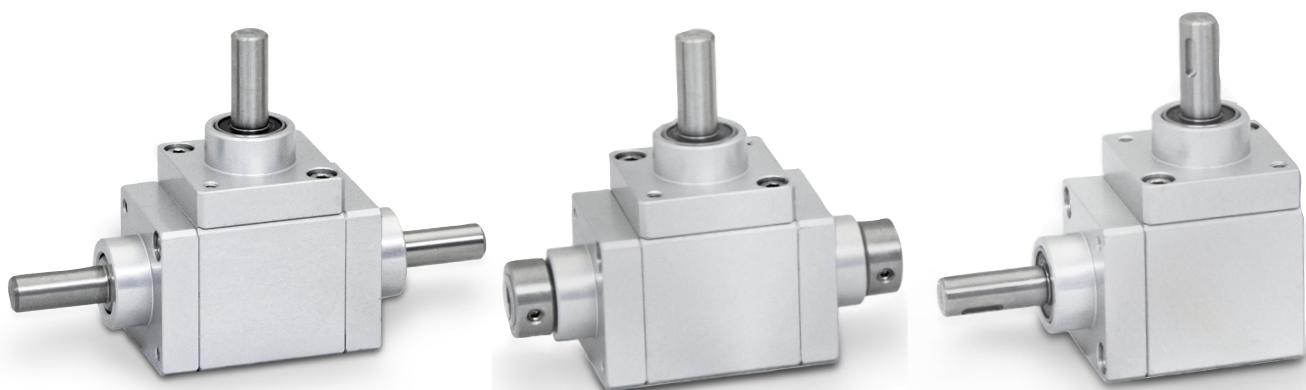




- Rapporti di trasmissione disponibili: **1:1 - 1:2** (standard) - **2:1** (disponibile nelle versioni «A» - «B» - «C»); (Tab. 3)
- Rapporti **1/2** e **2/1** sono disponibili solo con ingranaggi spiroidali.
- Corpo in alluminio, anodizzato; alberi in acciaio inox AISI 303.
- Coppia trasmissibile **12 Nm**. Carico radiale **25 kg** - carico assiale **2,5 kg** (Tab. 4).
- Modelli (Tab. 1):
  - Versione «A» con 2 uscite; peso 330 g.
  - Versione «B» con 3 uscite; peso 520 g.
  - Versione «C» (rotazione contraria) con 3 uscite; peso 535 g.
  - Versione «D» con 3 uscite, 2 ad albero cavo passante; 520 g.
  - Versione «E» con 4 uscite, 2 ad albero cavo passante; peso 600 g.
- Alberi di uscita standard: **M** = maschio **Ø10** / **F** = femmina **Ø10** (Tab. 9).

#### Disponibile a richiesta:

- Alberi di uscita: maschio **Ø14** / femmina **Ø12 - Ø14** nelle versioni «A» - «B» - «C».
- Corpo in acciaio **inox AISI 303**.
- Modelli con ingranaggi conici a **dentatura spiroidale** (Tab. 2) disponibili in tutte le versioni nel rapporto **1/1** (Tab. 2).
- Flangia di accoppiamento lato macchina **FL-M** (Tab. 6).
- Flangia con albero maschio per indicatori di posizione **FL-OP/EP** (Tab. 7).

- Available transmission ratios: **1:1 - 1:2** (standard) - **2:1** (available in versions «A» - «B» - «C»); (Tab. 3).
- Ratios **1/2** and **2/1** are only available with spiral gears.
- Aluminium case, anodised; AISI 303 stainless steel shafts (standard).
- Torque **12 Nm**. Radial load **25 kg** - axial load **2,5 kg** (Tab. 4).
- Models (Tab. 1):
  - Version «A» with 2 outputs; weight 330 g.
  - Version «B» with 3 outputs; weight 520 g.
  - Version «C» (opposite rotation) with 3 outputs; weight 535 g.
  - Version «D» with 3 outputs, 2 through hollow shafts; weight 520 g.
  - Version «E» with 4 outputs; weight 600 g.
- Standard output shafts: **M** = male **Ø10** / **F** = female **Ø10** (Tab. 9).

#### Available on request:

- Output shafts: male **Ø14** / female **Ø12 - Ø14** in versions «A» - «B» - «C».
- Case in **stainless steel AISI 303**.
- Models with **spiral bevel gears** are available in all versions with transmission ratio **1/1** (Tab. 2).
- Machine-side coupling flange **FL-M** (Tab. 7).
- Male shaft flange for position indicators **FL-OP/EP** (Tab. 8).

| FORMA COSTRUTTIVA E SENSO DI ROTAZIONE - CONFIGURATION AND DIRECTION OF ROTATION |                                                     |                                                         |                                                                   |                                                             | Tab. 1 |
|----------------------------------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------|-------------------------------------------------------------------|-------------------------------------------------------------|--------|
| «A»                                                                              | «B»                                                 | «C»                                                     | «D»                                                               |                                                             |        |
|                                                                                  |                                                     |                                                         |                                                                   |                                                             |        |
| 2 uscite, rot. concorde<br>2 outputs, same rotation                              | 3 uscite, rot. concorde<br>3 outputs, same rotation | 3 uscite, 1 rot. discorde<br>3 outputs, 1 opposite rot. | 3 uscite, 2 cave, rot. concorde<br>3 outputs, 2 hollow, same rot. | 4 uscite, rot. conc. e disc.<br>4 outputs, same rot. & opp. |        |

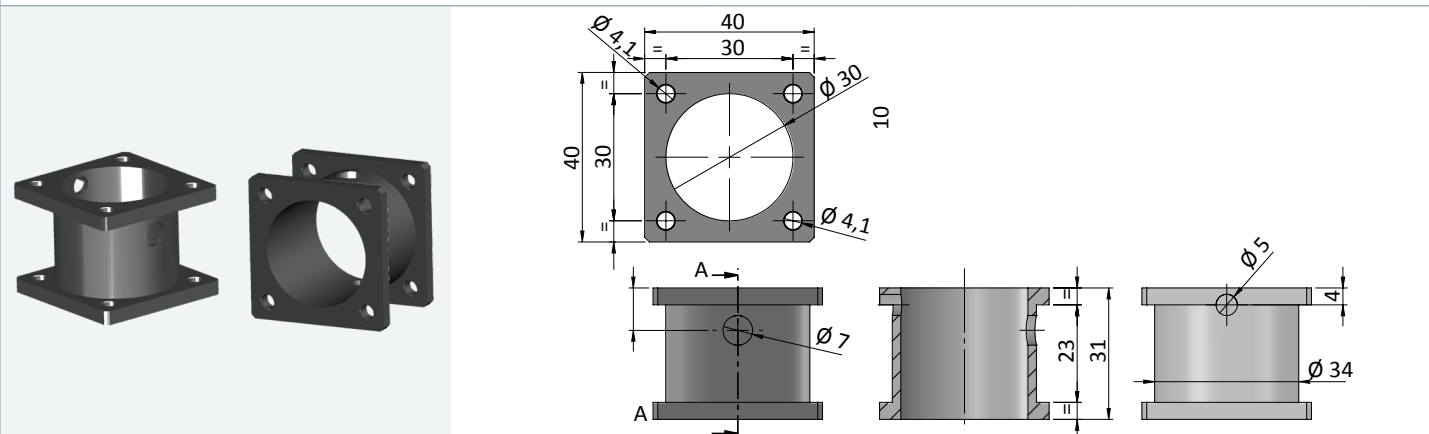
| IDENTIFICAZIONE ALBERI E RIFERIMENTI - SHAFT IDENTIFICATION AND REFERENCES |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Tab. 2 |
|----------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Esempio - Example                                                          | Esempio - Example |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |        |
|                                                                            |                   | <p>L'albero 1 è sempre raffigurato dalla parte opposta dei fori di fissaggio M_1, è il riferimento per:<br/><b>forma costruttiva, senso di rotazione e rapporto di trasmissione.</b><br/>Per convenzione l'albero 1, è rappresentato con rotazione in senso orario, gli altri seguono il senso orario.</p> <p><i>Shaft 1 is always shown on the side opposite the M_1 fixing bores and is the reference for: configuration, direction of rotation, gear ratio. By convention, Shaft 1 is shown rotating clockwise, the others follow the clockwise direction.</i></p> |        |

| RAPPORTI DI TRASMISSIONE DISPONIBILI - AVAILABLE TRANSMISSION RATIOS                                                       |                                                                                     |                                                                                     | Tab. 3                                          |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------|
| Il rapporto fa riferimento all'albero 1, opposto ai fori M_1 - The ratio refers to shaft 1, opposite the M_1 fixing bores. |                                                                                     |                                                                                     |                                                 |
| Rapporto - Ratio 1/1                                                                                                       | Rapporto - Ratio 1/2                                                                | Rapporto - Ratio 2/1                                                                |                                                 |
| <p>Es. - Ex.<br/>albero-shaft:<br/>1 = 10 rpm<br/>albero-shaft:<br/>2-3 = 10 rpm</p>                                       | <p>Es. - Ex.<br/>albero-shaft:<br/>1 = 10 rpm<br/>albero-shaft:<br/>2-3 = 5 rpm</p> | <p>Es. - Ex.<br/>albero-shaft:<br/>1 = 5 rpm<br/>albero-shaft:<br/>2-3 = 10 rpm</p> | non disp. nella vers. D<br>not avail. in ver. D |

| POSIZIONI DI FISSAGGIO M_ - M_ FIXING POSITIONS                                                                                                                                                                                                                                                        |                                        |                                               |                                        | Tab. 4 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------|----------------------------------------|--------|
| L'albero 1 di riferimento, per convenzione, è rappresentato con rotazione oraria; il corpo viene ruotato di 90° rispetto alla posizione precedente.<br>Shaft 1 shaft 1 remains the reference and is conventionally shown rotating clockwise; the housing is rotated by 90° from the previous position. |                                        |                                               |                                        |        |
| M_1 = vista dall'alto - top view                                                                                                                                                                                                                                                                       |                                        | M_2 = vista laterale destra - right side view |                                        |        |
| 0°                                                                                                                                                                                                                                                                                                     | 90°                                    | 90°                                           | 180°                                   |        |
|                                                                                                                                                                                                                                                                                                        |                                        |                                               |                                        |        |
| rotazione concorde - same rotation                                                                                                                                                                                                                                                                     | rotazione discorde - opposite rotation | rotazione concorde - same rotation            | rotazione discorde - opposite rotation |        |
| + 90° ↑                                                                                                                                                                                                                                                                                                |                                        | + 90° ↓                                       |                                        |        |
| M_3 = vista laterale sinistra - left side view                                                                                                                                                                                                                                                         |                                        | M_4 = vista dal basso - bottom view           |                                        |        |
| 270°                                                                                                                                                                                                                                                                                                   | 180°                                   | 180°                                          | 270°                                   |        |
|                                                                                                                                                                                                                                                                                                        |                                        |                                               |                                        |        |
| rotazione concorde - same rotation                                                                                                                                                                                                                                                                     | rotazione discorde - opposite rotation | rotazione concorde - same rotation            | rotazione discorde - opposite rotation |        |

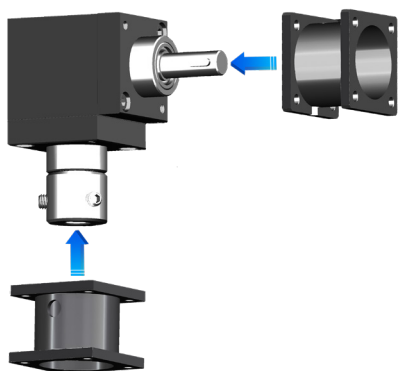
La flangia **FL-M**, compatibile con qualsiasi configurazione e tipo di albero (maschio o femmina) del rinvio, garantisce un collegamento stabile e preciso, riducendo al minimo le vibrazioni e assicurando un corretto allineamento tra i componenti collegati. Realizzata in alluminio anodizzato nero, è coordinata con il corpo del rinvio, anch'esso in colore nero.

The flange **FL-M**, compatible with any configuration and shaft (male or female) of the gearbox, ensures a stable and precise coupling, minimizing vibrations and ensuring correct alignment between the connected components. Made of black anodized aluminum, it is coordinated with the gearbox case, also in black.

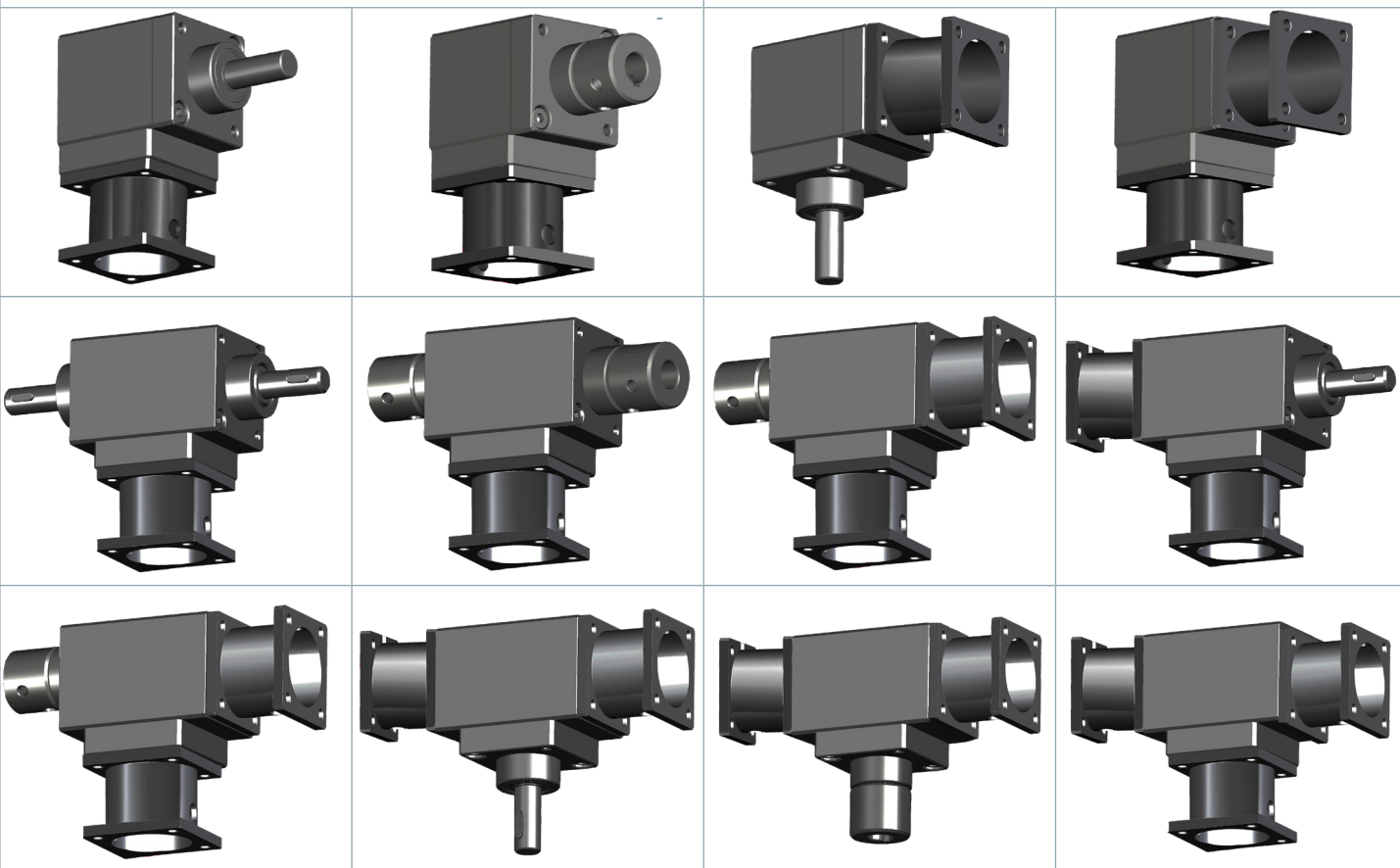
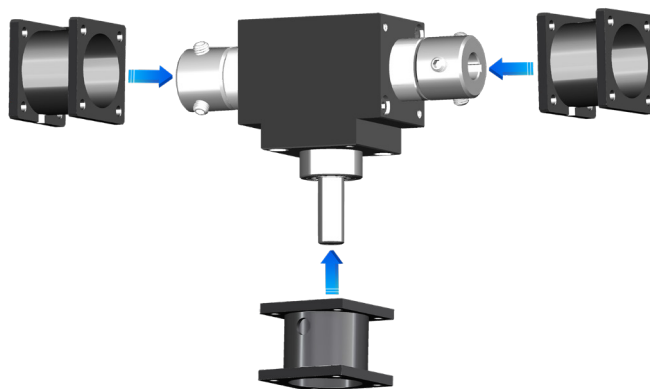


### Esempi di configurazioni - Configuration examples

Rinvio a 2 alberi - Gearbox with 2 shafts

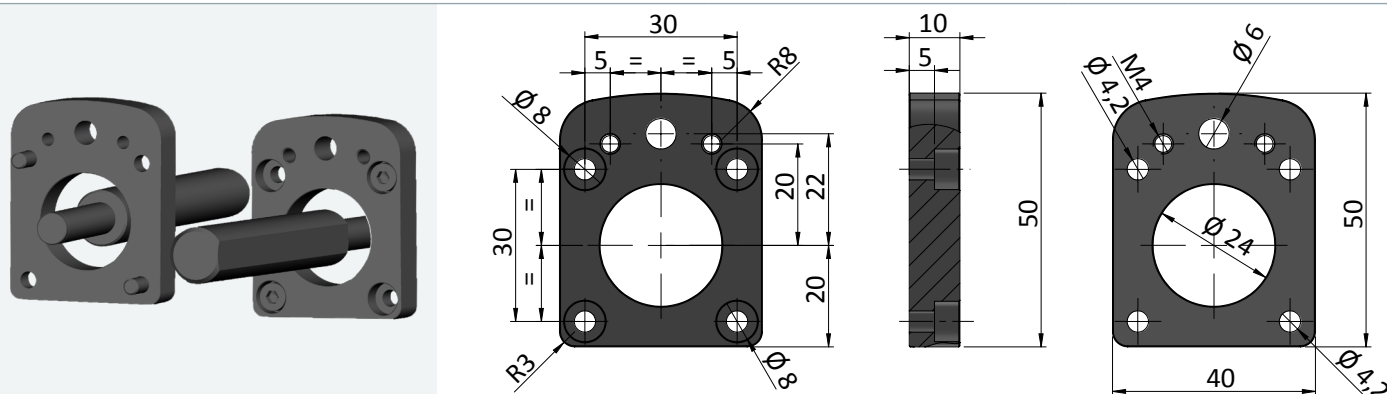


Rinvio a 3 alberi - Gearbox with 3 shafts



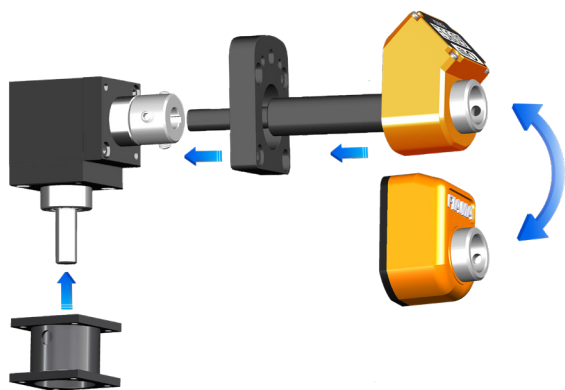
Realizzata in alluminio anodizzato nero, è coordinata con il corpo del rinvio, anch'esso in colore nero.

*Male shaft with flange **MØ14x80FL-OP3/EP3**, compatible with any configuration and shaft of the gearbox, connects the position indicator, whether mechanical or electronic, to the gearbox. This combination enables precise and monitored position adjustment, increasing stability and accuracy of readings. Made of black anodized aluminum, it is coordinated with the gearbox case, also in black.*

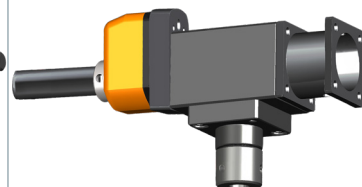
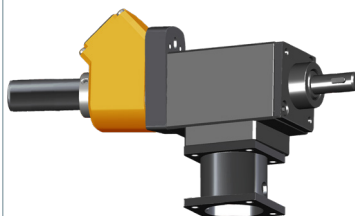
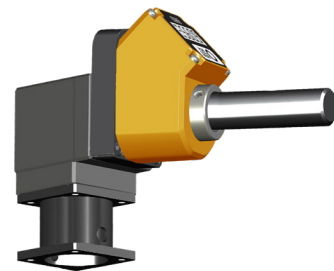
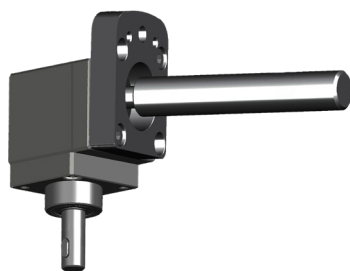
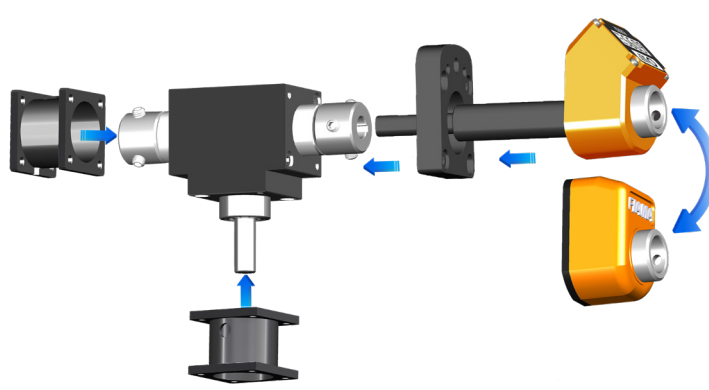


### Esempi di configurazioni - Configuration examples

Rinvio a 2 alberi - *Gearbox with 2 shafts*

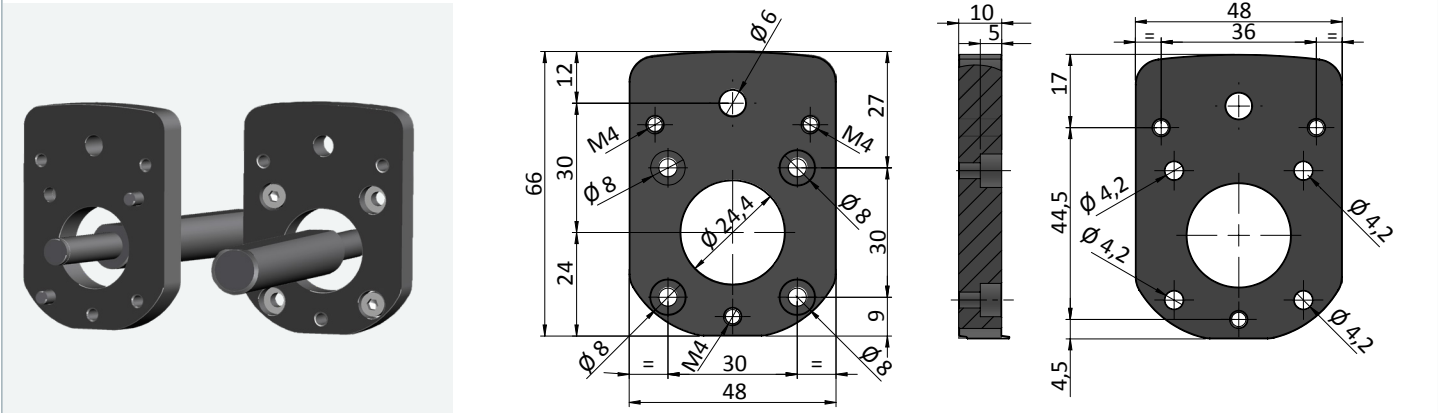


Rinvio a 3 alberi - *Gearbox with 3 shafts*

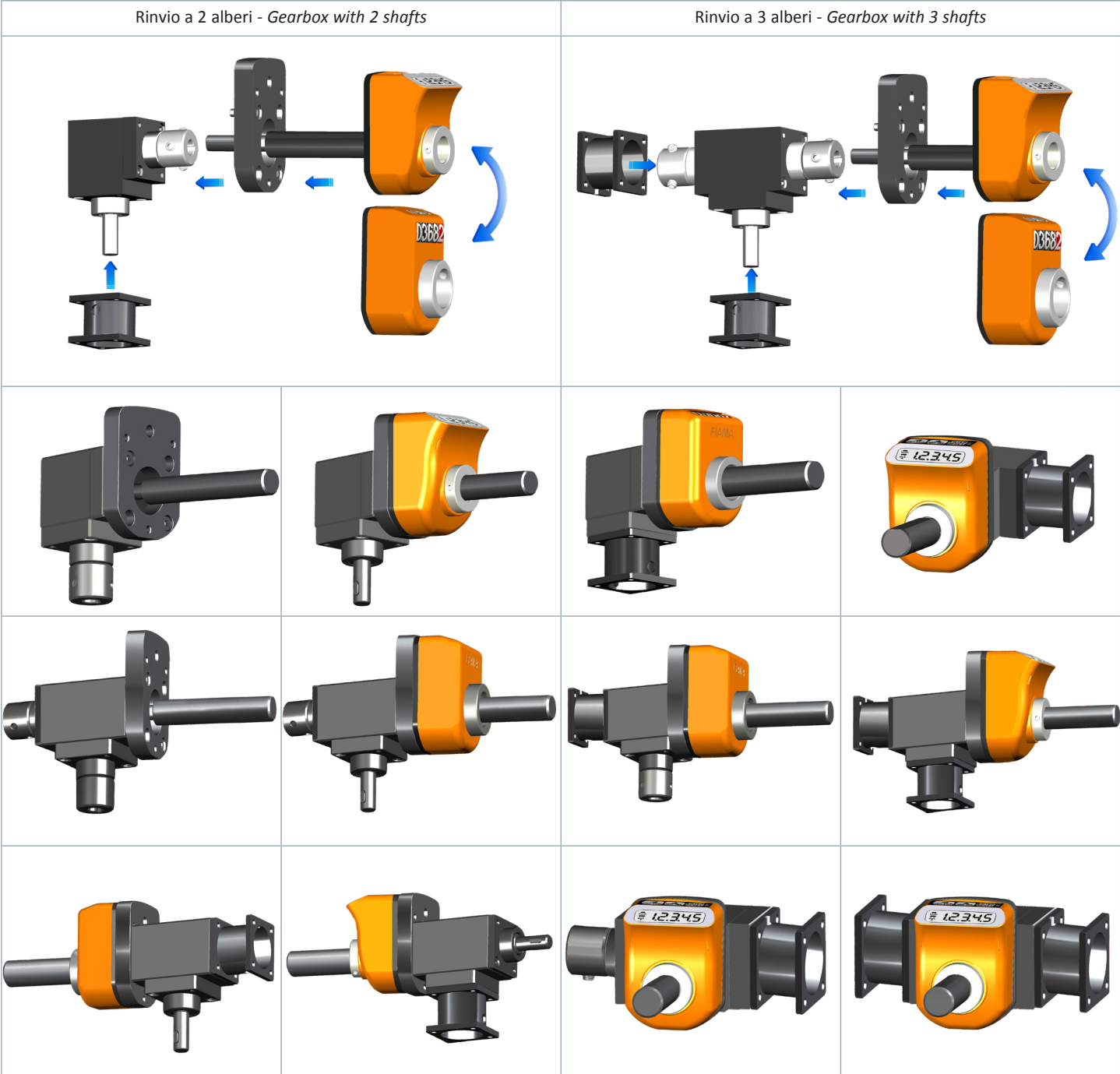


Albero maschio con flangia **MØ14x80 FL-OP7/EP7**, compatibile con qualsiasi configurazione e albero di uscita del rinvio, consente di collegare l'indicatore di posizione, sia meccanico che elettronico, al rinvio angolare. Questa combinazione permette una regolazione precisa e monitorata della posizione, incrementando la stabilità e l'accuratezza delle letture.  
Realizzata in alluminio anodizzato nero, è coordinata con il corpo del rinvio, anch'esso in colore nero.

Male shaft with flange **MØ14x80 FL-OP7/EP7**, compatible with any configuration and output shaft of the gearbox, connects the position indicator, whether mechanical or electronic, to the gearbox. This combination enables precise and monitored position adjustment, increasing stability and accuracy of readings. Made of black anodized aluminum, it is coordinated with the gearbox case, also in black.

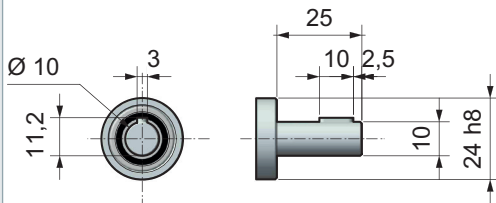
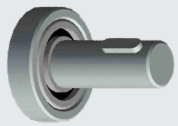


Esempi di configurazioni - Configuration examples

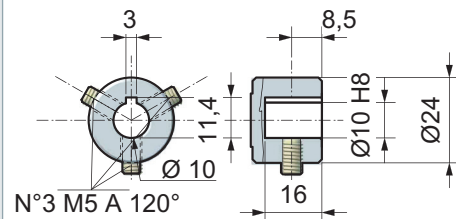
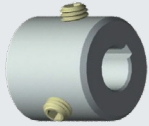


## ALBERI DI USCITA DISPONIBILI - AVAILABLE OUTPUT SHAFTS

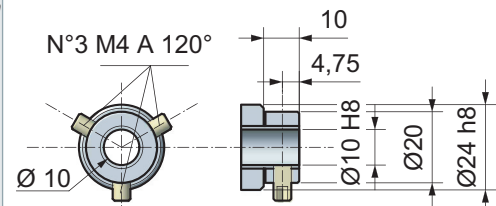
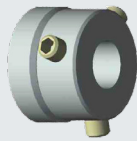
M = maschio - male



F = femmina - female

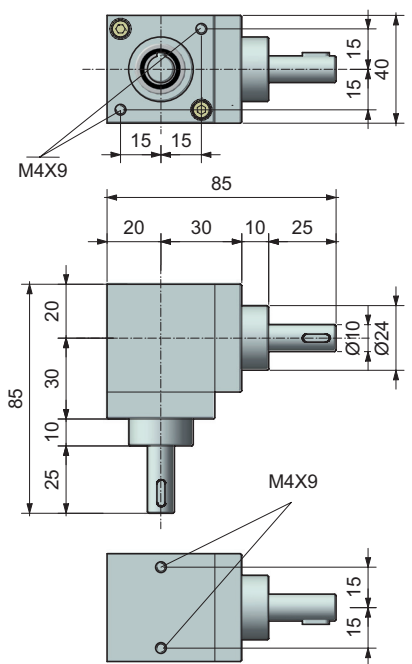
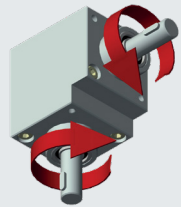


F = passante - through

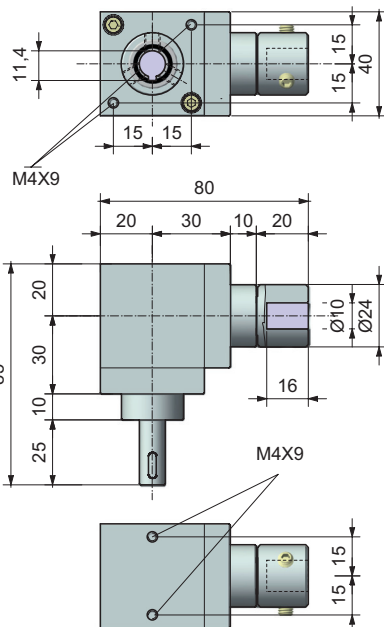
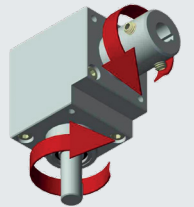


solo per la versione "D" - only for version "D"

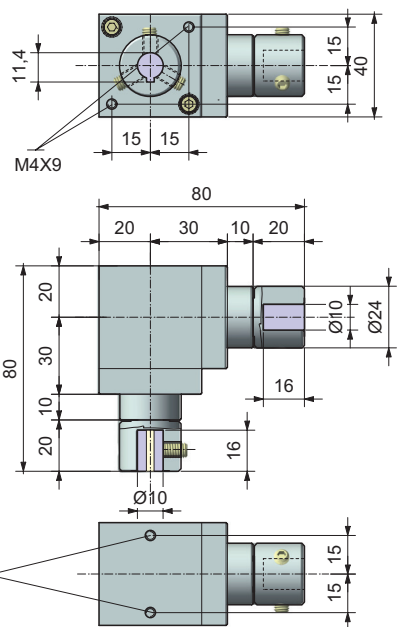
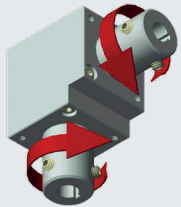
## VERSIONE - VERSION «A» M-M



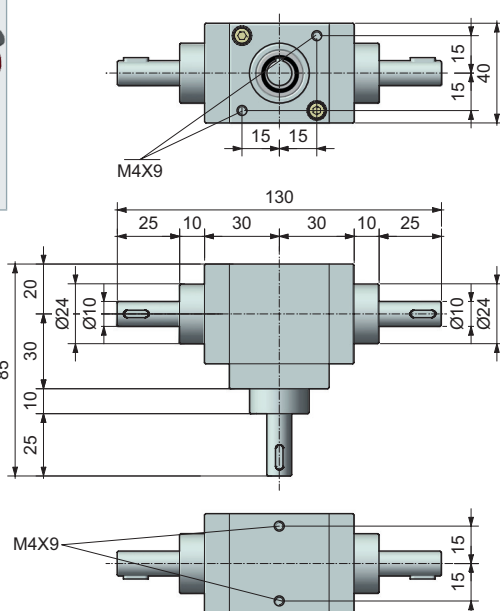
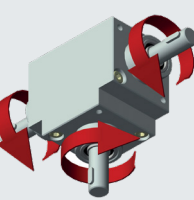
## VERSIONE - VERSION «A» M-F



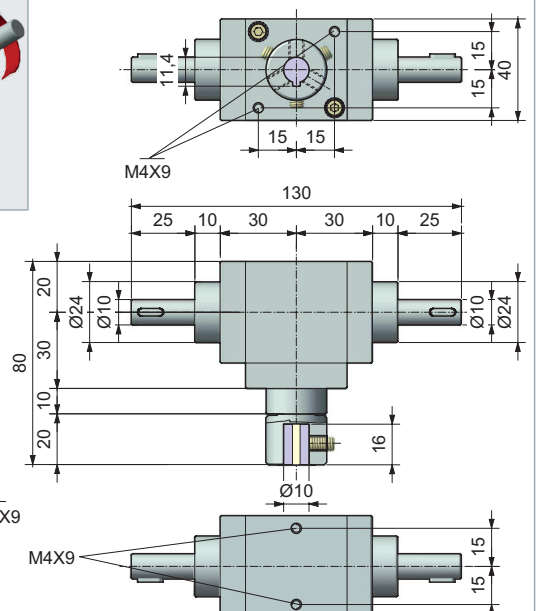
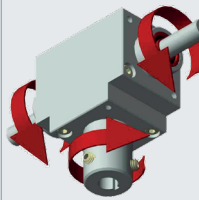
## VERSIONE - VERSION «A» F-F



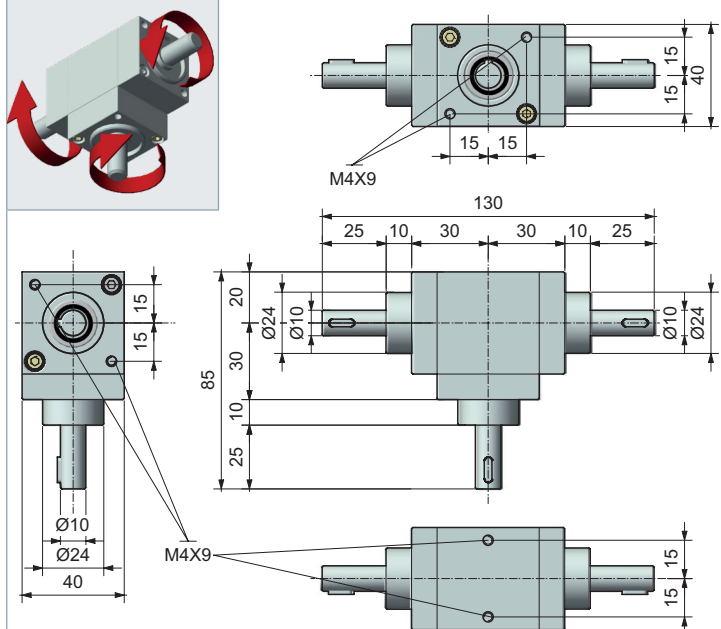
## VERSIONE - VERSION «B» M-M-M



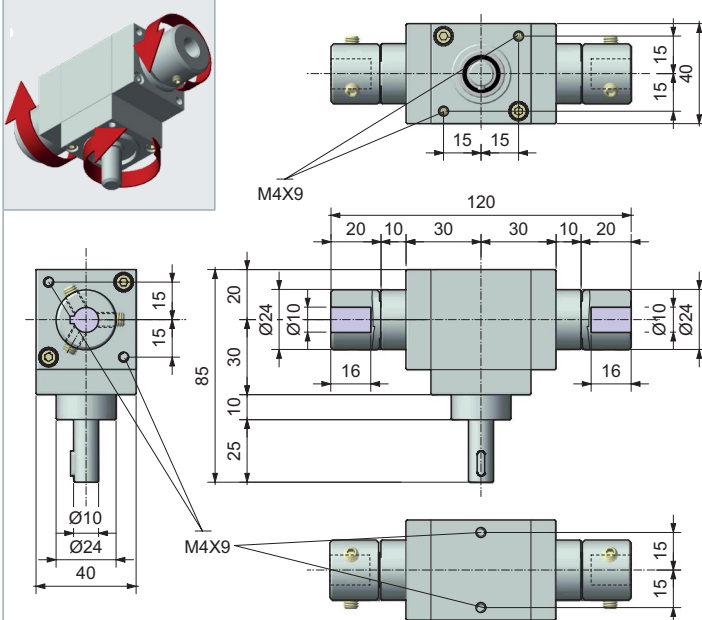
## VERSIONE - VERSION «B» F-M-M



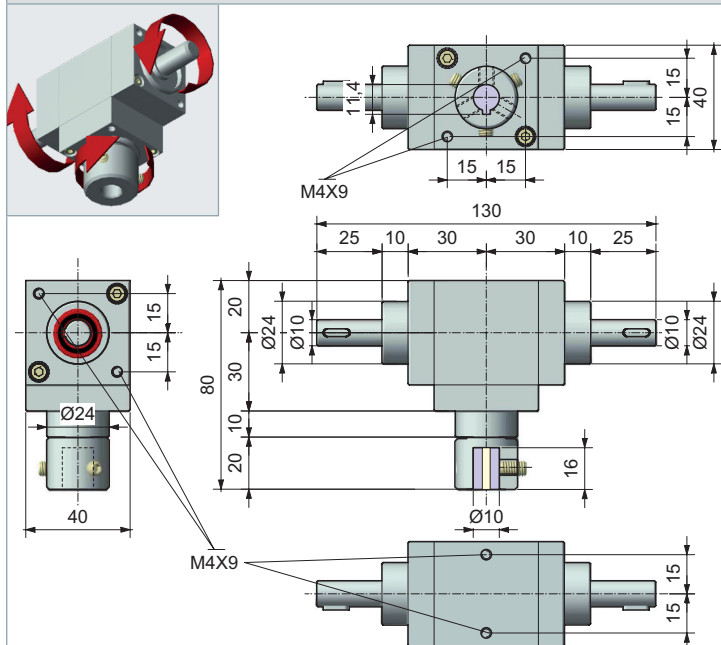
**VERSIONE - VERSION «C» M-M-M ROTAZIONE OPPOSTA - OPPOSITE ROTATION**



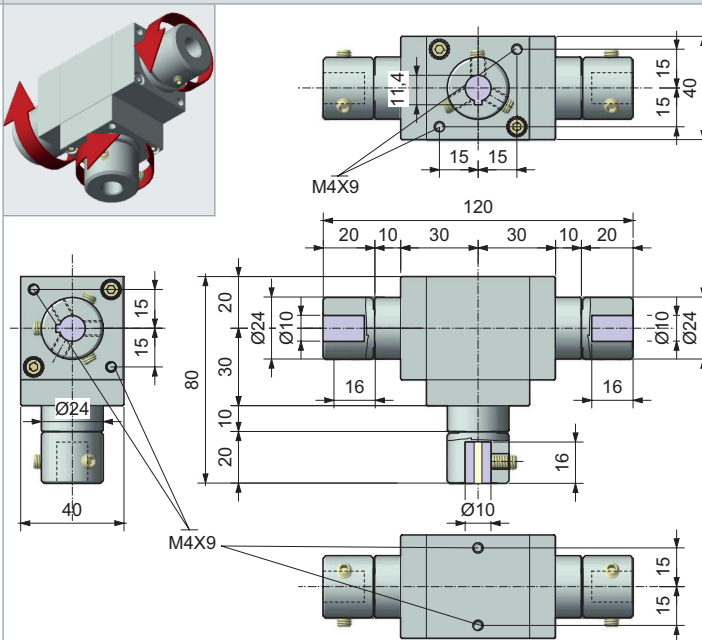
**VERSIONE - VERSION «C» M-F-F ROTAZIONE OPPOSTA - OPPOSITE ROTATION**



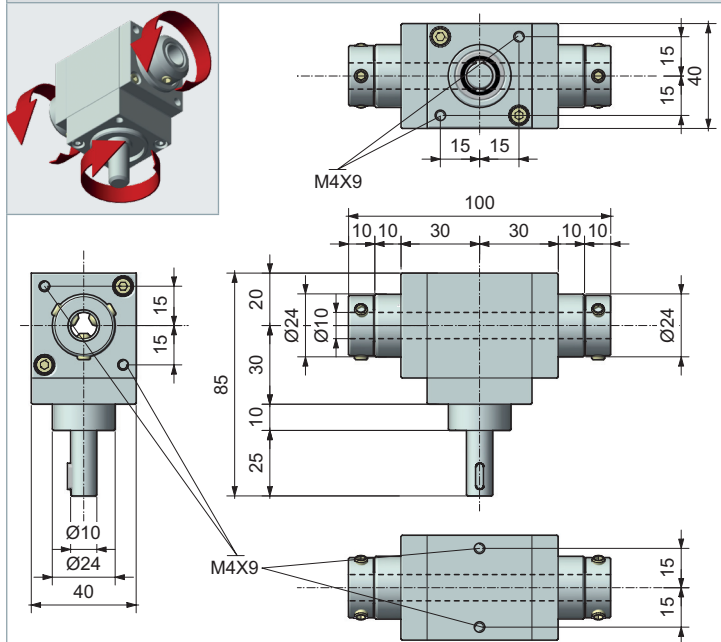
**VERSIONE - VERSION «C» F-M-M ROTAZIONE OPPOSTA - OPPOSITE ROTATION**



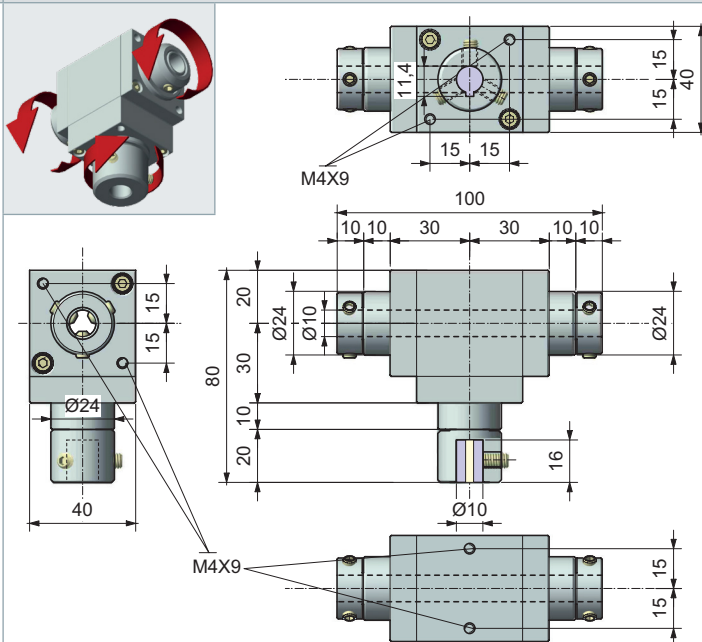
**VERSIONE - VERSION «C» F-F-F ROTAZIONE OPPOSTA - OPPOSITE ROTATION**



**VERSIONE - VERSION «D» M-F-F ALBERO PASSANTE - THROUGH-HOLLOW SHAFT**

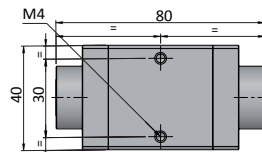
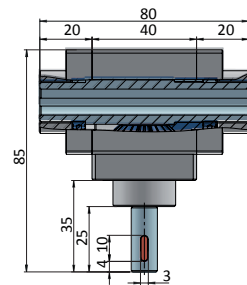
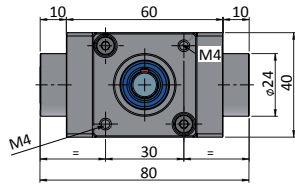
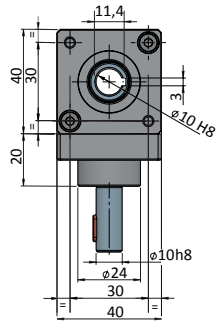
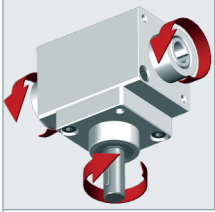


**VERSIONE - VERSION «D» F-F-F ALBERO PASSANTE - THROUGH-HOLLOW SHAFT**



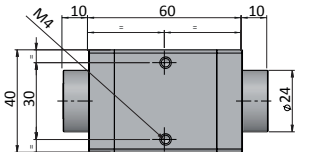
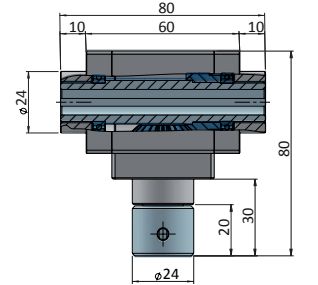
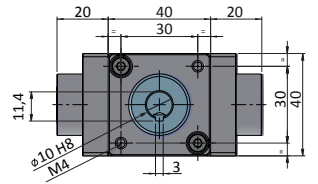
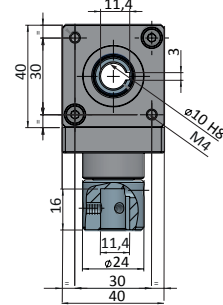
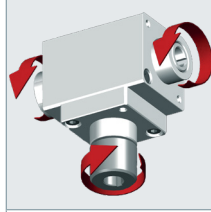
**VERSIONE - VERSION «D» M-F(Ø10CH3)-F(Ø10CH3)**

CON ALBERO PASSANTE - WITH THROUGH-HOLLOW SHAFT

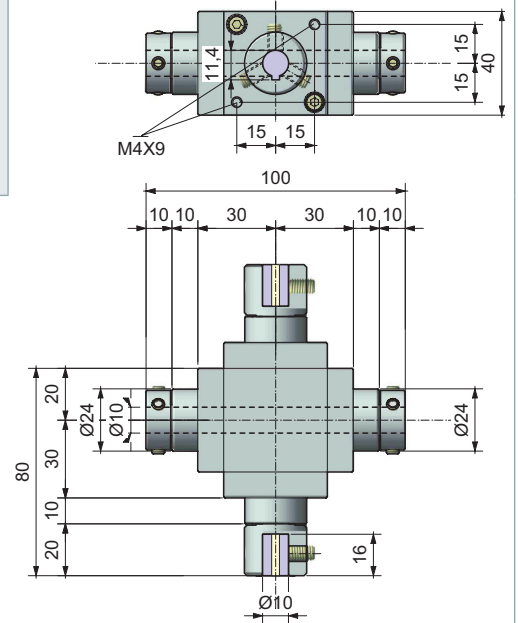
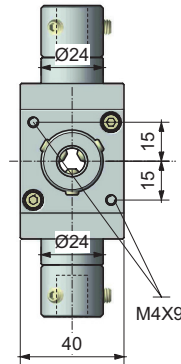
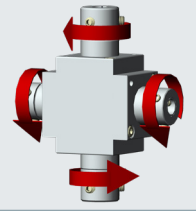
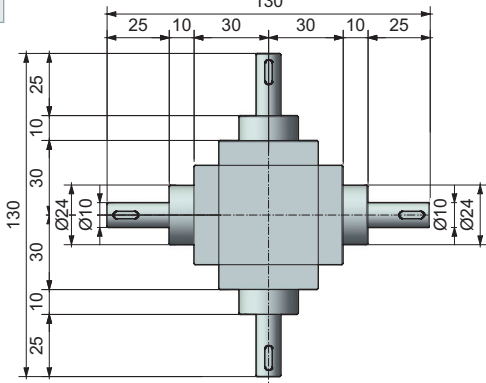
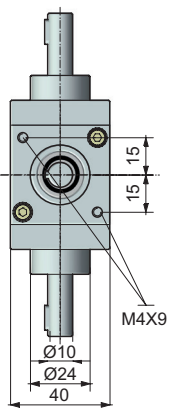
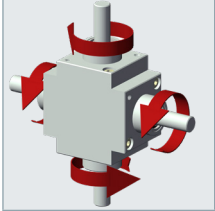


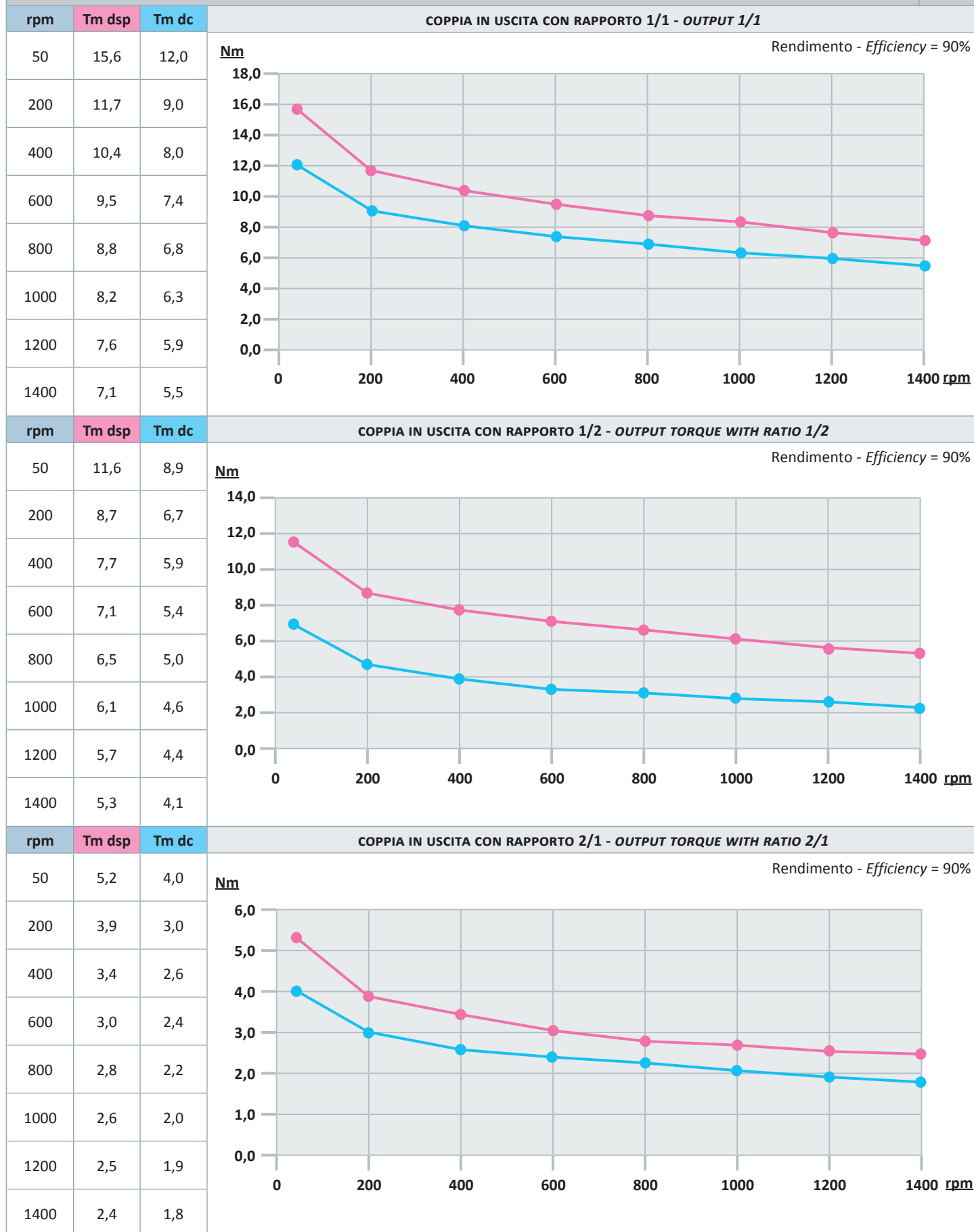
**VERSIONE - VERSION «D» F-F(Ø10CH3)-F(Ø10CH3)**

CON ALBERO PASSANTE - WITH THROUGH-HOLLOW SHAFT



**VERSIONE - VERSION «E» M-M-M-M**





- **Tm** = coppia massima in Nm - max torque in Nm  
 - **dc** = dentatura conica - bevel gearing  
 - **dsp** = dentatura spirale - spiral gearing

| ESEMPIO DI ORDINAZIONE - PART NR. CONFIGURATION     | 66/5 | SP                       | IN | B | MØ10 | FL-M | FØ10 | FL-M | FØ10 | FL-M | FØ10 | 1/1 |
|-----------------------------------------------------|------|--------------------------|----|---|------|------|------|------|------|------|------|-----|
| DENTATURA SPIROIDALE - SPIRAL GEARS (☛Tab. 2)       |      |                          |    |   |      |      |      |      |      |      |      |     |
| SP rapporto-ratio 1/1                               |      | rapporto-ratio 1/2 - 2/1 |    |   |      |      |      |      |      |      |      |     |
| ACCIAIO INOSSIDABILE - STAINLESS STEEL              |      |                          |    |   |      |      |      |      |      |      |      |     |
| INOX                                                |      |                          |    |   |      |      |      |      |      |      |      |     |
| VERSIONE - VERSION (☛Tab. 1)                        |      |                          |    |   |      |      |      |      |      |      |      |     |
| A - B - C - D - E                                   |      |                          |    |   |      |      |      |      |      |      |      |     |
| ALBERO 1 - SHAFT 1 (☛Tab. 9)                        |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ10 - FØ10 (standard)                              |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ12 - MØ14 - FØ10CH3 - FØ12 - FØ14                 |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ14x80 FL-OP3/EP3 flangiato - flanged (☛Tab. 8)    |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ14x80 FL-OP7/EP7 flangiato - flanged (☛Tab. 8)    |      |                          |    |   |      |      |      |      |      |      |      |     |
| FLANGIA ACCOPPIAMENTO - COUPLING FLANGE (☛Tab. 7)   |      |                          |    |   |      |      |      |      |      |      |      |     |
| FL-M (albero 1 - shaft 1)                           |      |                          |    |   |      |      |      |      |      |      |      |     |
| ALBERO 2 - SHAFT 2 (☛Tab. 9)                        |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ10 - FØ10 (standard)                              |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ12 - MØ14 - FØ10CH3 - FØ12 - FØ14                 |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ14x80 FL-OP3/EP3 flangiato - flanged (☛Tab. 8)    |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ14x80 FL-OP7/EP7 flangiato - flanged (☛Tab. 8)    |      |                          |    |   |      |      |      |      |      |      |      |     |
| FLANGIA ACCOPPIAMENTO - COUPLING FLANGE (☛Tab. 7)   |      |                          |    |   |      |      |      |      |      |      |      |     |
| FL-M (albero 2 - shaft 2)                           |      |                          |    |   |      |      |      |      |      |      |      |     |
| ALBERO 3 - SHAFT 3 (☛Tab. 9)                        |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ10 - FØ10 (standard)                              |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ12 - MØ14 - FØ10CH3 - FØ12 - FØ14                 |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ14x80 FL-OP3/EP3 flangiato - flanged (☛Tab. 8)    |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ14x80 FL-OP7/EP7 flangiato - flanged (☛Tab. 8)    |      |                          |    |   |      |      |      |      |      |      |      |     |
| FLANGIA ACCOPPIAMENTO - COUPLING FLANGE (☛Tab. 7)   |      |                          |    |   |      |      |      |      |      |      |      |     |
| FL-M (albero 3 - shaft 3)                           |      |                          |    |   |      |      |      |      |      |      |      |     |
| ALBERO 4 - SHAFT 4 (☛Tab. 9)                        |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ10 - FØ10 (standard)                              |      |                          |    |   |      |      |      |      |      |      |      |     |
| MØ12 - MØ14 - FØ10CH3 - FØ12 - FØ14                 |      |                          |    |   |      |      |      |      |      |      |      |     |
| RAPPORTI - RATIOS (☛Tab. 3)                         |      |                          |    |   |      |      |      |      |      |      |      |     |
| 1:1 - 1:2 - 2:1                                     |      |                          |    |   |      |      |      |      |      |      |      |     |
| INDICATORI - INDICATORS                             |      |                          |    |   |      |      |      |      |      |      |      |     |
| OP3/EP3 (ordinare separatamente - order separately) |      |                          |    |   |      |      |      |      |      |      |      |     |
| OP7/EP7 (ordinare separatamente - order separately) |      |                          |    |   |      |      |      |      |      |      |      |     |

☛ per la scelta degli indicatori consultare le schede tecniche, scaricabili anche dal nostro sito [www.fiama.it](http://www.fiama.it) nella sezione "Indicatori di posizione ..."

for the selection of indicators please see datasheets, which can be downloaded also from our web-site [www.fiama.it](http://www.fiama.it) in section "Position indicators ..."

opzione esclusiva - exclusive option

opzionale - optional

- Per la scelta del rinvio, consigliamo di consultare le tabelle e i dati tecnici riportati nelle "Informazioni generali" di questo catalogo (pag. 4 - 7)
- Per abbreviazioni e sigle consultare il «glossario» nelle "Informazioni generali" di questo catalogo (pag. 7).
- For the selection of the gearbox, we advise to consult the tables, and the technical data shown in the "General Information" of this catalog (p. 4 - 7)
- For abbreviations and acronyms consult the «glossary» in the "General Information" of this catalog (p. 7)