| **Tipo (grandezza) morsa** / Vise type (size) | | 1 | | 2 | | | | 3 | |
|---|---|---|---|---|---|---|---|---|---|
| | kN | 25 kN | | 25 kN | | | | 30 kN | |
| Apertura massima fra le slitte / Maximum opening between slides | A | 56 | 68 | 96 | 116 | 136 | 156 | 136 | 136 |
| | C | 70 | | 90 | | | | 100 | |
| | D | 200 + 32 | 300 + 32 | 300 | 400 | 500 | 600 | 400 | 500 |
| | E | 249 | 349 | 320 | 420 | 520 | 620 | 425 | 525 |
| | G | 75 | | 95 | | | | 125 | |
| | R | 74 | | 94 | | | | 124 | |
| | S | 69 | | 89 | | | | 99 | |
| | T | 72 | 116 | 102 | 142 | 182 | 222 | 132 | 182 |
| | Y | 277 | 377 | 360 | 460 | 560 | 660 | 470 | 570 |
| | X | 407 | 507 | 537 | 637 | 737 | 837 | 637 | 737 |
| | kg | 7 | 10 | 18 | 25 | 32 | 39 | 40 | 45 |
| | Cod. | 5.85.51200 | 5.85.51300 | 5.85.52300 | 5.85.52400 | 5.85.52500 | 5.85.52600 | 5.85.53400 | 5.85.53500 |

## Art. 855

3 in 1 VISES SINGLE / DOUBLE / SELF-CENTERING

Modulo base universale
CENTINAIA DI GANASCE DISPONIBILI !!

Universal vise body module
HUNDREDS OF JAWS AVAILABLE !!

## Art. 855D

(Art. 855 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

| Cod. | 5.85.5D120 | 5.85.5D130 | 5.85.5D230 | 5.85.5D240 | 5.85.5D250 | 5.85.5D260 | 5.85.5D340 | 5.85.5D350 |
|---|---|---|---|---|---|---|---|---|

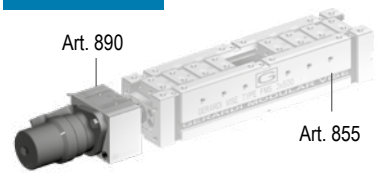
## Art. 802

Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission

Chiave dinamometrica Art.357 **(Consigliata)** - Torque wrench Art.357 **(Suggested)**

| Cod. | 5.80.21000 | 5.80.22000 | 5.80.23000 |
|---|---|---|---|

## Art. 855E

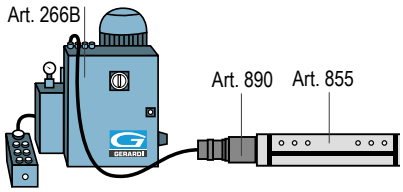



(Art. 855 + 890) Morsa + motore idraulico / Vise + hydraulic motor

| Cod. | 5.85.5E120 | 5.85.5E130 | 5.85.5E230 | 5.85.5E240 | 5.85.5E250 | 5.85.5E260 | 5.85.5E340 | 5.85.5E350 |
|---|---|---|---|---|---|---|---|---|

Meccanica con predisposizione elettroidraulicacompleta di motore, piastra, boccola e finecorsa

## Art. 855F

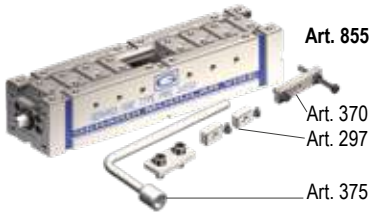



(Art. 855 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

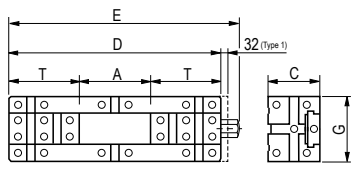
| Cod. | 5.85.5F120 | 5.85.5F130 | 5.85.5F230 | 5.85.5F240 | 5.85.5F250 | 5.85.5F260 | 5.85.5F340 | 5.85.5F350 |
|---|---|---|---|---|---|---|---|---|

Meccanica elettroidraulica completa di centralina idraulica apparecchiatura elettrica con pulsantiera

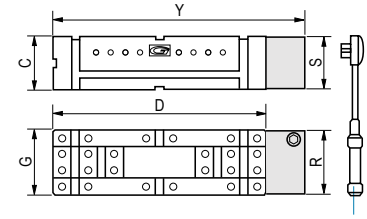
Dotazione standard:
- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 chiave a pipa Art. 375




Standard equipment:
- 2 workstops Art. 370
- 1 pair of positioning key-nuts for 16 mm slot Art. 297
- 1 box wrench Art. 375

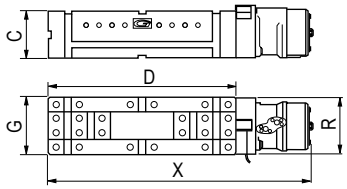



**Art. 855**

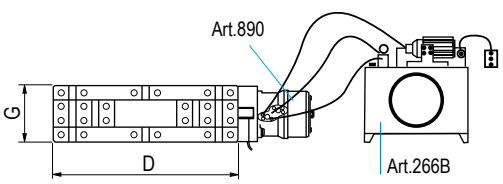



**Art. 855D**

Art.357 **(Incluso)**
Art.357 **(Included)**




**Art. 855E**




**Art. 855F**

| | 3 30 kN | | | 4 30 kN | | | | 5 32 kN | | | 6 32 kN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 136 | 136 | 136 | 188 | 168 | 148 | 128 | 152 | 216 | 252 | 316 | 280 | 244 |
| C | | 100 | | | 120 | | | | 140 | | | 160 | |
| D | 600 | 700 | 800 | 500 | 600 | 700 | 800 | 600 | 700 | 800 | 800 | 900 | 1000 |
| E | 625 | 725 | 825 | 525 | 625 | 725 | 825 | 625 | 725 | 825 | 825 | 925 | 1025 |
| G | | 125 | | | 145 | | | | 170 | | | 190 | |
| R | | 124 | | | 144 | | | | 169 | | | 189 | |
| S | | 99 | | | 119 | | | | 139 | | | 159 | |
| T | 232 | 282 | 332 | 156 | 216 | 276 | 336 | 174 | 242 | 274 | 242 | 310 | 378 |
| Y | 670 | 770 | 870 | 570 | 670 | 770 | 870 | - | - | - | - | - | - |
| X | 837 | 937 | 1037 | 737 | 837 | 937 | 1037 | 837 | 937 | 1037 | 1037 | 1137 | 1237 |
| kg | 50 | 55 | 60 | 66 | 72 | 80 | 88 | 115 | 125 | 135 | 170 | 190 | 210 |
| Cod. | 5.85.53600 | 5.85.53700 | 5.85.53800 | 5.85.54500 | 5.85.54600 | 5.85.54700 | 5.85.54800 | 5.85.55600 | 5.85.55700 | 5.85.55800 | 5.85.56800 | 5.85.56900 | 5.85.56100 |

**Art. 855D** (Art. 855 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

| Cod. | 5.85.5D360 | 5.85.5D370 | 5.85.5D380 | 5.85.5D450 | 5.85.5D460 | 5.85.5D470 | 5.85.5D480 | 5.85.5D560 | 5.85.5D570 | 5.85.5D580 | 5.85.5D680 | 5.85.5D690 | 5.85.5D610 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Art. 802** Moltiplicatore di coppia con rivio angolare - Mechanical with torque multiplier with angular transmission

| Cod. | 5.80.23000 | 5.80.24000 | 5.80.25000 | 5.80.26000 |
|---|---|---|---|---|

**Art. 855E** (Art. 855 + 890) Morsa + motore idraulico / Vise + hydraulic motor

| Cod. | 5.85.5E360 | 5.85.5E370 | 5.85.5E380 | 5.85.5E450 | 5.85.5E460 | 5.85.5E470 | 5.85.5E480 | 5.85.5E560 | 5.85.5E570 | 5.85.5E580 | 5.85.5E680 | 5.85.5E690 | 5.85.5E610 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

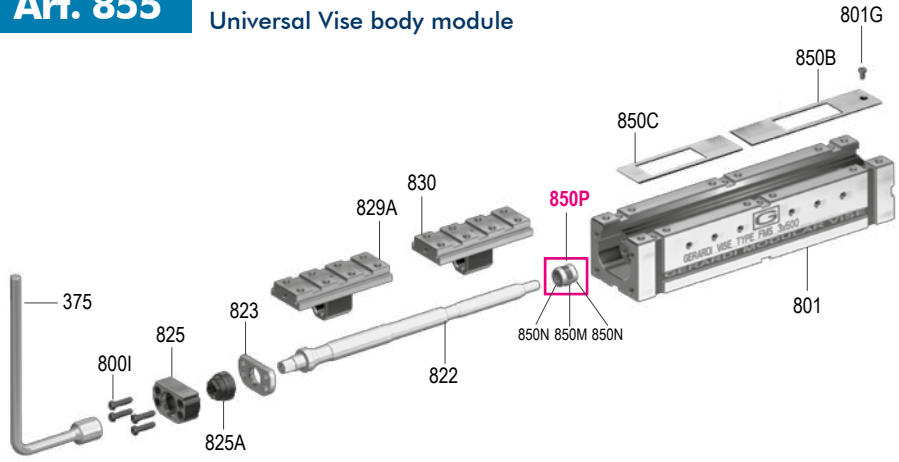
Mechanical with prepared hydraulic connection complete with motor plate,bushing and proximity switch

**Art. 855F** (Art. 855 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

| Cod. | 5.85.5F360 | 5.85.5F370 | 5.85.5F380 | 5.85.5F450 | 5.85.5F460 | 5.85.5F470 | 5.85.5F480 | 5.85.5F560 | 5.85.5F570 | 5.85.5F580 | 5.85.5F680 | 5.85.5F690 | 5.85.5F610 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

Mechanical with elettrohydraulicpower-pack ready to work

## Art. 855 Modulo base Universale
Universal Vise body module




| Art. | Pag. |
|---|---|
| 375 | 4.35 |
| 800I | 5.61 |
| 801G | 5.61 |
| 801I | 5.61 |
| 822 | 5.53 |
| 823 | 5.59 |
| 825 | 5.59 |
| 825A | 5.61 |
| 829A | 5.52 |
| 830 | 5.52 |
| 850B | 5.61 |

| Art. | Pag. |
|---|---|
| 850C | 5.61 |
| 850P | 5.72 |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |
| - | - |

# Morse e cubi morsa / Vises & vise-towers

# FMS SERIES

Precisione / Accuracy
**±0,02mm**

HRC

Durezza / Hardened
**HRC 58±2**

## Un sistema modulare flessibile con centinaia di ganasce disponibili

A Flexible modular system with hundreads of jaws available

5

### ESTREMA VERSATILITÀ
EXTREME VERSATILITY

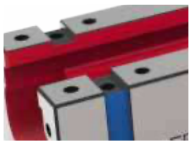
•3 posizioni per la ganascia fissa; •Serraggio dall'esterno all'interno e viceversa; •Posizionamento verticale-orizzontale-laterale; •Collegamento: fianco a fianco, dorso a dorso, fianco a dorso; •Possibilità illimitata per ganasce speciali; •Sostituzione semplice e precisa delle ganasce; •Elemento di prolunga per pezzi fuori misura; •Sistema di serraggio meccanico, idraulico, pneumatico elettrico o con moltiplicatore di potenza, tramite comando manuale, a pedale o mediante pulsante elettrico (vedi pag. 12); •Costruzione solida e compatta e massima apertura rispetto alla sua lunghezza; •Flessioni praticamente ridotte di due volte rispetto alle precedenti morse modulari standard; •Accurata ripetibilità di posizionamento del pezzo da lavorare; •Precisioni geometriche con tolleranze entro 0,02 mm; •Protezione integrale dalla penetrazione di corpi estranei tramite piastre scorrevoli; •Possibilità di trasformazione di ogni morsa singola in morsa autocentrante o in morsa doppia tramite la semplice sostituzione delle ganasce sul corpo base universale. (ESEMPI APPLICATIVI A PAGINA 5.76).

•3 positions for the fixed jaw; •Outside to inside clamping and viceversa; •Vertically, horizontally and sideway vise positioning; •Side to side, back to back and back to side vise positioning; •Unlimited special jaws; •Simple and precise exchange of jaws; •Extension element for extra-long pieces; •Mechanic, hydraulic or pneumatic or electrical clamping system or with pressure multiplier, through manual, pedal or push botton board control (see page 12); •Space saving design, solid construction and maximum blocking ratio to total lenght; •Deflection reduced two times with respect to the STANDARD modular vises; •Very accurate repetability of workpiece position; •Geometrical accuracy with tollerances within 0,02 mm; •Integral protection from chips and dirty through sliding protection; •Possibility to trasform each single vise in a self-centering vise with possibility to block from outside to inside and vice versa and in a double vise through the simple substitution of the jaws on the universal vise body base. (APPLICATION EXAMPLES ON PAGE 5.76)

### 3 Morse in Una
3 Vises in One

Possibilità di trasformare ogni morsa singola in una morsa autocentrante con bloccaggio concentrico dall'esterno all'interno e viceversa e in morsa doppia tramite la semplice sostituzione delle ganasce sul corpo base universale.

Possibility to trasform each single vise in a self-centering vise with the possibility to block from outside to inside and viceversa and in a double vise through the simple substitution of the jaw on the universal vise body base.



### Altissima rigidità
Highest rigidity

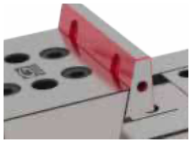
Base della morsa con una sezione doppia per garantire maggiore rigidità. Flessioni ridotte di due volte rispetto alle normali morse modulari standard. Disponibili cubi monoblocco.

Higher vise base in order to guarantee a better rigidity. Bending reduced two times with respect to the standard modular vises. Available solid vise towers

### Vite a doppio filetto
Double thread spindle

Vite principale (completamente protetta) con filetto destro e sinistro e slitte guidate lunghe quanto il corpo base con più chiavette per ganasce mobili

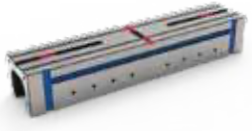
Completely protected main spindle with left and right thread and guided slides long ad the vise base with multiple movable jaw positions



### Riconfigurazione Rapidissima
Quickest Vise Resetting

Grazie alla piastra ganascia intercambiabile manualmente tramite sistema a pettine

Thanks to the quick interchangeable jaw plate through ground comb system



### Chiavette di posizionamento
Positioning Keyways

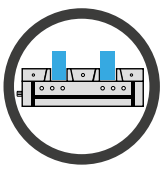
Chiavette longitudinali e trasversali sia sulla base per il posizionamento orizzontale, sia in testa per il posizionamento verticale.

Longitudinal and cross keyways both on the base bottom surface for horizontal positioning and on the side for vertical positioning

Nata espressamente per i centri di lavoro, la gamma FMS permette ottimizzazioni di serraggio con riferimenti precisi in spazi contenuti, usure inesistenti e rigidità impensabile (spessore della base raddoppiato), possibilità di bloccare più pezzi contemporaneamente con l'ausilio di sistemi meccanici, pneumatici, elettrici o idraulici. Tutte sono disponibili/predisposte sia per piazzamenti verticali che orizzontali. Serraggi di qualsiasi lunghezza. La caratteristica (Brevettata) che meglio contraddistingue questa serie di morse consiste nella possibilità di trasformare ogni morsa singola (cioè adibita al serraggio di un singolo pezzo) in una morsa autocentrante con bloccaggio concentrico dall'esterno all'interno e viceversa e in morsa doppia tramite la semplice sostituzione delle ganasce sul corpo base universale. Tutto ciò ne suggerisce l'impiego in situazioni produttive caratterizzate da lotti di pezzi estremamente diversi fra loro riducendo tempi di set-up e garantendo un'accurata ripetibilità di posizionamento e quindi di precisione migliorando l'efficienza globale del sistema produttivo.

---

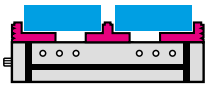
Born to be dedicated to machining centres, FMS series of vises allow workholdings with perfect alignment in a space saving design, extremely high wear resistence, with deflection reduced 2 times in respect to the STD modular vises (base thickness doubled), possibility to clamp more pieces simultaneously with mechanic, hydraulic pneumatic or electric devices. You can use them both for vertical and horizontal clamping without any price charge. Grip any work lenght. The feature (Pathented) which identifies this line of vises consists in the possibility to trasform each single vise (1 piece clamping) in a self-centering vise with possibility to block from outside to inside and viceversa and in a double vise through the simple substitution of the jaws on the universal vise body base. All that suggests their use in the production of lots of highly different pieces reducing set-up times and assuring very accurate repetability of workpiece position and precision, increasing the global efficiency of the production process.



SCAN IT TO SEE

THE WEB PAGE

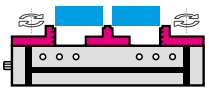
## *Singole, Doppie o Autocentranti !*
## *Single, Double or Self-centering !*



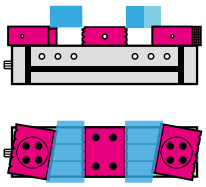
Serraggio particolare su gradino grande
Workpiece clamping on the large step

Ganascia Mobile Art.810P
Movable Jaw Art.810P

Ganascia Fissa Art.805Q
Fixed Jaw Art.805Q

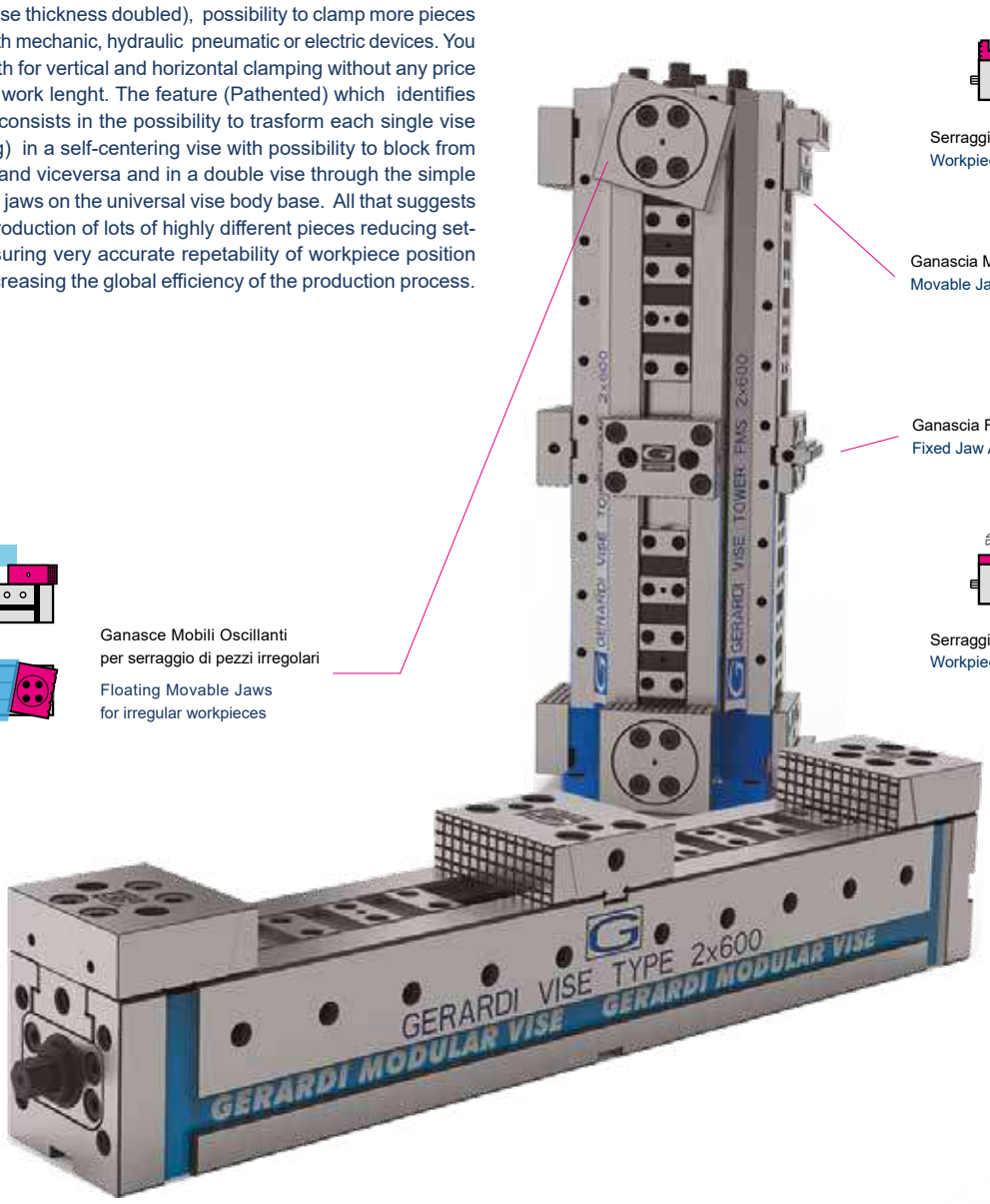


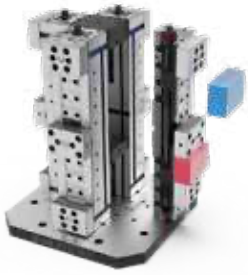
Serraggio particolare su gradino piccolo
Workpiece clamping on the small step



Ganasce Mobili Oscillanti
per serraggio di pezzi irregolari

Floating Movable Jaws
for irregular workpieces



**Sistema a terza mano -** Third hand service

Consente il carico e serraggio lieve del primo particolare da lavorare mentre viene caricato il secondo di dimensione maggiore. Molto utile con l'utilizzo verticale della morsa.

It allows the first workpiece loaded to be clamped lightly while the second workpiece is being loaded.Such device is useful especially with the vise vertically positioned

# Staffe di ancoraggio / Vise holding clamps

NEW 2024

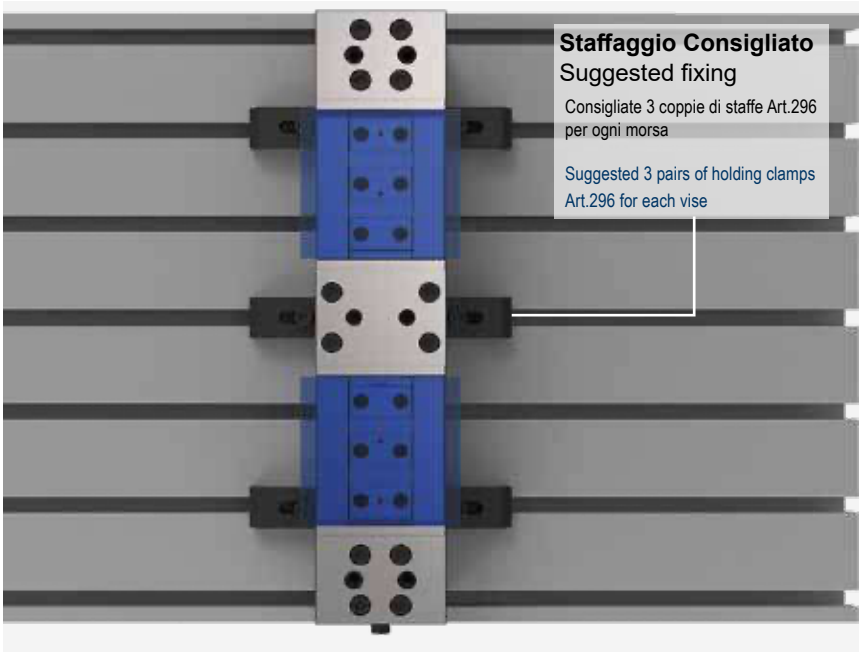
# FMS

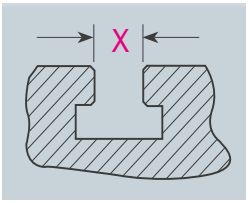
**Coppia staffe di fissaggio Art.296, complete di vite e dado a "T"**

Pair of vise holding clamps Art.296 complete of screw and "T" nuts

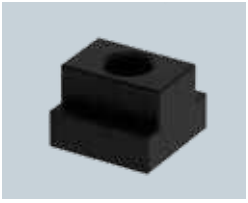
**Esempio d'ordine per morsa tipo 3 su macchina con cave a T da 18mm: Art.296 T.3 X=18mm**
**Oppure con codice: 2.29.6300 X=18mm**

Order example for Type 3 vise on machine with 18mm T-slots: Art.296 T.3 X=18mm
Also with code: 2.29.6300 X=18mm

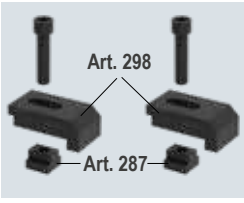



**Cava a T**
T Slot
Specificare sempre la cava della vostra macchina
Always specify the machine T-slot dimension

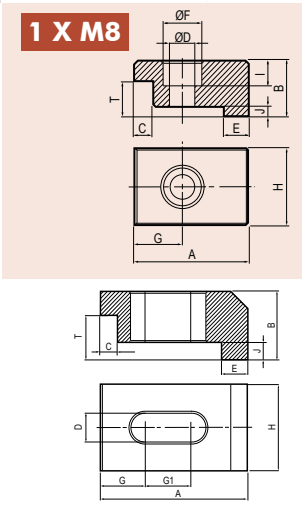


**Art.287** (Pag.4.34)
**Dadi a T** - T Nuts
Per fissaggio morse alle cave a T della macchina
For vise clamping on the machine T-slots




**Art.296**
(Art.298 + Art.287)
Consigliate 3 coppie di staffe Art.296 per ogni morsa
Suggested 3 pairs of holding clamps Art.296 for each vise

| Tipo (grandezza) Type (size) | | 1 | | | | 1 | | | | | | | | 2 - 3 | | | | | | | 4 - 5 - 6 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Art. 296** Coppia di staffe Holding clamps pair | Cava a T slot X | 12 | 14 | 16 | 18 | 12* | 14 | 16 | 16 | 18 | 20 | 18* | 20 | 22 | 16 | 18 | 20 | 22 | 18* | 20 | 22 | 16 | 18 | 20 | 22 | 18* | 20 | 22 |
| | T-nuts Ref. N° | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 20 | 21 | 22 | 32 | 39 | 40 | 20 | 21 | 22 | 23 | 32 | 39 | 40 | 20 | 21 | 22 | 23 | 32 | 39 | 40 |
| | Filetto vite Screw thread | M8 | | | | M10 | | M12 * | | M16 | | | | | M12 * | | | | M16 | | | M12 | | | | M16 * | | |
| 1 X M8 | A | 50 | | | | 50 | | 50 | | 50 | | | | | 76 | | | | 76 | | | 86 | | | | 86 | | |
| | B | 24 | | | | 24 | | 24 | | 24 | | | | | 30 | | | | 30 | | | 40 | | | | 40 | | |
| | C | 6 | | | | 6 | | 6 | | 6 | | | | | 6 | | | | 6 | | | 10 | | | | 10 | | |
| | Ø D | 8,5 | | | | 11 | | 13 | | 17 | | | | | 13 | | | | 17 | | | 13 | | | | 17 | | |
| | E | 10 | | | | 10 | | 10 | | 10 | | | | | 13 | | | | 13 | | | 15 | | | | 15 | | |
| | Ø F | 14 | | | | - | | - | | - | | | | | - | | | | - | | | - | | | | - | | |
| | G / G1 | 14 | | | | 16/15 | | 17,5/13 | | 19/9 | | | | | 17/22 | | | | 16/15 | | | 26/27 | | | | 26/27 | | |
| | H | 34 | | | | 34 | | 34 | | 34 | | | | | 42 | | | | 42 | | | 50 | | | | 50 | | |
| | I | 8 | | | | 10 | | 10 | | 10 | | | | | - | | | | - | | | - | | | | - | | |
| | J | 4 | | | | 4 | | 4 | | 4 | | | | | 10 | | | | 10 | | | 10 | | | | 10 | | |
| | T ± 0,1 | 15 | | | | 15 | | 15 | | 15 | | | | | 20 | | | | 20 | | | 26 | | | | 26 | | |
| | Cod. | 2.29.61000 / M8 | | | | 2.29.61000 / M10 | | 2.29.61000 / M12 | | 2.29.61000 / M16 | | | | | 2.29.63000 / M12 | | | | 2.29.63000 / M12 | | | 2.29.65000 / M12 | | | | 2.29.65000 / M16 | | |




*Scelta consigliata - Suggested choice

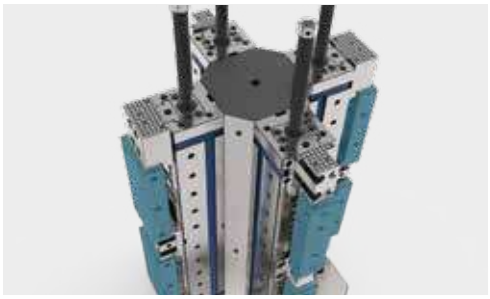
*Scelta NON consigliata - NO Suggested choice

# Soluzioni personalizzate / Customized solutions

# FMS

## Soluzioni personalizzate a tutti i vostri problemi di serraggio

Customized solutions for all your clamping problems



### Morse FMS automatizzate in verticale

FMS vises automated vertically mounted

**Gestione automatica di morse meccaniche grazie alla predisposizione per connessione con il robot. Lavorazioni del particolare su 3 lati con un unico serraggio evitando il riposizionamento ed una seconda ripresa del particolare da lavorare.**

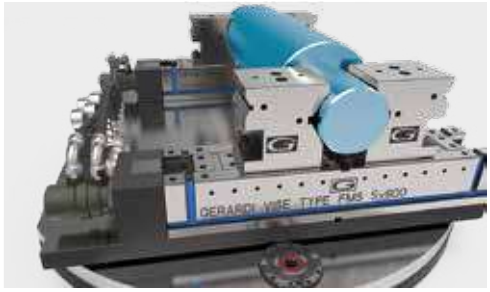
Automated machine setting thanks to the pre-fitting with robot connection. Workpiece machining on 3 sides with one clamping and so avoiding re-positioning and a second machining of the workpiece.

### Morsa FMS con riduttore epicicloidale

FMS vise with epicyclic force reducer

**Riduttore epicicloidale il quale consente di moltiplicare notevolmente la coppia sviluppata dal motore idraulico consentendo di arrivare a elevate forze di serraggio , fino a 480 kN**

Epicyclic force reducer able to multiply greatly the torque generated by the hydraulic engine reaching a very high clamping force, maximum 480kN.



### Serraggio automatico di grandi particolari tondi

Round workpieces automatic clamping

**Sistema di serraggio meccanico con morse FMS per il serraggio di particolari tondi di grandi dimensioni controllato tramite centralina idraulica da CNC**

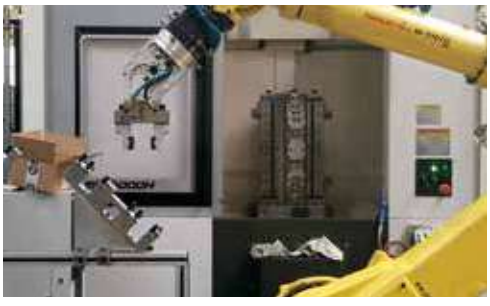
Quick positioning and clamping with FMS vises of whole equipment on round Zero Point plate through pull-studs and centering pin.

### Non solo per centri a 5 assi

Not only for 5th axis machines

**Morsa autocentrante FMS su centro di lavoro verticale con ganasce personalizzate in alluminio.**

Self Centering FMS vise with taylor made jaws aluminum mounted on Vertical CNC



### Morse FMS in verticale con robot

FMS vises vertically mounted + robot

**Assieme di morse FMS montate verticalmente su centro orizzontale gestite tramite robot anche per carico e scarico pezzi**

FMS vises vertically mounted on horizontal machining center.
Both vise clamping and workpieces turnover are operated through automated robotic system.

# TRE MORSE IN UNA
# THREE VISES IN ONE

**Acquista il modulo base universale. Una soluzione aperta per il lavoro di oggi pensando a quello di domani !**

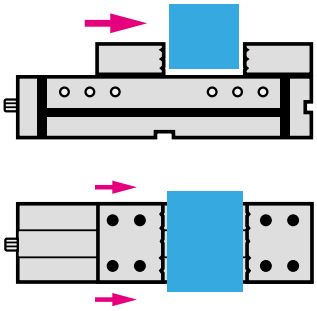
Buy the base body. A Versatile solution for present and future machining !

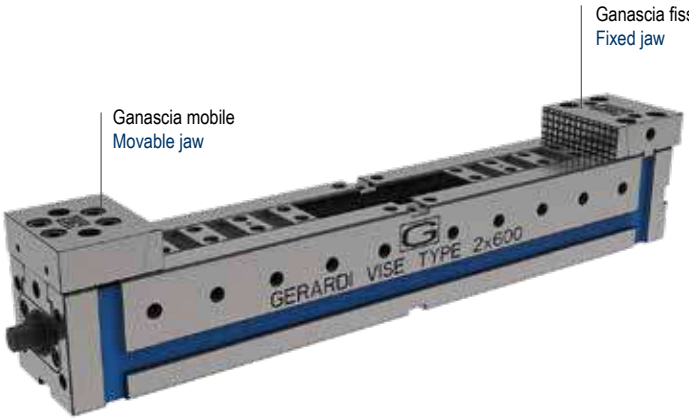
## CORPO BASE Art.855
## BASE BODY Art.855

Modulo base universale
**CENTINAIA DI GANASCE DISPONIBILI !!**

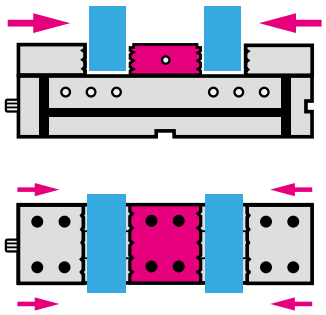
Universal vise body module
**HUNDREDS OF JAWS AVAILABLE !!**

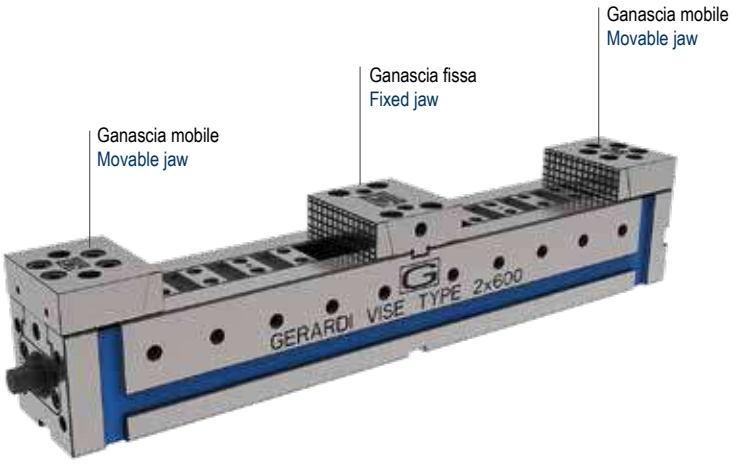
## SERRAGGI SINGOLI
## SINGLE CLAMPING



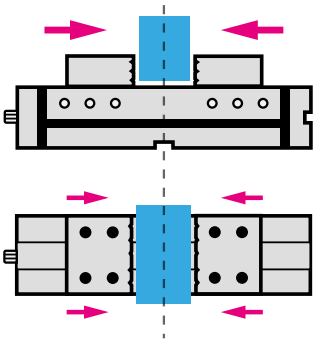


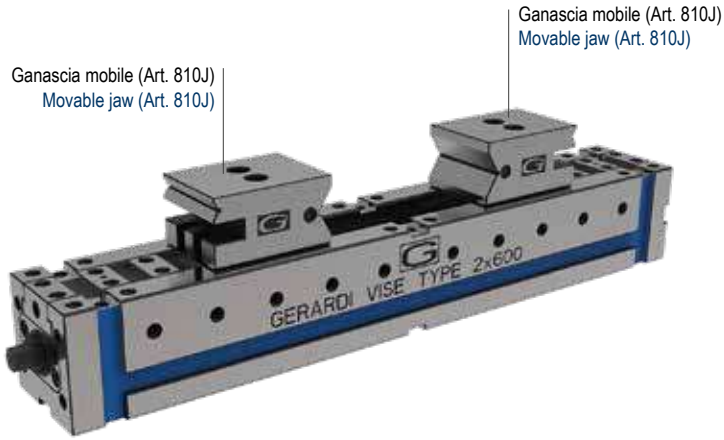

## SERRAGGI DOPPI
## DOUBLE CLAMPING



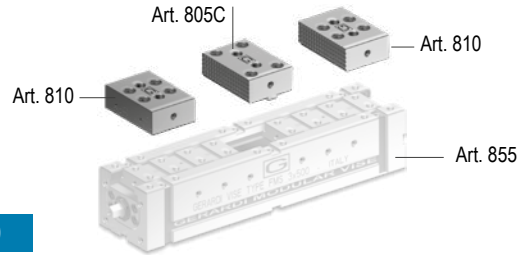



## AUTOCENTRANTE
## SELF-CENTERING

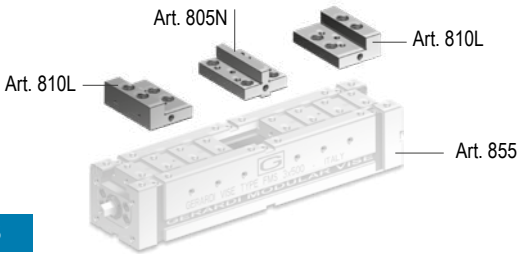




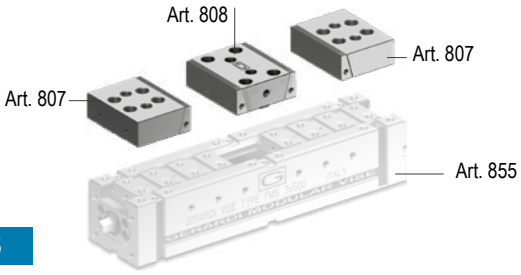
## VERSIONI PER SERRAGGI DOPPI
## DOUBLE CLAMPING CONFIGURATION



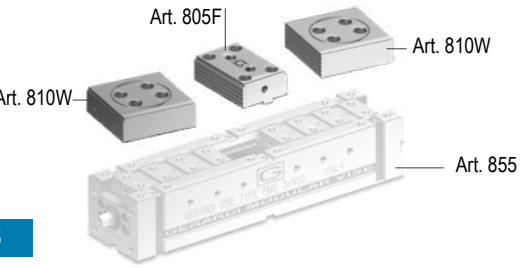

**Art. 860**



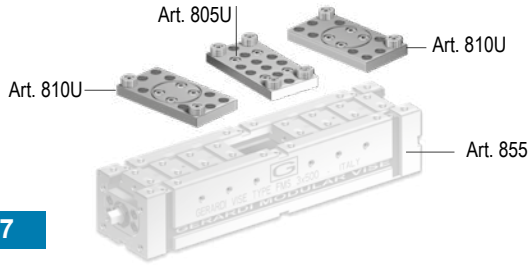

**Art. 863**



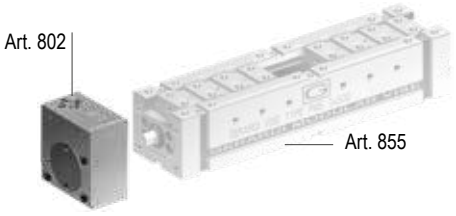

**Art. 865**




**Art. 866**

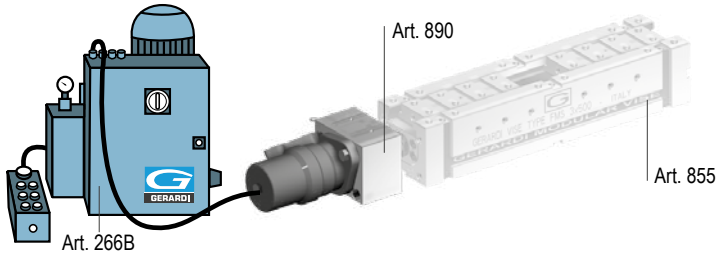



**Art. 867**



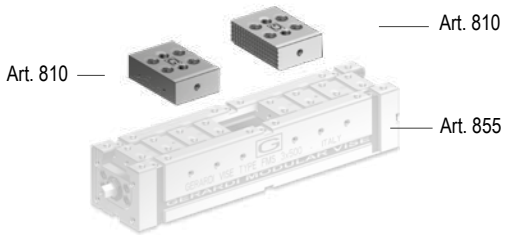

(Art. 855 + 802)

**Art. 855D**

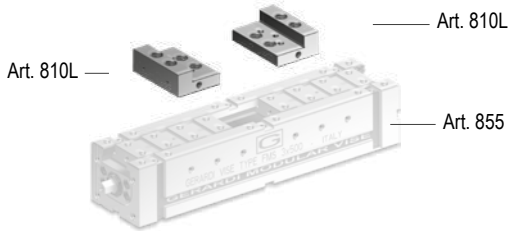



**Art. 855F** (Art. 855 + 890 + 266B)

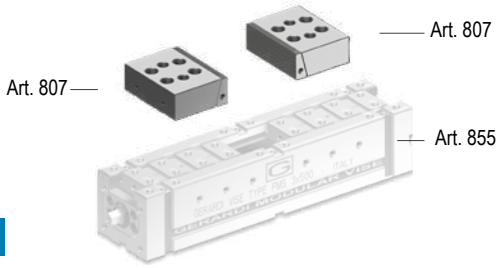
## VERSIONI AUTOCENTRANTI
## SELF-CENTERING TYPE



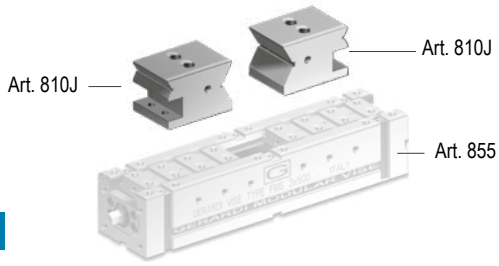

**Art. 860**



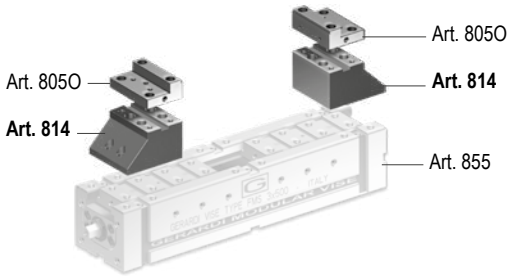

**Art. 863**



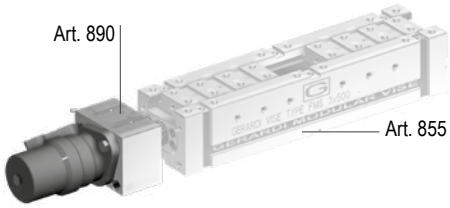

**Art. 865**




**Art. 870**

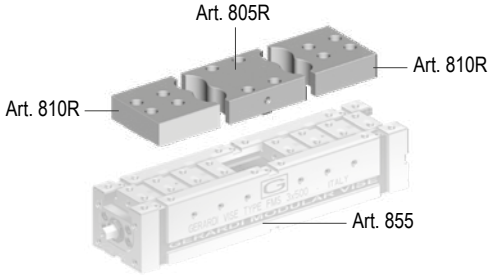



**Art. 868**



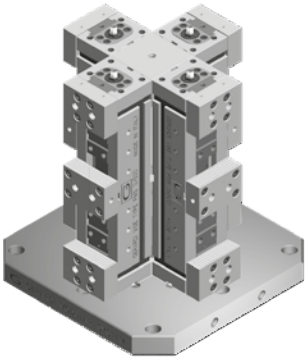

(Art. 855 + 890)

**Art. 855E**



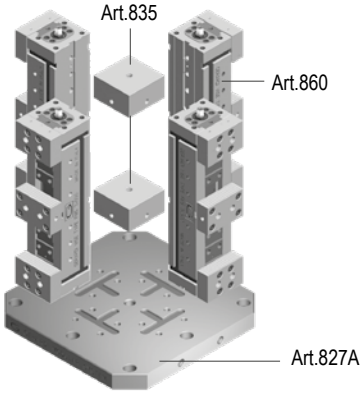

5

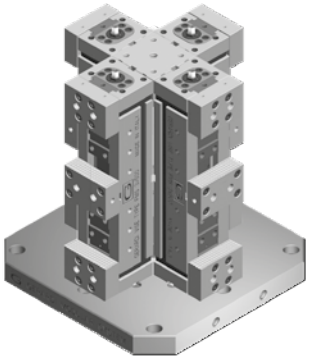
# CUBI DI MORSE MONTATI A CROCE O DORSO A DORSO
## VISE TOWERS CROSS OR BACK TO BACK MOUNTED



**N° 4 MORSE FMS**
montate a croce su piastra base (Art. 827A)
con distanziali (Art. 835)

N° 4 FMS VISES
cross-mounted on base plate (Art. 827A)
with spacers (Art. 835)



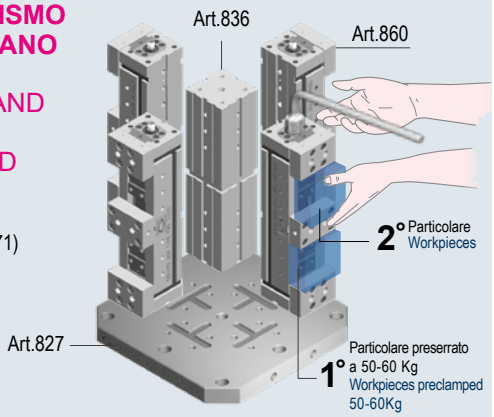



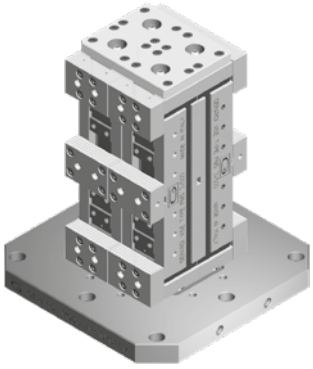
**N° 4 MORSE FMS**
montate a croce su piastra base (Art. 827A)
con supporto centrale (Art.836)

N° 4 FMS VISES
cross-mounted on base plate (Art.827A)
with center support (Art.836)

**MECCANISMO TERZA MANO INCLUSO**
THIRD HAND DEVICE INCLUDED

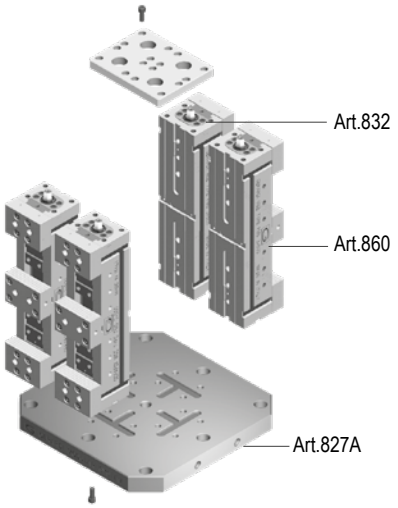
**Art.850P**
(Pag - Page 5.71)

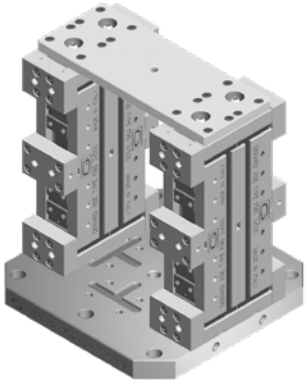


**N° 4 MORSE FMS**
montate dorso a dorso, fianco a fianco, su piastra base
(Art. 827) con piastra di collegamento (Art. 832)

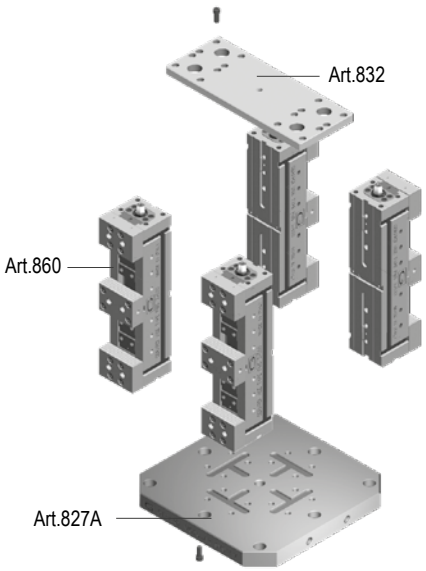
N° 4 FMS VISES
cross-mounted back-to-back,side by side, on base
plate (Art. 827) with connecting plate (Art. 832)



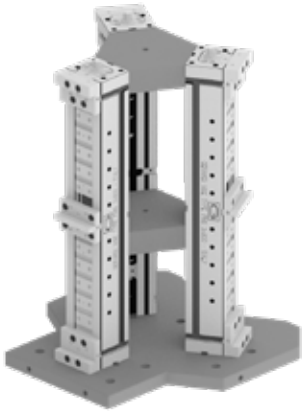
**N° 4 MORSE FMS**
montate dorso a dorso, su piastra base
(Art. 827A) con piastra di collegamento (Art. 832)

N° 4 FMS VISES
cross-mounted back-to-back,on base plate
(Art. 827A) with connecting plate (Art. 832)



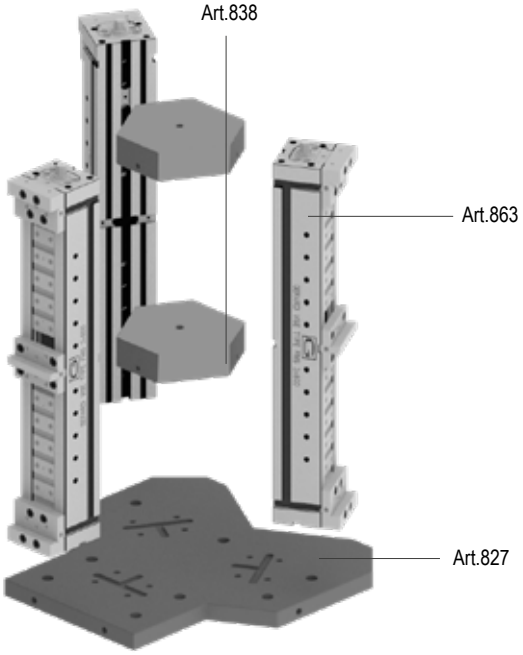

Montaggio ed allineamento morsa con distanziali, supporto centrale o piastra di collegamento (Vedi pag.5.3)
Vise and alignement mounted with spacers, center support or connecting plate (See page 5.3)

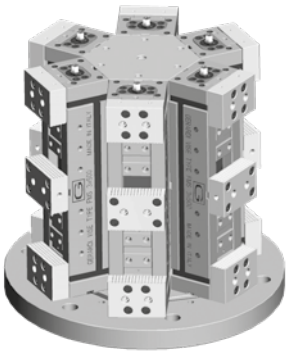
# CUBI DI MORSE MONTATI VERTICALMENTE
## VISE TOWERS VERTICALLY ASSEMBLED



**N° 3 morse FMS**
montate verticalmente su piastra base a Y (827)
con supporto centrale (Art. 838)

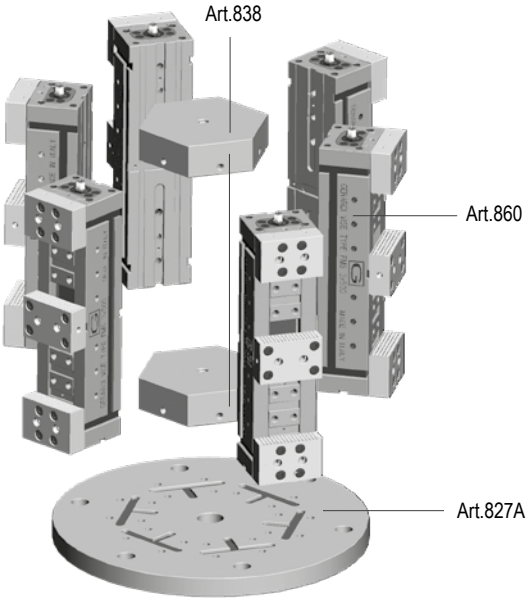
N° 3 FMS vises
**vises** vertically mounted on Y base plate (827A)
with exagon center support (Art. 838)

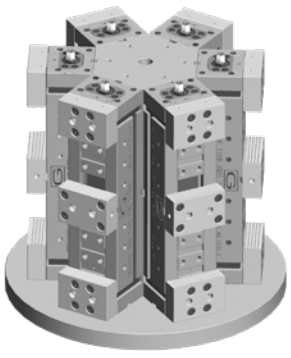


**N° 6 morse FMS**
montate verticalmente su piastra base (Art. 827A)
con distanziali esagonali (Art. 838)

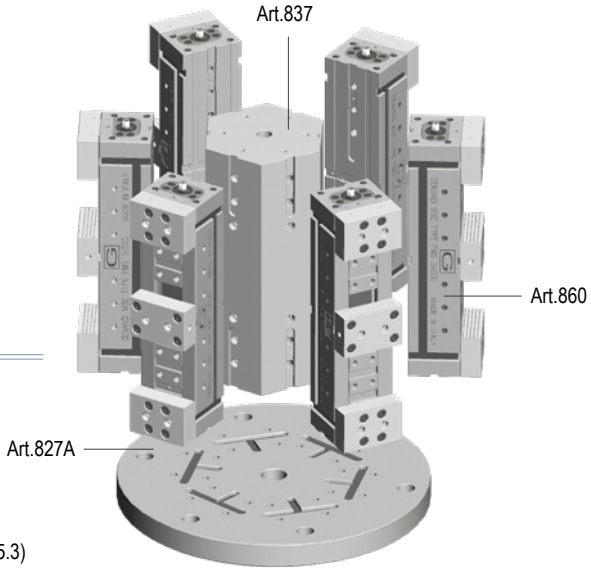
N° 6 FMS vises
**vises** vertically mounted on base plate (Art. 827A)
with exagon spacer (Art. 838)



**N° 6 morse FMS** montate verticalmente
su piastra base (Art. 827A)
con supporto centrale (Art. 837)

N° 6 FMS vises vertically mounted
on base plate (Art. 827A) with exagon
center support (Art. 837)




Montaggio ed allineamento morsa con distanziali, supporto centrale o piastra di collegamento (Vedi pag.5.3)
Vise and alignement mounted with spacers, center support or connecting plate (See page 5.3)

# VALIGETTA DI CAMPIONATURA FMS (Art.860)
## FMS SAMPLE KIT CASE (Art.860)

**Art. 983**

Art.860 T.1x300

**Morsa / Vise Art. 860**

| Cod. | 0.98.30000 |
|---|---|

**Art. 860 - All'Interno - Inside:**

| | | | |
|---|---|---|---|
| Art.810L | Art.807 | Art.810X | Art.810U |
| Art.810J | Art.814 | Art.806B | Art.806C |
| Art.806D | Art.806E | Art.806F | Art.298 |
| Art.297 | Art.850H | Art.370 | Art.375 |

# SIMBOLOGIA DATI TECNICI
## TECHNICAL DATA ICONS

**GANASCE**
**JAWS**

| Piane Straights | A gradino With step | Oscillanti Floating | Oscillanti con inserti regolabili Floating with inserts adjustable | Prismatiche Prismatic |
|---|---|---|---|---|

**POSSIBILITÀ**
**POSSIBILITY**

| Serraggio singolo Single clamping | Serraggio doppio Double clamping | Predisposi-zione Zero Point Zero Point Ready | Cubi-morsa Vise tower | Divisore Automatico Automatic dividing head | Divisore Meccanico Mechanical dividing head |
|---|---|---|---|---|---|

**PIASTRE GANASCE**
**JAW PLATES**

| Discen-dente Pull down | Piana Straight | Cambio rapido manuale Quick manual change | GRIP GRIP | Inserti GRIP Inserti GRIP |
|---|---|---|---|---|

**PAGINE**
**PAGES**

| Lavorazioni a 5 assi 5 axis machining | Accessori & Ricambi Accessories & Spare Parts | Istruzioni corretto utilizzo Instruction for a proper use | Diagrammi forze di serraggio Clamping force diagrams | Sistema Idraulico Hydraulic System |
|---|---|---|---|---|

# OPZIONI LAVORAZIONI EXTRA
## OPTIONS FOR EXTRA MACHINING

Nei codici, **FMS** si riferisce agli articoli dei gruppi 5, 6 e 7.
In codes, **FMS** refers to articles in groups 5, 6 and 7.

| Lavorazione extra<br>Extra machining | Cod. |
|---|---|
| AGGIUNTA di un foro calibrato<br>ADDITION of a calibrated hole | MAN-010-FMS |
| AGGIUNTA di una chiavetta calibrata<br>ADDITION of a calibrated key-way | MAN-020-FMS |
| PREDISPOZIONE SEMPLICE<br>SIMPLE SET UP | MAN-030-FMS |
| PREDISPOSIZIONE & MONTAGGIO COMPLETO<br>COMPLETE SET UP & MOUNTING | MAN-040-FMS |
| MONTAGGIO PARZIALE<br>PARTIAL ASSEMBLY | MAN-050-FMS |

| Lavorazione extra<br>Extra machining | Cod. |
|---|---|
| MONTAGGIO SEMPLICE<br>SIMPLE ASSEMBLY | MAN-060-FMS |
| MONTAGGIO ed ALLINEAMENTO (Standard)<br>(Standard) ASSEMBLY and ALIGNMENT | MAN-070-FMS |
| MONTAGGIO VERTICALE<br>COMPLETE VERTICAL ASSEMBLY | MAN-080-FMS |
| ALLINEAMENTO e CONTROLLO tramite DEA<br>ALIGNMENT and CONTROL by DEA \ CMM | MAN-090-FMS |
| TABULATO controllo DEA<br>PRINTOUT DEA control | MAN-100-FMS |

Vedi pagina 5.70 per esempi applicativi - See page 5.70 for application examples