Réducteurs couple conique en aluminium et en fonte
Aluminium and cast iron helical bevel gearboxes

Un produit compact et modulaire **A modular and compact product**
Un produit compact et modulaire à rendement élevé **Very energy efficent drive**

Couvercle d'inspection amovible

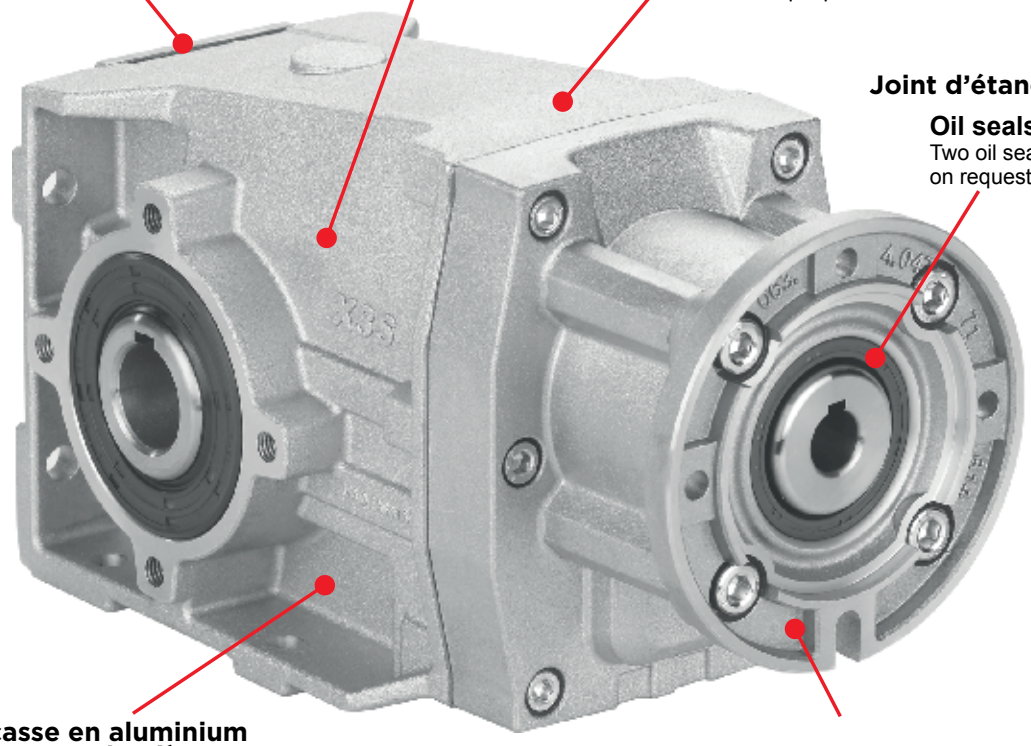
Removable inspection cover
Allows periodic inspection of gearing during routine maintenance

Engrenages en acier trempé et rectifiés

Gears
Hardened and ground gears

Carcasse aluminium imprégnée à vide

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



Joint d'étanchéité

Oil seals
Two oil seals on request

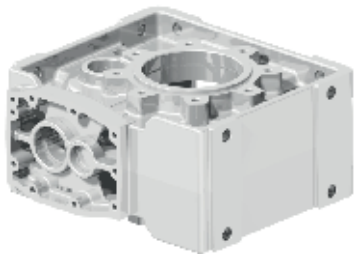
Carcasse en aluminium d'une seule pièce

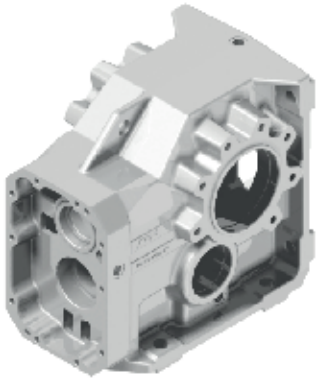
Single-piece aluminum
Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing

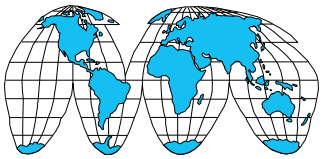
Bride modulaire

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

Cast Iron housing
With high tensile strength. Precision machined for alignment of bearings and gearing





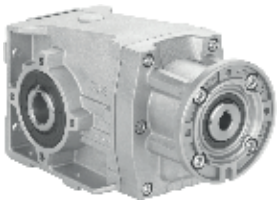


World wide sales network.

Fiche technique spécifique en page .....

Specific type datasheet on page .....

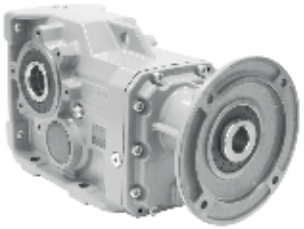
On page / A pagina / Auf Seite / À la page /En la página



Types / Tipi
Typen / Types
Tipos

8-5	8-7	8-9	8-11	8-13	8-15	8-17	8-19	8-21
X22S 50Nm	**X32S** 90Nm	**X33S** 100Nm	**X42A** 150Nm	**X43A** 160Nm	**X52A** 250Nm	**X53A** 250Nm	**X62A** 410Nm	**X63A** 410Nm

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



Types / Tipi
Typen / Types
Tipos

8-23	8-25	8-27	8-29	8-31	8-33	8-35	8-37	8-39	8-41
X73C 675Nm	**X74C** 675Nm	**X83C** 1000Nm	**X84C** 1000Nm	**X93C** 1600Nm	**X94C** 1650Nm	**X103** 3000Nm	**X104** 3000Nm	**X113** 4500Nm	**X114** 4600Nm

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

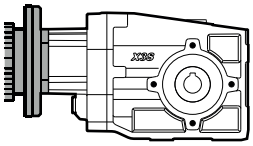
Types / Tipi
Typen / Types
Tipos

8-43	8-45	8-47	8-49
113C 675Nm	**114C** 675Nm	**133C** 1000Nm	**134C** 1000Nm

Type - Tipo - Typ
Type - Tipo

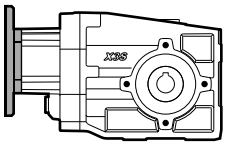
M

Helical-bevel gear
Riduttori ortogonali



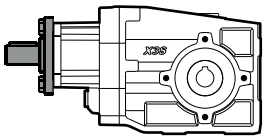
With IEC motor

M



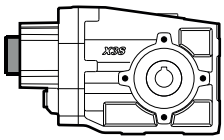
With motor flange

P



With male input shaft

R



Modular base

B

Not available for:
X93C , X103 ,
X104 , X113 ,
X114 .

Size - Grandezza - Grösse
Taille - Tomaño

X22S

2 Stages Riduzioni Stufen Trains Etapas | 3 Stages Riduzioni Stufen Trains Etapas

Aluminum
Alluminio
Aluminium
Aluminium
Aluminio

X22S
X32S
X42A
X52A
X62A

X33S
X43A
X53A
X63A

3 Stages Riduzioni Stufen Trains Etapas | 4 Stages Riduzioni Stufen Trains Etapas

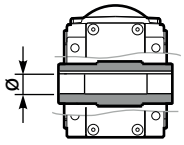
Cast Iron
Ghisa
Grauguss
Fonte
Fundicion

113C
133C
X73C
X83C
X93C
X103
X113

114C
134C
X74C
X84C
X94C
X104
X114

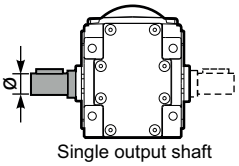
Mounting - Montaggio
Montage - Fixation
Tipo de montaje

C



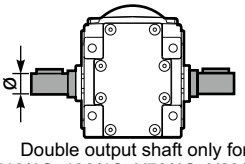
Hollow outpu shaft

C



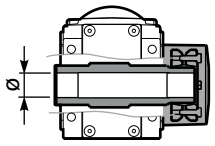
Single output shaft

A



Double output shaft only for 113/4C, 133/4C, X73/4C, X83/4C, X93/4C, X103/4 and X113/4

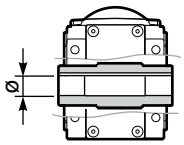
B



Shrink Disk
(only on the DX side)

D

Only on request for Q.ty
A richiesta per quantità



Stainless steel hub

I

Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox

Only on request for Q.ty
A richiesta per quantità

Rapporto - Ratio
Untersetzung
Reduction
Relacion

4.83

See technical data table

Vedi tabelle dati tecnici.

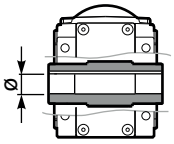
Technisches Datenblatt beachten

Voir Tableau données techniques

Ver tabla datos técnicos

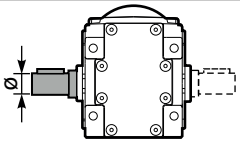
Output shaft - Albero uscita
Ausgangsflansch
Arbre de sortie
Brida en solida

-A



➡ STANDARD
Hollow output shaft

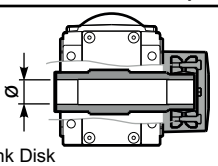
X22S	X73/4C X83/4C
-A ⇨ ø18	**-F ➡ ø40**
-B ➡ ø20	**-H** ⇨ ø45
X32S X33S	113C 114C
-B ➡ ø20	**-F ➡ ø40**
-C ⇨ ø25	**-G** ⇨ ø42
X42A X43A	133C 134C
-C ➡ ø25	**-F** ⇨ ø40
-D ⇨ ø30	**-H ➡ ø45**
X52A X53A	X93C X94C
-D ➡ ø30	**-H** ⇨ ø45
-E ⇨ ø35	**-J ➡ ø50**
X62A X63A	X103 X104
-E ➡ ø35	**-K ➡ ø60**
-F ⇨ ø40	X113 X114
	-T ➡ ø70



Single and double output shaft

-I	X22S X32/3S	⇨ ø20
-L	X32/3S X42/3A	⇨ ø25
-M	X52/3A	⇨ ø30
-N	X52/3A X62/3A X73/4A*	⇨ ø35
-V	X83/4A 113/4C	⇨ ø40*
-O	113/4C	⇨ ø42*
-P	133/4C	⇨ ø45*
-1	X93/4C	⇨ ø50*
-3	X103/4	⇨ ø60*
-5	X113/4	⇨ ø70*

*** Also available double output shaft**



Shrink Disk

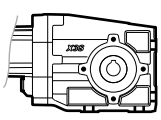
-U	X22S X32/3S	⇨ ø20
-Q	X42/3A	⇨ ø30
-R	X52/3A	⇨ ø35
-S	X62/3A X73/4A X83/4A 113/4C	⇨ ø40
-6	133/4C	⇨ ø45
-7	X93/4C	⇨ ø50
-8	X103/4	⇨ ø65
-9	X113/4	⇨ ø75

TÜV NORD 0032 — Dossier according to 94/9/EG 8. b ii stored

On request we can deliver our products according to the ATEX
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern
Sur demande nos produits peuvent se conformer à la réglementation ATEX
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

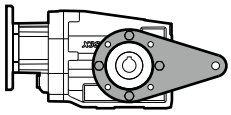
Type - Tipo - Typ
Type - Tipo

BR



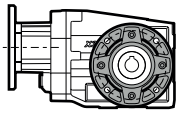
FB

Forma base
Universal



BR

Braccio d reazione
Reaction arm

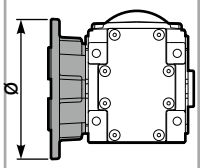


-F

Flangia uscita
output flange

Output flange
Flangia di uscita
Ausgangs Flansch
Bride de sortie
Brida en salida

N



N Senza flangia / Without flange

X22S

1 ⇨ ø120

X32S X33S

1 ⇨ ø120
2 ⇨ ø160

X52-3A X62-3A

2 ⇨ ø160
3 ⇨ ø200
4 ⇨ ø250

X73C X74C X83C X84C

4 ⇨ ø250

113C 114C X93C X94C

C ⇨ ø280
L ⇨ ø280

133C 134C

C ⇨ ø320

X103 X104

6 ⇨ ø350

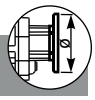
X113 X114

7 ⇨ ø450

Motor size - Grandezza motore
Motor Grösse
Grandeur moteur - Tamaño motor

-O

Flange
Flangia



B5

-A=56 (ø120)
-B=63 (ø140)
-C=71 (ø160)
-D=80 (ø200)
-E=90 (ø200)
-F=100÷112 (ø250)
-G=132 (ø300)
-H=160 (ø350)
-I=180 (ø350)
-L=200 (ø400)
CA=225 (ø450)

B14

-O=56 (ø80)
-P=63 (ø90)
-Q=71 (ø105)
-R=80 (ø120)
-T=90 (ø140)
-U=100÷112 (ø160)
-V=132 (ø200)

Without flange
Senza flangia

X22S X33S X43A

-Z ⇨ ø9 (56B5)
-0 ⇨ ø11 (63B5)
-1 ⇨ ø14 (71B5)

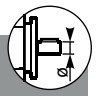
X32S X42A X53A X63A X74C X84C 114C 134C

-1 ⇨ ø14 (71B5)
-2 ⇨ ø19 (80B5)
-3 ⇨ ø24 (90B5)

X52A X62A 113C 133C X73C X83C X94C

-2 ⇨ ø19 (80B5)
-3 ⇨ ø24 (90B5)
-4 ⇨ ø28 (100B5)

Type R
Tipo R



X22S X33S X43A

-1 ⇨ ø14

X32S X42A X53A X63A X74C X84C 114C 134C

-2 ⇨ ø19

X52A X62A 113C 133C X73C X83C X94C

-3 ⇨ ø24

X93C X104 X114

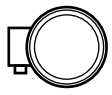
-4 ⇨ ø28

X103 X113

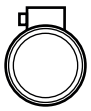
-6 ⇨ ø42

Terminal box position
Posizione morsettiera
Klemmkastenlage
Position boîte à bornes
Posición caja de bornes

B

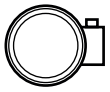


A



B

STANDARD

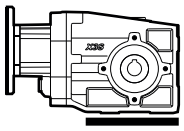


C

D

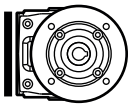
Mounting position
Posizione montaggio
Einbaulage
Position de montage
Position de montaje

B3

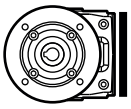


B3

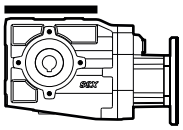
STANDARD



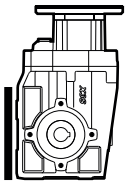
B6



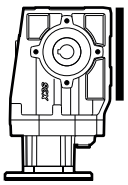
B7



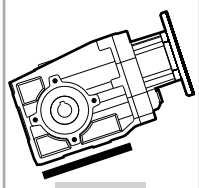
B8



V5



V6



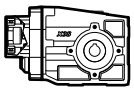
V8

Coupling
Giunto
Kupplung
Joint
Juntura

C

0

Without coupling
Senza giunto

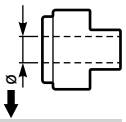


-

Nothing indication:
standard bore

Nessuna indicazione:
foro standard

COUPLING



A = 9mm
B = 11mm
C = 14mm
D = 19mm
E = 24mm
F = 28mm

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA

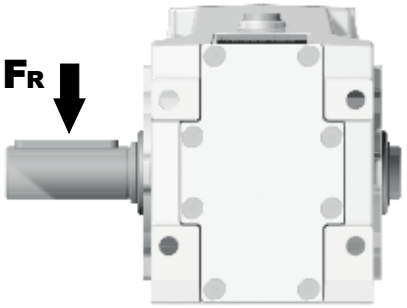
Lifting / sollevamento / hubantriebe / levage / elevactión	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotation / rotaction	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translation / translacion	$\mathbf{P}\ [KW] = \frac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

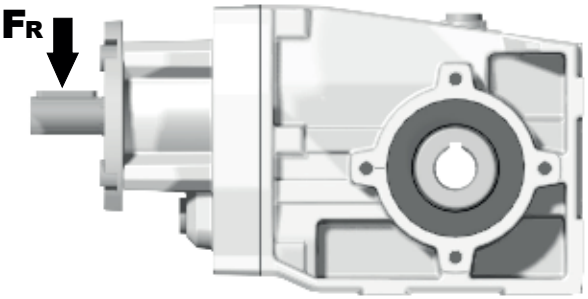
TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

	$\mathbf{M}\ [Nm] = \frac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$
	$\mathbf{M}\ [lb\ in] = \frac{\mathbf{63030} \cdot \mathbf{P}[HP]}{\mathbf{n}\ [rpm]}$

RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / 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.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida





$F_R\ [N] = \frac{\mathbf{M}\ [Nm] \cdot \mathbf{2000}}{\mathbf{d}\ [mm]} \cdot f_K$	$F_R\ [N] = \frac{\mathbf{M}\ [lb\ in] \cdot \mathbf{8.9}}{\mathbf{d}\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
$\mathbf{f_k}$	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / 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.
— Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
— En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

B Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

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

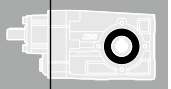
Flange code / Codice flangia / Flanschtype / Code bride / Código bridas

Input speed / Velocità in entrata / Eintriebsdrehzahl / Vitesse en entrée / Velocidad de entrada

X22S Angletech Gear 50Nm

Rating - Aluminum

HELICAL-BEVEL GEARBOXES



▪ QUICK SELECTION / Selezione veloce

The dynamic efficiency is **0.96** for all ratios

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 -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft Ø	Ratios code
289.7	**4.83**	0.37	11.7	2.6	**0.95**	**30**			C	C		289		01
189.2	**7.40**	0.37	17.9	1.7	**0.62**	**30**			C	C		287		02
146.2	**9.58**	0.37	23.2	1.7	**0.64**	**40**			C	C		199		03
127.5	**10.98**	0.37	26.6	1.7	**0.63**	**45**			C	C		179		04

C Ratio / Rapporto / Untersetzung / Rapport de réduction / Relación

Transmitted torque / Momento torcente trasmesso / Mögliche Drehmomente / Couple de sortie / Par transmitido

Service factor / Fattore di servizio / Betriebsfaktor / Facteur de service / Factor de servicio

Output shaft diam. / Diam. albero uscita / Durchmesser abtriebswelle / Diametre arbre lent / Diametro eje de salida

Notes / Note / Anmerkungen / Note / Notas

fs

Type of load and starts per hour / Tipo di carico e avviamenti per ora		Oper. hours per day / Ore di funz. giorn. 3 h	10 h	24 h
Continuous or intermittent appl. with start / hour ≤ 10 / Applicazione cont. o interm. con n.ro operazioni/ora	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 > 10 / Applicazione intermittente con n.ro operazioni/ora	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 / Brides disponibles / Bridas disponibles

B) Mounting with reduction ring / Montaggio con boccola di riduzione / Reduzierhülsen / Montage avec douille de réduction / Montaje con casquillo de reducción

C) Motor flangeholes position/terminal box position / Posizione fori flangia/basetta motore / Bohrungsposition am Motorflansch/-sockel / Position trous bride/barrette à bornes moteur / Posición agujeros brida / base motor

B) Available without reduction bushes / Disponibile anche senza boccola / Auch ohne Reduzierbuchse verfügbar / Disponible aussi sans douille de réduction / 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	Sélectionner le couple souhaité (comprenant le facteur de service)	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	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	Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction	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)	Choisir la bride disponible (si elle est demandée)	Seleccionar la brida disponible (sobre pedido)