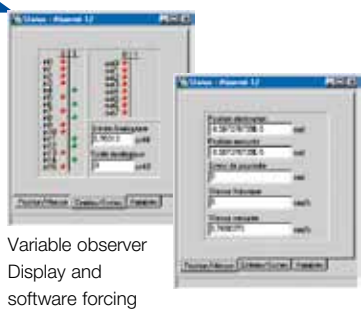
CANopen or PROFIBUS network management
Simple click access to all subscribers on network.



4 channel oscilloscope
Adjustable time base; adjustable trigger; RMS, peak-to-peak, average, min, max measures…



Parameter adjustment
Axis, motor, sensor, input/output configuration; tuning assistant…



Variable observer
Display and software forcing

Diagnostic help
event history; troubleshooting assistant; firmware update...

Accessories and options

Parvex Motion Explorer

A complete multi-axes servo application on CANOpen

Parvex Motion Explorer
Use :

- Parameter definition
- Oscilloscope
- Control

DIGIVEX Motion
Operating mode :

- Master slave synchronisation
- PDO messages, interpolation
- Multi-axis supervision

Applications
Examples :

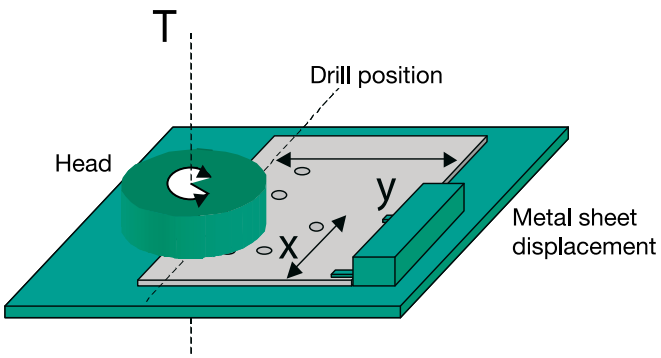
- Palletising
- Packaging
- Bending

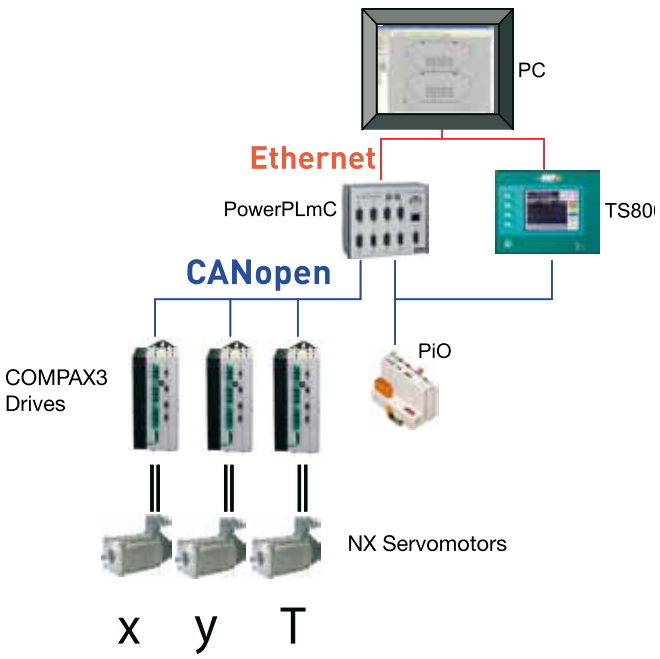
One unique machine plug using CANopen bus gives opportunity to develop all the tasks for the realisation of an advanced application : Parameter Definition, Adjustment, Control.

Applications

AMADA 3 axes stamping machine

MB Machine-tool





SSD Parvex offer

Stamping machine with 3 servomotors axes. Complete cabinet integration with servomotors, automates, I/E and Touch Screen operator

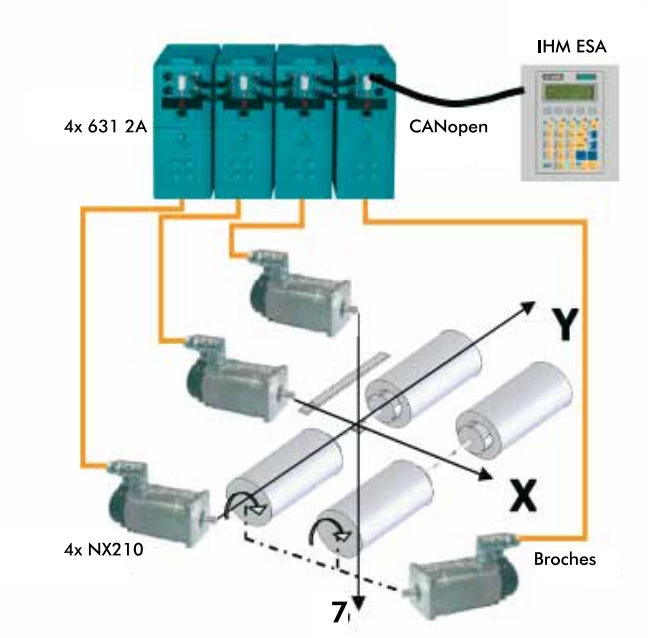
Advantages

- Economical and simple solution.
- High dynamic system and high accuracy thanks to brushless servomotors

Applications

Machine-tool for clock and watchmaking

B&B Technics



SSD Parvex offer

Complete cabinet integrating 631 servo drives in Can open communication with ESA interface

Advantages

- Complete Drive + HMI solution with no more PLC
- Simple user program
- Low cost and compacity

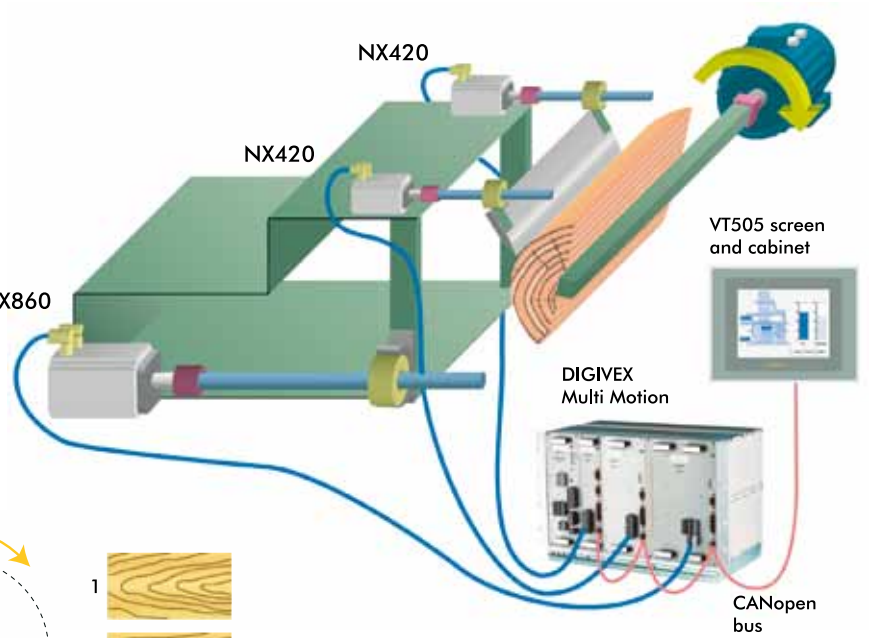
The machine

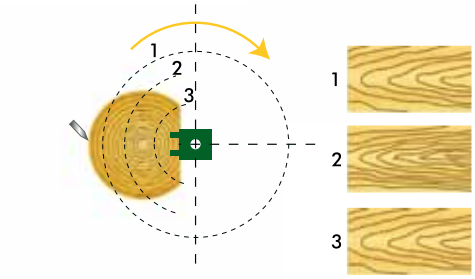
- machining of link of stainless steel watchstrap
- drilling or tapping, emerging or not
- 6 drillings per part
- up to 1800 parts per day

Applications

Slicing machine

Staylog





SSD Parvex offer

2 NX420 servo motor and 1 NX 860 servo motor powered by a 3 axis DIGIVEX Multi Motion positioning system for the position control of knife and carriage. 1 VT505 graphic terminal for input of production data and operating modes.

Customer benefits

Positioning-drive replacing axis card for an improved reliability and increased performances.

Applications

Test bench for wind tunel

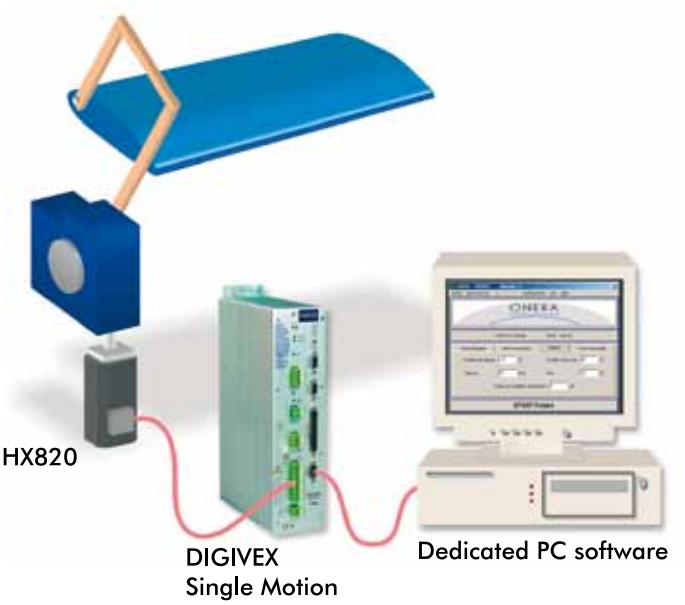
SSD Parvex offer

1 HX820VR servo motor controlled by a DIGIVEX single motion positioning-drive.

Dedicated PC software, specifically developed by SSD Parvex, allowing cam construction using customer data, program compilation with new values and its transfer to drive.

Customer benefits

Application of positioning integrally managed by SSD Parvex including cabinet wiring and DIGIVEX motion and PC software development.



Other Parker SSD Parvex solutions

AC650 and AC650V Drives

- 0.25 – 110 kW
- Drive-mounted keypad
- Preprogrammed macros
- Cloning module
- User configurable Inputs/ Outputs
- Communication options

590+ DC Drives

- 1A – 2700A
- Common programming with the 690+ serie
- Up to 2700A and supply voltage up to 660V
- Function block programming including open and closed loop
- winder control
- Communication interface for common networks

TS8000 Touch screen panel

- Multilingual graphical interface
- Pre-engineered projects
- Built-in web server
- Compact flash card slot
- Integrated protocol conversion
- Software and programming cable included

AC690+ integrator series

- 0.37 à 1000kW
- Open or closed loop vector
- Function block programming
- Common programming with the 590+ series
- Communication interface for common networks
- Dual rated for constant or quadratic “fan” torque
- Integral EMC compliant filters

MM series DC motors

- Compact motors
- Exceptionnal power/size ratio
- Shunt wound DC motor
- Class H insulation
- Class F temperature rise
- 220V/400V supply fan

MA series vector motors

- Compact square form
- Same sizes as DC motors with the same power
- Incremental encoder
- IP54 or IP23 protection
- Auxiliary ventilation
- High overload capability
- High maximum speed

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