SICME | ORANGE1

NGBe Series

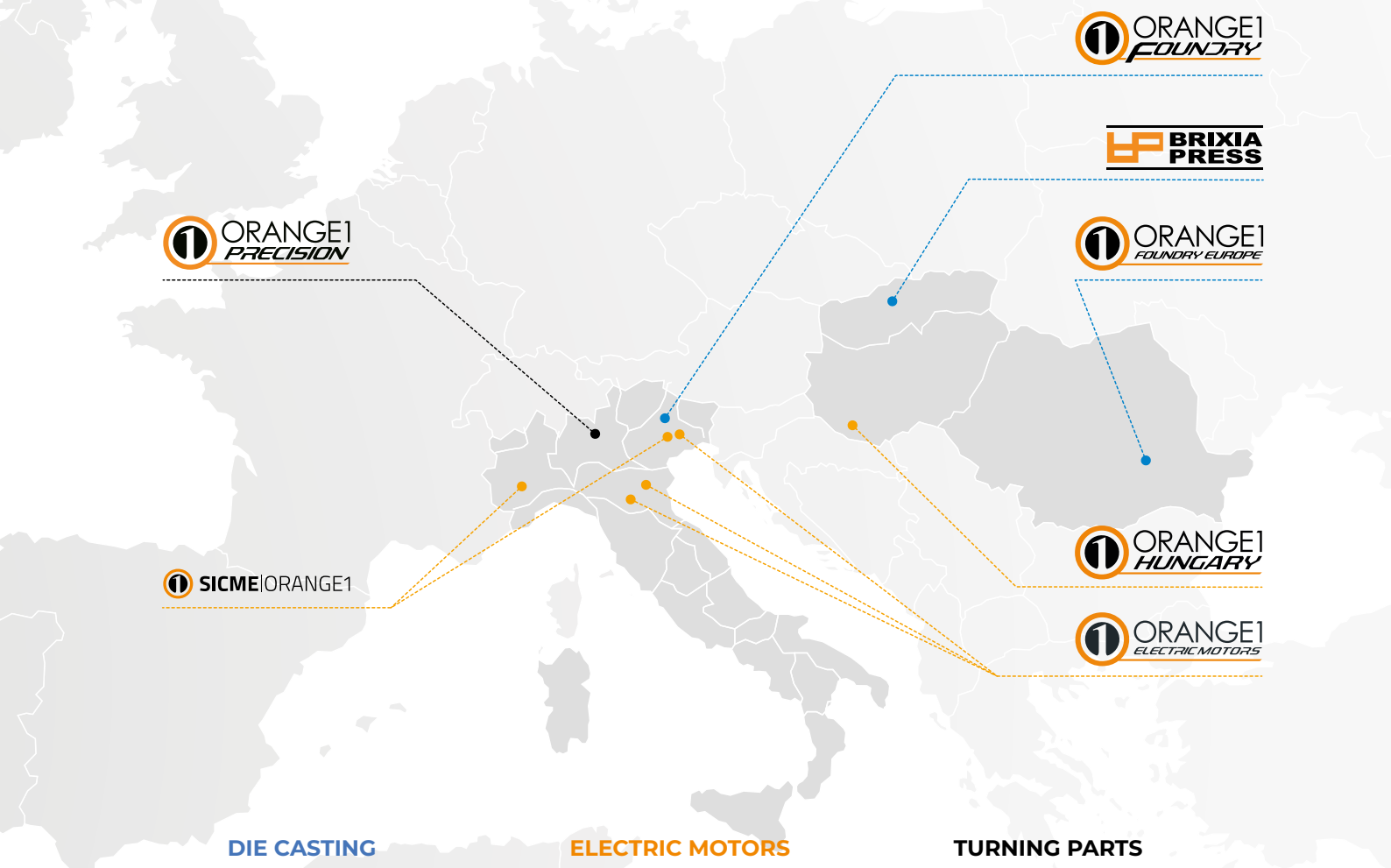
PERMANENT MAGNET BRUSHLESS SERVOMOTORS

Member of ORANGE1 HOLDING

ORANGE1 HOLDING

A dynamic, strong and ambitious Group

Orange1 Holding is an international renown Group, one of the most important European manufacturers of single-phase and three-phase asynchronous electric motors. It has an annual capacity of more than 1 million motors and 5 million electric stators. The group, established in 1971 by Leone Donazzan, chaired today by his son Armando Donazzan, is strongly focused on technological innovation, performance and customization to meet individual clients requirements.



DIE CASTING

ELECTRIC MOTORS

TURNING PARTS

SICME | ORANGE1

Sicme orange1 was born from the fusion of Sicme Motori and Magnetic.
Sicme Motori is an italian manufacturer of electric motors and generators for industrial applications, founded in Turin – Italy, in 1967. Over the years, the company has developed new technologies, expanding its products range and its geographical coverage.
Magnetic Motors, founded in 1973 under the name O.C.E.M., manufactured small rotating electrical machines specifically designed to be used for variable speed application. The company headquarters have been in Montebello Vicentino since 1986.
Today Sicme-Orange1 designs and manufactures a wide range of variable speed electric motors suitable for many industrial applications

PRODUCTION PLANTS

LOCATION	MOTORS PRODUCTION
MONTEBELLO VIC.NO - ITALY 36054 (VI) Via del Lavoro 7	AC VECTORIAL MOTORS DC MOTORS BRUSHLESS MOTORS TORQUE MOTORS
TORINO - ITALY 10156 (TO) Strada del Francese 130	AC MOTORS DC MOTORS GENERATORS SERVICE RELUCTANCE MOTORS

#WEAREPASSION

We look to the future, to anticipate customers' needs.

Soul, Heart and Brain striving to create real value to our customers and to ourselves. Our motto is "We Are Passion" to win the most passionate challenge: anticipate customers' needs. With its mission the company creates real value to the customers by considering their perspectives and meeting their expectations. Orange1 Holding defines itself as a "Manufacturer of Solutions". How to ride through time? Orange1 moves with the time acting without hesitation in order to be constantly at the cutting edge of development in its sector.

RESEARCH & DEVELOPMENT

The R&D Department is a strategic advantage for the Group.

The design and development of new products is a crucial factor in such a changing industrial society considering the technological innovations and the competitors. Corporate strategies and choices are extensive technological research, desire to emerge and a high level of originality. Orange1 products suit customers and market needs despite the high level of personalization. The launch of a new product is the conclusion of a thorough market analysis. By focusing on the flexibility and efficiency Orange1 Group responds to customers' demands designing customized models for special applications. This has allowed a notable technological and production development.

A TEAM OF 26 SPECIALIZED DESIGNER
High technical skill and competence centers for mechanical and electromagnetic design.

STANDARDS AND CERTIFICATIONS

The Group is certified ISO 9001:2015

Orange1 always commits to implementing the existing standards and strives to maintain high levels in service and quality. To increase customer satisfaction, Orange1 has acquired the following certification in order to meet the requirements for each country:

INDICE — INDEX

Nominal torque Nm
Nominal power kW

NGBe

4,9 Nm
1,9 kW

NGBe96

11,9 Nm
2,7 kW

NGBe123

30 Nm
4,1 kW

NGBe143

NGBe143.TEBC 39 Nm
9,1 kW

NGBe200 86 Nm
27,0 kW

NGBe200.TEBC 116 Nm
36,4 kW

SERVOMOTORI BRUSHLESS NGBe — Pensati per le esigenze sempre più estreme dell'automazione industriale che richiedono sistemi ad elevate prestazioni, miglior affidabilità e ridotta manutenzione.
La serie NGBe è stata sviluppata utilizzando materiali di altissima qualità, nuovi dettagli estetici e funzionali sono stati introdotti per ottenere ingombri ridotti e una riduzione dei costi per il cliente.

THE NGBe BRUSHLESS RANGE — *The NGBe brushless servomotors are designed to meet the increasingly demanding needs of the automation industry, which require high-performance systems, greater reliability, and reduced maintenance. We used high-quality materials to develop the NGBe series. The new aesthetic and functional details introduced allowed us to reduce the overall dimensions, resulting in great savings for the customer.*

LINEA NGBe
NGBe SERIE

Caratteristiche principali — Main features

Affidabilità — Reliability

Magneti
Realizzati in terre rare NeFeB, rivestiti superficialmente per garantire elevate prestazioni e una protezione totale del magnete da fenomeni di ossidazione e corrosione vengono inoltre contenuti da un elemento tubolare.

Magnets
Magnets are made of NeFeB rare earth and are surface-coated to guarantee high performance and protect them against oxidation and corrosion. Moreover, they are contained in a tubular element.

Colle epossidiche
Dedicate all'incollaggio dei magneti al rotore per consentire un bloccaggio strutturale degli stessi, il riempimento dei giochi ed un'ottima protezione del magnete.

Epoxy glues
Used to glue the magnets to the rotor and lock them in place, fill in gaps, and protect the magnet.

Cuscinetti
Di tipo a sfere con schermi, prelubrificati a vita.
Il cuscinetto lato accoppiamento è stato scelto con un'adeguata capacità di carico radiale e sul lato opposto un cuscinetto speciale con grasso per alte temperature.

Bearings
The shielded ball bearings are lubricated for life. The bearing on the coupling side has a suitable radial load capacity, whereas the special bearing on the opposite side has high-temperature grease.

Stator — The motors manufactured with the stator's monolithic structure, thus guaranteeing reliability and greater structural rigidity.
.

Modularità — Modularity

NGBe è progettato prevedendo un'uguale predisposizione meccanica per il montaggio di **4 differenti tipi di feedback motore**.

Il fissaggio del motore alle vostre macchine è agevole grazie all'**accesso diretto delle viti di fissaggio della flangia** B5, V1 o V3.

Le connessioni previste per i connettori M23 hanno la funzionalità di **aggancio rapido**, garantendo praticità anche nelle situazioni di impianti con difficile accessibilità.

***NGBe** has an equal mechanical set-up for assembling **4 types of motor feedback**.*

*The motor can be easily fastened to your machines thanks to the **direct access to the B5, V1 or V3 flange fastening screws**.*

*The connections of the M23 connectors have the **quick coupling function**, which guarantees practicality, even when systems are difficult to access.*

Isolamento — Insulation

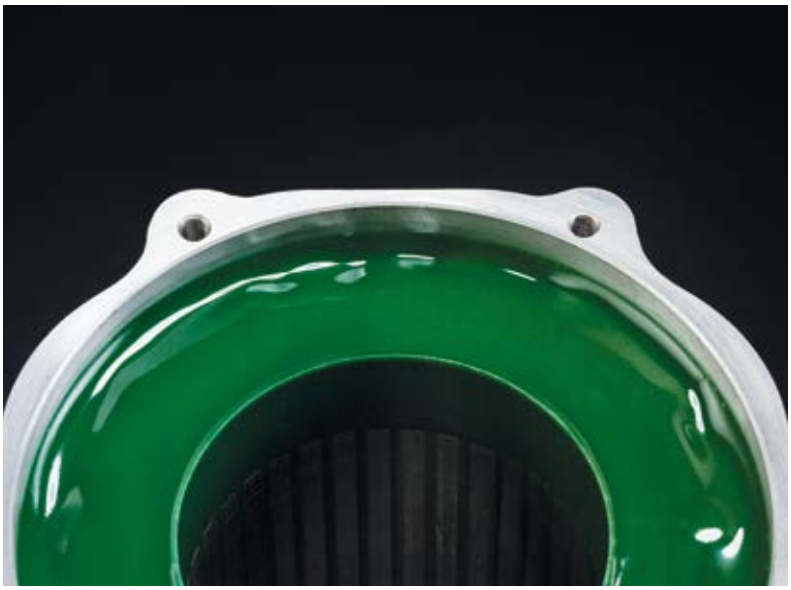
Tutta la **serie NGBe** è in **classe termica F**, pertanto la massima sovratemperatura dell'avvolgimento ammessa è di 105K (temperatura max ambiente 40°C) .

L'avvolgimento dello statore è progettato con un **doppio isolamento elettrico**.
Una prima impregnazione di vernice isolante seguita da un secondo riempimento con resina epossidica, in ambiente sottovuoto. Queste attenzioni garantiscono un eccellente grado di affidabilità dell'avvolgimento. Un'ottima soluzione per la protezione dello statore anche nei momenti di smontaggio per le operazioni di manutenzione.

*The entire **NGBe series** has a **class F thermal rating**; therefore, the maximum winding over-temperature permitted is of 105K (maximum room temperature: 40°C).*

*The winding of the stator is designed with **double electrical insulation**.*
It is first impregnated with an insulating paint and then it is filled with an epoxy resin in a vacuum environment.
These details make the winding extremely reliable. An excellent solution to protect the stator during disassembly operations for maintenance purposes.

References standard —
Our brushless servomotors comply with the IEC 60034 standard concerning rotating electrical machines. Therefore, they comply with the regulations of most of the EU Countries.



Soluzioni costruttive — Constructive solutions

Dummy slot

Sono previste delle nicchie sullo statore per produrre effetti sulla coppia simili a quelli dovuti alle cave, compensandoli.
The slots on the stator produce effects on the torque similar to those on the hollows, thereby compensating them.

Magnet phase shift

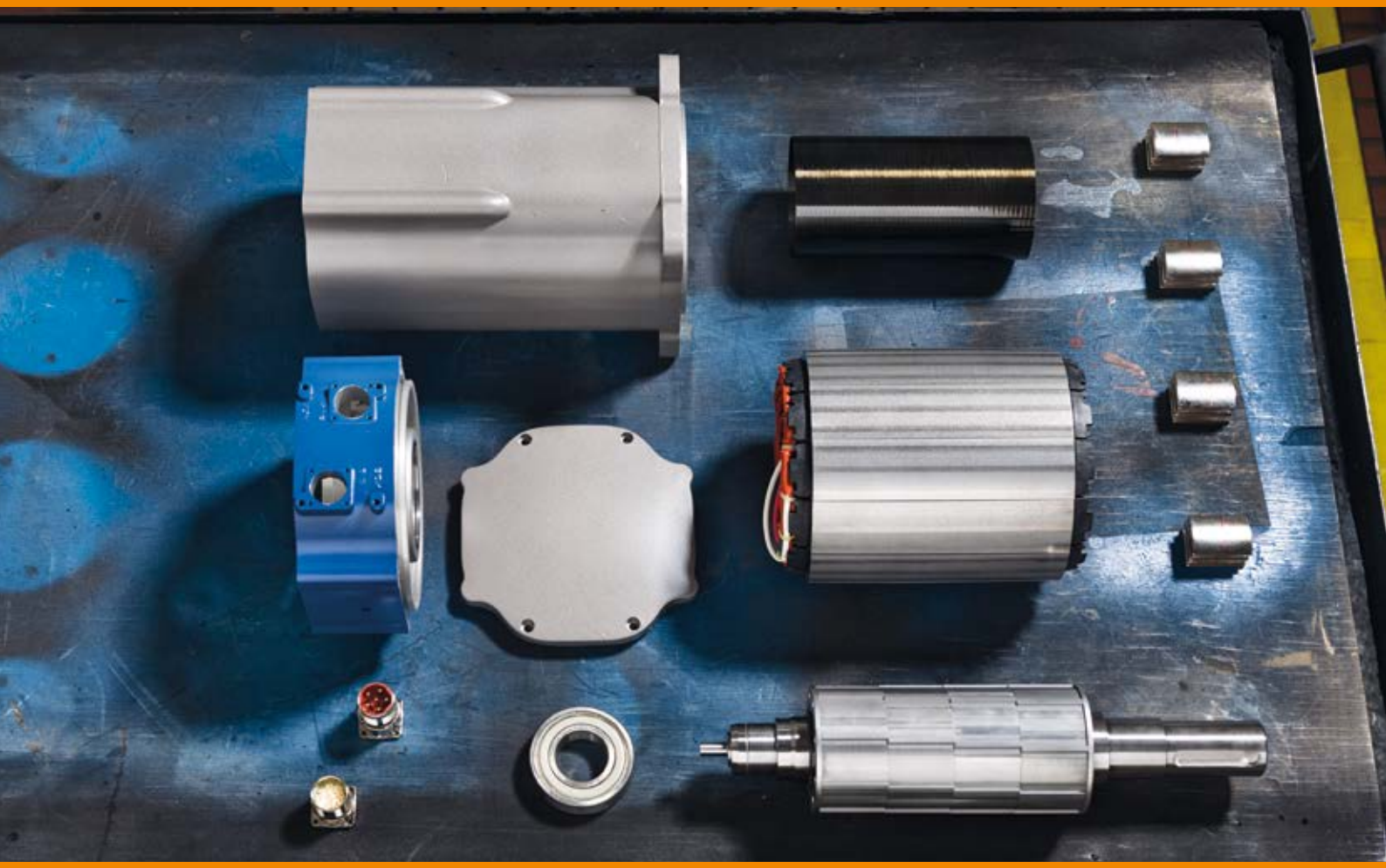
Nello stesso modulo di rotore i magneti sono collocati in posizione asimmetrica.
The magnets are placed in an asymmetric position in the same rotor module.

Stepped skewing

Posizione disallineata dei moduli del rotore
Misaligned position of the rotor modules.

"I servomotori NGBe sono progettati per ottenere una ridotta pendolazione di coppia, a favore di un'ottima rotondità di moto."

"NGBe servomotors are designed to reduce torque oscillation and promote excellent rotation regularity."



NGB evolution

I NUOVI SERVOMOTORI —

BRUSHLESS — *L'estetica del prodotto è il risultato di una grande attenzione al rapporto tra forma e funzionalità dei diversi componenti, soluzione capace di offrire un otore dalla forte riconoscibilità e con importanti dettagli funzionali.*

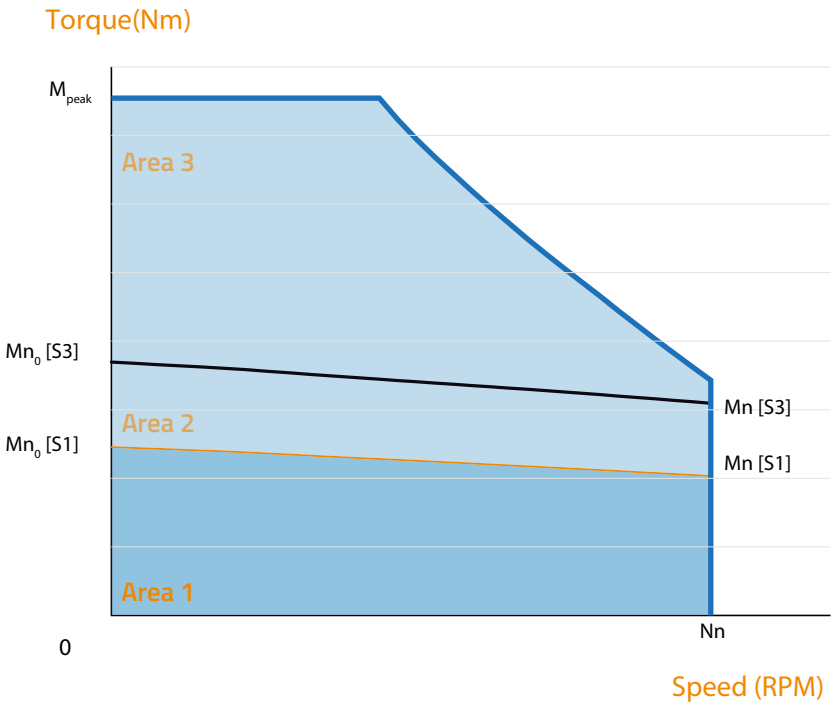
THE NEW BRUSHLESS MOTORS —

The aesthetics of the product is the result of our great attention to the relationship between the shape and functionality of different components to provide a highly recognizable motor with important functional details.

"L'attenzione che poniamo nella scelta dei materiali, ci consente di proporre servomotori dalle ottime performance, elevata robustezza e massima affidabilità."

"Our attention in choosing the materials allows us to provide high-performance, solid, and reliable servomotors."

Definizione dei parametri — Parameters definition



Reference graph for the parameters defined in this catalogue.
For technical details not included in this document, refer to the NGBe series technical manual.

Area 1:
Area di funzione del motore in servizio continuativo S1 (CEI EN 60034-1); la curva Mn_0–Mn indica il declassamento della coppia continuativa erogabile in funzione della velocità.

***Area 1**:*
Function area of the motor in continuous running duty S1 *(IEC EN 60034-1); the* Mn_0-Mn *curve indicates the de-rating of the continuous torque supplied according to speed.*

Area 2:
Area di funzione del motore con servizio intermittente periodico S3-40% su periodo di un minuto (CEI EN 60034-1), con 40 secondi a carico costante e 60 secondi con motore a riposo; la curva Mn_0[S3] – Mn[S3] indica il declassamento della coppia quadratica media del cliclo erogabile, in funzione della velocità.

***Area 2**:*
Function area of the motor with periodic intermittent duty S3-40% over a period of one minute (IEC EN 60034-1), with 40 seconds at constant load and 60 seconds with motor in standby; the Mn_0[S3] – Mn[S3] *curve indicates the de-rating of the cycle average square torque supplied, according to speed.*

Area 3:
Area che descrive la coppia massima fornibile dal motore in relazione alle caratterische costruttive dello stesso [M_{peak}] e in relazione alla massima tensione fornibile dal convertitore. Nella scelta del motore e avvolgimento si deve considerare la velocità fino a cui viene richiesta l'erogazione della coppia massima.

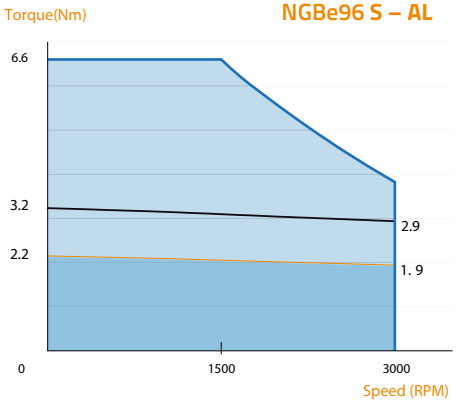
***Area 3**:*
This area describes the maximum torque supplied by the motor in relation to its construction features [M_{peak}] *and maximum converter-supplied voltage. When choosing the motor and winding, it is important to consider the speed up to which the maximum torque has to be supplied.*

***Nominal Speed Nn:** It is the maximum speed available at which the maximum overload torque is higher than* Mn_0*[S1]*

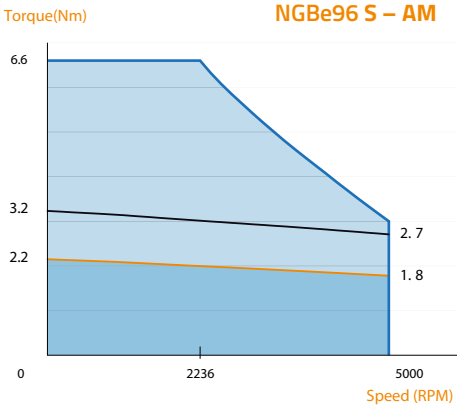
NGBe96 TENV - 8 poles - 3x360VRMS motor power supply

	code	Nominal speed Nn	Duty cycle S1: Stall torque Mn_0	Duty cycle S1: Nominal torque Mn	Duty cycle S1: Stall current In_0	Duty cycle S3-40%, 1 min: Stall torque $Mn_{0\ [S3]}$	Duty cycle S3-40%, 1 min: Nominal torque Mn [S3]	Peak torque M_{peak}	Torque costant K_t	Inertia J	Weight m
NGBe96S	**AL**	**3000** Rpm	**2.2** Nm	**1.9** Nm	**2.2** A_{RMS}	**3.2** Nm	**2.9** Nm	**6.6** Nm	**0.99** Nm/A_{RMS}	**1.3** kgcm²	**3.3** kg
NGBe96M	**AI**	3000 Rpm	3.6 Nm	3.2 Nm	2.8 A_{RMS}	5.5 Nm	4.9 Nm	10.8 Nm	1.30 Nm/A_{RMS}	2.3 kgcm²	4.5 kg
NGBe96L	**AH**	**3000** Rpm	**4.9** Nm	**4.2** Nm	**3.7** A_{RMS}	**7.5** Nm	**6.5** Nm	**14.7** Nm	**1.34** Nm/A_{RMS}	**3.4** kgcm²	**5.6** kg
NGBe96S	**AM**	5000 Rpm	2.2 Nm	1.8 Nm	3 A_{RMS}	3.2 Nm	2.7 Nm	6.6 Nm	0.71 Nm/A_{RMS}	1.3 kgcm²	3.3 kg
NGBe96M	**AF**	**5000** Rpm	**3.6** Nm	**2.8** Nm	**4.6** A_{RMS}	**5.5** Nm	**4.3** Nm	**10.8** Nm	**0.79** Nm/A_{RMS}	**2.3** kgcm²	**4.6** kg
NGBe96L	**AD**	5000 Rpm	4.9 Nm	3.5 Nm	5.9 A_{RMS}	7.5 Nm	5.5 Nm	14.7 Nm	0.83 Nm/A_{RMS}	3.4 kgcm²	5.6 kg

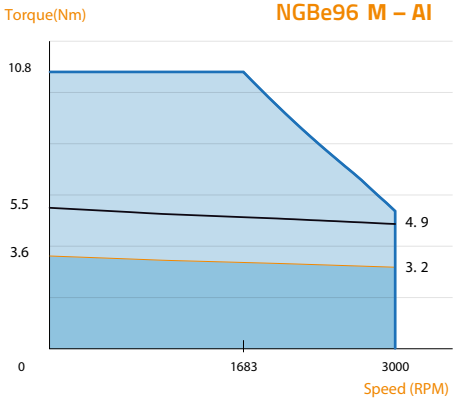
NGBe96 S – AL



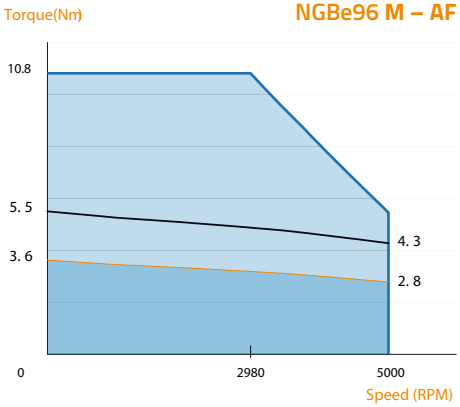
NGBe96 S – AM



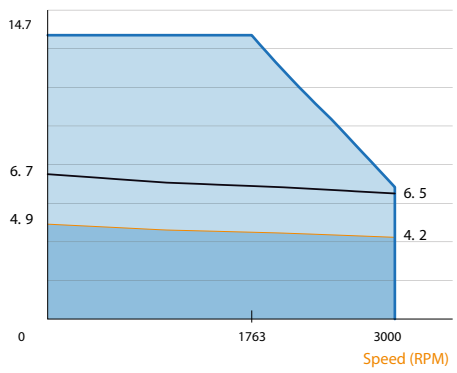
NGBe96 M – AI



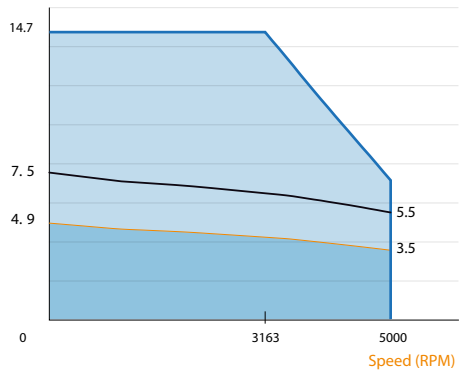
NGBe96 M – AF



NGBe96 L – AH



NGBe96 L – AD



Torque costant —
The torque
is proportional
to the motor current

$$Kt = \frac{Mn\ [Nm]}{In\ [A_{RMS}]}$$

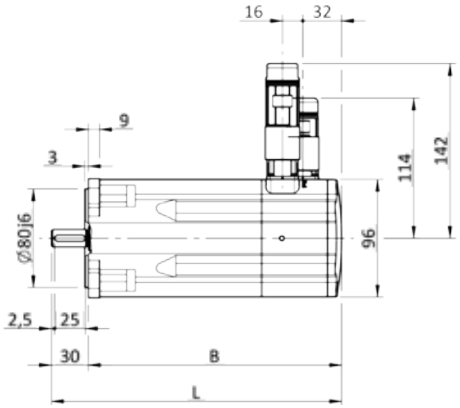
Others informations:
more data are available
on technical manual of
NGBe motor

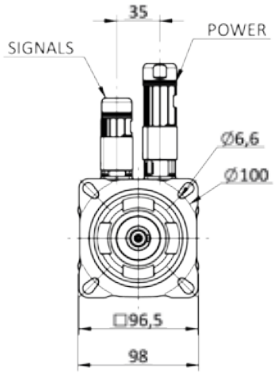
Max torque
S3 - 40% 1'
S1 torque

NGBe96 S — B: 152mm
L: 182mm
LB: 232mm

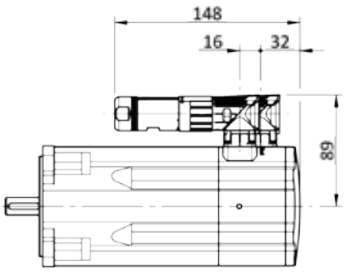
NGBe96 M — B: 179mm
L: 209mm
LB: 259mm

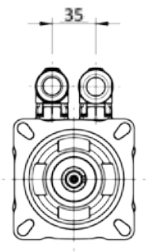
NGBe96 L — B: 206mm
L: 236mm
LB: 286mm



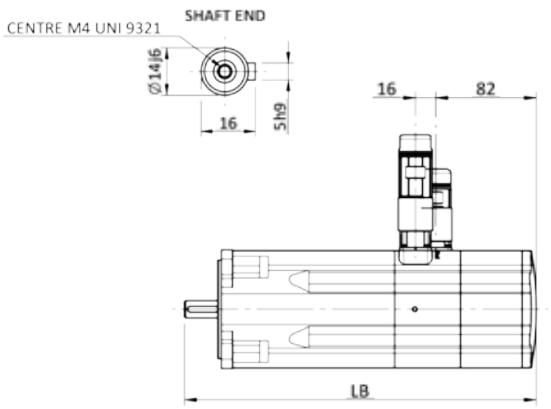


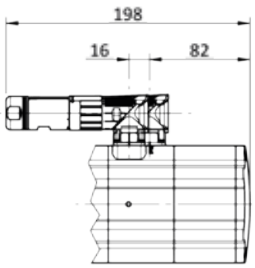
Version B —
Standard execution





Version D —
Motor with rotatable
right angle connectors



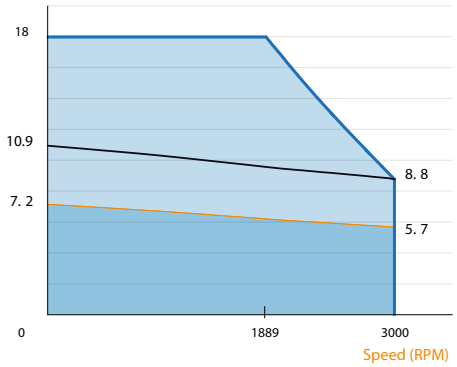


Motor with brake —
Left: Version B
Right: Version D

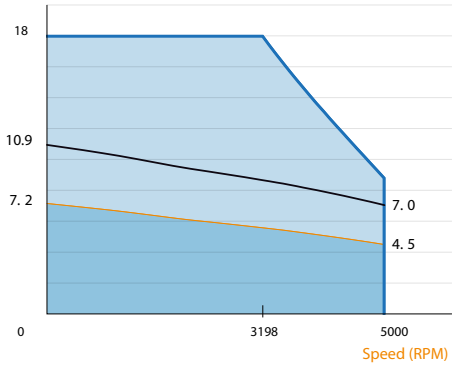
NGBe123 TENV - 8 poles - 3x360VRMS motor power supply

	code	Nominal speed Nn	Duty cycle S1: Stall torque Mn_0	Duty cycle S1: Nominal torque Mn	Duty cycle S1: Stall current In_0	Duty cycle S3-40%, 1 min: Stall torque $Mn_{0\ [S3]}$	Duty cycle S3-40%, 1 min: Nominal torque Mn [S3]	Peak torque M_{peak}	Torque costant K_t	Inertia J	Weight m
NGBe123S	**AK**	**3000** Rpm	**7.2** Nm	**5.7** Nm	**5.3** A_{RMS}	**10.9** Nm	**8.8** Nm	**18** Nm	**1.36** Nm/A_{RMS}	**8.2** kgcm²	**7.3** kg
NGBe123M	**AJ**	3000 Rpm	9.6 Nm	7.2 Nm	6.5 A_{RMS}	14.8 Nm	11.3 Nm	25 Nm	1.48 Nm/A_{RMS}	12.1 kgcm²	9.2 kg
NGBe123L	**AG**	**3000** Rpm	**11.9** Nm	**8.5** Nm	**8** A_{RMS}	**18.4** Nm	**13.4** Nm	**36** Nm	**1.49** Nm/A_{RMS}	**16.1** kgcm²	**11.3** kg
NGBe123S	**AI**	5000 Rpm	7.2 Nm	4.5 Nm	8.7 A_{RMS}	10.9 Nm	7.0 Nm	18 Nm	0.83 Nm/A_{RMS}	8.2 kgcm²	7.3 kg
NGBe123M	**AF**	**5000** Rpm	**9.6** Nm	**4.9** Nm	**10.5** A_{RMS}	**14.8** Nm	**7.8** Nm	**25** Nm	**0.91** Nm/A_{RMS}	**12.1** kgcm²	**9.2** kg
NGBe123L	**AD**	5000 Rpm	11.9 Nm	4.5 Nm	13.2 A_{RMS}	18.4 Nm	7.3 Nm	36 Nm	0.90 Nm/A_{RMS}	16.1 kgcm²	11.3 kg

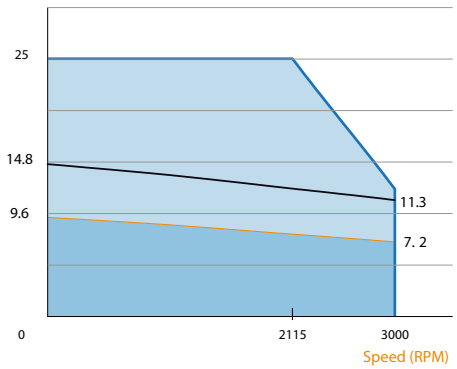
NGBe123 S – AK



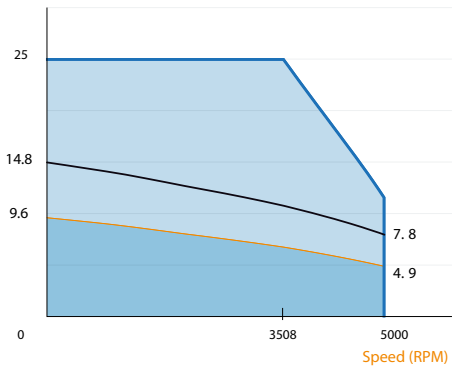
NGBe123 S – AI



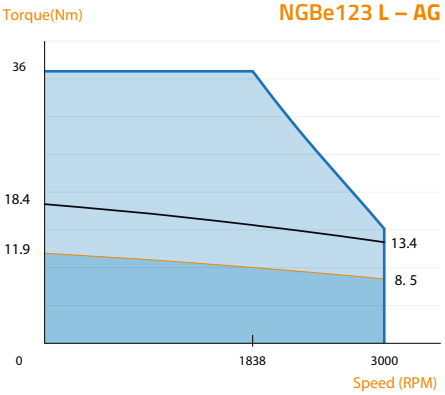
NGBe123 M – AJ



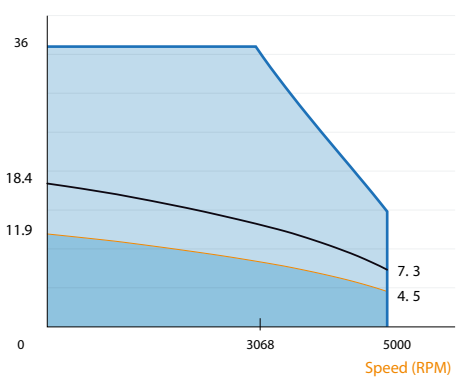
NGBe123 M – AF



NGBe123 L – AG



NGBe123 L – AD



Torque costant —
The torque
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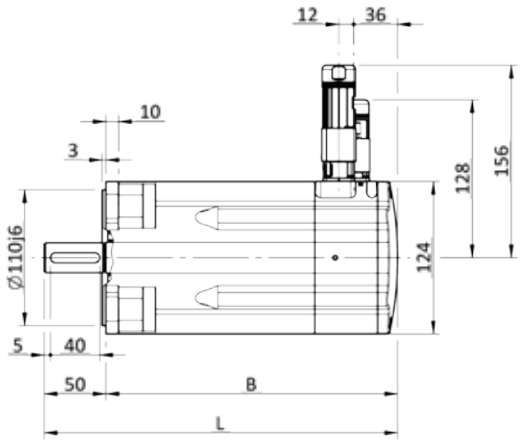
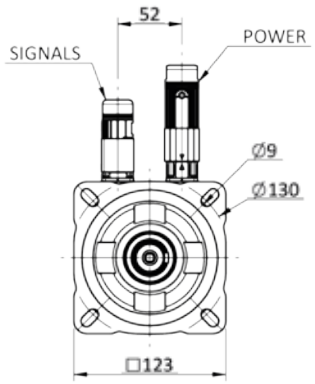
$$Kt = \frac{Mn\ [Nm]}{In\ [A_{RMS}]}$$

Others informations:
more data are available
on technical manual of
NGBe motor

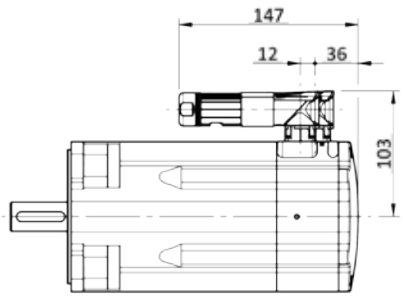
Max torque
S3 - 40% 1'
S1 torque

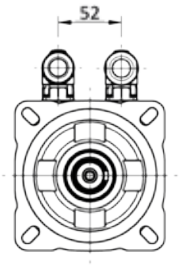
NGBe123S — B: 183mm
L: 233mm
LB: 287mm
NGBe123M — B: 210mm
L: 260mm
LB: 314mm
NGBe123L — B: 236mm
L: 286mm
LB: 340mm



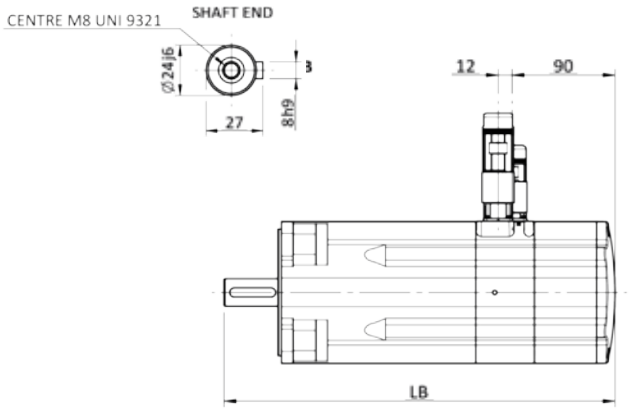


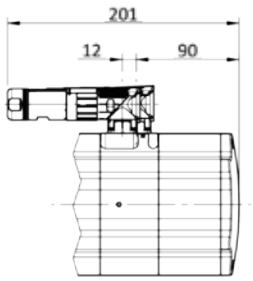
Version B —
Standard execution





Version D —
Motor with rotatable
right angle connectors

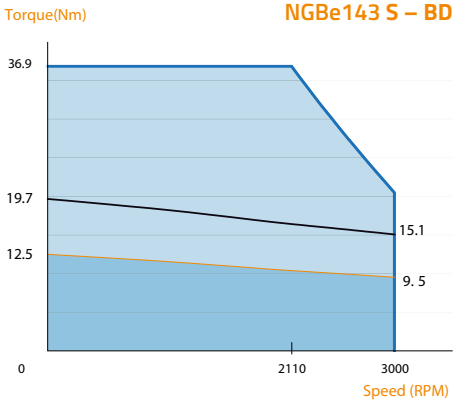


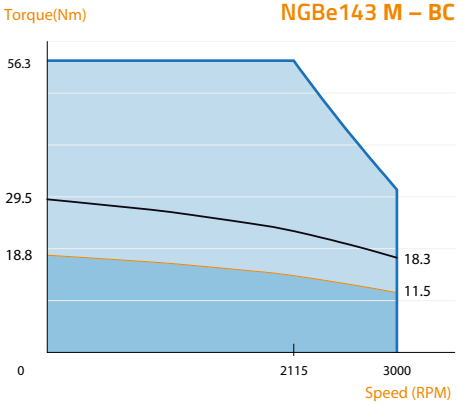


Motor with brake —
Left: Version B
Right: Version D

NGBe143 TENV - 8 poles - 3x360VRMS motor power supply

	code	Nominal speed Nn	Duty cycle S1: Stall torque Mn_0	Duty cycle S1: Nominal torque Mn	Duty cycle S1: Stall current In_0	Duty cycle S3-40%, 1 min: Stall torque $Mn_{0\ [S3]}$	Duty cycle S3-40%, 1 min: Nominal torque $Mn_{[S3]}$	Peak torque M_{peak}	Torque costant K_t	Inertia J	Weight m
NGBe143S	BD	3000 Rpm	12.5 Nm	9.5 Nm	9.4 A_{RMS}	19.7 Nm	15.1 Nm	36.9 Nm	1.33 Nm/A_{RMS}	28 $kgcm^2$	12.6 kg
NGBe143M	BC	3000 Rpm	18.8 Nm	11.5 Nm	13.9 A_{RMS}	29.5 Nm	18.3 Nm	56.3 Nm	1.35 Nm/A_{RMS}	38 $kgcm^2$	16.2 kg
NGBe143L	AE	3000 Rpm	25 Nm	12.7 Nm	16.6 A_{RMS}	39.4 Nm	20.2 Nm	75 Nm	1.51 Nm/A_{RMS}	49 $kgcm^2$	20.0 kg
NGBe143P	AD	3000 Rpm	30 Nm	13.1 Nm	19.8 A_{RMS}	47.3 Nm	20.8 Nm	90 Nm	1.52 Nm/A_{RMS}	60 $kgcm^2$	23.8 kg

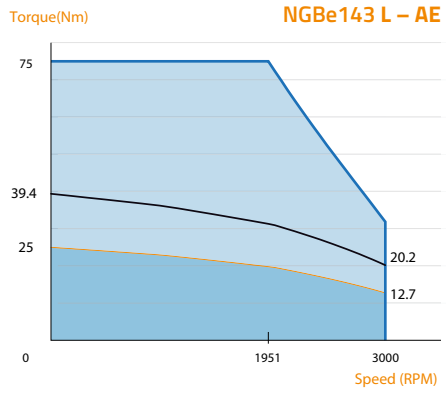


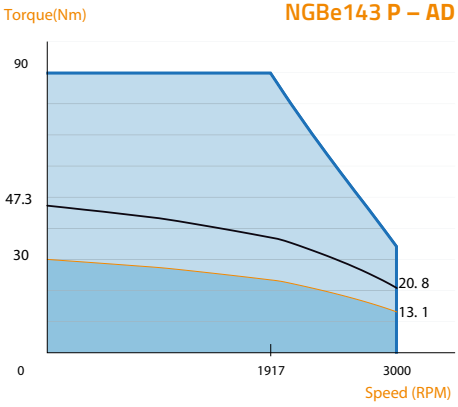


Torque costant —
The torque
is proportional
to the motor current

$$Kt = \frac{Mn\ [Nm]}{In\ [A_{RMS}]}$$

Others informations:
more data are available
on technical manual of
NGBe motor





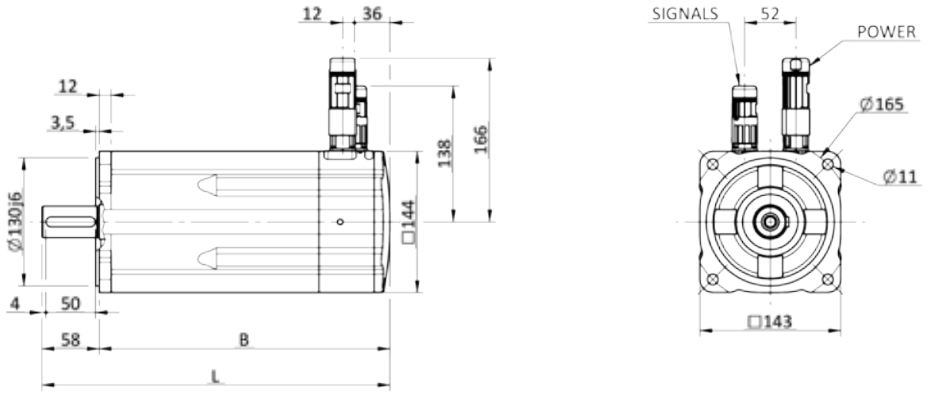
Max torque
S3 - 40% 1'
S1 torque

NGBe143S — B: 221mm
L: 279mm
LB: 344mm

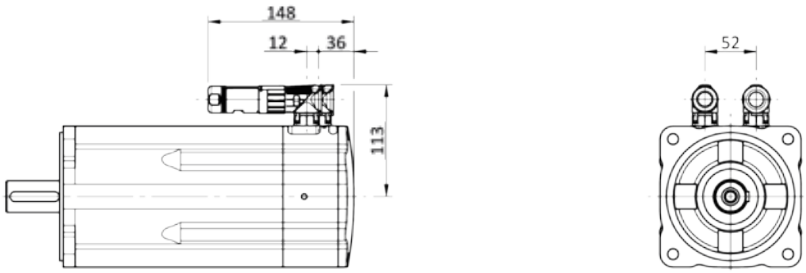
NGBe143M — B: 258mm
L: 316mm
LB: 381mm

NGBe143L — B: 295mm
L: 353mm
LB: 418mm

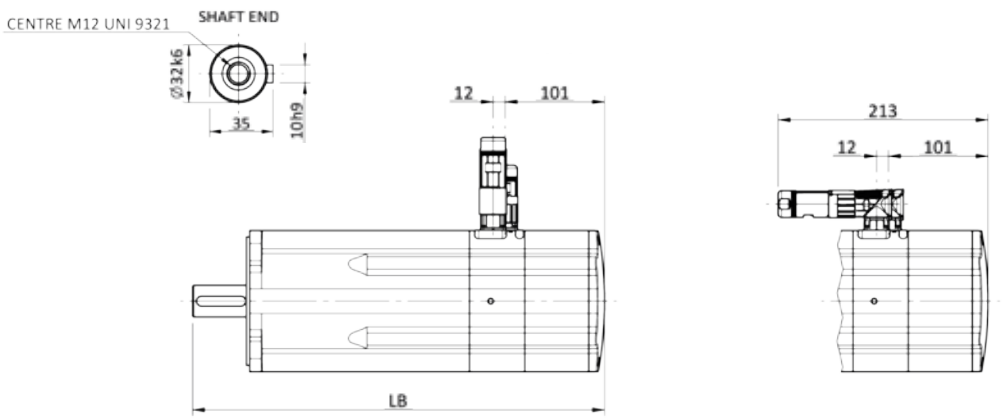
NGBe143P — B: 332 mm
L: 390mm
LB: 455mm



Version B —
Standard execution



Version D —
Motor with rotatable
right angle connectors



Motor with brake —
Left: Version B
Right: Version D

NGBe143 TEBC - 8 poles - 3x360VRMS motor power supply

	code	Nominal speed Nn	Duty cycle S1: Stall torque Mn_0	Duty cycle S1: Nominal torque Mn	Duty cycle S1: Stall current In_0	Duty cycle S3-40%, 1 min: Stall torque $Mn_{0\ [S3]}$	Duty cycle S3-40%, 1 min: Nominal torque Mn [S3]	Peak torque M_{peak}	Torque costant K_t	Inertia J	Weight m
NGBe143S	BD	3000 Rpm	17.3 Nm	14.7 Nm	13 A_{RMS}	26.9 Nm	23.1 Nm	36.9 Nm	1.33 Nm/A_{RMS}	28 $kgcm^2$	17.0 kg
NGBe143M	BC	3000 Rpm	24.7 Nm	19.9 Nm	18.3 A_{RMS}	38.5 Nm	31.3 Nm	56.3 Nm	1.35 Nm/A_{RMS}	38 $kgcm^2$	21.0 kg
NGBe143L	AE	3000 Rpm	31.8 Nm	24.6 Nm	21.3 A_{RMS}	49.7 Nm	39.8 Nm	75 Nm	1.49 Nm/A_{RMS}	49 $kgcm^2$	25.2 kg
NGBe143P	AD*	3000 Rpm	38.7 Nm	29 Nm	25.5 A_{RMS}	60.5 Nm	46.3 Nm	90 Nm	1.52 Nm/A_{RMS}	60 $kgcm^2$	30.0 kg

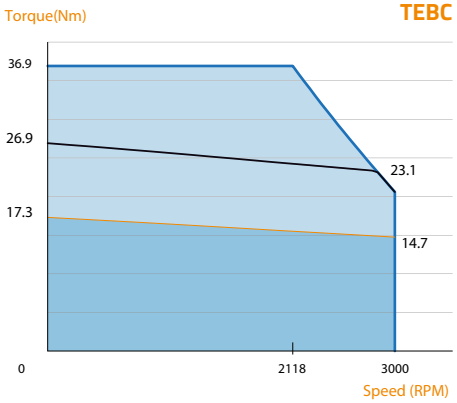
*Scatola morsetti disponibile per NGBe143 e obligatoria per NGBe143P
**Motor with terminal box is available for NGBe143 and mandatory for NGBe143P only*

Totally Enclosed Blower Cooled

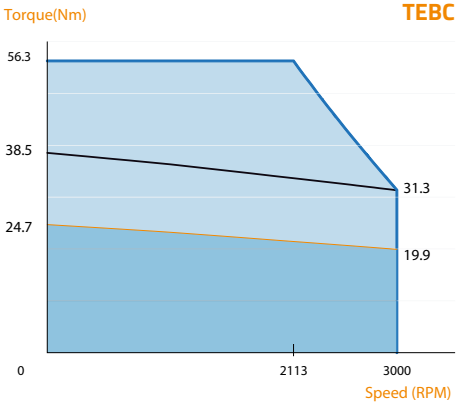
La vesione ventilata del NGBe consente di raggiungere coppie continuative più elevate in tutto il range di velocità. Si presta ad applicazioni dove il ciclo macchina è particolarmente oneroso. Prevede elettroventilatore con alimentazione 1x230Vac, 50/60Hz, 0.25A, 42kW su connettore insdustriale M16 3 pin.

The NGBe143 TEBC reaches higher continuous torque over the whole speed range. It is suitable for applications where machine cycle is particularly heavy. Fan supply 1x230Vac, 50/60Hz, 0.25A, 42W with M16 3 pins connector.

NGBe143 S – BD TEBC



NGBe143 M – BC TEBC

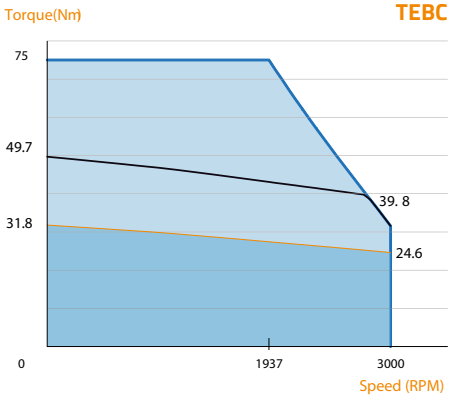


Torque costant —
The torque is proportional to the motor current

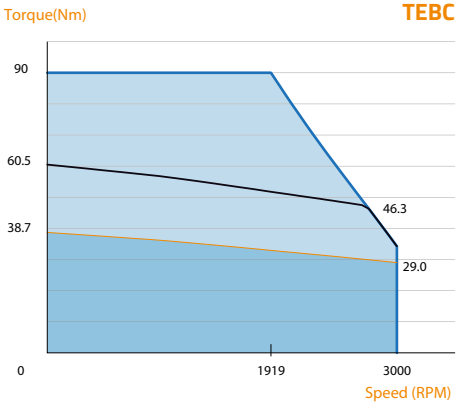
$$Kt = \frac{Mn\ [Nm]}{In\ [A_{RMS}]}$$

Others informations:
more data are available on technical manual.of NGBe motor

NGBe143 L – AE TEBC



NGBe143 P – AD TEBC



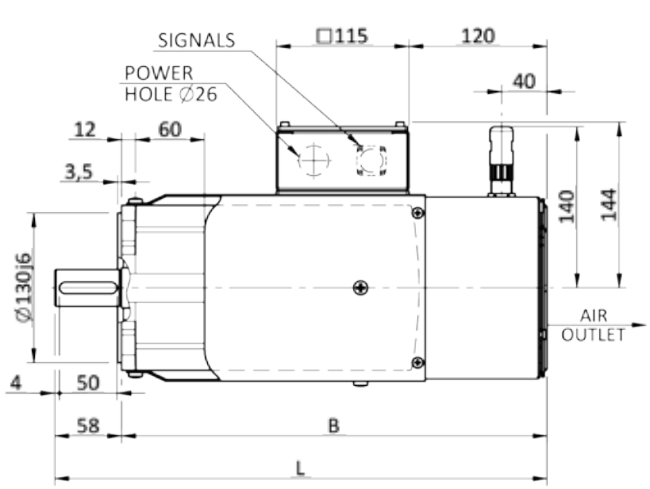
Max torque
S3 - 40% 1'
S1 torque

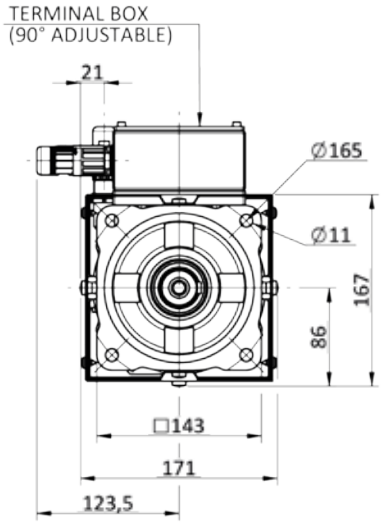
NGBe143S — B: 332mm
L: 390mm
LB: 455mm

NGBe143M — B: 369mm
L: 427mm
LB: 492mm

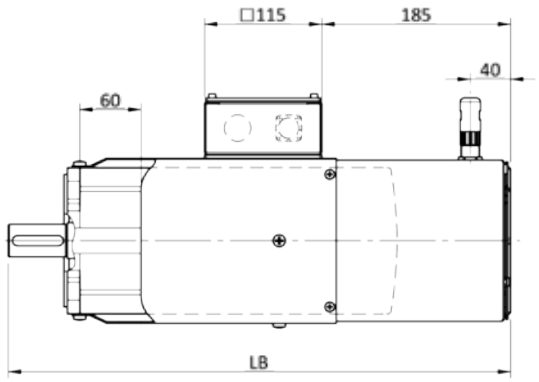
NGBe143L — B: 406mm
L: 464mm
LB: 529mm

NGBe143P — B: 443 mm
L: 501mm
LB: 566mm

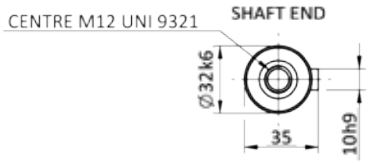




Version S:
Motor with terminal box and electrofan.



Motor with brake



For dimensions of motors with connectors output, please contact Sicme Orange1

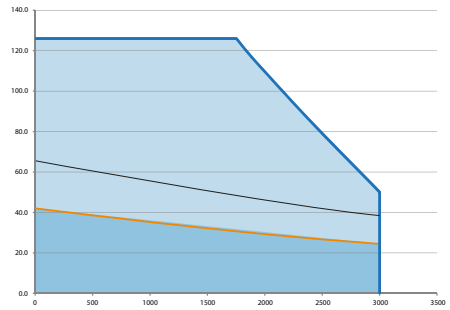
NGBe200 TENV - 8 poles - 3x360VRMS motor power supply

	code	Nominal speed Nn	Duty cycle S1: Stall torque Mn_0	Duty cycle S1: Nominal torque Mn	Duty cycle S1: Stall current In_0	Duty cycle S3-40% 1 min: Stall torque $Mn_{0\ [S3]}$	Duty cycle S3-40% 1 min: Nominal torque $Mn_{[S3]}$	Peak torque M_{peak}	Torque costant K_t	Inertia J	Weight m
NGBe200S	AJ	3000 Rpm	42 Nm	24,5 Nm	28,1 A_{RMS}	65,9 Nm	38,8 Nm	126 Nm	1,50Nm/A_{RMS}	66 kgcm2	29 kg
NGBe200M	AF	3000 Rpm	57 Nm	19,8 Nm	38,8 A_{RMS}	89,9 Nm	31,4 Nm	171 Nm	1,47 Nm/A_{RMS}	94 kgcm2	43 kg
NGBe200L	AK	2000 Rpm	68 Nm	34,4 Nm	28,2 A_{RMS}	107,5 Nm	54,4 Nm	204 Nm	2,41Nm/A_{RMS}	122 kgcm2	48 kg
NGBe200P	AF	2000 Rpm	75 Nm	27,2 Nm	31,4 A_{RMS}	118,7 Nm	42,9 Nm	225 Nm	2,39 Nm/A_{RMS}	150 kgcm2	60 kg

**Motor with connectors output is available for NGBe200*

Torque(Nm)

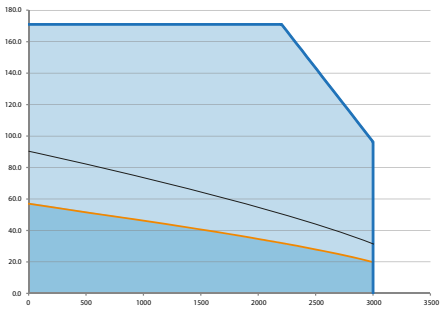
NGBe200S-AJ



Speed (RPM)

Torque(Nm)

NGBe200M-AF



Speed (RPM)

Torque costant —

The torque is proportional to the motor current

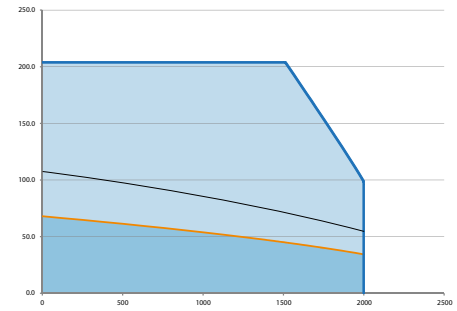
$$Kt = \frac{Mn\ [Nm]}{In\ [A_{RMS}]}$$

Others informations:

more data are available on technical manual of NGBe motor

Torque(Nm)

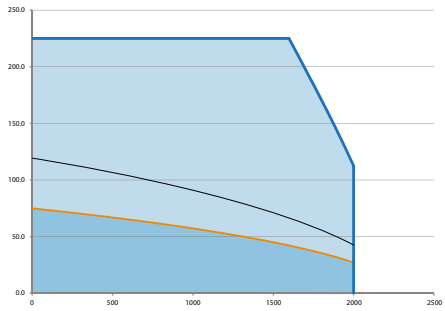
NGBe200L-AK



Speed (RPM)

Torque(Nm)

NGBe200P-AF



Speed (RPM)

Max torque

S3 - 40% 1'

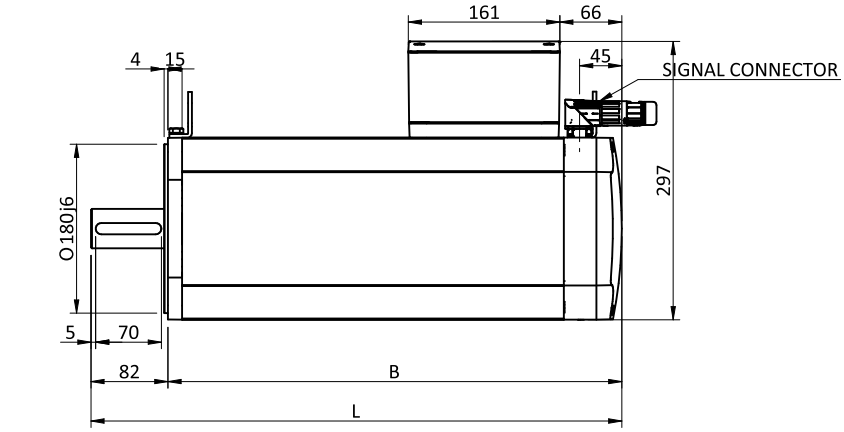
S1 torque

NGBe200S — B: 332mm
L: 404mm
LB: 493,5mm

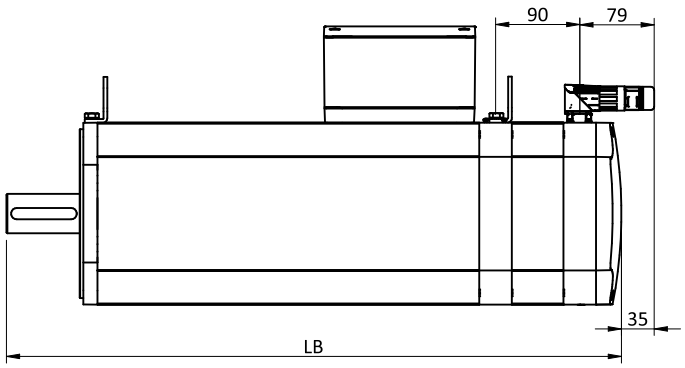
NGBe200M — B: 376mm
L: 458mm
LB: 547,5mm

NGBe200L — B: 430mm
L: 512mm
LB: 601,5mm

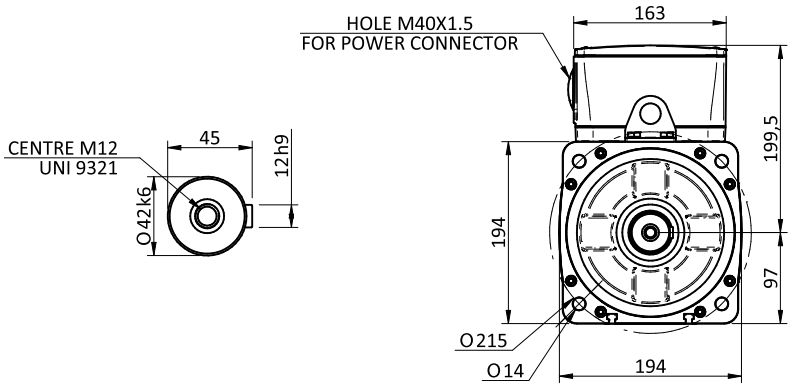
NGBe200P — B: 484mm
L: 566mm
LB: 655,5mm



Version S:
Motor with terminal box



Motor with brake



For dimensions of motors with connectors output, please contact Sicme Orange1

NGBe200 TEBC - 8 poles - 3x360VRMS motor power supply

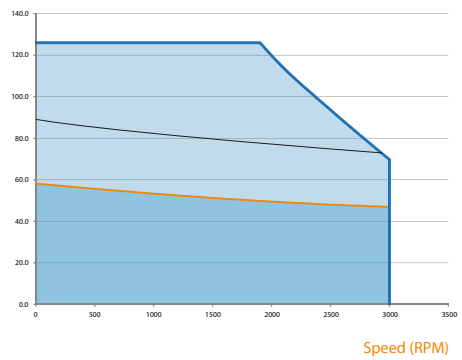
	code	Nominal speed Nn	Duty cycle S1: Stall torque Mn_0	Duty cycle S1: Nominal torque Mn	Duty cycle S1: Stall current In_0	Duty cycle S3-40% 1 min: Stall torque $Mn_{0\ [S3]}$	Duty cycle S3-40% 1 min: Nominal torque Mn [S3]	Peak torque M_{peak}	Torque costant K_t	Inertia J	Weight m
NGBe200S	**AH**	**3000 Rpm**	**58 Nm**	**46,9 Nm**	**49,3 A_{RMS}**	**88,8 Nm**	**69,8 Nm**	**126 Nm**	**1,18Nm/A_{RMS}**	**66 kgcm2**	**32 kg**
NGBe200M	**AF**	3000 Rpm	84 Nm	65,8 Nm	60,2 A_{RMS}	129,4 Nm	91,6 Nm	171 Nm	1,39 Nm/A_{RMS}	94 kgcm2	46 kg
NGBe200L	**AD**	**3000 Rpm**	**108 Nm**	**81,9 Nm**	**70,3 A_{RMS}**	**166,7 Nm**	**119,6 Nm**	**204 Nm**	**1,49Nm/A_{RMS}**	**122 kgcm2**	**51 kg**
NGBe200P	**AC**	3000 Rpm	128 Nm	99,2 Nm	76,7 A_{RMS}	199,5 Nm	121,9 Nm	225 Nm	1,67 Nm/A_{RMS}	150 kgcm2	64 kg

Totally Enclosed Blower Cooled

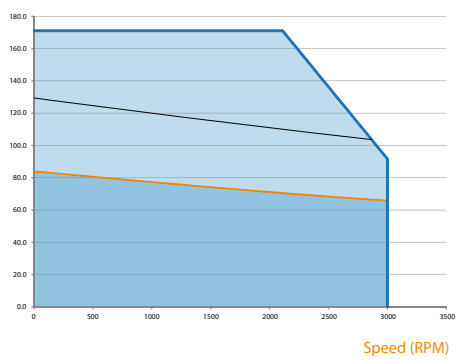
Prevede elettroventilatore con alimentazione 3x400Vac, 50/60Hz, 0.17/0,13A, 68/70W su connettore industriale M23 6 pin.

Fan supply 3x400Vac, 50/60Hz, 0,17/0,13A, 68/70W connected on M23 6 pins connector.

NGBe200S-AH



NGBe200M-AF



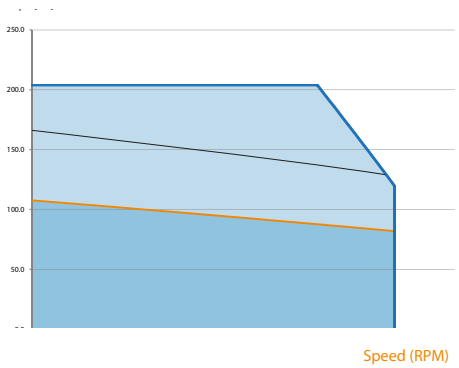
Torque costant —

The torque is proportional to the motor current

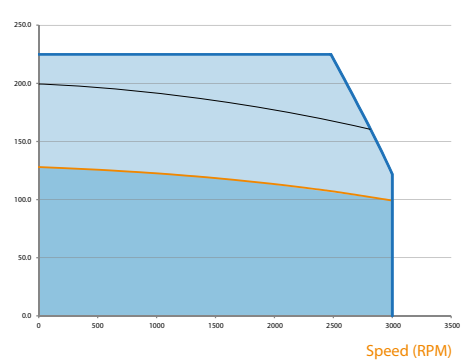
$$Kt = \frac{Mn\ [Nm]}{In\ [A_{RMS}]}$$

Others informations:
more data are available on technical manual of NGBe motor

NGBe200L-AD



NGBe200P-AC



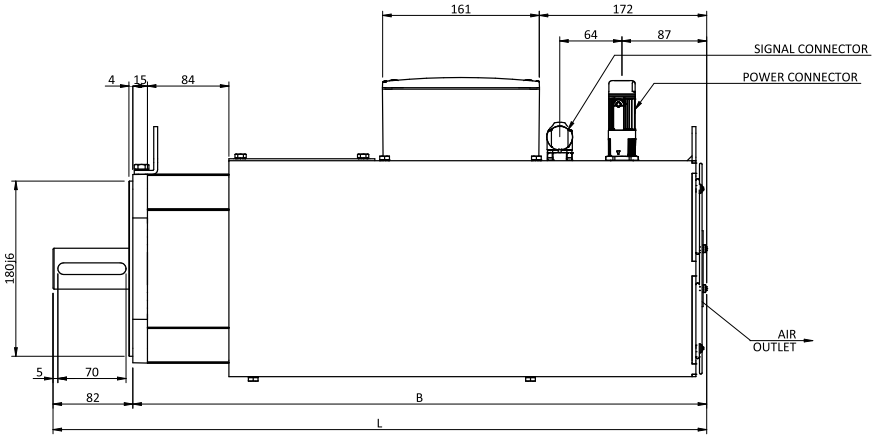
Max torque
S3 - 40% 1'
S1 torque

NGBe200S — B: 428mm
L: 510mm
LB: 599,5mm

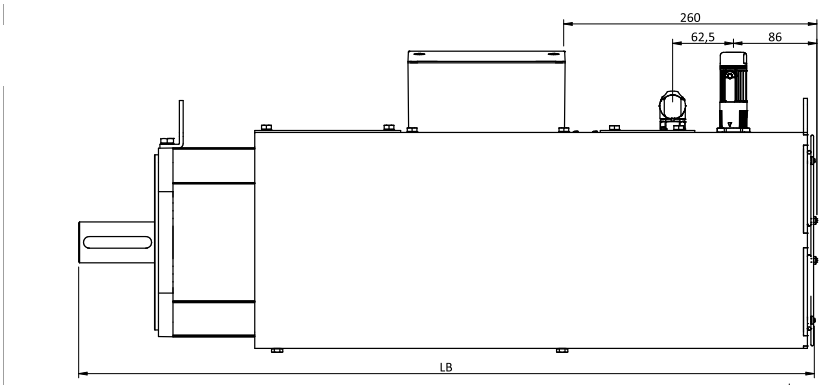
NGBe200M — B: 482mm
L: 564mm
LB: 653,5mm

NGBe200L — B: 536mm
L: 618mm
LB: 707,5mm

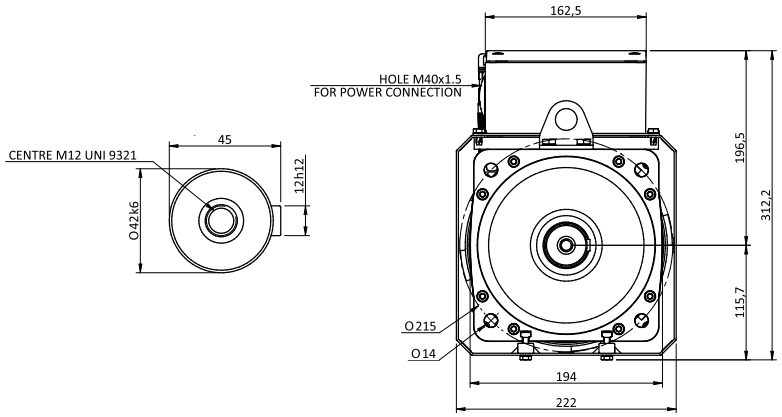
NGBe200P — B: 590mm
L: 672mm
LB: 761,5mm



Version S:
Motor with terminal box
and electrofan



Motor with brake



NGBe260 TENV - 8 poles - 3x360VRMS motor power supply

*preliminary data

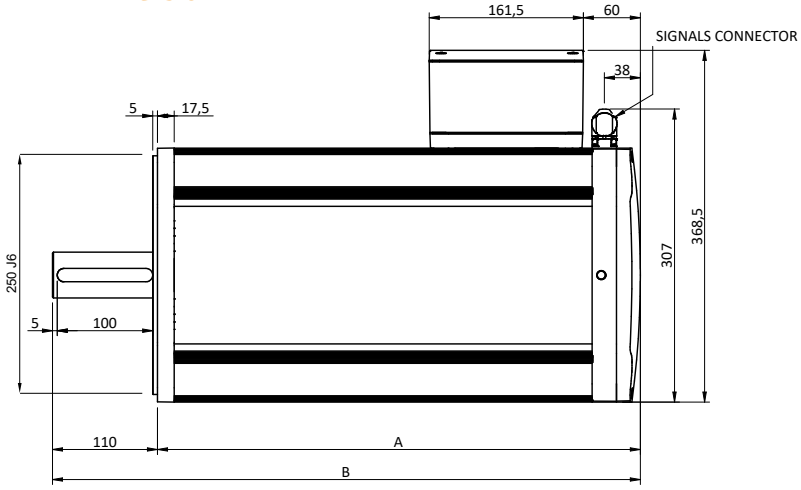
	code	Nominal speed Nn	Stall torque Mn_0	Nominal torque Mn	Stall current In_0	Peak torque Nm	Torque costant Nm/A	Inertia $Kgcm^2$	Weight m
NGBe260S	**S1**	**2000 Rpm**	**120 Nm**	**68 Nm**	**54 A_{RMS}**	**370 Nm**	**2,2 Nm/A_{RMS}**	**284 kgcm2**	**75 kg**
NGBe260M	**S2**	2000 Rpm	175 Nm	67 Nm	79 A_{RMS}	550 Nm	2,2 Nm/A_{RMS}	427 kgcm2	96 kg
NGBe260L	**S3**	**2000 Rpm**	**230 Nm**	**32 Nm**	**102 A_{RMS}**	**740 Nm**	**2,3 Nm/A_{RMS}**	**569 kgcm2**	**120 kg**
NGBe260P	**S4**	2000 Rpm	280 Nm	20 Nm	121 A_{RMS}	920 Nm	2,3 Nm/A_{RMS}	711 kgcm2	142 kg

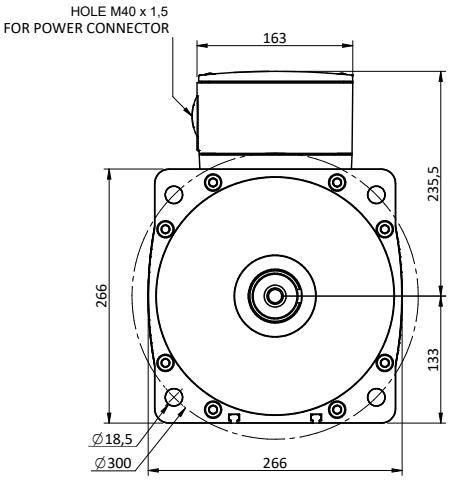
NGBe260 TEBC - 8 poles - 3x360VRMS motor power supply

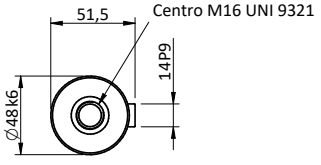
*preliminary data

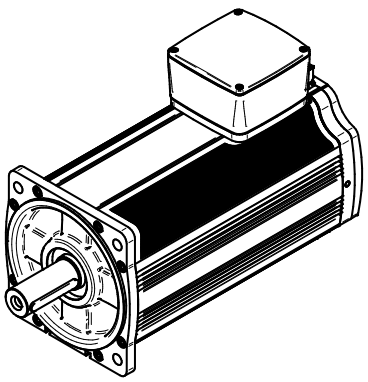
	code	Nominal speed Nn	Stall torque Mn_0	Nominal torque Mn	Stall current In_0	Peak torque Nm	Torque costant Nm/A	Inertia $Kgcm^2$	Weight m
NGBe260S	**S1**	**3000 Rpm**	**190 Nm**	**135 Nm**	**147 A_{RMS}**	**370 Nm**	**1,29 Nm/ A_{RMS}**	**284 kgcm2**	**87 kg**
NGBe260M	**S2**	3000 Rpm	280 Nm	170 Nm	200 A_{RMS}	550 Nm	1,40 Nm/A_{RMS}	427 kgcm2	109 kg
NGBe260L	**S3**	**3000 Rpm**	**360 Nm**	**190 Nm**	**245 A_{RMS}**	**740 Nm**	**1,47 Nm/ A_{RMS}**	**569 kgcm2**	**133 kg**
NGBe260P	**S4**	3000 Rpm	440 Nm	200 Nm	275 A_{RMS}	920 Nm	1,60 Nm/A_{RMS}	711 kgcm2	156 kg

TENV - Version









NGBe260 S - A: 422mm

B: 532mm

NGBe260 M - A: 506mm

B: 616mm

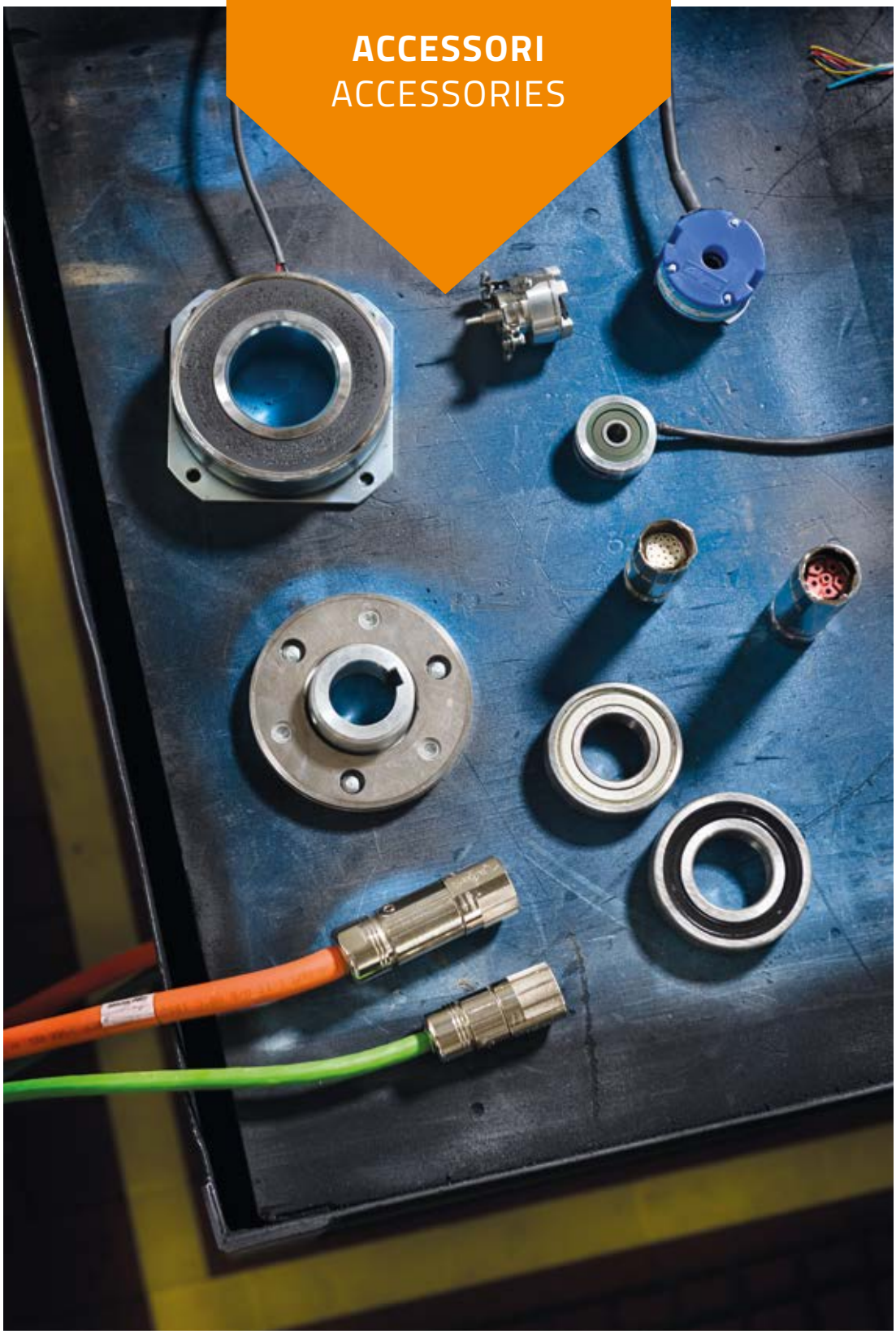
NGBe260 L - A: 590mm

B: 700mm

NGBe260 P - A: 674mm

B: 784mm

ACCESSORI
ACCESSORIES



Connessioni motore - Motor connection

Sistema di feedback del motore - Motor feedback system

Il motore è fornito completo di resolver o di encoder, alloggiato nello scudo posteriore per la protezione contro gli urti accidentali. Sono disponibili i seguenti tipi:

The motor is provided with a resolver or encoder housed in the rear shield to protect it against accidental impacts. The following types are available:

— **Resolver 2 poles:** Sine-Cosine wave – 2 poles – 0.5 ratio transformation
— **Encoder TTL + Hall S., Abs. singleturn:** incremental signal TTL2048 ppr (max 150 kHz) – 5 Vdc Line driver – Commutation signals – Zero pulse
— **Encoder Sin Cos Abs. singleturn:** incremental signal sinusoidale 2048 ppr – 1 Vpp signal SinCos + zero pulse – 1 period absolute waves/rev. – 5Vdc
— **Encoder BiSS Abs. multiturn:** absolute multiturn BiSS interface – incremental sinusoidal signal 2048 ppr – 19 bit singleturn + 12 multiturn – 5Vdc

— ***2-pole resolver:*** *Sine-Cosine wave – 2 poles – 0.5 transformation ratio*
— ***Encoder TTL + Hall S., Abs. singleturn:*** *incremental signal TTL2048 ppr (max 150 kHz) – 5 Vdc Line driver – Commutation signals – Zero pulse*
— ***Encoder Sin Cos Abs. single turn:*** *incremental signal sinusoidale 2048 ppr – 1 Vpp signal SinCos + zero pulse – 1 period absolute waves/rev. – 5Vdc*
— ***Encoder BiSS Abs. multi-turn:*** *absolute multiturn BiSS interface – incremental sinusoidal signal 2048 ppr – 19 bit singleturn + 12 multiturn – 5Vdc*

Altri encoder (Endat, Hyperface ..) o sole predisposizioni sono possibili su richiesta.

Other encoders (Endat, Hyperface, etc.) or other set-ups are available upon request.

Freno — Brake

Su richiesta è disponibile il motore completo di freno di stazionamento che si inserisce in mancanza di alimentazione (freno negativo). Tale freno è previsto per mantenere bloccato l'asse e deve essere inserito a velocità prossima a zero: le operazioni di frenatura del motore in velocità sono infatti delle frenature elettriche effettuate tramite l'inverter e non svolte o assistite dal freno. L'alimentazione a 24 Vdc è cablata sul connettore di potenza.

The motor complete with holding brake, which engages in case of power failure (negative brake), is available upon request. This brake keeps the axis blocked and must be engaged when speed is close to zero. At a certain speed, the motor brakes electrically via an inverter and not via the brake, which does not even assist during this operation. The 24 Vdc power supply is wired to the power connector.

	Nominal torque @20°C Mn	Stall torque @100°C M_{stat}	Inertia *ΔJ	Weight *Δm
NGBe96	4.5 Nm	4.0 Nm	0.12 kgcm²	0.7 kg
NGBe123	18 Nm	15 Nm	1.66 kgcm²	1.8 kg
NGBe143	36 Nm	32 Nm	5.56 kgcm²	2.9 kg
NGBe200	72 Nm	62 Nm	16 kgcm²	3.8 kg

* Aggiuntiva a quella del motore - *To be added to the motor torque*

Protezione termica — Power connection

I servomotori possono essere forniti con uno dei seguenti tipi di sensore termico:
Termoresistenza tipo KTY 84-130
Termocontatto N.C. klixon

The servo motors can be supplied with one of the following types of thermal sensor:
Resistance thermometer type KTY 84-130
Temperature Switch N.C. klixon

Verniciatura — Painting

I motori vengono forniti verniciati in RAL9005 o RAL5002, con vernici a polvere che assicurano elevate caratteristiche meccaniche (durezza, elasticità) e una buona finitura delle superfici del motore. A richiesta possiamo realizzare una verniciatura smalto monocolore su specifiche a richiesta del cliente.

The motors are painted with two colours, RAL9005 or RAL5002, with powder paints that ensure high mechanical features (hardness, elasticity) and a good finish of the motor's surfaces. Single-colour enamel paint available upon request.

Anello paraolio — Seal ring

Tutti i motori possono essere equipaggiati con anello di tenuta paraolio con molla per applicazioni dove è previsto il bagno d'olio, mentre su richiesta è possibile fornire anche la versione solo per tenuta IP65 sull'albero.

All motors can be equipped with oil seal ring with a spring for applications requiring oil bath. The specific version for an IP65 seal on the shaft can be supplied upon request.

Inerzia supplementare — Ring seal

Su richiesta è possibile prevedere un'inerzia aggiuntiva per migliorare il controllo del motore (opzione disponibile solo nella versione senza freno).

Extra inertia can be added upon request to improve motor control (option available only in the brakeless version).

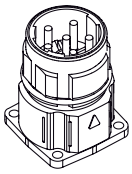
	Additional inertia ΔJ	Additional weight Δm
NGBe96	+ 1.1 kgcm²	+ 0.7 kg
NGBe123	+ 7.5 kgcm²	+ 1.9 kg
NGBe143	+ 22.8 kgcm²	+ 3.2 kg

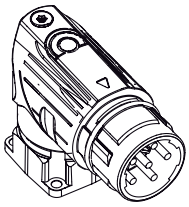
Connessioni motore — Motor connection

Connessioni di potenza 6 pins — Power connection 6 pins

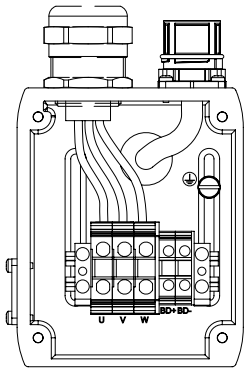
Connessione di potenza
+ connessione freno di stazionamento.

Power connections
+ parking brake connection.





connector M23 —
Straight or adjustable
to 90 °, fitted for
both quick-coupling for
in thread engagement.
Connector M40 for
NGBe200 available
upon request.

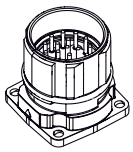


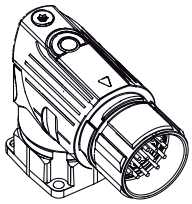
Terminal adjustable box
2 positions —
Available for NGBe143,
NGBe200 and NGBe260

Connessioni di segnale 17 pins — Signal connection 17 pins

Connessione trasduttore velocità/posizione.

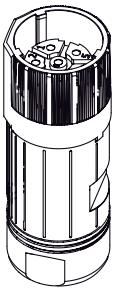
Speed/position transducer connection.



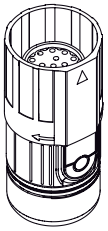


connector M23 —
Straight or adjustable
to 90 °, fitted for
both quick-coupling for
in thread engagement.

Connettori volanti opzionali — Optional mobile connectors



Free connector M23 —
6 pins power connector,
quick coupling.



Free connector M23 —
17 pins signal connector,
quick coupling.

Cavi opzionali — Optional cables

A richiesta possiamo fornire cavi
di alimentazione e di controllo servomotore
della lunghezza desiderata completi
di connettore ad innesto rapido lato motore.

Servomotor control and power cables
(of the required length) complete
with quick coupling connector on the
motor side can be supplied upon request.

SICME-ORANGE1 SERVICE

Sicme-Orange1 quality and technical team, together with a dedicated internal department, offers a full service system which is able to satisfy any specific request into electric motor maintenance. Sicme-Orange1 Service can provide an innovative diagnostic tools for electrical testing and analysis to pinpoint immediately specific motor issues. For this purpose an equipped in-house testing room is available, in order to handle tests, inspections and issue detailled test report for each motor.

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