

Aluminum one step gearboxes

A modular and compact product

Alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint

Flange

Fully modular to IEC and Compact integrated motor. NEMA C flange

Gears

Hardened and ground gears.

Removable inspection cover

Allows periodic inspection of gearing during routine maintenance

Output shaft

With well proportioned bearings

Feet

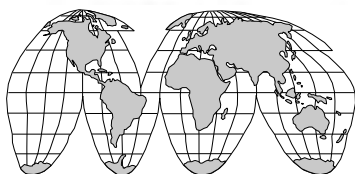
Removable feet.

Single-piece aluminum alloy housing

Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing

Ideal for use as first step with wormgearboxes.

Lubricated for life with synthetic oil with operative range from -15° to +130°C



World wide sales network.



Specific type datasheet on page...

On page / A pagina / Auf Seite / En la página



Types / Tipi /
Arten / Tipos →

5-5	5-7	5-9	5-11
211A 20Nm	311A 30Nm	411A 38Nm	511A 110Nm

On page / A pagina / Auf Seite / En la página



Types / Tipi /
Arten / Tipos →

M-1										
56A 56B	63A 63B	71A 71B	80A 80B	90S 90L	100LA 100LB	112M	132S 132M	160M 160L	180M 180L	

● Get on our web for the selected type/size the detailed informations

For : / Per : / Für : / Para :

Selection guide - fs
Guida alla selezione

Reversibility
Reversibilità

Download 3D drawings
Download disegni 3D

Mounting pos. - Lubrication
Pos. di montaggio - lubrificazione

Thermal limit
Limite termico

Interchangeability
Intercambiabilità

2 - 6 poles selection
Selezione 2 - 6 poli

Atex certification
Certificazione Atex

Installation and maintenance
Installazione, uso e manutenzione

Radial - axial loads
Carichi radiali e assiali

Accessories
Accessori

Spare parts list
Liste parti di ricambio

Type - Tipo - Typ - Tipo

Size - Grandezza
Grösse - Tomaño

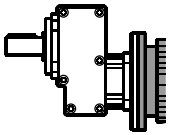
Mounting - Montaggio - Montage - Tipo de montaje

P

311A

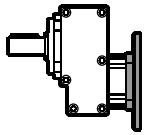
H1

Aluminum one step gear
Riduttori in alluminio a uno stadio



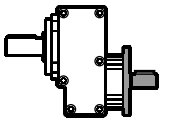
With IEC motor

M



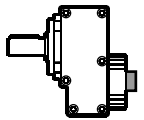
With motor flange

P



With male input shaft

R

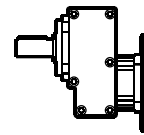


Modular Base

B

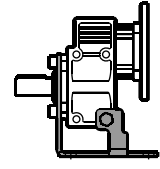
1 Stages
Riduzioni
Stufen
Etapas

211A
311A
411A
511A



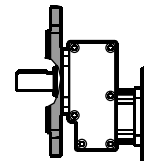
Without flange / feet

-N



Mounted feet

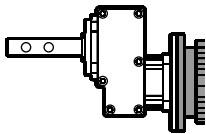
H1



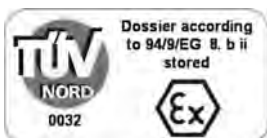
Output flange mounted

-F

Special output shaft
Albero uscita speciale



Only on request for Q.ty
A richiesta per quantità



A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX

On request we can deliver our products according to the ATEX

Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern

A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

Ratio - Rapporto
Untersetzung
Relación

Output shaft
Albero uscita
Abtriebswelle
Eje en salida

Output flange
Flangia uscita
Ausgangsflansch
Brida en salida

Motor size
Grandezza motore
Motor Grösse
Tamaño motor

Terminal box position
Posizione morsettiere
Klemmkastenlage
Posición caja de bornes

Mounting position
Posizione montaggio
Einbaulage
Position de montage

2.84

S

2

C

B

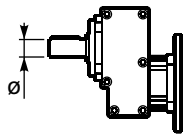
B3

See technical data table

Vedi tabelle dati tecnici.

Technisches Datenblatt beachten.

Ver tabla datos técnicos



→ STANDARD

211A

S → **∅14**

311A

S → **∅14**

C → **∅19**

E → **∅24**

411A

S → **∅14**

C → **∅19**

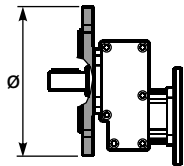
E → **∅24**

511A

C → **∅19**

E → **∅24**

G → **∅28**



N Senza flangia
Without flange

311A

1 → **∅120**

2 → **∅140**

3 → **∅160**

4 → **∅200**

411A

1 → **∅120**

2 → **∅140**

3 → **∅160**

4 → **∅200**

511A

1 → **∅120**

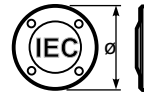
2 → **∅140**

3 → **∅160**

4 → **∅200**

5 → **∅250**

Standard Flange
Flangia Standard



B5

A=56
(∅120)

B=63
(∅140)

C=71
(∅160)

D=80
(∅200)

E=90
(∅200)

F=100+112
(∅250)

B14

O=56
(∅80)

P=63
(∅90)

Q=71
(∅105)

R=80
(∅120)

T=90
(∅140)

U=100+112
(∅160)

V=132
(∅200)

Type R / Tipo R

211A

311A

1 → **∅14**

511A

3 → **∅24**

411A

2 → **∅19**

Without flange / Senza flangia

211A

311A

Z → **∅9**
(56B5)

0 → **∅11**
(63B5)

1 → **∅14**
(71B5)

511A

2 → **∅19**
(80B5)

3 → **∅24**
(90B5)

4 → **∅28**
(100B5)

→ STANDARD



A



B

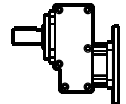
STANDARD



C



D

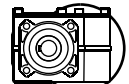


B3/B5

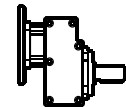
STANDARD



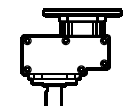
B6



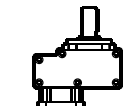
B7



B8



V5



V6

Specify only for vertical positions

Specificare solo per posizione verticale

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

Lifting / sollevamento / hubantriebe / elevación

$$P \text{ [KW]} = \frac{M \text{ [Kg]} \cdot g \text{ [9.81]} \cdot v \text{ [m / s]}}{1000}$$

Rotation / rotazione / drehung / rotation

$$P \text{ [KW]} = \frac{M \text{ [Nm]} \cdot n \text{ [rpm]}}{9550}$$

Linear movement / traslazione / linearbewegung / translacion

$$P \text{ [KW]} = \frac{F \text{ [N]} \cdot v \text{ [m / s]}}{1000}$$

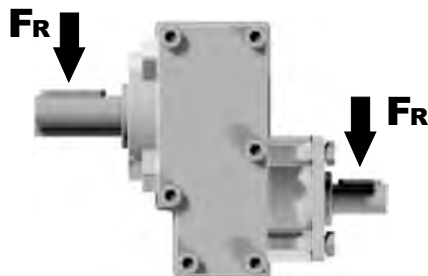
TORQUE / COPPIA / DREHMOMENT / PAR

$$M \text{ [Nm]} = \frac{9550 \cdot P \text{ [KW]}}{n \text{ [rpm]}}$$

$$M \text{ [lb in]} = \frac{63030 \cdot P \text{ [HP]}}{n \text{ [rpm]}}$$

RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CARGA RADIAL Y AXIAL

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



	$F_R \text{ [N]} = \frac{M \text{ [Nm]} \cdot 2000}{d \text{ [mm]}} \cdot f_k$	$F_R \text{ [N]} = \frac{M \text{ [lb in]} \cdot 8.9}{d \text{ [in]}} \cdot f_k$
M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion	
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diámetro primitivo	
f_k	Coefficiente di trasformazione / Factor / Faktor / Coefficiente de transmisión 1.15 Ingranaggi / Gearwheels / Zahnrad / Engranaje 1.25 Catena / Chain sprockets / Antriebskette / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Correa plana	

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore
Wie wählt man ein Getriebe / Cómo seleccionar un reductor

B Output speed
Velocità in uscita
Abtriebsdrehzahl
Velocidad de salida

Nominal power
Potenza nominale
Max. mögliche Leistung
Potencia nominal

A Nominal torque
Momento torcente nominale
Nenn Drehmoment
Par de torsión nominal

Flange code
Codice flangia
Flanschtype
Código bridas

Input speed
Velocità in entrata
Eintriebsdrehzahl
Velocidad de entrada

Gear size
Grandezza riduttore
Getriebegröße
Tamaño reductor

Motor power
Potenza motore
Motorleistung
Potencia motor

311A

One step 30Nm

Rating - Aluminum ONE STEP GEARBOXES

QUICK SELECTION / Selezione velocità								input speed (n ₁) = 1400 min ⁻¹						
Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{1M} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1R} [kW]	Nominal torque M _{2R} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft		
							B	C	O	P	Q			Ratios code
892	1.57	0.37	3.9	3.3	1.24	13	63	71				2844	standard ø14	-
493	2.84	0.37	7.0	3.3	1.21	23			C	C	1954			
426	3.29	0.37	8.1	3.2	1.18	26			C	C	1756			
362	3.87	0.37	9.6	2.9	1.08	28			C	C	1558			

C Ratio
Rapporto
Untersetzung
Relación

Transmitted torque
Momento torcente trasmesso
Mögliche Drehmomente
Par transmitido

Service factor
Fattore di servizio
Betriebsfaktor
Factor de servicio

Output shaft diam.
Diam. albero uscita
Durchmesser abtriebswelle
Diametro eje de salida

Notes
Note
Anmerkungen
Notas

fs		Oper. hours per day Ore di funz. giorn.			
Type of load and starts per hour Tipo di carico e avviamenti per ora		3 h	10 h	24 h	
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	≤ 10	Uniform / Uniforme	0.8	1	1.25
		Moderate / Moderato	1	1.25	1.5
		Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	> 10	Uniform / Uniforme	1	1.25	1.5
		Moderate / Moderato	1.25	1.5	1.75
		Heavy / Forte	1.5	1.75	2.15

D	Motor flange available Flange disponibili Erhältliche Motorflansche Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccia di riduzione Reduzierhülsen Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Bohrungsposition am Motorflansch/-sockel Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccia Auch ohne Reduzierbuchse verfügbar Disponible tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Erhältliche Motorflansche (auf Anfrage)	Seleccionar la brida disponible (sobre pedido)