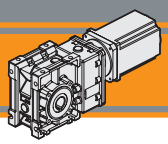

ENERGY SAVING




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Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata. l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet www.intecno-srl.com**

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## Caratteristiche tecniche

## *Technical features*

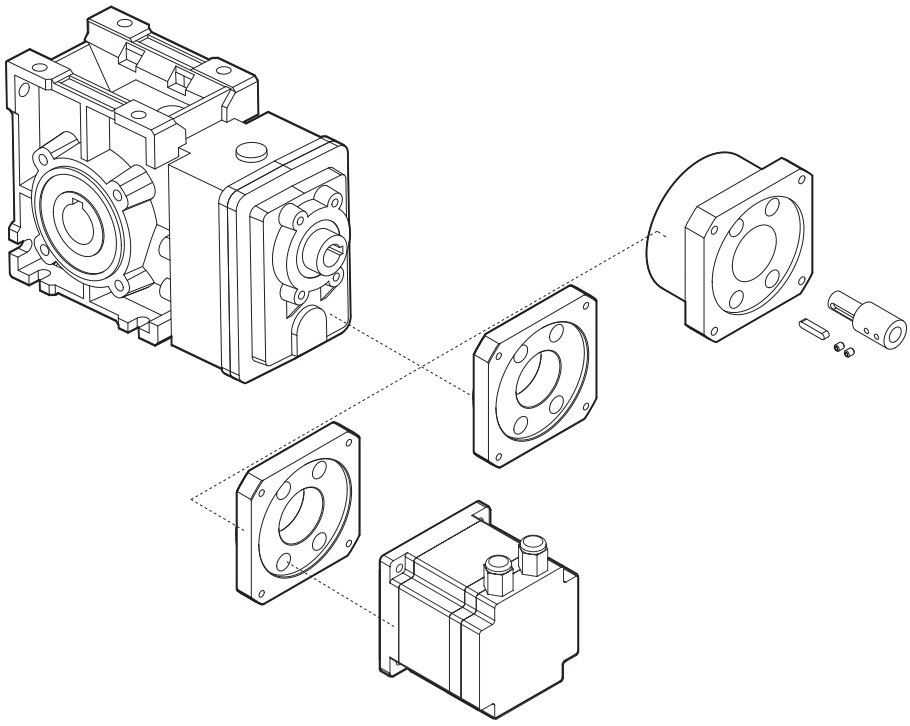
Le caratteristiche principali dei motoriduttori brushless CC ad assi ortogonali della serie CMB sono:

- Alimentazione in bassa tensione 24/36/48 Vcc
- Motore protezione IP55
- Coppie motori disponibili da 0.43 Nm a 2.1 Nm
- Lubrificazione permanente con olio sintetico
- Carcassa in pressofusione di alluminio
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili anche nella versione con solo riduttore, sia con flangia di entrata standard che con flangia e manicotto dedicati

*The main features of CMB brushless DC helical bevel gearmotors range are:*

- *Low voltage power supply 24/36/48 Vdc*
- *Motor protection IP55*
- *Motor torque ratings available from 0.43 Nm up to 2.1 Nm*
- *Permanent sinthetic oil long life lubrication*
- *Die-cast aluminium housing*
- *Ground-hardened helical gears.*
- *Gearbox only version also available, with either standard input flange or customized flange and coupling*

ENERGY SAVING



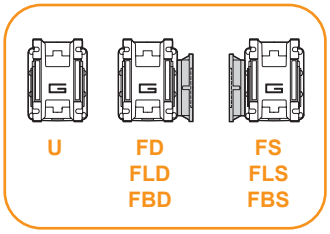
## Designazione

## *Classification*

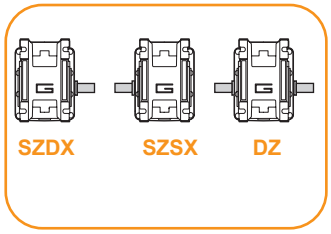
| RIDUTTORE / *GEARBOX* | | | | |
|---|---|---|---|---|
| **CMB** | **402** | **U** | **9.2** | **020** |
| Tipo *Type* | Grandezza *Size* | Versione riduttore *Gearbox version* | Rapporto *Ratio* | Albero di uscita *Output shaft* |
| **CMB** | **402**<br>**502** | **U**<br>**FD**<br>**FS**<br>**FLD**<br>**FLS**<br>**FBD**<br>**FBS** | Vedere tabelle *See tables* | C13 |

| MOTORE / *MOTOR* | | |
|---|---|---|
| **BL070.480** | **48V** | **BR** |
| Tipo *Type* | Tensione *Voltage* | Freno *Brake* |
| **BLS043.240**<br>**BL070.240**<br>**BL070.48B**<br>**BL070.480**<br>**BL140.480**<br>**BL210.480**<br>**BL210.48E** | **24V-36V**<br>**24V**<br>**48V**<br>**48V**<br>**48V**<br>**48V**<br>**48V** | **24V**<br>**48V**<br>A16 |

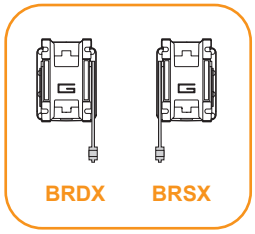
Versione Riduttore
*Gearbox Version*



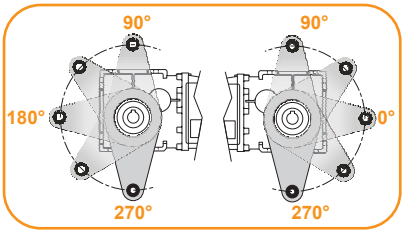

Albero di uscita
*Output shaft*

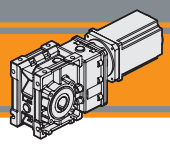



Braccio di reazione
*Torque arm*




Angolo
*Angle*





## Simbologia / *Symbols*

| | | |
|---|---|---|
| Ns | | n° stadi / *No. stages* |
| ir | | rapporto reale / *real ratio* |
| $M_2$ | [Nm] | coppia in uscita<br>*output torque* |
| $A_2$ | [N] | Carico assiale ammissibile in uscita<br>Permitted output *axial load* |
| $R_2$ | [N] | Carico radiale ammissibile in uscita<br>*Permitted output radial load* |
| $Pn_1$ | [kW] | Potenza nominale in entrata<br>*Nominal input power* |
| $Mn_2$ | [Nm] | Coppia nominale in uscita in funzione di Pn1<br>*Nominal output torque referred to Pn1* |
| $n_{1MAX}$ | [Rpm] | Velocità max entrata / *Max input speed* |
| V | [V] | *Tensione / Voltage* |
| $n_2$ | [Rpm] | Velocità in uscita / *Output Speed* |
| IP | | Grado di protezione / *Enclosure protection* |
| Kg | | Peso / *Weight* |
| sf | | Fattore di servizio / *Service Factor* |

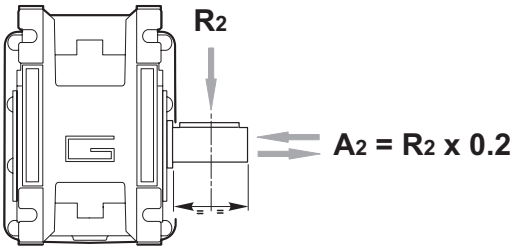
## Lubrificazione e temperaura / *Lubrication and temperature*

I motoriduttori CMB sono forniti completi di lubrificante sintetico (viscosità 320) e non necessitano di manutenzione.
Temperatura ambiente 0 ÷ 40 °C (in assenza di congelamento ed in assenza di condensa).
Per temperature diverse, contattare nostro UT.

*Permanent synthetic oil long life lubrification (viscosity grade 320) on CMB gearmotors.*
*Ambient temperature 0 ÷ 40 °C (in the absence of freezing and condensation).*
*For temperature outside this range please contact our technical dept.*



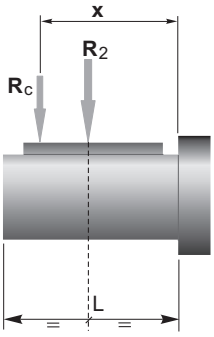
## Carichi radiali / *Radial loads*




| $n_2$ [$min^{-1}$] | $R_2$ [N] | |
|---|---|---|
| | CMB 402 | CMB 502 |
| 400 | 905 | 1116 |
| 300 | 996 | 1228 |
| 200 | 1141 | 1406 |
| 170 | 1204 | 1484 |
| 140 | 1414 | 1743 |
| 100 | 1582 | 1949 |
| 90 | 1638 | 2019 |
| 60 | 2047 | 2490 |
| 40 | 2524 | 3029 |
| 30 | 2778 | 3334 |
| 20 | 3180 | 3816 |
| 15 | 3500 | 4200 |
| 10 | 3500 | 4200 |

Quando il carico radiale risultante non è applicato sulla mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula

*When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:*




| | CMB 402 | CMB 502 |
|---|---|---|
| a | 86 | 104 |
| b | 66 | 79 |
| $R_{2MAX}$ | 3500 | 4200 |

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

*a. b = valori riportati nella tabella*
*a. b = values given in the table*

## CMB402 con motore brushless CC

## *CMB402 with brushless DC motor*

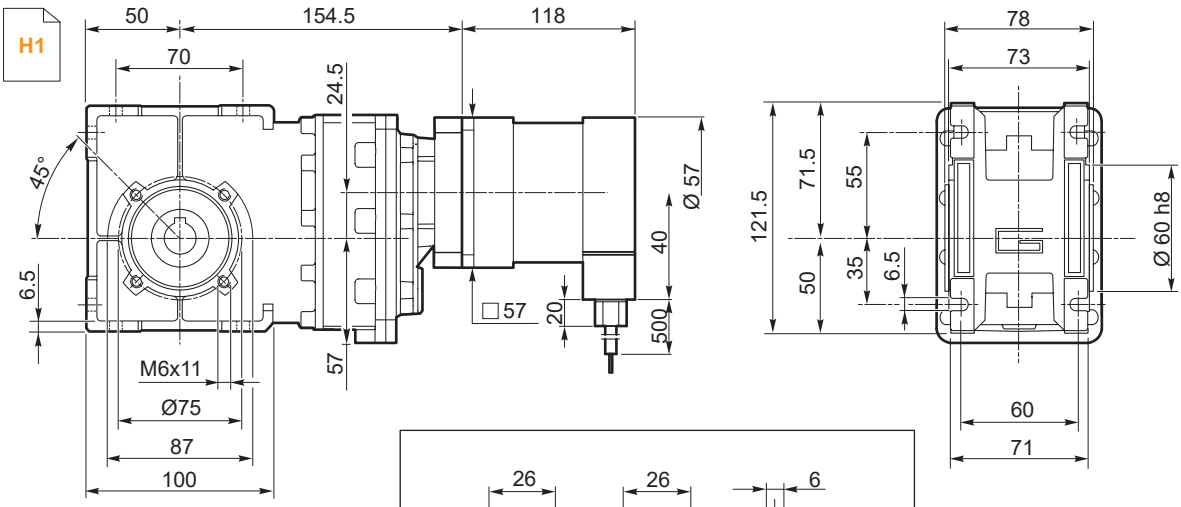
| CMB402 | BLS043.240 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 24V | | | | | | | 36V | | | | | |
| ir | $n_{2MIN}$ [ rpm ] | | | $n_{2MAX}$ [ rpm ] | | | $n_{1MAX}$ [ rpm ] | $n_{2MIN}$ [ rpm ] | | | $n_{2MAX}$ [ rpm ] | | | $n_{1MAX}$ [ rpm ] |
| | | $M_2$ [Nm] | sf | | $M_2$ [Nm] | sf | | | $M_2$ [Nm] | sf | | $M_2$ [Nm] | sf | |
| 6.2 | 49 | 2.5 | 18.4 | 486 | 2.5 | 12.5 | | 65 | 2.5 | 18.4 | 648 | 2.5 | 11.1 | |
| 7.5 | 40 | 3.0 | 15.2 | 400 | 3.0 | 10.3 | | 53 | 3.0 | 15.2 | 534 | 3.0 | 9.1 | |
| 9.2 | 33 | 3.7 | 12.4 | 326 | 3.7 | 8.4 | | 43 | 3.7 | 12.4 | 435 | 3.7 | 7.4 | |
| 11.8 | 25 | 4.8 | 10.8 | 254 | 4.8 | 7.3 | | 34 | 4.8 | 10.8 | 338 | 4.8 | 6.5 | |
| 12.5 | 24 | 5.0 | 10.3 | 240 | 5.0 | 7.0 | | 32 | 5.0 | 10.3 | 320 | 5.0 | 6.2 | |
| 14.8 | 20 | 6.0 | 8.6 | 202 | 6.0 | 5.9 | | 27 | 6.0 | 8.6 | 270 | 6.0 | 5.2 | |
| 17.6 | 17 | 7.1 | 7.3 | 170 | 7.1 | 4.9 | | 23 | 7.1 | 7.3 | 227 | 7.1 | 4.4 | |
| 18.6 | 16 | 7.5 | 8.4 | 161 | 7.5 | 5.7 | | 22 | 7.5 | 8.4 | 215 | 7.5 | 5.0 | |
| 22.3 | 13 | 9.0 | 7.0 | 134 | 9.0 | 4.8 | | 18 | 9.0 | 7.0 | 179 | 9.0 | 4.2 | |
| 23.9 | 13 | 9.7 | 6.5 | 125 | 9.7 | 4.4 | 3000 | 17 | 9.7 | 6.5 | 167 | 9.7 | 3.9 | 4000 |
| 28.9 | 10 | 12 | 6.4 | 104 | 12 | 4.3 | | 14 | 12 | 6.4 | 138 | 12 | 3.8 | |
| 30.8 | 9.7 | 12 | 6.0 | 97 | 12 | 4.1 | | 13 | 12 | 6.0 | 130 | 12 | 3.6 | |
| 33.6 | 8.9 | 14 | 5.5 | 89 | 14 | 3.7 | | 12 | 14 | 5.5 | 119 | 14 | 3.3 | |
| 35.6 | 8.4 | 14 | 5.2 | 84 | 14 | 3.5 | | 11 | 14 | 5.2 | 112 | 14 | 3.1 | |
| 42.8 | 7.0 | 17 | 4.3 | 70 | 17 | 2.9 | | 9.4 | 17 | 4.3 | 94 | 17 | 2.6 | |
| 55.3 | 5.4 | 22 | 3.3 | 54 | 22 | 2.3 | | 7.2 | 22 | 3.3 | 72 | 22 | 2.0 | |
| 59.1 | 5.1 | 24 | 3.1 | 51 | 24 | 2.1 | | 6.8 | 24 | 3.1 | 68 | 24 | 1.9 | |
| 64.3 | 4.7 | 26 | 2.9 | 47 | 26 | 2.0 | | 6.2 | 26 | 2.9 | 62 | 26 | 1.7 | |
| 72.5 | 4.1 | 29 | 2.6 | 41 | 29 | 1.7 | | 5.5 | 29 | 2.6 | 55 | 29 | 1.5 | |

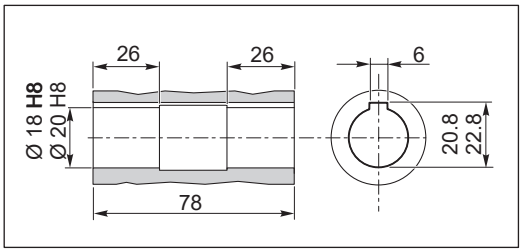
| Tipo *Type* | Numero di poli *Number of poles* | Numero di fasi *Number of phase* | Tensione *Rated voltage [ V ]* | Numero di giri *Rated speed* [ rpm ] | Coppia nominale *Rated torque* [ Nm ] | Potenza nominale *Rated power* [ W ] |
|---|---|---|---|---|---|---|
| BLS043.240 | 4 | 3 | 36 | 4000 | 0.43 | 180 |
| | | | 24 | 3000 | | 130 |

| Tipo *Type* | Coppia massima *Peak torque* [ Nm ] | Corrente nominale *Rated current* [ A ] | Resistenza *Resistance* [ ohm ] | Induttanza *Inductance* [ mH ] | Corrente massima *Peak current* [ A ] | Peso *Weight* [ kg ] |
|---|---|---|---|---|---|---|
| BLS043.240 | 0.86 | 6 | 0.35 | 1 | 12.0 | 1.25 |

Azionamenti *Drives* → H1

**CMB402U + BLS043.240**

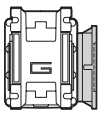



Albero lento cavo / *Hollow output shaft*

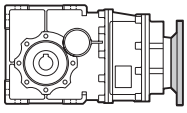
Kg 4.7

C12 →

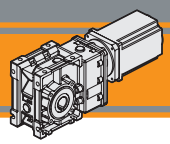


**CMB402..F**
**CMB402..FL**
**CMB402..FB**

C11 →



**CMB402..AS...**



## CMB402 con motore brushless CC

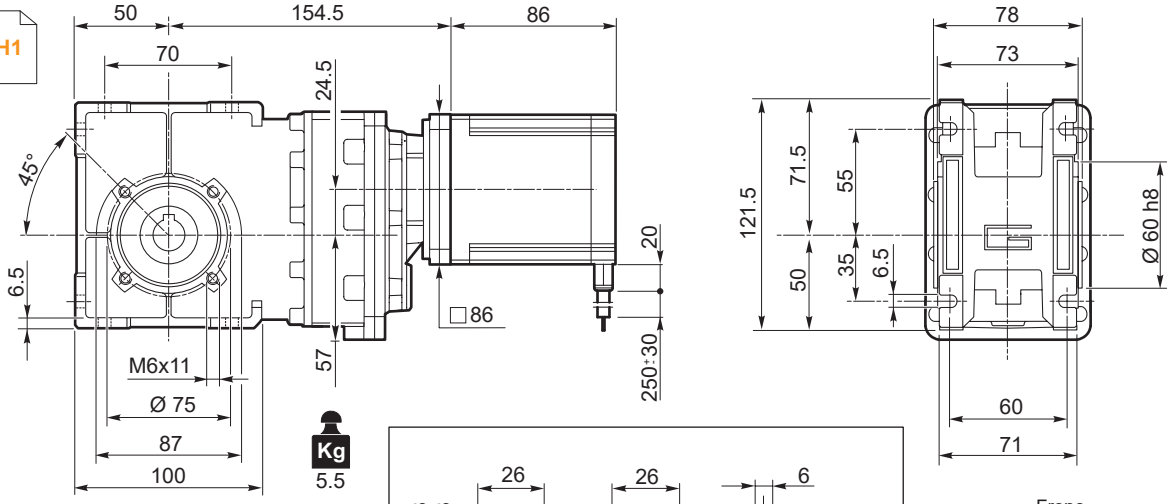
## *CMB402 with brushless DC motor*

| CMB402 | BL070.240 / BL070.480 / BL070.48B | | | | | | |
|---|---|---|---|---|---|---|---|
| | 24V / 48V | | | | | | |
| ir | $n_{2MIN}$ [ rpm ] | | | $n_{2MAX}$ [ rpm ] | | | $n_{1MAX}$ [ rpm ] |
| | | $M_2$ [Nm] | sf | | $M_2$ [Nm] | sf | |
| 6.2 | 49 | 4.1 | 11.3 | 486 | 4.1 | 7.7 | 3000 |
| 7.5 | 40 | 4.9 | 9.3 | 400 | 4.9 | 6.3 | |
| 9.2 | 33 | 6.1 | 7.6 | 326 | 6.1 | 5.2 | |
| 11.8 | 25 | 7.8 | 6.6 | 254 | 7.8 | 4.5 | |
| 12.5 | 24 | 8.2 | 6.3 | 240 | 8.2 | 4.3 | |
| 14.8 | 20 | 9.8 | 5.3 | 202 | 9.8 | 3.6 | |
| 17.6 | 17 | 12 | 4.5 | 170 | 12 | 3.0 | |
| 18.6 | 16 | 12 | 5.2 | 161 | 12 | 3.5 | |
| 22.3 | 13 | 15 | 4.3 | 134 | 15 | 2.9 | |
| 23.9 | 13 | 16 | 4.0 | 125 | 16 | 2.7 | |
| 28.9 | 10 | 19 | 3.9 | 104 | 19 | 2.7 | |
| 30.8 | 9.7 | 20 | 3.7 | 97 | 20 | 2.5 | |
| 33.6 | 8.9 | 22 | 3.4 | 89 | 22 | 2.3 | |
| 35.6 | 8.4 | 23 | 3.2 | 84 | 23 | 2.2 | |
| 42.8 | 7.0 | 28 | 2.7 | 70 | 28 | 1.8 | |
| 55.3 | 5.4 | 36 | 2.1 | 54 | 36 | 1.4 | |
| 59.1 | 5.1 | 39 | 1.9 | 51 | 39 | 1.3 | |
| 64.3 | 4.7 | 42 | 1.8 | 47 | 42 | 1.2 | |
| 72.5 | 4.1 | 48 | 1.6 | 41 | 48 | 1.1 | |

| Tipo *Type* | Numero di poli *Number of poles* | Numero di fasi *Number of phase* | Tensione *Rated voltage* [ V ] | Numero di giri *Rated speed* [ rpm ] | Coppia nominale *Rated torque* [ Nm ] | Potenza nominale *Rated power* [ W ] |
|---|---|---|---|---|---|---|
| BL070.240 | 8 | 3 | 24 | 3000 | 0.7 | 220 |
| BL070.480<br>BL070.48B | 8 | 3 | 48 | 3000 | 0.7 | 220 |
| **Tipo *Type*** | **Coppia massima Peak torque [ Nm ]** | **Corrente nominale *Rated current* [ A ]** | **Resistenza *Resistance* [ ohm ]** | **Induttanza *Inductance* [ mH ]** | **Corrente massima *Peak current* [ A ]** | **Peso *Weight* [ kg ]** |
| BL070.240 | 2.1 | 13 | 0.091 | 0.23 | 26 | 2.1 |
| BL070.480<br>BL070.48B | 1.4 | 6.5 | 0.34 | 1.0 | 13 | 2.1 |

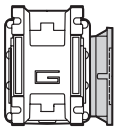
Azionamenti *Drives* → H1

**CMB402U + BL070.240 BL070.480**



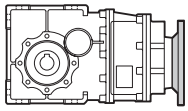

Albero lento cavo / *Hollow output shaft*

C12 →



**CMB402..F**
**CMB402..FL**
**CMB402..FB**

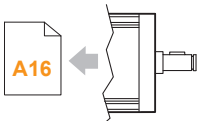
C11 →



**CMB402..AS...**

Freno *Break*

A16 →



**BL070.48B**

## CMB402 con motore brushless CC

## *CMB402 with brushless DC motor*

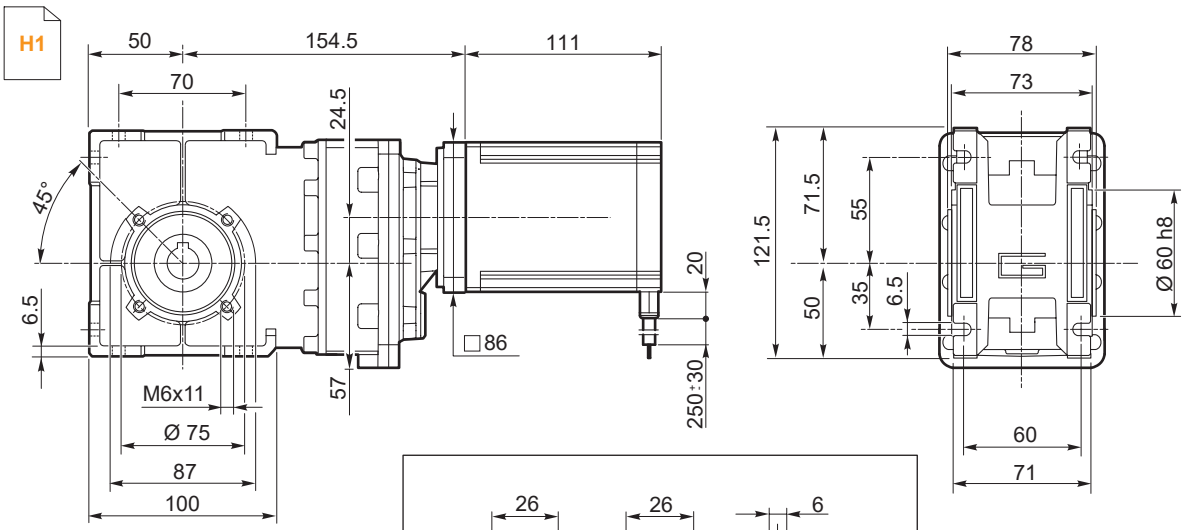
| CMB402 | BL140.480 | | | | | | |
|---|---|---|---|---|---|---|---|
| | 48V | | | | | | |
| ir | $n_{2MIN}$ [ rpm ] | | | $n_{2MAX}$ [ rpm ] | | | $n_{1MAX}$ [ rpm ] |
| | | $M_2$ [Nm] | sf | | $M_2$ [Nm] | sf | |
| 6.2 | 49 | 8.1 | 5.7 | 486 | 8.1 | 3.8 | 3000 |
| 7.5 | 40 | 9.9 | 4.7 | 400 | 9.9 | 3.2 | |
| 9.2 | 33 | 12 | 3.8 | 326 | 12 | 2.6 | |
| 11.8 | 25 | 15 | 3.3 | 254 | 15 | 2.3 | |
| 12.5 | 24 | 16 | 3.1 | 240 | 16 | 2.1 | |
| 14.8 | 20 | 19 | 2.7 | 202 | 19 | 1.8 | |
| 17.6 | 17 | 23 | 2.2 | 170 | 23 | 1.5 | |
| 18.6 | 16 | 24 | 2.6 | 161 | 24 | 1.8 | |
| 22.3 | 13 | 29 | 2.2 | 134 | 29 | 1.5 | |
| 23.9 | 13 | 31 | 2.0 | 125 | 31 | 1.4 | |
| 28.9 | 10 | 38 | 2.0 | 104 | 38 | 1.3 | |
| 30.8 | 9.7 | 41 | 1.8 | 97 | 41 | 1.2 | |
| 33.6 | 8.9 | 44 | 1.7 | 89 | 44 | 1.1 | |
| 35.6 | 8.4 | 47 | 1.6 | 84 | 47 | 1.1 | |
| 42.8 | 7.0 | 56 | 1.3 | 70 | 56 | 0.9 | |
| 55.3 | 5.4 | 73 | 1.0 | 54 | 72 | 0.7 | |
| 59.1 | 5.1 | 78 | 1.0 | 51 | 72 | 0.7 | |
| 64.3 | 4.7 | 85 | 0.9 | 47 | 72 | 0.7 | |
| 72.5 | 4.1 | 95 | 0.8 | 41 | 72 | 0.7 | |

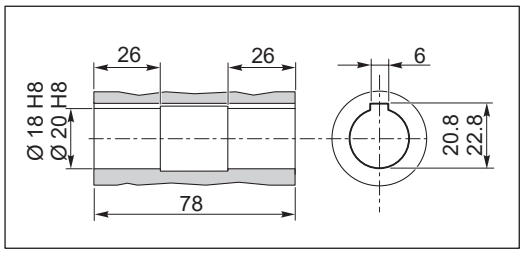
**Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1.**
**Contattare il ns. servizio tecnico**
***Attention: rated torque withstood by gear reducer for service in S1 is exceeded.***
***Please. contact our technical office.***

| Tipo *Type* | Numero di poli *Number of poles* | Numero di fasi *Number of phase* | Tensione *Rated voltage [ V ]* | Numero di giri *Rated speed* [ rpm ] | Coppia nominale *Rated torque* [ Nm ] | Potenza nominale *Rated power* [ W ] |
|---|---|---|---|---|---|---|
| **BL140.480** | 8 | 3 | 48 | 3000 | 1.4 | 440 |
| **Tipo *Type*** | **Coppia massima *Peak torque* [ Nm ]** | **Corrente nominale *Rated current* [ A ]** | **Resistenza *Resistance* [ ohm ]** | **Induttanza *Inductance* [ mH ]** | **Corrente massima *Peak current* [ A ]** | **Peso *Weight* [ kg ]** |
| **BL140.480** | 2.8 | 13.0 | 0.16 | 0.5 | 26 | 3.15 |

**Azionamenti *Drives*** H1

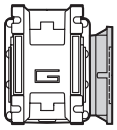
**CMB402U + BL140.480**



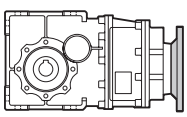

Albero lento cavo / *Hollow output shaft*

C12



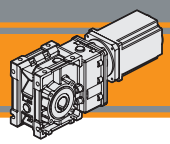
**CMB402..F**
**CMB402..FL**
**CMB402..FB**

C11



**CMB402..AS...**

Kg 6.5

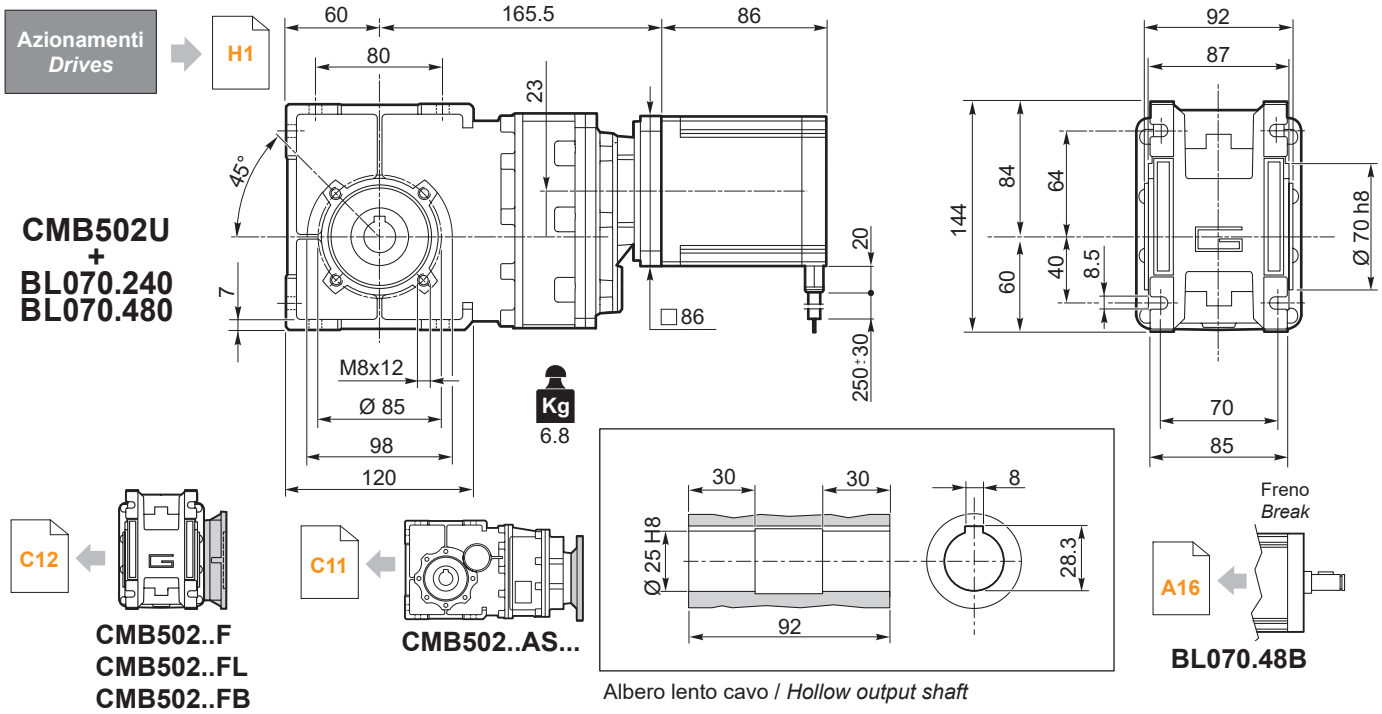


## CMB502 con motore brushless CC

## *CMB502 with brushless DC motor*

| CMB502 | BL070.240 / BL070.480 / BL070.48B | | | | | | |
|---|---|---|---|---|---|---|---|
| | 24V / 48V | | | | | | |
| ir | $n_{2MIN}$ [ rpm ] | | | $n_{2MAX}$ [ rpm ] | | | $n_{1MAX}$ [ rpm ] |
| | | $M_2$ [Nm] | sf | | $M_2$ [Nm] | sf | |
| 6.2 | 49 | 4.1 | 19.8 | 486 | 4.1 | 13.4 | 3000 |
| 7.5 | 40 | 4.9 | 16.3 | 400 | 4.9 | 11.1 | |
| 9.2 | 33 | 6.1 | 13.3 | 326 | 6.1 | 9.0 | |
| 11.8 | 25 | 7.8 | 13.3 | 254 | 7.8 | 9.0 | |
| 12.5 | 24 | 8.2 | 12.6 | 240 | 8.2 | 8.5 | |
| 14.8 | 20 | 9.8 | 10.6 | 202 | 9.8 | 7.2 | |
| 17.6 | 17 | 12 | 8.9 | 170 | 12 | 6.1 | |
| 18.6 | 16 | 12 | 10.3 | 161 | 12 | 7.0 | |
| 22.3 | 13 | 15 | 8.6 | 134 | 15 | 5.8 | |
| 23.9 | 13 | 16 | 8.0 | 125 | 16 | 5.5 | |
| 28.9 | 10 | 19 | 7.6 | 104 | 19 | 5.1 | |
| 30.8 | 9.7 | 20 | 7.1 | 97 | 20 | 4.8 | |
| 33.6 | 8.9 | 22 | 6.5 | 89 | 22 | 4.4 | |
| 35.6 | 8.4 | 23 | 6.1 | 84 | 23 | 4.2 | |
| 42.8 | 7.0 | 28 | 5.1 | 70 | 28 | 3.5 | |
| 55.3 | 5.4 | 36 | 3.9 | 54 | 36 | 2.7 | |
| 59.1 | 5.1 | 39 | 3.7 | 51 | 39 | 2.5 | |
| 64.3 | 4.7 | 42 | 3.4 | 47 | 42 | 2.3 | |
| 72.5 | 4.1 | 48 | 3.0 | 41 | 48 | 2.0 | |

| Tipo *Type* | Numero di poli *Number of poles* | Numero di fasi *Number of phase* | Tensione *Rated voltage* [ V ] | Numero di giri *Rated speed* [ rpm ] | Coppia nominale *Rated torque* [ Nm ] | Potenza nominale *Rated power* [ W ] |
|---|---|---|---|---|---|---|
| BL070.240 | 8 | 3 | 24 | 3000 | 0.7 | 220 |
| BL070.480<br>BL070.48B | 8 | 3 | 48 | 3000 | 0.7 | 220 |
| **Tipo *Type*** | **Coppia massima Peak torque [ Nm ]** | **Corrente nominale *Rated current* [ A ]** | **Resistenza *Resistance* [ ohm ]** | **Induttanza *Inductance* [ mH ]** | **Corrente massima *Peak current* [ A ]** | **Peso *Weight* [ kg ]** |
| BL070.240 | 2.1 | 13 | 0.091 | 0.23 | 26 | 2.1 |
| BL070.480<br>BL070.48B | 1.4 | 6.5 | 0.34 | 1.0 | 13 | 2.1 |




Albero lento cavo / *Hollow output shaft*

## CMB502 con motore brushless CC

## *CMB502 with brushless DC motor*

| CMB502 | BL140.480 | | | | | | |
|---|---|---|---|---|---|---|---|
| | 48V | | | | | | |
| ir | $n_{2MIN}$ [ rpm ] | | | $n_{2MAX}$ [ rpm ] | | | $n_{1MAX}$ [ rpm ] |
| | | $M_2$ [Nm] | sf | | $M_2$ [Nm] | sf | |
| 6.2 | 49 | 8.1 | 9.9 | 486 | 8.1 | 6.7 | 3000 |
| 7.5 | 40 | 9.9 | 8.2 | 400 | 9.9 | 5.5 | |
| 9.2 | 33 | 12 | 6.6 | 326 | 12 | 4.5 | |
| 11.8 | 25 | 15 | 6.6 | 254 | 15 | 4.5 | |
| 12.5 | 24 | 16 | 6.3 | 240 | 16 | 4.3 | |
| 14.8 | 20 | 19 | 5.3 | 202 | 19 | 3.6 | |
| 17.6 | 17 | 23 | 4.5 | 170 | 23 | 3.0 | |
| 18.6 | 16 | 24 | 5.2 | 161 | 24 | 3.5 | |
| 22.3 | 13 | 29 | 4.3 | 134 | 29 | 2.9 | |
| 23.9 | 13 | 31 | 4.0 | 125 | 31 | 2.7 | |
| 28.9 | 10 | 38 | 3.8 | 104 | 38 | 2.6 | |
| 30.8 | 9.7 | 41 | 3.5 | 97 | 41 | 2.4 | |
| 33.6 | 8.9 | 44 | 3.3 | 89 | 44 | 2.2 | |
| 35.6 | 8.4 | 47 | 3.1 | 84 | 47 | 2.1 | |
| 42.8 | 7.0 | 56 | 2.6 | 70 | 56 | 1.7 | |
| 55.3 | 5.4 | 73 | 2.0 | 54 | 73 | 1.3 | |
| 59.1 | 5.1 | 78 | 1.8 | 51 | 78 | 1.3 | |
| 64.3 | 4.7 | 85 | 1.7 | 47 | 85 | 1.2 | |
| 72.5 | 4.1 | 95 | 1.5 | 41 | 95 | 1.0 | |

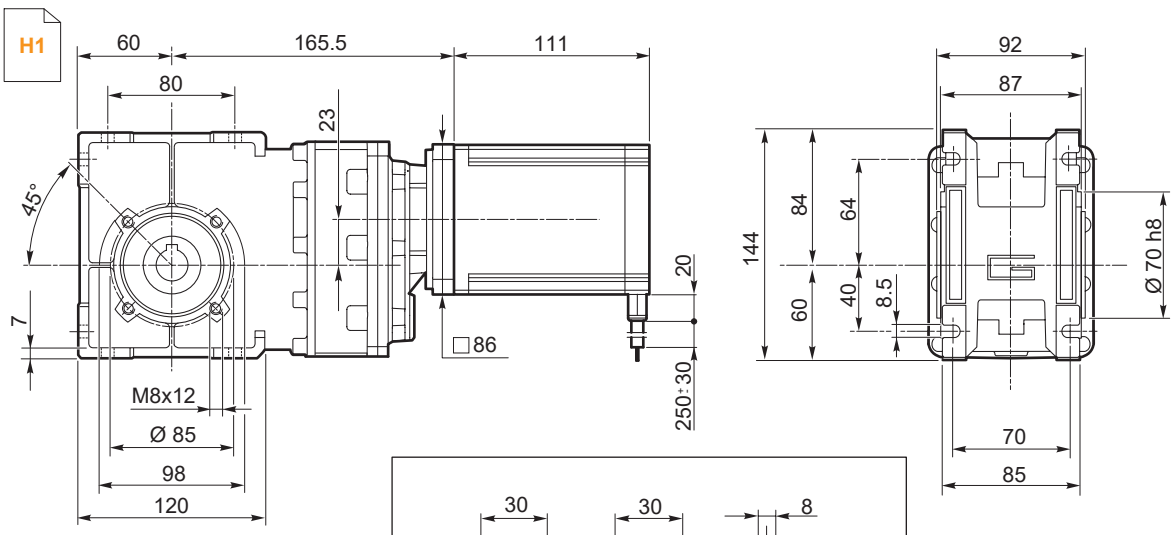
**Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1.**
**Contattare il ns. servizio tecnico**
***Attention: rated torque withstood by gear reducer for service in S1 is exceeded.***
***Please. contact our technical office.***

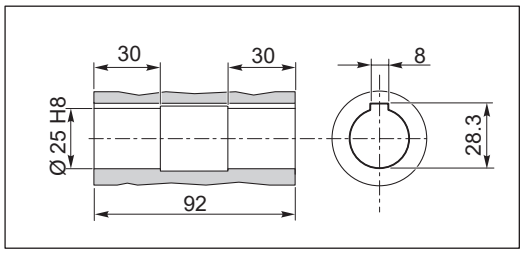
| Tipo *Type* | Numero di poli *Number of poles* | Numero di fasi *Number of phase* | Tensione *Rated voltage [ V ]* | Numero di giri *Rated speed* [ rpm ] | Coppia nominale *Rated torque* [ Nm ] | Potenza nominale *Rated power* [ W ] |
|---|---|---|---|---|---|---|
| **BL140.480** | 8 | 3 | 48 | 3000 | 1.4 | 440 |
| **Tipo *Type*** | **Coppia massima *Peak torque* [ Nm ]** | **Corrente nominale *Rated current* [ A ]** | **Resistenza *Resistance* [ ohm ]** | **Induttanza *Inductance* [ mH ]** | **Corrente massima *Peak current* [ A ]** | **Peso *Weight* [ kg ]** |
| **BL140.480** | 2.8 | 13.0 | 0.16 | 0.5 | 26 | 3.15 |

**Azionamenti *Drives***

H1

**CMB502U + BL140.480**

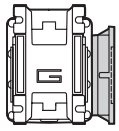



Albero lento cavo / *Hollow output shaft*

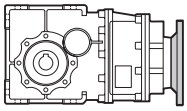
Kg 7.8

C12

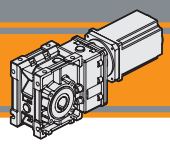


**CMB502..F**
**CMB502..FL**
**CMB502..FB**

C11



**CMB502..AS...**



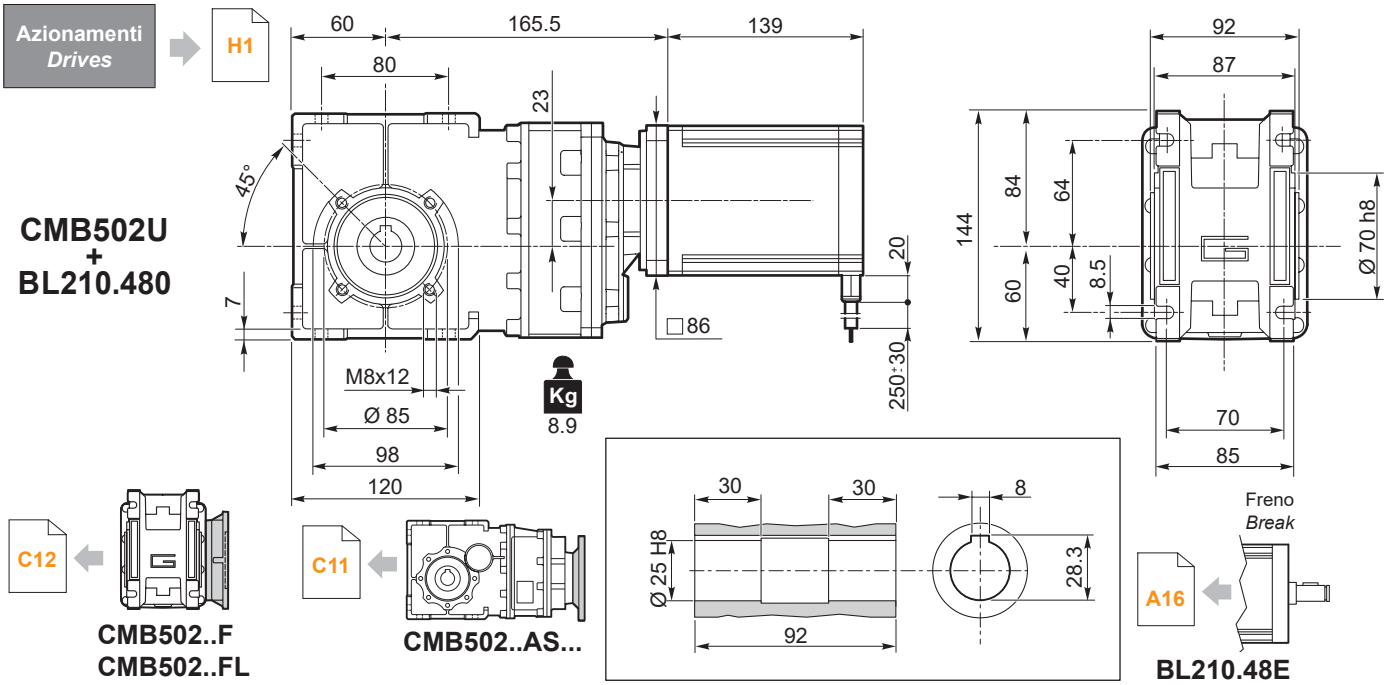
## CMB502 con motore brushless CC

## *CMB502 with brushless DC motor*

| CMB502 | BL210.480 / BL210.48E | | | | | | |
|---|---|---|---|---|---|---|---|
| | 48V | | | | | | |
| ir | $n_{2MIN}$ [ rpm ] | | | $n_{2MAX}$ [ rpm ] | | | $n_{1MAX}$ [ rpm ] |
| | | $M_2$ [Nm] | sf | | $M_2$ [Nm] | sf | |
| 6.2 | 49 | 12 | 6.6 | 486 | 12 | 4.5 | 3000 |
| 7.5 | 40 | 15 | 5.4 | 400 | 15 | 3.7 | |
| 9.2 | 33 | 18 | 4.4 | 326 | 18 | 3.0 | |
| 11.8 | 25 | 23 | 4.4 | 254 | 23 | 3.0 | |
| 12.5 | 24 | 25 | 4.2 | 240 | 25 | 2.8 | |
| 14.8 | 20 | 29 | 3.5 | 202 | 29 | 2.4 | |
| 17.6 | 17 | 35 | 3.0 | 170 | 35 | 2.0 | |
| 18.6 | 16 | 37 | 3.4 | 161 | 37 | 2.3 | |
| 22.3 | 13 | 44 | 2.9 | 134 | 44 | 1.9 | |
| 23.9 | 13 | 47 | 2.7 | 125 | 47 | 1.8 | |
| 28.9 | 10 | 57 | 2.5 | 104 | 57 | 1.7 | |
| 30.8 | 9.7 | 61 | 2.4 | 97 | 61 | 1.6 | |
| 33.6 | 8.9 | 66 | 2.2 | 89 | 66 | 1.5 | |
| 35.6 | 8.4 | 70 | 2.0 | 84 | 70 | 1.4 | |
| 42.8 | 7.0 | 84 | 1.7 | 70 | 84 | 1.2 | |
| 55.3 | 5.4 | 109 | 1.3 | 54 | 109 | 0.9 | |
| 59.1 | 5.1 | 117 | 1.2 | 51 | 117 | 0.8 | |
| 64.3 | 4.7 | 127 | 1.1 | 47 | 127 | 0.8 | |
| 72.5 | 4.1 | 143 | 1.0 | 41 | 139 | 0.7 | |

**Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1.**
**Contattare il ns. servizio tecnico**
***Attention: rated torque withstood by gear reducer for service in S1 is exceeded.***
***Please. contact our technical office.***

| Tipo *Type* | Numero di poli *Number of poles* | Numero di fasi *Number of phase* | Tensione *Rated voltage [ V ]* | Numero di giri *Rated speed* [ rpm ] | Coppia nominale *Rated torque* [ Nm ] | Potenza nominale *Rated power* [ W ] |
|---|---|---|---|---|---|---|
| BL210.480 BL210.48E | 8 | 3 | 48 | 3000 | 2.1 | 660 |
| **Tipo *Type*** | **Coppia massima *Peak torque* [ Nm ]** | **Corrente nominale *Rated current* [ A ]** | **Resistenza *Resistance* [ ohm ]** | **Induttanza *Inductance* [ mH ]** | **Corrente massima *Peak current* [ A ]** | **Peso *Weight* [ kg ]** |
| BL210.480 BL210.48E | 4.2 | 18.7 | 0.115 | 0.31 | 37 | 4.2 |



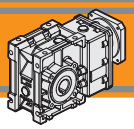

Albero lento cavo / *Hollow output shaft*

## Dati tecnici

*Technical data*

| | $n_2$ [$min^{-1}$] | $Mn_2$ [Nm] | $Pn_1$ [kW] | i |
|---|---|---|---|---|
| **CMB 402** | | | | |
| n1 = 1400 rpm | **227** | 40 | 1.0 | 6.18 |
| | **187** | 40 | 0.83 | 7.49 |
| | **152** | 40 | 0.68 | 9.2 |
| | **118** | 45 | 0.59 | 11.83 |
| | **112** | 45 | 0.56 | 12.48 |
| | **94.4** | 45 | 0.47 | 14.83 |
| | **79.4** | 45 | 0.40 | 17.63 |
| | **75.3** | 55 | 0.46 | 18.6 |
| | **62.7** | 55 | 0.38 | 22.33 |
| | **58.6** | 55 | 0.36 | 23.91 |
| | **48.5** | 65 | 0.35 | 28.89 |
| | **45.4** | 65 | 0.33 | 30.84 |
| | **41.7** | 65 | 0.30 | 33.57 |
| | **39.3** | 65 | 0.28 | 35.63 |
| | **32.7** | 65 | 0.24 | 42.75 |
| | **25.3** | 65 | 0.18 | 55.31 |
| | **23.7** | 65 | 0.17 | 59.06 |
| | **21.8** | 65 | 0.16 | 64.29 |
| | **19.3** | 65 | 0.14 | 72.50 |
| **CMB 502** | | | | |
| n1 = 1400 rpm | **227** | 70 | 1.8 | 6.18 |
| | **187** | 70 | 1.5 | 7.49 |
| | **152** | 70 | 1.2 | 9.20 |
| | **118** | 90 | 1.2 | 11.83 |
| | **112** | 90 | 1.1 | 12.48 |
| | **94.4** | 90 | 0.95 | 14.83 |
| | **79.4** | 90 | 0.80 | 17.63 |
| | **75.3** | 110 | 0.92 | 18.60 |
| | **62.7** | 110 | 0.77 | 22.33 |
| | **58.6** | 110 | 0.72 | 23.91 |
| | **48.5** | 125 | 0.67 | 28.89 |
| | **45.4** | 125 | 0.63 | 30.84 |
| | **41.7** | 125 | 0.58 | 33.57 |
| | **39.3** | 125 | 0.55 | 35.63 |
| | **32.7** | 125 | 0.46 | 42.75 |
| | **25.3** | 125 | 0.35 | 55.31 |
| | **23.7** | 125 | 0.33 | 59.06 |
| | **21.8** | 125 | 0.30 | 64.29 |
| | **19.3** | 125 | 0.27 | 72.50 |

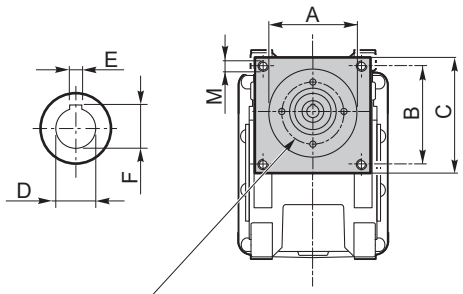
| | $n_2$ [$min^{-1}$] | $Mn_2$ [Nm] | $Pn_1$ [kW] | i |
|---|---|---|---|---|
| **CMB 402** | | | | |
| n1 = 3000 rpm | **486** | 31.2 | 1.65 | 6.18 |
| | **400** | 31.2 | 1.36 | 7.49 |
| | **326** | 31.2 | 1.11 | 9.20 |
| | **254** | 35.1 | 0.97 | 11.83 |
| | **240** | 35.1 | 0.92 | 12.48 |
| | **202** | 35.1 | 0.77 | 14.83 |
| | **170** | 35.1 | 0.65 | 17.63 |
| | **161** | 42.9 | 0.75 | 18.60 |
| | **134** | 42.9 | 0.63 | 22.33 |
| | **126** | 42.9 | 0.59 | 23.91 |
| | **104** | 50.7 | 0.57 | 28.89 |
| | **97.3** | 50.7 | 0.54 | 30.84 |
| | **89.4** | 50.7 | 0.49 | 33.57 |
| | **84.2** | 50.7 | 0.47 | 35.63 |
| | **70.2** | 50.7 | 0.39 | 42.75 |
| | **54.2** | 50.7 | 0.30 | 55.31 |
| | **50.8** | 50.7 | 0.28 | 59.06 |
| | **46.7** | 50.7 | 0.26 | 64.29 |
| | **41.4** | 50.7 | 0.23 | 72.50 |
| **CMB 502** | | | | |
| n1 = 3000 rpm | **486** | 54.6 | 2.89 | 6.18 |
| | **400** | 54.6 | 2.38 | 7.49 |
| | **326** | 54.6 | 1.94 | 9.20 |
| | **254** | 70.2 | 1.94 | 11.83 |
| | **240** | 70.2 | 1.84 | 12.48 |
| | **202** | 70.2 | 1.55 | 14.83 |
| | **170** | 70.2 | 1.30 | 17.63 |
| | **161** | 85.8 | 1.51 | 18.60 |
| | **134** | 85.8 | 1.26 | 22.33 |
| | **126** | 85.8 | 1.17 | 23.91 |
| | **104** | 97.5 | 1.10 | 28.89 |
| | **97.3** | 97.5 | 1.03 | 30.84 |
| | **89.4** | 97.5 | 0.95 | 33.57 |
| | **84.2** | 97.5 | 0.90 | 35.63 |
| | **70.2** | 97.5 | 0.75 | 42.75 |
| | **54.2** | 97.5 | 0.58 | 55.31 |
| | **50.8** | 97.5 | 0.54 | 59.06 |
| | **46.7** | 97.5 | 0.50 | 64.29 |
| | **41.4** | 97.5 | 0.44 | 72.50 |



## Dimensioni CMB con flange motore AS

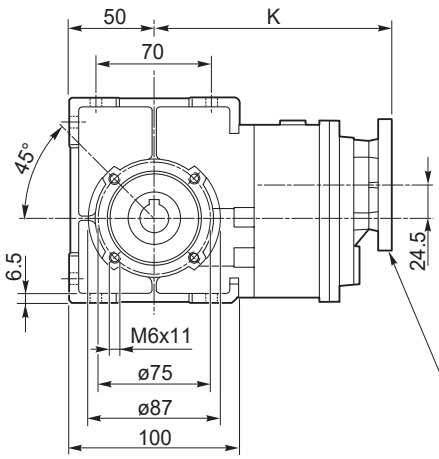
## *CMB dimensions with motor flanges AS*

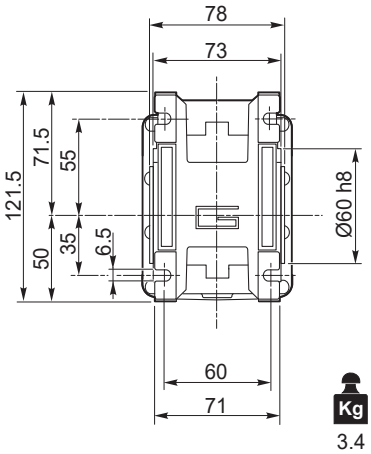
### CMB402 - U - AS...




Connessione con boccola o giunto in funzione del diametro dell'albero motore.

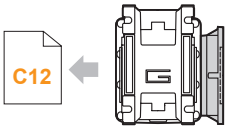
*Connection with sleeve or coupling depending on motorshaft's diameter.*




Lo spessore della flangia è variabile in funzione delle diverse lunghezze dell'albero motore.

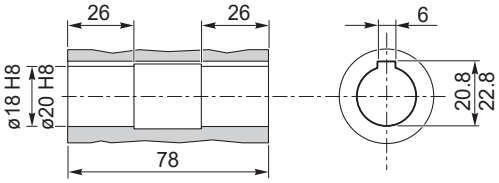
*Flange's thickness may vary depending on motorshaft's lenght.*



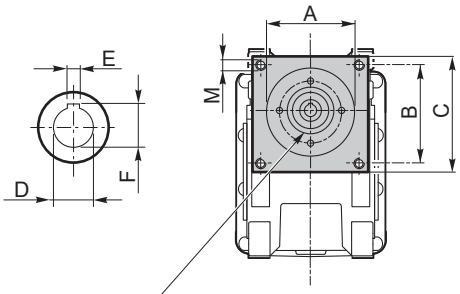

**CMB402..F**
**CMB402..FL**
**CMB402..FB**

| *Dimensioni / Dimensions* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AS** | **A** | **B** | **C** | **M** | **K** | **D** | **E** | **F** |
| **AS392** | 38.1 | 47.1 | 64 | M5 | 154.5 | 9 | 3 | 10.5 |
| | | | | | | 11 | 4 | 12.8 |
| | | | | | | 14 | 5 | 16.3 |
| **AS384** | 73 | 69.6 | 86 | M5 | 154.5 | 9 | 3 | 10.5 |
| | | | | | | 11 | 4 | 12.8 |
| | | | | | | 14 | 5 | 16.3 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... |

Albero uscita cavo
*Hollow output shaft*

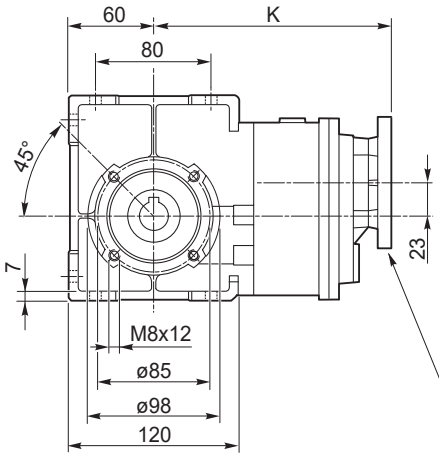


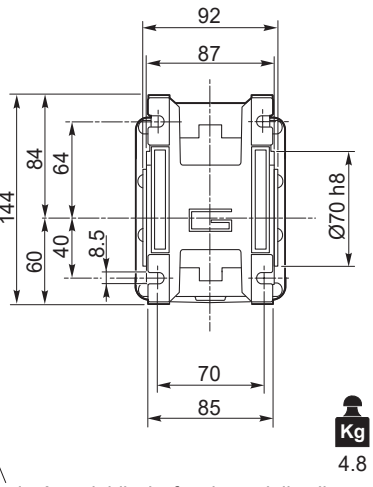

### CMB502 - U - AS...




Connessione con boccola o giunto in funzione del diametro dell'albero motore.

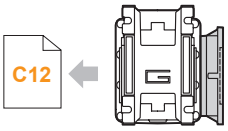
*Connection with sleeve or coupling depending on motorshaft's diameter.*




Lo spessore della flangia è variabile in funzione delle diverse lunghezze dell'albero motore.

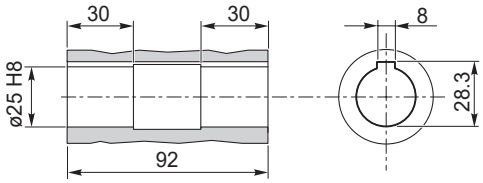
*Flange's thickness may vary depending on motorshaft's lenght.*




**CMB502..F**
**CMB502..FL**
**CMB502..FB**

| *Dimensioni / Dimensions* | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AS** | **A** | **B** | **C** | **M** | **K** | **D** | **E** | **F** |
| **AS384** | 73 | 69.6 | 86 | M5 | 165.5 | 9 | 3 | 10.5 |
| | | | | | | 11 | 4 | 12.8 |
| | | | | | | 14 | 5 | 16.3 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... |

Albero uscita cavo
*Hollow output shaft*

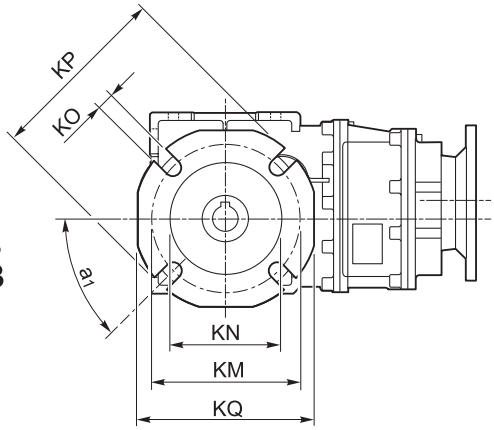


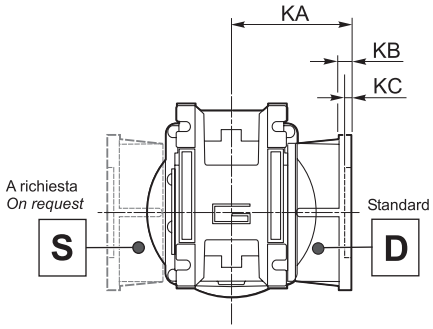
## Flange uscita

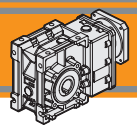
## *Output flange*

| | Flange uscita / *Output flanges* | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **F** | | | | | | | | | **FL** | | | | | | | | | | **FB** | | | | | | | | |
| **CMB** | **$a_1$** | **KA** | **KB** | **KC** | **KM** | **KN** H8 | **KO** | **KP** | **KQ** | **$a_1$** | **KA** | **KB** | **KC** | **KM** | **KN** H8 | **KO** | **KP** | **KQ** | **$a_1$** | **KA** | **KB** | **KC** | **KM** | **KN** H8 | **KO** | **KP** | **KQ** |
| **402** | 45° | 67 | 7.5 | 4.5 | 80-95 | 60 | 9 | 110 | 95 | 45° | 97 | 7.5 | 4.5 | 80-95 | 60 | 9 | 110 | 95 | 45° | 80 | 8.5 | 5 | 115-125 | 95 | 9.5 | 140 | 112 |
| **502** | 45° | 90 | 9 | 5 | 90-110 | 70 | 11 | 125 | 110 | 45° | 120 | 9 | 5 | 90-110 | 70 | 11 | 125 | 110 | 45° | 89 | 9 | 5 | 130-145 | 110 | 9.5 | 160 | 132 |

**CMB..F**
**CMB..FL**
**CMB..FB**

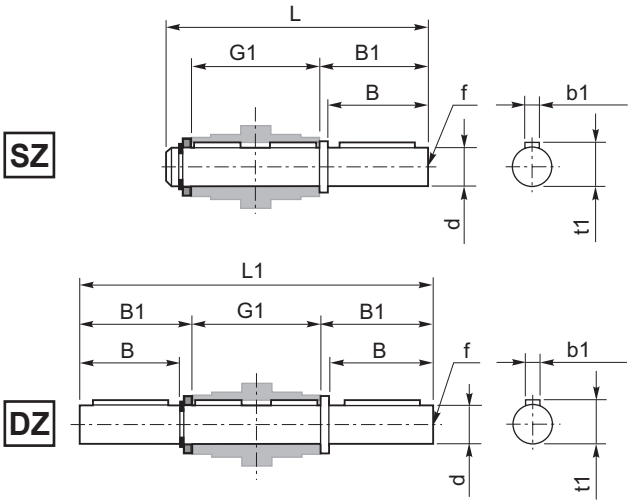


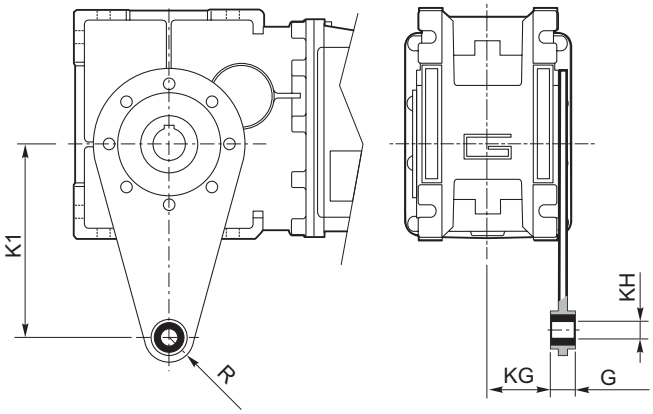





## Accessori

## *Accessories*



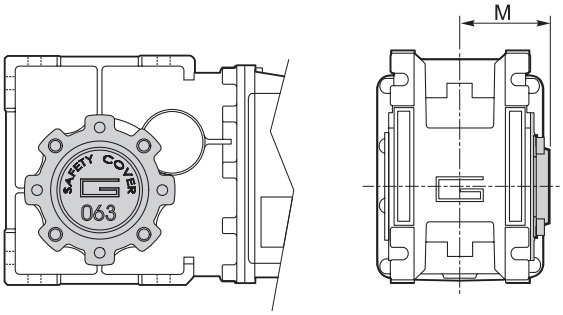

Albero lento / *Output shaft*

| CMB | d h7 | B | B1 | G1 | L | L1 | f | b1 | t1 |
|---|---|---|---|---|---|---|---|---|---|
| **402** | 18 | 40 | 43 | 78 | 128 | 164 | M6 | 6 | 20.5 |
| **502** | 25 | 50 | 53.5 | 92 | 153 | 199 | M10 | 8 | 28 |

Braccio di reazione / *Torque arm*

| CMB | K1 | G | KG | KH | R |
|---|---|---|---|---|---|
| **402** | 100 | 14 | 31 | 10 | 18 |
| **502** | 100 | 14 | 38 | 10 | 18 |

## SC - *Safety cover*




| CMB | M |
|---|---|
| **402** | 54.5 |
| **502** | 62.5 |

# Note/*Notes*