

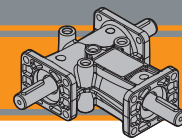


Right-angle  
bevel  
gearboxes

Rinvii angolari  
**Right-angle bevel gearboxes**



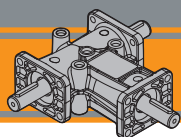




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# DZ Rinvii angolari Right-angle bevel gearboxes

## Caratteristiche tecniche

I rinvii angolari serie DZ sono stati progettati per applicazioni industriali dove occorre trasmettere un moto rotatorio tra alberi disposti perpendicolarmente tra loro.

Sono disponibili:

- 5 grandezze: DZ1, DZ2, DZ3, DZ4 e DZ5
- 2 rapporti: 1/1 e 1/2;
- 2 o 1 prese moto uscita;
- 1 flangia ingresso e 2 flange uscita. Solo per le grandezze 1 e 2 è disponibile la versione con 1 sola flangia uscita

Caratteristiche comuni a tutta la serie sono:

- Carter monoblocco in lega di alluminio predisposta per il fissaggio in 3 punti o, in alternativa, alle 2 o 3 flange in corrispondenza delle prese moto
- Coppia Conica Spiroidale GLEASON in acciaio al Nichel Cromo con trattamento di Cementazione - Tempra
- Alberi maschio in acciaio al carbonio protetti superficialmente contro la corrosione con trattamento di fosfatazione. Le sedi linguetta (non presenti sulla taglia DZ1) possono assumere qualsiasi posizione angolare.
- Sulla taglia DZ3 è previsto un albero di uscita cavo con sede linguetta
- Cuscinetti radiali a sfere (DZ3 con albero cavo con cuscinetti conici in uscita)
- Anelli di Tenuta tipo A in NBR o Tappi in NBR ove l'albero non è sporgente
- Lubrificazione con olio sintetico ISO 150, ad esclusione delle grandezze 1 fornita con grasso minerale 00 EP permanente

## Technical features

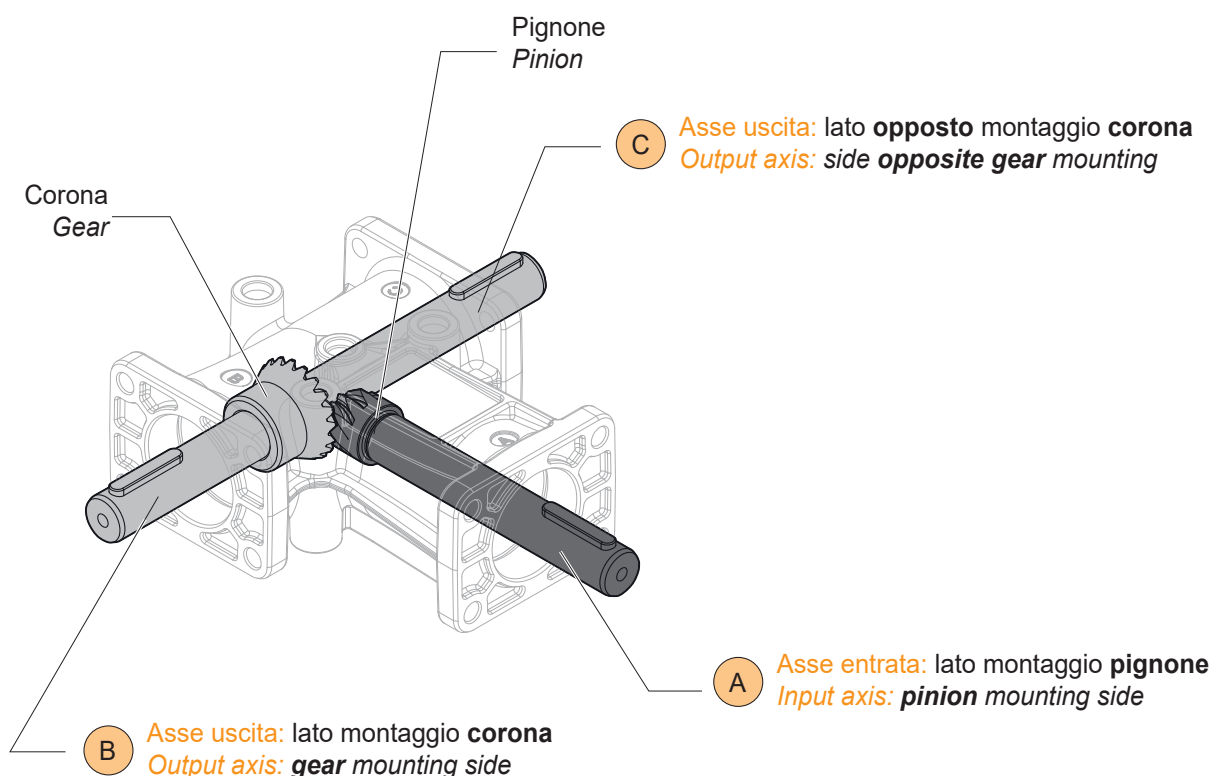
DZ-series right-angle bevel gearboxes are designed for industrial applications where rotary motion must be transmitted between perpendicularly arranged shafts.

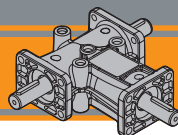
Those available:

- 5 sizes: DZ1, DZ2, DZ3, DZ4 and DZ5
- 2 ratios: 1/1 and 1/2;
- 2 or 1 output power take-off;
- 1 input flange and 2 output flanges. Only for sizes 1 and 2 the version with only 1 output flange is available

Common features throughout the series are:

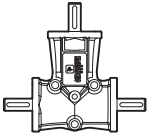
- One-piece aluminium alloy casing prepared for 3-point fixing or, alternatively, 2 or 3 flanges at the power take-off
- GLEASON spiral bevel gear in Nickel Chrome steel with Case hardening treatment
- Solid shafts made of carbon steel, surface protected against corrosion with phosphating treatment. The keyways (not present on size DZ1) can assume any angular position.
- On size DZ3 there is a hollow output shaft with keyways
- Radial ball bearings (DZ3 with hollow shaft with conical output bearings)
- NBR type A sealing rings or NBR plugs where the shaft does not protrude
- Lubrication with synthetic oil ISO 150, except size 1 supplied with permanent 00 EP mineral grease





### Designazione

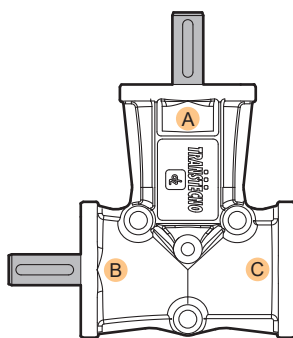
### Classification

| RINVIO ANGOLARE / RIGHT-ANGLE BEVEL GEARBOX                                       |                   |                             |                                    |                   |                           |                           |                           |
|-----------------------------------------------------------------------------------|-------------------|-----------------------------|------------------------------------|-------------------|---------------------------|---------------------------|---------------------------|
| DZ                                                                                | 1                 | 0                           | S                                  | 2F                | A                         | B                         | -                         |
| Tipo<br>Type                                                                      | Grandezza<br>Size | Rapporto<br>Ratio           | Tipo di montaggio<br>Mounting type | Flangia<br>Flange | Albero in A<br>Shaft in A | Albero in B<br>Shaft in B | Albero in C<br>Shaft in C |
| <b>DZ</b>                                                                         | <b>1</b>          | <b>0 - 1</b>                | <b>S</b>                           | <b>2F</b>         | <b>A</b>                  | <b>B</b>                  | <b>C</b>                  |
|  | 2<br>3<br>4<br>5  | $i = 1/1$                   | <b>FS</b>                          | (n°2)             |                           | -                         | -                         |
|                                                                                   |                   | <b>2 - 3</b>                | <b>...</b>                         | <b>3F</b>         |                           |                           |                           |
|                                                                                   |                   | $i = 1/2$                   |                                    | (n°3)             |                           |                           |                           |
|                                                                                   |                   | <b>11</b>                   |                                    |                   |                           |                           |                           |
|                                                                                   |                   | $i = 1/1$                   |                                    |                   |                           |                           |                           |
|                                                                                   |                   | Albero cavo<br>Hollow shaft |                                    |                   |                           |                           |                           |

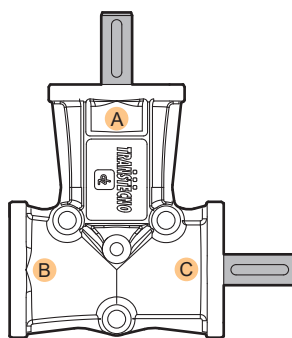
DZ

### Versione

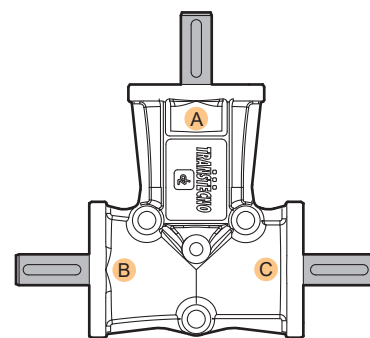
### Version



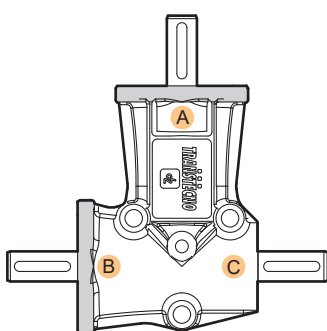
S..AB



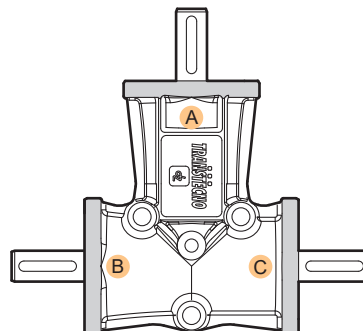
FS..AC



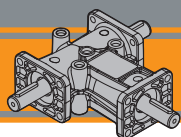
...ABC



2F



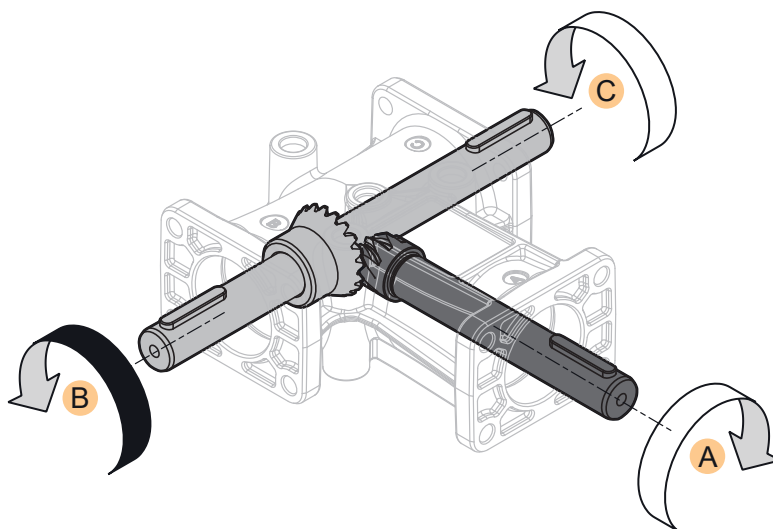
3F



# DZ Rinvii angolari Right-angle bevel gearboxes

## Sensi di rotazione

## Direction of rotation



## Simbologia

## Symbols

|                                                                                          |                      |                                                                                                                  |
|------------------------------------------------------------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------|
| $n_1$                                                                                    | [min <sup>-1</sup> ] | Velocità in ingresso / <i>Input speed</i>                                                                        |
| $n_2$                                                                                    | [min <sup>-1</sup> ] | Velocità in uscita / <i>Output speed</i>                                                                         |
| $i$                                                                                      |                      | Rapporto di riduzione / <i>Ratio</i>                                                                             |
| $P_1$                                                                                    | [kW]                 | Potenza in entrata / <i>Input power</i>                                                                          |
| $M_2$                                                                                    | [Nm]                 | Coppia nominale in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>               |
| $P_{n1}$                                                                                 | [kW]                 | Potenza nominale in entrata / <i>Nominal input power</i>                                                         |
| $M_{n2}$                                                                                 | [Nm]                 | Coppia nominale in uscita in funzione di $P_{n1}$ / <i>Nominal output torque referred to <math>P_{n1}</math></i> |
| $sf$                                                                                     |                      | Fattore di servizio / <i>Service factor</i>                                                                      |
| $R_1$                                                                                    | [N]                  | Carico radiale ammissibile in entrata / <i>Permitted input radial load</i>                                       |
| $A_1$                                                                                    | [N]                  | Carico assiale ammissibile in entrata / <i>Permitted input axial load</i>                                        |
| $R_2$                                                                                    | [N]                  | Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>                                       |
| $A_2$                                                                                    | [N]                  | Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>                                        |
|  $kg$ | [kg]                 | Peso del solo riduttore / <i>Weight of the gearbox only</i>                                                      |

## Lubrificazione

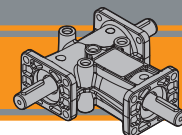
## Lubrication

I rinvii angolari serie DZ, sono forniti completi di lubrificante sintetico ISO 150, ad esclusione delle grandezze 1 forniti con grasso minerale 00 EP.

DZ-series right-angle bevel gearboxes are supplied complete with synthetic lubricant ISO 150, except size 1 supplied with 00 EP mineral grease.

Possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

They can be installed in any mounting position and are maintenance-free.



## Carichi radiali e assiali

## Entrata / Input

## Radial and axial loads

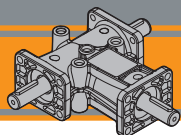
Per carichi radiali o assiali superiori a quelli di tabella si prega di contattare il servizio tecnico

For radial or axial loads higher than those in the table, please contact technical service

|      | n1<br>[min <sup>-1</sup> ] | i    | n <sub>2</sub><br>[min <sup>-1</sup> ] | R <sub>1</sub><br>[N] | A <sub>1</sub><br>[N] |   | n1<br>[min <sup>-1</sup> ] | i   | n <sub>2</sub><br>[min <sup>-1</sup> ] | R <sub>1</sub><br>[N] | A <sub>1</sub><br>[N] |
|------|----------------------------|------|----------------------------------------|-----------------------|-----------------------|---|----------------------------|-----|----------------------------------------|-----------------------|-----------------------|
|      |                            |      |                                        |                       |                       |   |                            |     |                                        |                       |                       |
| DZ 1 | 50                         | 1    | 50                                     | 140                   | 100                   |   | 100                        | 1   | 100                                    | 140                   | 100                   |
|      |                            | 2    | 25                                     |                       |                       |   |                            | 2   | 50                                     |                       |                       |
|      | 250                        | 1    | 250                                    | 120                   | 100                   |   | 500                        | 1   | 500                                    | 82                    | 100                   |
|      |                            | 2    | 125                                    | 140                   |                       |   |                            | 2   | 250                                    | 140                   |                       |
|      | 750                        | 1    | 750                                    | 65                    | 100                   |   | 1000                       | 1   | 1000                                   | 39                    | 75                    |
|      |                            | 2    | 375                                    | 140                   |                       |   |                            | 2   | 500                                    | 140                   | 100                   |
| 1500 | 1                          | 1500 | 20                                     | 38                    | 2000                  | 1 | 2000                       | 10  | 25                                     |                       |                       |
|      | 2                          | 750  | 130                                    | 100                   |                       | 2 | 1000                       | 120 | 100                                    |                       |                       |
| 2500 | 1                          | 2500 | 5                                      | 12                    | 3000                  | 1 | 3000                       | *   | *                                      |                       |                       |
|      | 2                          | 1250 | 110                                    | 100                   |                       | 2 | 1500                       | 100 | 100                                    |                       |                       |
| DZ 2 | 50                         | 1    | 50                                     | 330                   | 220                   |   | 100                        | 1   | 100                                    | 330                   | 220                   |
|      |                            | 2    | 25                                     |                       |                       |   |                            | 2   | 50                                     |                       |                       |
|      | 250                        | 1    | 250                                    | 200                   | 220                   |   | 500                        | 1   | 500                                    | 135                   | 220                   |
|      |                            | 2    | 125                                    | 315                   |                       |   |                            | 2   | 250                                    | 270                   |                       |
|      | 750                        | 1    | 750                                    | 120                   | 220                   |   | 1000                       | 1   | 1000                                   | 80                    | 170                   |
|      |                            | 2    | 375                                    | 235                   |                       |   |                            | 2   | 500                                    | 150                   | 185                   |
| 1500 | 1                          | 1500 | 45                                     | 85                    | 2000                  | 1 | 2000                       | 30  | 50                                     |                       |                       |
|      | 2                          | 750  | 75                                     | 110                   |                       | 2 | 1000                       | 50  | 75                                     |                       |                       |
| 2500 | 1                          | 2500 | 15                                     | 25                    | 3000                  | 1 | 3000                       | *   | *                                      |                       |                       |
|      | 2                          | 1250 | 25                                     | 35                    |                       | 2 | 1500                       |     |                                        |                       |                       |
| DZ 3 | 50                         | 1    | 50                                     | 690                   | 460                   |   | 100                        | 1   | 100                                    | 690                   | 460                   |
|      |                            | 2    | 25                                     |                       |                       |   |                            | 2   | 50                                     |                       |                       |
|      | 250                        | 1    | 250                                    | 480                   | 460                   |   | 500                        | 1   | 500                                    | 280                   | 460                   |
|      |                            | 2    | 125                                    | 690                   |                       |   |                            | 2   | 250                                    | 690                   |                       |
|      | 750                        | 1    | 750                                    | 215                   | 460                   |   | 1000                       | 1   | 1000                                   | 110                   | 455                   |
|      |                            | 2    | 375                                    | 690                   |                       |   |                            | 2   | 500                                    | 620                   | 460                   |
| 1500 | 1                          | 1500 | 50                                     | 350                   | 2000                  | 1 | 2000                       | 20  | 250                                    |                       |                       |
|      | 2                          | 750  | 450                                    | 430                   |                       | 2 | 1000                       | 350 | 400                                    |                       |                       |
| 2500 | 1                          | 2500 | 10                                     | 150                   | 3000                  | 1 | 3000                       | *   | 50                                     |                       |                       |
|      | 2                          | 1250 | 250                                    | 325                   |                       | 2 | 1500                       | 150 | 250                                    |                       |                       |
| DZ 4 | 50                         | 1    | 50                                     | 960                   | 640                   |   | 100                        | 1   | 100                                    | 960                   | 640                   |
|      |                            | 2    | 25                                     |                       |                       |   |                            | 2   | 50                                     |                       |                       |
|      | 250                        | 1    | 250                                    | 650                   | 640                   |   | 500                        | 1   | 500                                    | 420                   | 595                   |
|      |                            | 2    | 125                                    | 960                   |                       |   |                            | 2   | 250                                    | 960                   | 640                   |
|      | 750                        | 1    | 750                                    | 360                   | 550                   |   | 1000                       | 1   | 1000                                   | 250                   | 400                   |
|      |                            | 2    | 375                                    | 960                   | 640                   |   |                            | 2   | 500                                    | 780                   | 640                   |
| 1500 | 1                          | 1500 | 150                                    | 225                   | 2000                  | 1 | 2000                       | 100 | 150                                    |                       |                       |
|      | 2                          | 750  | 450                                    | 570                   |                       | 2 | 1000                       | 300 | 500                                    |                       |                       |
| 2500 | 1                          | 2500 | 50                                     | 80                    | 3000                  | 1 | 3000                       | *   | *                                      |                       |                       |
|      | 2                          | 1250 | 230                                    | 400                   |                       | 2 | 1500                       | 150 | 300                                    |                       |                       |
| DZ 5 | 50                         | 1    | 50                                     | 1100                  | 740                   |   | 100                        | 1   | 100                                    | 1100                  | 740                   |
|      |                            | 2    | 25                                     |                       |                       |   |                            | 2   | 50                                     |                       |                       |
|      | 250                        | 1    | 250                                    | 1050                  | 740                   |   | 500                        | 1   | 500                                    | 870                   | 740                   |
|      |                            | 2    | 125                                    | 1100                  |                       |   |                            | 2   | 250                                    | 1100                  |                       |
|      | 750                        | 1    | 750                                    | 740                   | 740                   |   | 1000                       | 1   | 1000                                   | 450                   | 720                   |
|      |                            | 2    | 375                                    | 1100                  |                       |   |                            | 2   | 500                                    | 950                   | 740                   |
| 1500 | 1                          | 1500 | 250                                    | 550                   | 2000                  | 1 | 2000                       | 200 | 400                                    |                       |                       |
|      | 2                          | 750  | 600                                    | 565                   |                       | 2 | 1000                       | 400 |                                        |                       |                       |
| 2500 | 1                          | 2500 | 150                                    | 300                   | 3000                  | 1 | 3000                       | 100 | 200                                    |                       |                       |
|      | 2                          | 1250 | 300                                    | 400                   |                       | 2 | 1500                       | 200 | 400                                    |                       |                       |

\* Contattare il servizio tecnico

\* Contact technical service



# DZ Rinvii angolari Right-angle bevel gearboxes

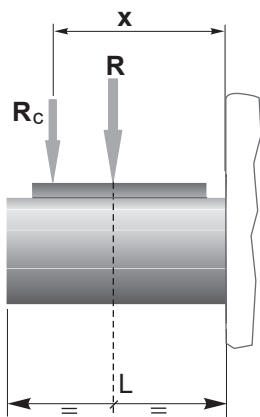
## Carichi radiali

## Entrata / Input

## Radial loads

Quando il carico radiale risultante non è applicato sulla mezzzeria 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:*

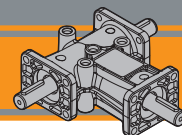


$$R_c = \frac{R \cdot a}{(b+x)} \leq R_{..MAX}$$

$$R \leq R_c$$

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

|      | i | a     | b    | R <sub>max</sub><br>[N] |
|------|---|-------|------|-------------------------|
| DZ 1 | 1 | 47.5  | 40   | 140                     |
|      | 2 |       |      |                         |
| DZ 2 | 1 | 75.5  | 58   | 330                     |
|      | 2 |       |      |                         |
| DZ 3 | 1 | 119.5 | 94.5 | 690                     |
|      | 2 |       |      |                         |
| DZ 4 | 1 | 131   | 96   | 960                     |
|      | 2 |       |      |                         |
| DZ 5 | 1 | 131   | 96   | 1100                    |
|      | 2 |       |      |                         |



## Carichi radiali e assiali

## Uscita / Output

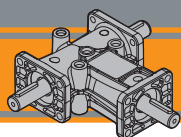
## Radial and axial loads

Per carichi radiali o assiali superiori a quelli di tabella si prega di contattare il servizio tecnico

For radial or axial loads higher than those in the table, please contact technical service

|      | n1<br>[min <sup>-1</sup> ] | i      | n <sub>2</sub><br>[min <sup>-1</sup> ] | R <sub>1</sub><br>[N] | A <sub>1</sub><br>[N] |  | n1<br>[min <sup>-1</sup> ] | i      | n <sub>2</sub><br>[min <sup>-1</sup> ] | R <sub>1</sub><br>[N] | A <sub>1</sub><br>[N] |
|------|----------------------------|--------|----------------------------------------|-----------------------|-----------------------|--|----------------------------|--------|----------------------------------------|-----------------------|-----------------------|
|      | 50                         | 1<br>2 | 50<br>25                               | 140                   | 100                   |  | 100                        | 1<br>2 | 100<br>50                              | 140                   | 100                   |
| DZ 1 | 250                        | 1<br>2 | 250<br>125                             | 140                   | 100                   |  | 500                        | 1<br>2 | 500<br>250                             | 140                   | 100                   |
|      | 750                        | 1<br>2 | 750<br>375                             | 140                   | 100                   |  | 1000                       | 1<br>2 | 1000<br>500                            | 140                   | 100                   |
|      | 1500                       | 1<br>2 | 1500<br>750                            | 133<br>140            | 85<br>100             |  | 2000                       | 1<br>2 | 2000<br>1000                           | 125<br>140            | 75<br>100             |
|      | 2500                       | 1<br>2 | 2500<br>1250                           | 112<br>120            | 60<br>100             |  | 3000                       | 1<br>2 | 3000<br>1500                           | 100                   | 50<br>100             |
|      | 50                         | 1<br>2 | 50<br>25                               | 330                   | 220                   |  | 100                        | 1<br>2 | 100<br>50                              | 330                   | 220                   |
|      | 250                        | 1<br>2 | 250<br>125                             | 330                   | 220                   |  | 500                        | 1<br>2 | 500<br>250                             | 330                   | 220                   |
| DZ 2 | 750                        | 1<br>2 | 750<br>375                             | 330                   | 220                   |  | 1000                       | 1<br>2 | 1000<br>500                            | 330                   | 220                   |
|      | 1500                       | 1<br>2 | 1500<br>750                            | 290<br>330            | 195<br>220            |  | 2000                       | 1<br>2 | 2000<br>1000                           | 250<br>330            | 175<br>220            |
|      | 2500                       | 1<br>2 | 2500<br>1250                           | 225<br>330            | 160<br>220            |  | 3000                       | 1<br>2 | 3000<br>1500                           | 200<br>330            | 150<br>220            |
|      | 50                         | 1<br>2 | 50<br>25                               | 690                   | 460                   |  | 100                        | 1<br>2 | 100<br>50                              | 690                   | 460                   |
|      | 250                        | 1<br>2 | 250<br>125                             | 690                   | 460                   |  | 500                        | 1<br>2 | 500<br>250                             | 690                   | 460                   |
|      | 750                        | 1<br>2 | 750<br>375                             | 690                   | 460                   |  | 1000                       | 1<br>2 | 1000<br>500                            | 670<br>690            | 460                   |
| DZ 3 | 1500                       | 1<br>2 | 1500<br>750                            | 550<br>690            | 430<br>460            |  | 2000                       | 1<br>2 | 2000<br>1000                           | 450<br>690            | 400<br>460            |
|      | 2500                       | 1<br>2 | 2500<br>1250                           | 375<br>690            | 350<br>460            |  | 3000                       | 1<br>2 | 3000<br>1500                           | 300<br>690            | 300<br>460            |
|      | 50                         | 1<br>2 | 50<br>25                               | 960                   | 640                   |  | 100                        | 1<br>2 | 100<br>50                              | 960                   | 640                   |
|      | 250                        | 1<br>2 | 250<br>125                             | 960                   | 640                   |  | 500                        | 1<br>2 | 500<br>250                             | 960                   | 640                   |
|      | 750                        | 1<br>2 | 750<br>375                             | 960                   | 640                   |  | 1000                       | 1<br>2 | 1000<br>500                            | 880<br>960            | 640                   |
|      | 1500                       | 1<br>2 | 1500<br>750                            | 700<br>960            | 570<br>640            |  | 2000                       | 1<br>2 | 2000<br>1000                           | 600<br>960            | 500<br>640            |
| DZ 4 | 2500                       | 1<br>2 | 2500<br>1250                           | 500<br>960            | 400<br>640            |  | 3000                       | 1<br>2 | 3000<br>1500                           | 400<br>960            | 300<br>640            |
|      | 50                         | 1<br>2 | 50<br>25                               | 1100                  | 740                   |  | 100                        | 1<br>2 | 100<br>50                              | 1100                  | 740                   |
|      | 250                        | 1<br>2 | 250<br>125                             | 1100                  | 740                   |  | 500                        | 1<br>2 | 500<br>250                             | 1100                  | 740                   |
|      | 750                        | 1<br>2 | 750<br>375                             | 1100                  | 740                   |  | 1000                       | 1<br>2 | 1000<br>500                            | 1100                  | 740                   |
|      | 1500                       | 1<br>2 | 1500<br>750                            | 920<br>1100           | 670<br>740            |  | 2000                       | 1<br>2 | 2000<br>1000                           | 700<br>1100           | 600<br>740            |
|      | 2500                       | 1<br>2 | 2500<br>1250                           | 600<br>1100           | 500<br>740            |  | 3000                       | 1<br>2 | 3000<br>1500                           | 500<br>1100           | 400<br>740            |
| DZ 5 | 50                         | 1<br>2 | 50<br>25                               | 330                   | 220                   |  | 100                        | 1<br>2 | 100<br>50                              | 330                   | 220                   |
|      | 250                        | 1<br>2 | 250<br>125                             | 330                   | 220                   |  | 500                        | 1<br>2 | 500<br>250                             | 330                   | 220                   |
|      | 750                        | 1<br>2 | 750<br>375                             | 330                   | 220                   |  | 1000                       | 1<br>2 | 1000<br>500                            | 330                   | 220                   |
|      | 1500                       | 1<br>2 | 1500<br>750                            | 290<br>330            | 195<br>220            |  | 2000                       | 1<br>2 | 2000<br>1000                           | 250<br>330            | 175<br>220            |
|      | 2500                       | 1<br>2 | 2500<br>1250                           | 225<br>330            | 160<br>220            |  | 3000                       | 1<br>2 | 3000<br>1500                           | 200<br>330            | 150<br>220            |
|      | 50                         | 1<br>2 | 50<br>25                               | 690                   | 460                   |  | 100                        | 1<br>2 | 100<br>50                              | 690                   | 460                   |

DZ



# DZ Rinvii angolari Right-angle bevel gearboxes

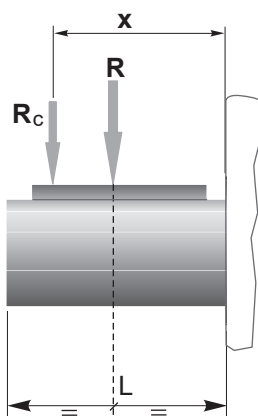
## Carichi radiali

## Uscita / Output

## Radial loads

Quando il carico radiale risultante non è applicato sulla mezzzeria 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:*

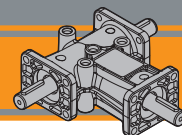


$$R_c = \frac{R \cdot a}{(b+x)} \leq R_{..MAX}$$

$$R \leq R_c$$

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

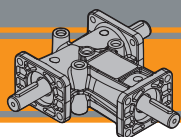
|      | i | a     | b     | R <sub>max</sub><br>[N] |
|------|---|-------|-------|-------------------------|
| DZ 1 | 1 | 61.5  | 54    | 140                     |
|      | 2 |       |       |                         |
| DZ 2 | 1 | 102   | 84.5  | 330                     |
|      | 2 |       |       |                         |
| DZ 3 | 1 | 145.5 | 120.5 | 690                     |
|      | 2 |       |       |                         |
| DZ 4 | 1 | 169   | 134   | 960                     |
|      | 2 |       |       |                         |
| DZ 5 | 1 | 169   | 134   | 1100                    |
|      | 2 |       |       |                         |



### Technical data

|      | i | n <sub>1</sub><br>[min <sup>-1</sup> ] | n <sub>2</sub><br>[min <sup>-1</sup> ] | M <sub>n2</sub><br>[Nm] | P <sub>n1</sub><br>[kW] | n <sub>1</sub><br>[min <sup>-1</sup> ] | n <sub>2</sub><br>[min <sup>-1</sup> ] | M <sub>n2</sub><br>[Nm] | P <sub>n1</sub><br>[kW] | n <sub>1</sub><br>[min <sup>-1</sup> ] | n <sub>2</sub><br>[min <sup>-1</sup> ] | M <sub>n2</sub><br>[Nm] | P <sub>n1</sub><br>[kW] | n <sub>1</sub><br>[min <sup>-1</sup> ] | n <sub>2</sub><br>[min <sup>-1</sup> ] | M <sub>n2</sub><br>[Nm] | P <sub>n1</sub><br>[kW] | n <sub>1</sub><br>[min <sup>-1</sup> ] | n <sub>2</sub><br>[min <sup>-1</sup> ] | M <sub>n2</sub><br>[Nm] | P <sub>n1</sub><br>[kW] |
|------|---|----------------------------------------|----------------------------------------|-------------------------|-------------------------|----------------------------------------|----------------------------------------|-------------------------|-------------------------|----------------------------------------|----------------------------------------|-------------------------|-------------------------|----------------------------------------|----------------------------------------|-------------------------|-------------------------|----------------------------------------|----------------------------------------|-------------------------|-------------------------|
| DZ 1 | 1 | 50                                     | 50                                     | 4.7                     | 0.02                    | 100                                    | 100                                    | 3.9                     | 0.04                    | 250                                    | 250                                    | 3.0                     | 0.08                    | 500                                    | 500                                    | 2.6                     | 0.13                    | 750                                    | 750                                    | 2.4                     | 0.18                    |
|      | 2 |                                        | 25                                     | 3.6                     | 0.01                    |                                        | 50                                     | 3.5                     | 0.02                    |                                        | 125                                    | 3.1                     | 0.04                    |                                        | 250                                    | 2.7                     | 0.07                    |                                        | 375                                    | 2.5                     | 0.09                    |
|      | 1 | 1000                                   | 1000                                   | 2.1                     | 0.21                    | 1500                                   | 1500                                   | 1.9                     | 0.29                    | 2000                                   | 2000                                   | 1.8                     | 0.36                    | 2500                                   | 2500                                   | 1.75                    | 0.44                    | 3000                                   | 3000                                   | 1.7                     | 0.51                    |
|      | 2 |                                        | 500                                    | 2.2                     | 0.11                    |                                        | 750                                    | 1.9                     | 0.14                    |                                        | 1000                                   | 1.8                     | 0.18                    |                                        | 1250                                   | 1.75                    | 0.22                    |                                        | 1500                                   | 1.7                     | 0.26                    |
| DZ 2 | 1 | 50                                     | 50                                     | 16.5                    | 0.08                    | 100                                    | 100                                    | 14                      | 0.14                    | 250                                    | 250                                    | 10.5                    | 0.26                    | 500                                    | 500                                    | 9.0                     | 0.45                    | 750                                    | 750                                    | 8.5                     | 0.64                    |
|      | 2 |                                        | 25                                     | 15                      | 0.04                    |                                        | 50                                     | 15                      | 0.08                    |                                        | 125                                    | 11                      | 0.14                    |                                        | 250                                    | 9.5                     | 0.24                    |                                        | 375                                    | 9.1                     | 0.34                    |
|      | 1 | 1000                                   | 1000                                   | 7.5                     | 0.75                    | 1500                                   | 1500                                   | 6.9                     | 1.04                    | 2000                                   | 2000                                   | 6.6                     | 1.33                    | 2500                                   | 2500                                   | 6.2                     | 1.56                    | 3000                                   | 3000                                   | 5.9                     | 1.78                    |
|      | 2 |                                        | 500                                    | 8.0                     | 0.40                    |                                        | 750                                    | 6.9                     | 0.52                    |                                        | 1000                                   | 6.5                     | 0.65                    |                                        | 1250                                   | 6.4                     | 0.80                    |                                        | 1500                                   | 6.3                     | 0.95                    |
| DZ 3 | 1 | 50                                     | 50                                     | 53                      | 0.27                    | 100                                    | 100                                    | 45                      | 0.45                    | 250                                    | 250                                    | 34                      | 0.85                    | 500                                    | 500                                    | 30                      | 1.51                    | 750                                    | 750                                    | 29                      | 2.15                    |
|      | 2 |                                        | 25                                     | 39                      | 0.10                    |                                        | 50                                     | 37                      | 0.19                    |                                        | 125                                    | 33                      | 0.41                    |                                        | 250                                    | 28                      | 0.70                    |                                        | 375                                    | 26.5                    | 1.00                    |
|      | 1 | 1000                                   | 1000                                   | 25                      | 2.51                    | 1500                                   | 1500                                   | 22                      | 3.32                    | 2000                                   | 2000                                   | 21                      | 4.22                    | 2500                                   | 2500                                   | 20                      | 5.03                    | 3000                                   | 3000                                   | 19                      | 5.73                    |
|      | 2 |                                        | 500                                    | 23.2                    | 1.17                    |                                        | 750                                    | 20.5                    | 1.55                    |                                        | 1000                                   | 20                      | 2.01                    |                                        | 1250                                   | 19.5                    | 2.45                    |                                        | 1500                                   | 19                      | 2.86                    |
| DZ 4 | 1 | 50                                     | 50                                     | 87                      | 0.44                    | 100                                    | 100                                    | 74                      | 0.74                    | 250                                    | 250                                    | 56                      | 1.41                    | 500                                    | 500                                    | 49                      | 2.46                    | 750                                    | 750                                    | 46                      | 3.47                    |
|      | 2 |                                        | 25                                     | 90                      | 0.23                    |                                        | 50                                     | 82                      | 0.41                    |                                        | 125                                    | 63.5                    | 0.80                    |                                        | 250                                    | 55                      | 1.38                    |                                        | 375                                    | 52                      | 1.96                    |
|      | 1 | 1000                                   | 1000                                   | 41                      | 4.12                    | 1500                                   | 1500                                   | 36                      | 5.43                    | 2000                                   | 2000                                   | 35                      | 7.04                    | 2500                                   | 2500                                   | 33                      | 8.29                    | 3000                                   | 3000                                   | 31                      | 9.35                    |
|      | 2 |                                        | 500                                    | 45                      | 2.26                    |                                        | 750                                    | 39                      | 2.94                    |                                        | 1000                                   | 37                      | 3.72                    |                                        | 1250                                   | 36.3                    | 4.56                    |                                        | 1500                                   | 35                      | 5.28                    |
| DZ 5 | 1 | 50                                     | 50                                     | 120                     | 0.60                    | 100                                    | 100                                    | 100                     | 1.01                    | 250                                    | 250                                    | 78                      | 1.96                    | 500                                    | 500                                    | 66                      | 3.32                    | 750                                    | 750                                    | 63                      | 4.75                    |
|      | 2 |                                        | 25                                     | 95                      | 0.24                    |                                        | 50                                     | 90                      | 0.45                    |                                        | 125                                    | 78                      | 0.98                    |                                        | 250                                    | 67                      | 1.68                    |                                        | 375                                    | 63                      | 2.37                    |
|      | 1 | 1000                                   | 1000                                   | 56                      | 5.63                    | 1500                                   | 1500                                   | 50                      | 7.54                    | 2000                                   | 2000                                   | 48                      | 9.65                    | 2500                                   | 2500                                   | 46                      | 11.56                   | 3000                                   | 3000                                   | 43                      | 12.97                   |
|      | 2 |                                        | 500                                    | 55                      | 2.76                    |                                        | 750                                    | 47.5                    | 3.58                    |                                        | 1000                                   | 45                      | 4.52                    |                                        | 1250                                   | 43.5                    | 5.47                    |                                        | 1500                                   | 42                      | 6.33                    |

dz

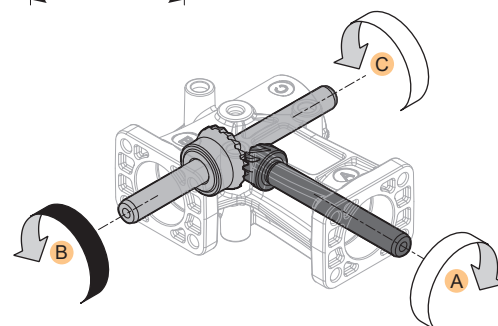
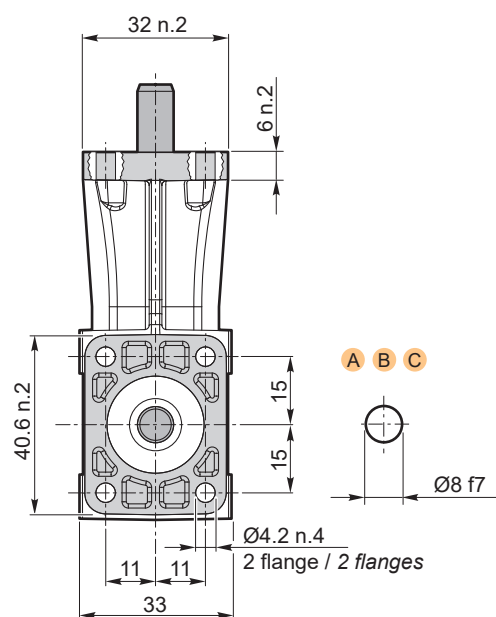
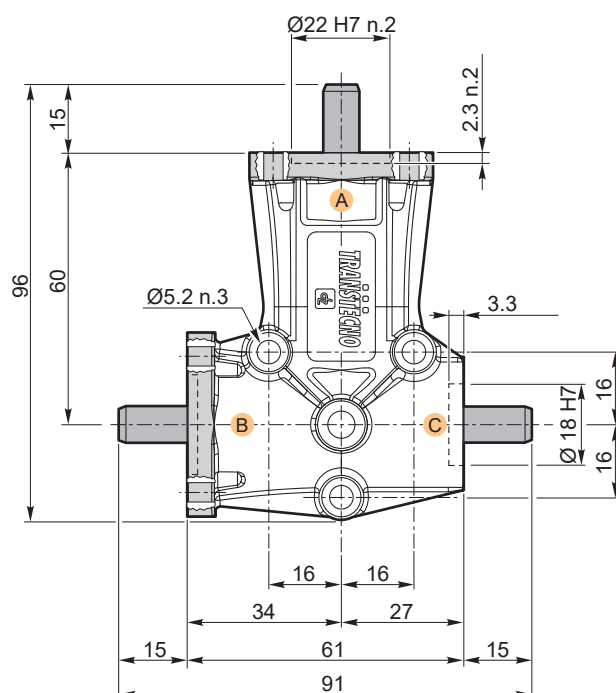


# DZ Rinvii angolari Right-angle bevel gearboxes

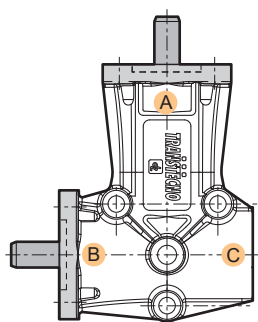
Dimensioni

Dimensions

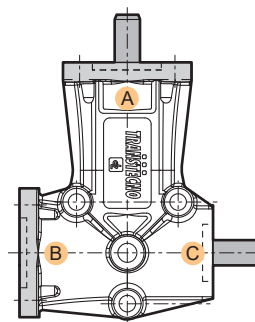
## DZ 1 ... 2F ...



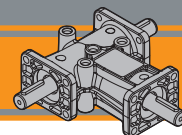
| i | Code         | Kg  |
|---|--------------|-----|
| 1 | DZ 11 2F ABC | 0.3 |
| 2 | DZ 13 2F ABC |     |



| i | Code          | Kg  |
|---|---------------|-----|
| 1 | DZ 10 S 2F AB | 0.3 |
| 2 | DZ 12 S 2F AB |     |



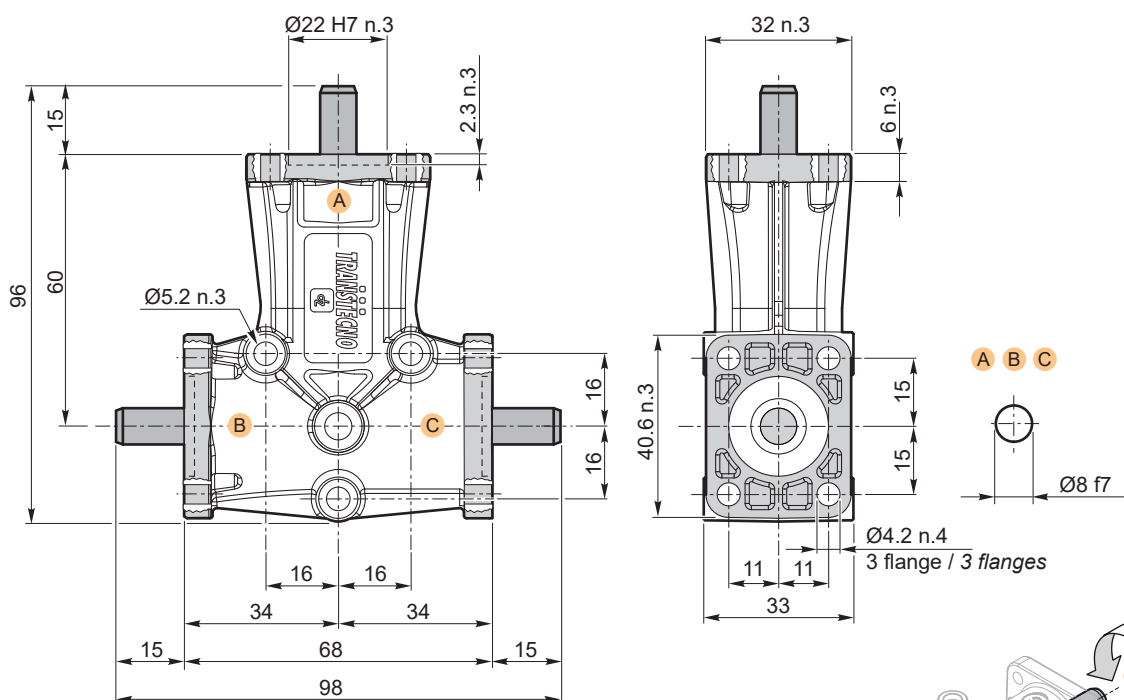
| i | Code           | Kg  |
|---|----------------|-----|
| 1 | DZ 10 FS 2F AC | 0.3 |
| 2 | DZ 12 FS 2F AC |     |



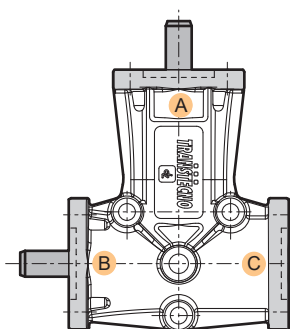
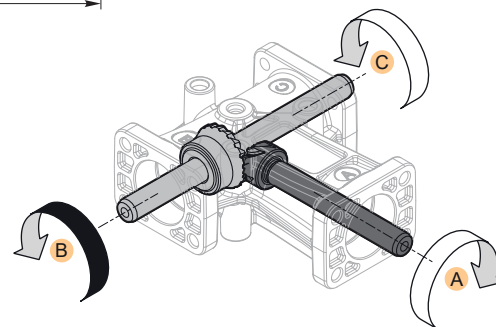
Dimensioni

Dimensions

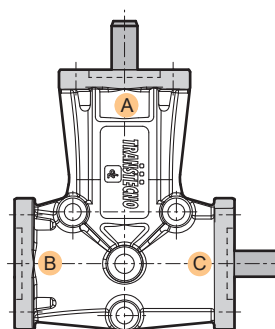
DZ 1... 3F ...



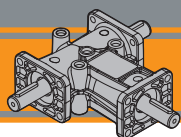
| i | Code         | Kg  |
|---|--------------|-----|
| 1 | DZ 11 3F ABC | 0.3 |
| 2 | DZ 13 3F ABC |     |



| i | Code          | Kg  |
|---|---------------|-----|
| 1 | DZ 10 S 3F AB | 0.3 |
| 2 | DZ 12 S 3F AB |     |



| i | Code           | Kg  |
|---|----------------|-----|
| 1 | DZ 10 FS 3F AC | 0.3 |
| 2 | DZ 12 FS 3F AC |     |

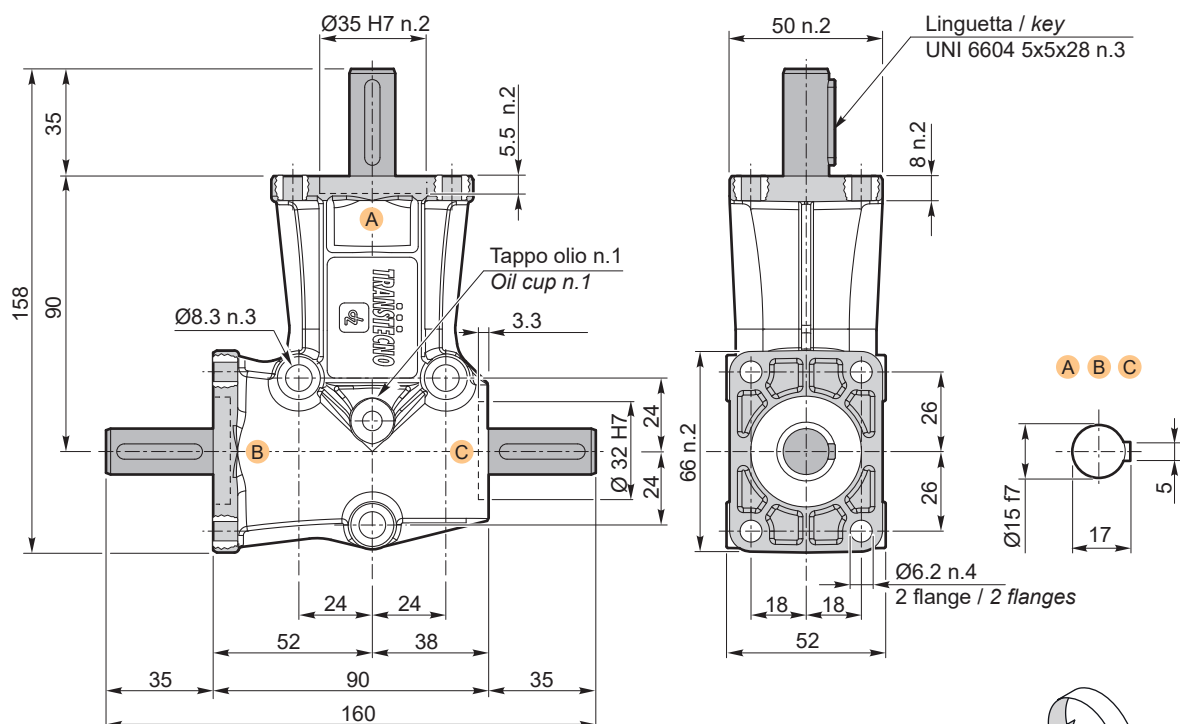


# DZ Rinvii angolari Right-angle bevel gearboxes

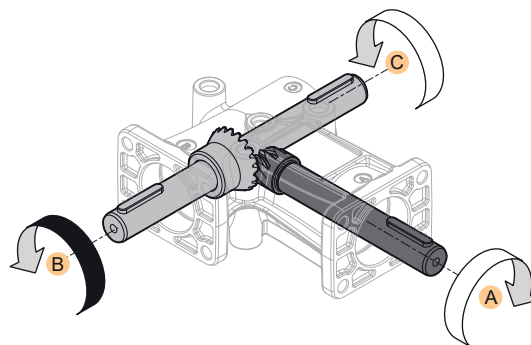
Dimensioni

Dimensions

## DZ 2 ... 2F ...

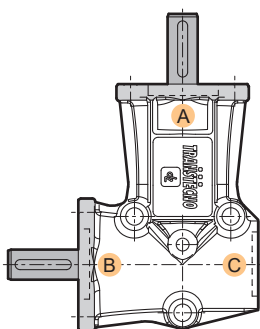


| i | Code         | Kg  |
|---|--------------|-----|
| 1 | DZ 21 2F ABC | 1.2 |
| 2 | DZ 23 2F ABC |     |

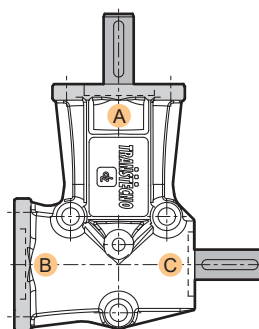


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

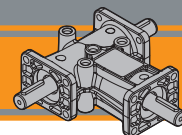
The keyways in hollow shafts as in solid shafts can assume any angular position.



| i | Code          | Kg  |
|---|---------------|-----|
| 1 | DZ 20 S 2F AB | 1.1 |
| 2 | DZ 22 S 2F AB |     |



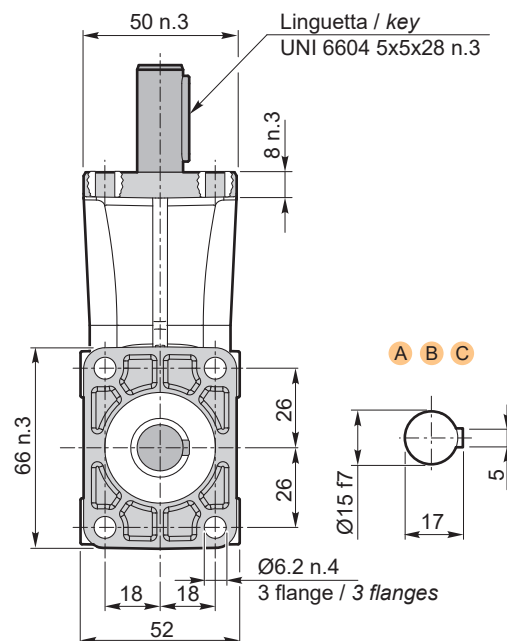
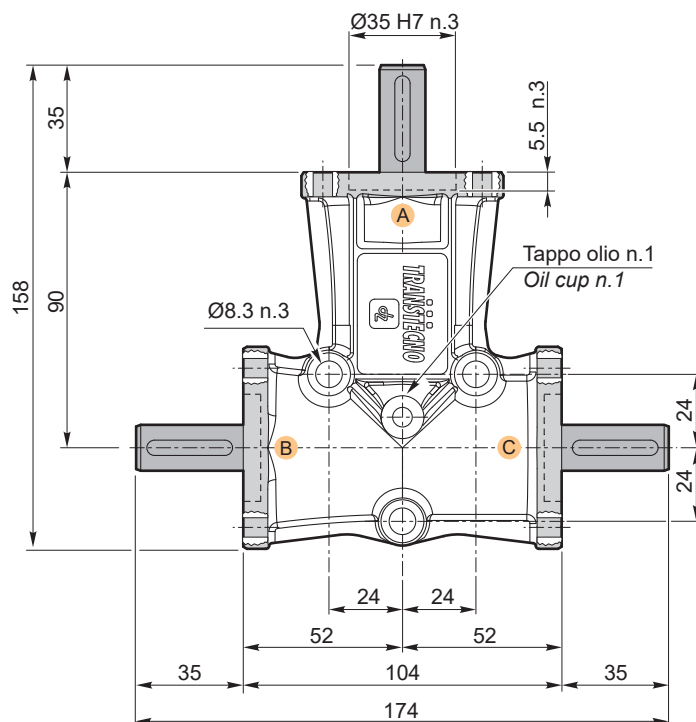
| i | Code           | Kg  |
|---|----------------|-----|
| 1 | DZ 20 FS 2F AC | 1.1 |
| 2 | DZ 22 FS 2F AC |     |



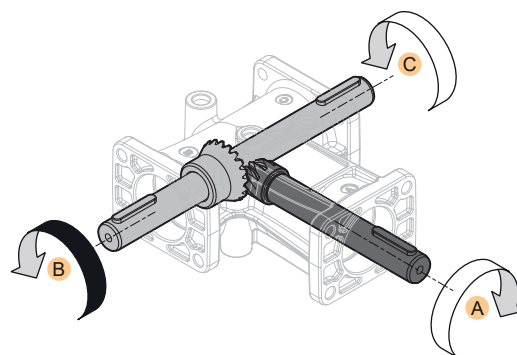
Dimensioni

Dimensions

DZ 2 ... 3F ...

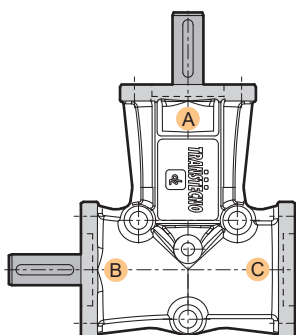


| i | Code         | Kg  |
|---|--------------|-----|
| 1 | DZ 21 3F ABC | 1.2 |
| 2 | DZ 23 3F ABC |     |

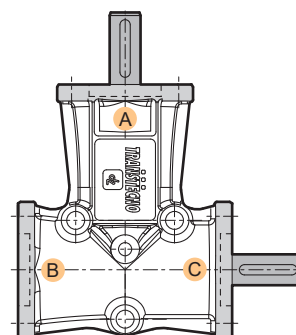


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

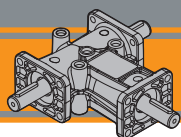
The keyways in hollow shafts as in solid shafts can assume any angular position.



| i | Code          | Kg  |
|---|---------------|-----|
| 1 | DZ 20 S 3F AB | 1.1 |
| 2 | DZ 22 S 3F AB |     |



| i | Code           | Kg  |
|---|----------------|-----|
| 1 | DZ 20 FS 3F AC | 1.1 |
| 2 | DZ 22 FS 3F AC |     |

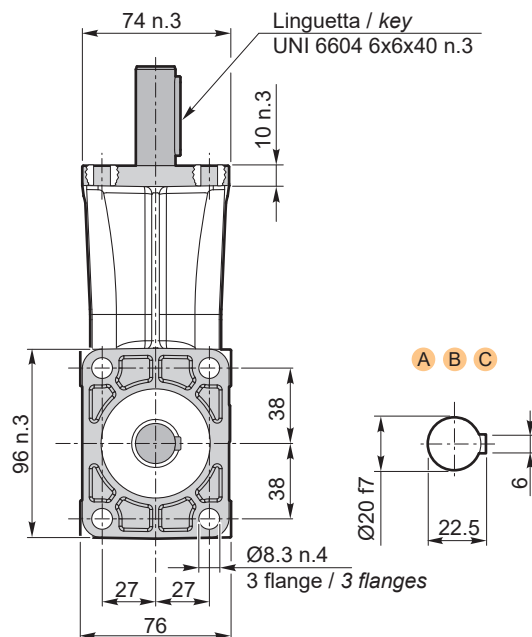
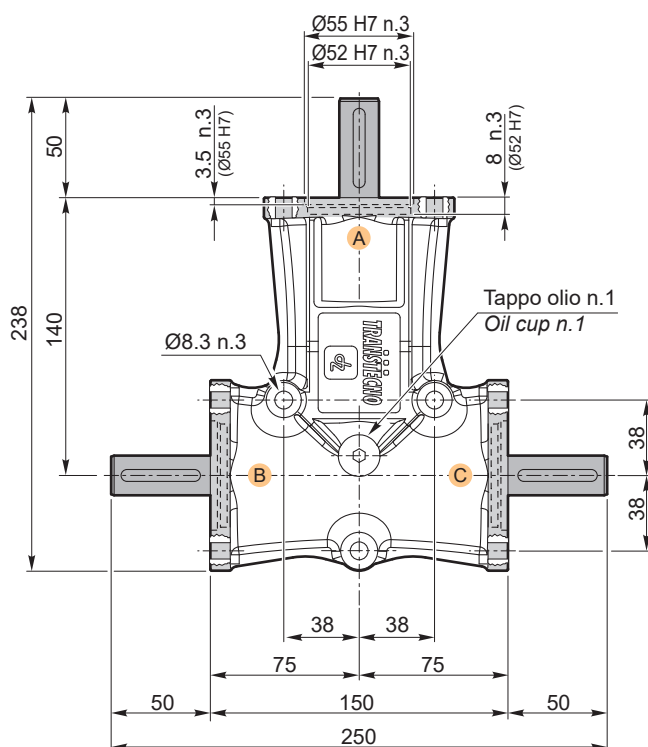


# DZ Rinvii angolari Right-angle bevel gearboxes

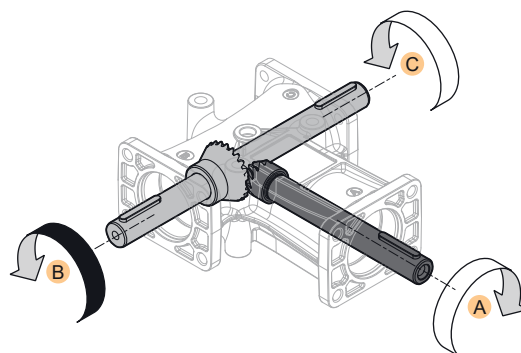
Dimensioni

Dimensions

## DZ 3 ... 3F ...

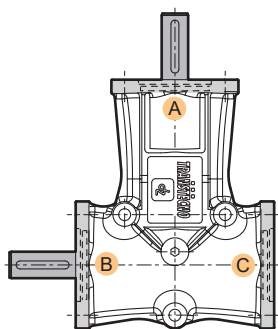


| i | Code         | Kg  |
|---|--------------|-----|
| 1 | DZ 31 3F ABC | 3.5 |
| 2 | DZ 33 3F ABC |     |

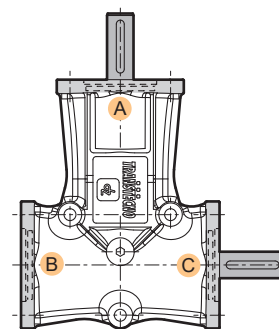


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

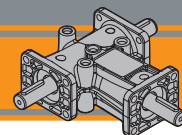
The keyways in hollow shafts as in solid shafts can assume any angular position.



| i | Code          | Kg  |
|---|---------------|-----|
| 1 | DZ 30 S 3F AB | 3.4 |
| 2 | DZ 32 S 3F AB |     |



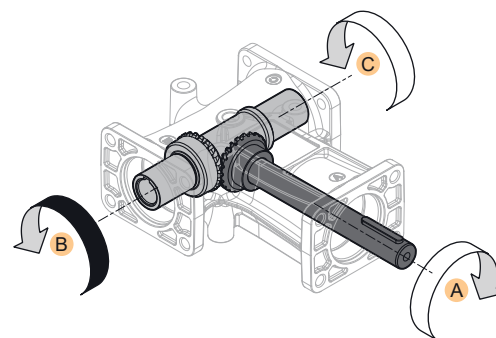
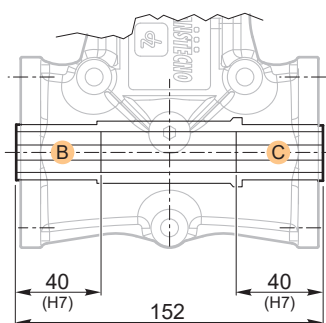
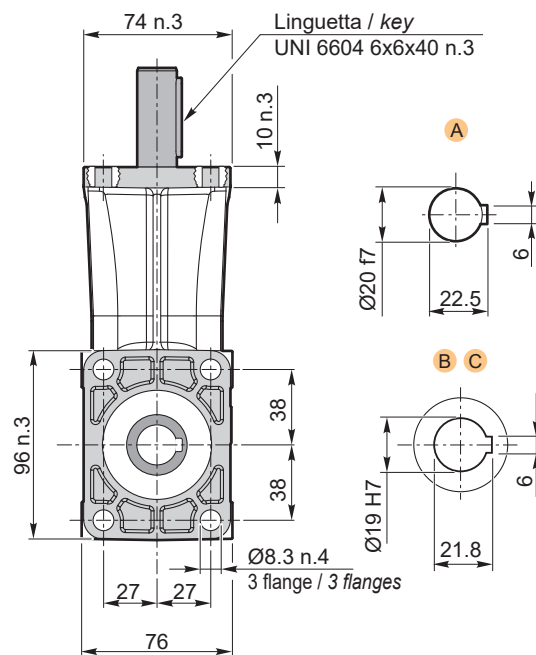
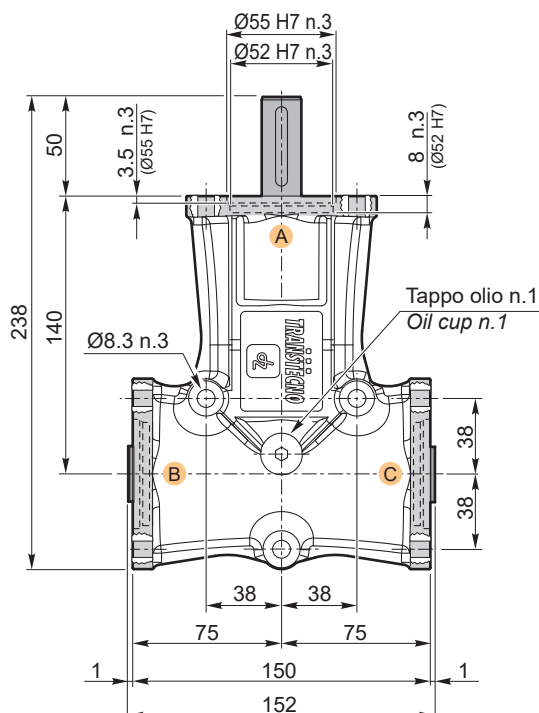
| i | Code           | Kg  |
|---|----------------|-----|
| 1 | DZ 30 FS 3F AC | 3.4 |
| 2 | DZ 32 FS 3F AC |     |



## Dimensioni

## Dimensions

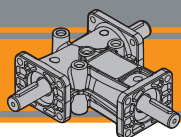
## DZ 3 ... 3F ... albero cavo / hollow shaft



Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

The keyways in hollow shafts as in solid shafts can assume any angular position.

| i | Code          | Kg  |
|---|---------------|-----|
| 1 | DZ 311 3F ABC | 3.3 |

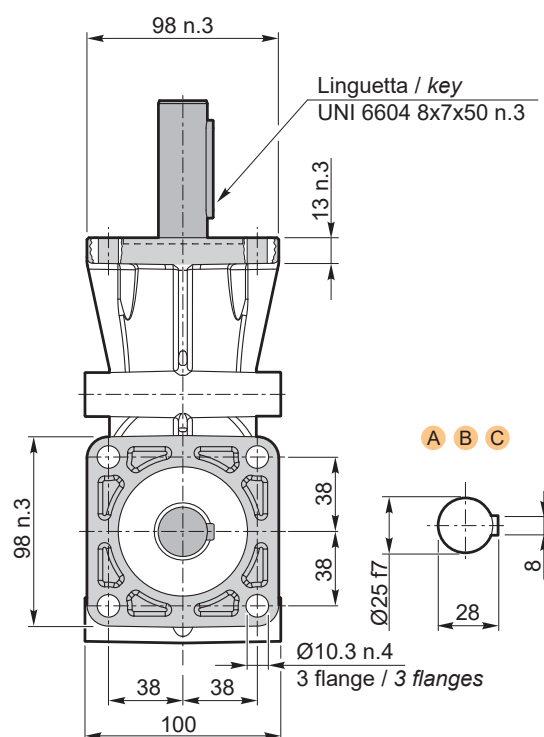
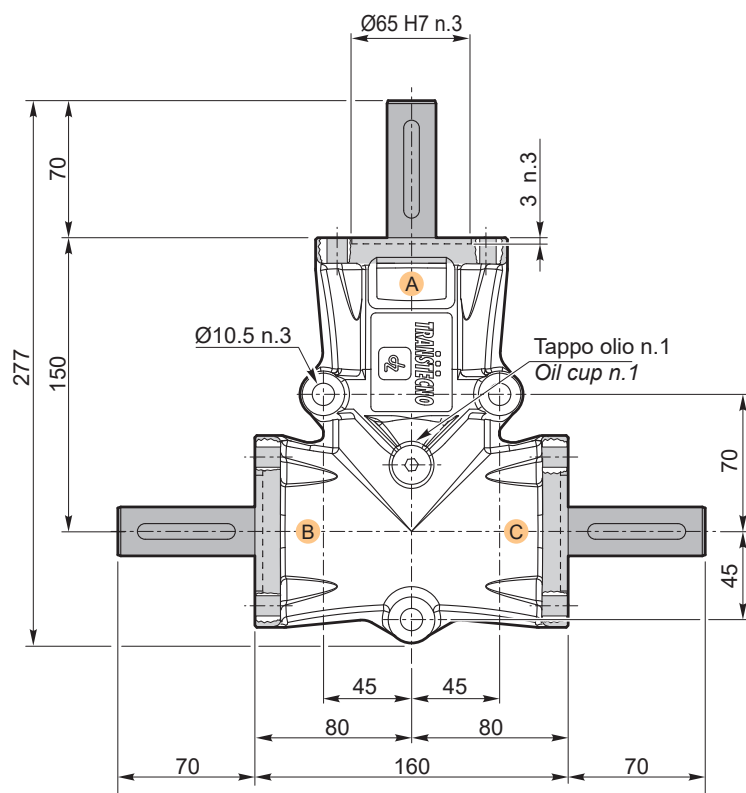


# DZ Rinvii angolari Right-angle bevel gearboxes

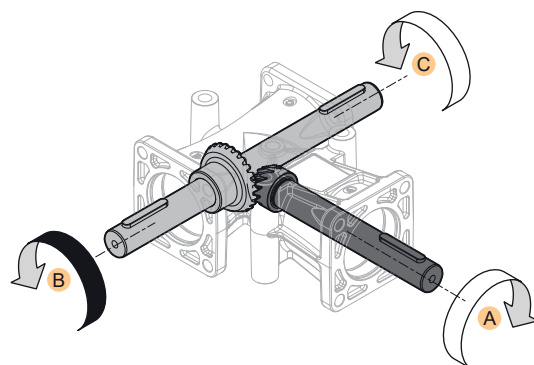
Dimensioni

Dimensions

## DZ 4 ... 3F ...

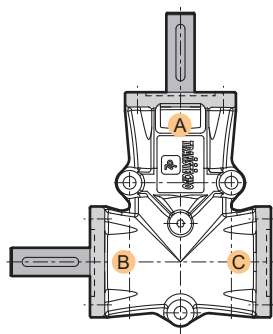


| i | Code         | Kg  |
|---|--------------|-----|
| 1 | DZ 41 3F ABC | 5.8 |
| 2 | DZ 43 3F ABC |     |

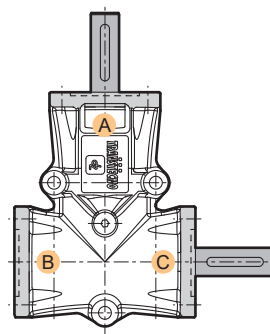


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

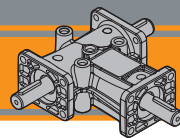
The keyways in hollow shafts as in solid shafts can assume any angular position.



| i | Code          | Kg  |
|---|---------------|-----|
| 1 | DZ 40 S 3F AB | 5.5 |
| 2 | DZ 42 S 3F AB |     |



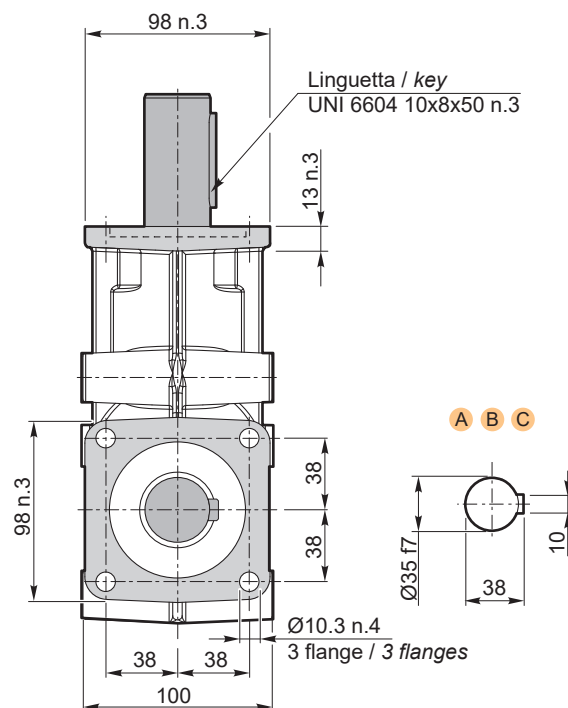
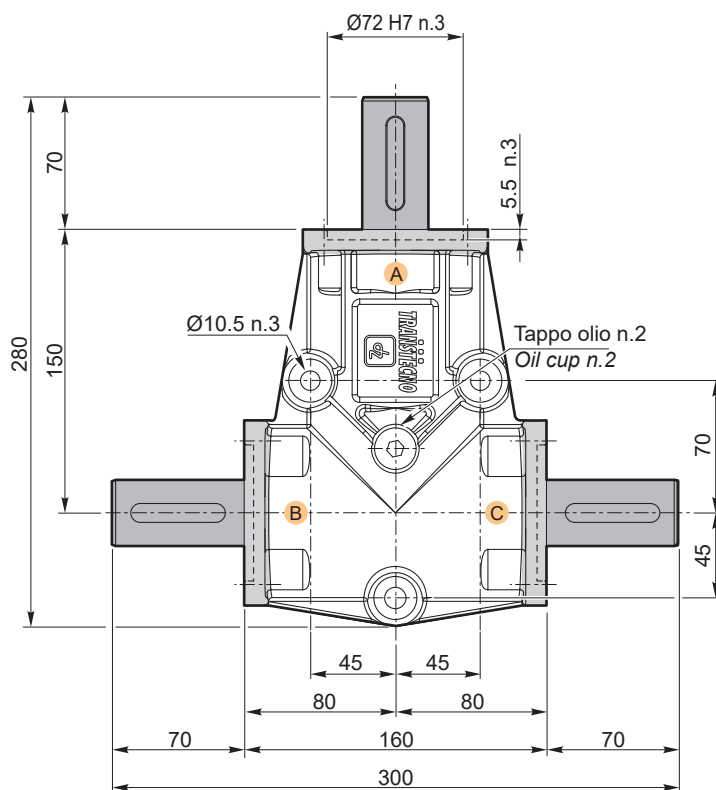
| i | Code           | Kg  |
|---|----------------|-----|
| 1 | DZ 40 FS 3F AC | 5.5 |
| 2 | DZ 42 FS 3F AC |     |



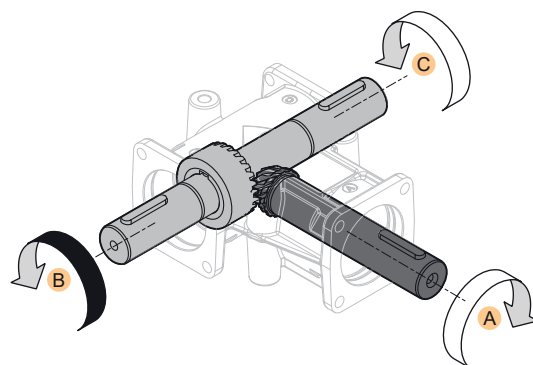
Dimensioni

Dimensions

DZ 5 ... 3F ...

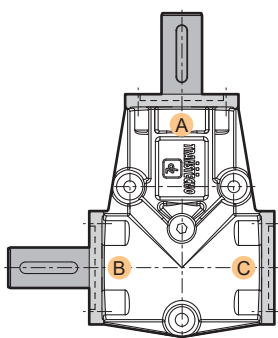


| i | Code         | Kg  |
|---|--------------|-----|
| 1 | DZ 51 3F ABC | 8.8 |
| 2 | DZ 53 3F ABC |     |

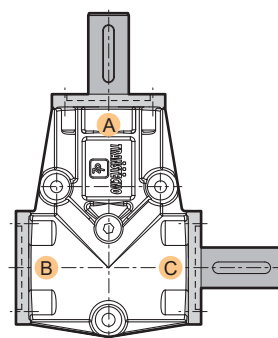


Le sedi linguetta negli alberi cavi come negli alberi maschi possono assumere qualsiasi posizione angolare.

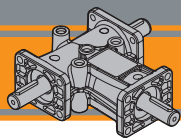
The keyways in hollow shafts as in solid shafts can assume any angular position.



| i | Code          | Kg  |
|---|---------------|-----|
| 1 | DZ 50 S 3F AB | 8.1 |
| 2 | DZ 52 S 3F AB |     |



| i | Code           | Kg  |
|---|----------------|-----|
| 1 | DZ 50 FS 3F AC | 8.1 |
| 2 | DZ 52 FS 3F AC |     |



DZ

Rinvii angolari  
Right-angle bevel gearboxes

# Note/Notes



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