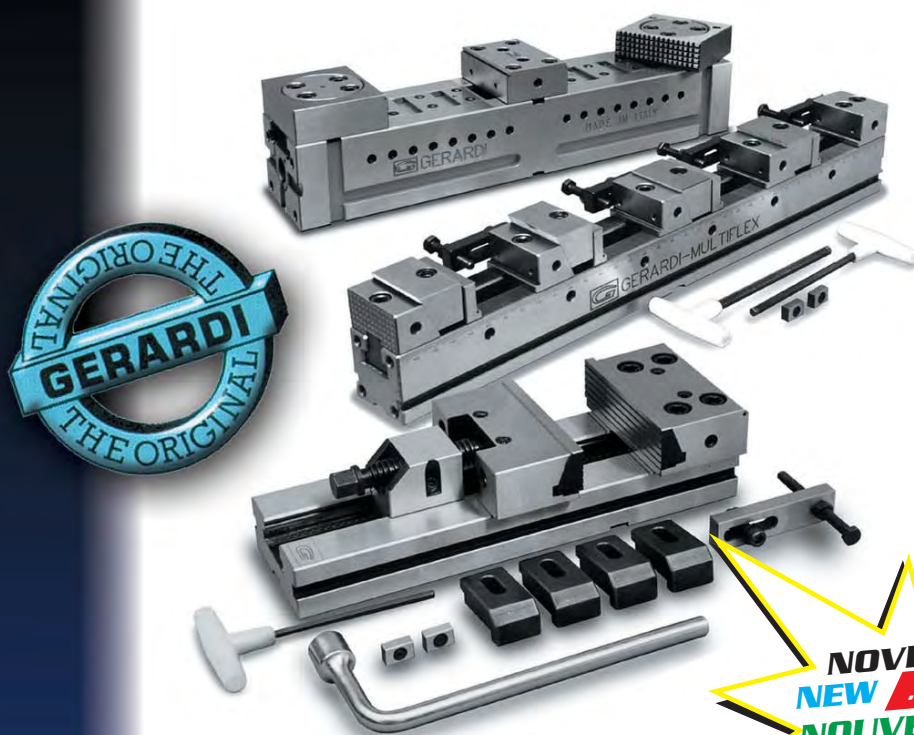


gerardi.it



NOVITA'
NEW ...PAG 3
NOUVEAUTE
NEUHEIT

MORSE MODULARI DI PRECISIONE

PRECISION MODULAR VISES ETAUX MODULAIRES DE PRECISION
PRÄZISIONSMASCHINENSCHRAUBSTÖCKE



COMPANY
WITH QUALITY SYSTEM
CERTIFIED BY DNV
= ISO 9001/2000 =



Il sistema di morse modulari con la più vasta gamma di combinazioni

The workholding system with the largest range of applications available in the world
Le système de bridage avec la plus vaste étendue d' applications à travers le monde
Das Werkstückspannsystem mit weltweit den meisten Anwendungsmöglichkeiten

MORSE MODULARI DI PRECISIONE SERIE "STANDARD"

PRECISION MODULAR VISES "STANDARD" SERIES

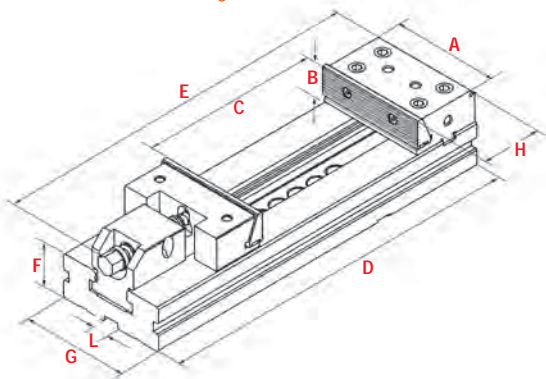
ETAUX MODULAIRES DE PRECISION SERIE "STANDARD"

HOCHPRÄZISE MODULARSCHRAUBSTÖCKE SERIE "STANDARD"



Art. 1

Morsa con ganascia mobile guidata
 Vise with guided movable jaw
 Etou avec morsa mobile guidé
 Schraubstock mit beweglichem Backen



DOTAZIONE STANDARD

Ciascuna morsa completa viene fornita con la seguente dotazione:
 1 arresto laterale Art. 370
 1 coppia di tasselli di posizionamento Art. 297 (standard per cava da 16 mm)
 1 chiave a pipa Art. 375 - 1 chiave a "T" Art. 376
 OPTIONAL: FORI CALIBRATI SU RICHIESTA



STANDARD EQUIPMENT

Each complete vise is supplied with the following standard accessories:
 1 workstop Art. 370
 1 pair of positioning key-nuts Art. 297 (standard for 16 mm slot)
 1 box-wrench Art. 375 - 1 wrench a "T" Art. 376
 OPTION: GROUND HOLES ON REQUEST



EQUIPEMENT STANDARD

Chaque etau est fournie avec les articles suivants:
 1 butée latérale Art. 370
 1 jeu de tasseaux de positionnement Art. 297 (pour rainures de 16 en standard)
 1 clé coudée Art. 375 - 1 clé en T Art. 376
 OPTIONS: TROUS CALIBRES SUR DEMANDE



STANDARD AUSSTATTUNG

Jeder Schraubstock wird mit der folgenden Standardausstattung geliefert:
 1 Werkstückanschlag Art. 370
 1 Paar Nutensteine Art. 297 (für T-Nutenbreite 16 mm)
 1 Spannschlüssel Art. 375
 1 Inbusschlüssel Art. 376
 OPTIONAL: KALIBRIERTE BOHRUNGEN AUF ANFRAGE

Altissima precisione
 Possibilità di allineamento di più morse
 Ganasce discendenti
 Durata illimitata
 Costruzione solida e compatta
 Usura praticamente inesistente
 Capacità di bloccaggi illimitati
 Acciaio temprato e rettificato HRC60

High precision and gang operation
 Pull down easy to change jaws
 Unlimited longevity
 Space saving design
 No "wear" construction
 Unlimited clamping range
 All steel construction
 hardened and ground HRC60

Haute précision
 Possibilité d'alignement des mors
 Mors auto plaqueurs à changement simple
 Grande longévité
 Conception compacte
 Usure quasi inexistante
 Possibilité de serrages illimité
 En acier trempé 60 HRC

Hohe Präzision
 Einfache Handhabung
 Einfachwechselbare Spannbacken
 Langlebig
 Geringe Aufbauhöhe
 Vielseitige Spannmöglichkeiten
 Hohe Verschleißfestigkeit
 Aus gehärtetem und geschliffenem Stahl HRC60

| mm | TIPO MORSA | | | | VISE SIZE | | | | TYPE D'ETAU | | | | SCHRAUBSTOCKTYP | | | | | | | |
|----|------------|------|------|------|-----------|-----|-----|-----|-------------|-----|-----|-----|-----------------|-----|-----|-----|-----|------|------|------|
| | 1 | 2 | 3 | 4 | | | | | | | | | | | | | | | | |
| A | 100 | 125 | 150 | 175 | | | | | 200 | | | | 300 | | | | | | | |
| B | 30 | 40 | 50 | 60 | | | | | 65 | | | | 80 | | | | | | | |
| C | 100 | 150 | 200 | 300 | 200 | 300 | 400 | 500 | 200 | 300 | 400 | 500 | 600 | 200 | 300 | 400 | 500 | 600 | 700 | 800 |
| D | 270 | 345 | 420 | 520 | 455 | 555 | 655 | 755 | 495 | 595 | 695 | 795 | 895 | 535 | 635 | 735 | 835 | 935 | 1035 | 1135 |
| E | 320 | 410 | 500 | 600 | 530 | 630 | 730 | 830 | 580 | 680 | 780 | 880 | 980 | 630 | 730 | 830 | 930 | 1030 | 1130 | 1230 |
| F | 35 | 40 | 50 | 58 | | | | | 70 | | | | 78 | | | | | | | |
| G | 75 | 95 | 125 | 145 | | | | | 170 | | | | 195 | | | | | | | |
| H | 77.9 | 77.9 | 89.4 | 96.9 | | | | | 113.4 | | | | 120.4 | | | | | | | |
| L | 16 | 16 | 16 | 16 | | | | | 16 | | | | 16 | | | | | | | |
| kg | 6.8 | 12.9 | 25.5 | 29 | 37 | 42 | 47 | 52 | 64 | 69 | 74 | 79 | 84 | 95 | 105 | 115 | 125 | 135 | 145 | 155 |

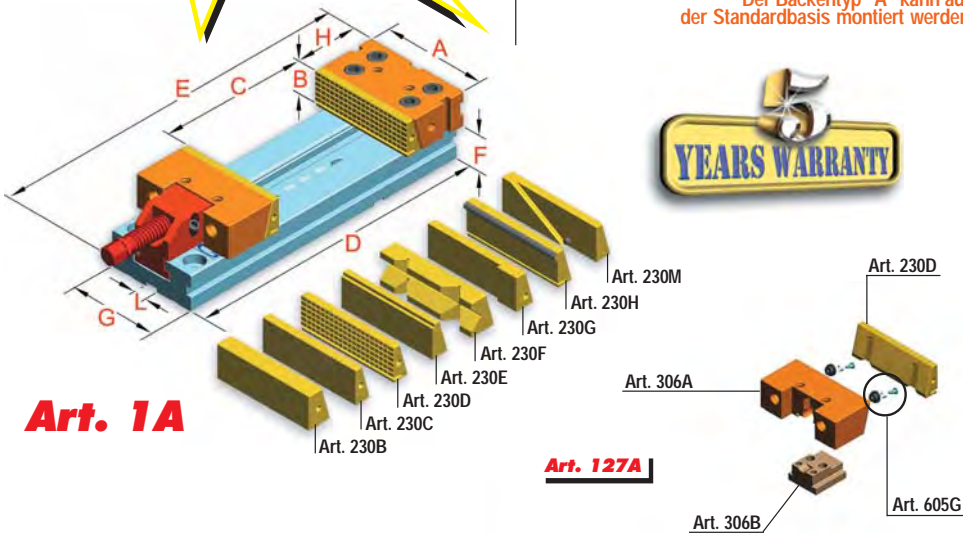
| inch | TIPO MORSA | | | | VISE SIZE | | | | TYPE D'ETAU | | | | SCHRAUBSTOCKTYP | | | | | | | |
|------|------------|------|------|------|-----------|------|-------|-------|-------------|-------|-------|------|-----------------|-------|-------|-------|-------|-------|-------|-------|
| | 4" | 5" | 6" | 7" | | | | | | | | | | | | | | | | |
| A | 3.9 | 4.9 | 5.9 | 6.8 | | | | | 7.8 | | | | 11.8 | | | | | | | |
| B | 1.1 | 1.5 | 1.9 | 2.3 | | | | | 2.5 | | | | 3.1 | | | | | | | |
| C | 3.9 | 5.9 | 7.8 | 11.1 | 7.8 | 11.8 | 15.7 | 19.6 | 7.87 | 11.8 | 15.7 | 19.6 | 23.6 | 7.87 | 11.8 | 15.7 | 19.6 | 19.6 | 27.5 | 31.4 |
| D | 10.6 | 13.5 | 16.5 | 20.7 | 17.9 | 21.8 | 25.7 | 29.7 | 19.4 | 23.4 | 27.3 | 31.2 | 35.2 | 21 | 25 | 28.9 | 32.8 | 36.8 | 40.7 | 44.6 |
| E | 12.5 | 16.1 | 19.6 | 23.6 | 20.8 | 24.8 | 28.7 | 32.6 | 22.8 | 26.7 | 30.7 | 34.6 | 38.5 | 20.8 | 24.8 | 28.7 | 36.6 | 40.5 | 44.4 | 48.4 |
| F | 1.3 | 1.5 | 1.9 | 2.2 | | | | | 2.7 | | | | 3 | | | | | | | |
| G | 2.9 | 3.7 | 4.9 | 5.7 | | | | | 6.6 | | | | 7.6 | | | | | | | |
| H | 3 | 3 | 3.5 | 3.8 | | | | | 4.4 | | | | 4.7 | | | | | | | |
| L | 0.6 | 0.6 | 0.6 | 0.6 | | | | | 0.6 | | | | 0.6 | | | | | | | |
| lb | 14.9 | 28.4 | 56.1 | 63.8 | 81.4 | 92.5 | 103.5 | 114.5 | 140.9 | 151.9 | 162.9 | 174 | 185 | 209.2 | 231.2 | 253.3 | 275.3 | 297.3 | 319.3 | 341.4 |

MORSE MODULARI **SERIE "1A"** - **SISTEMA A PETTINE** PRECISION MODULAR VISES **SERIES "1A"** - **COMB SYSTEM** ETAUX MODULAIRES **SERIE "1A"** - **SYSTEME A STRIES** MODULARSCHRAUBSTÖCKE **SERIE "1A"** - **KAMMSYSTEM**

con piastre ganasce rapide intercambiabili manualmente
 with quick interchangeable pull down jaws
 avec mors à changements rapides
 mit verzahnten schnellwechselbaren Niederzugbacken



NOVITA' NEW
NOUVEAUTE
NEUHEIT



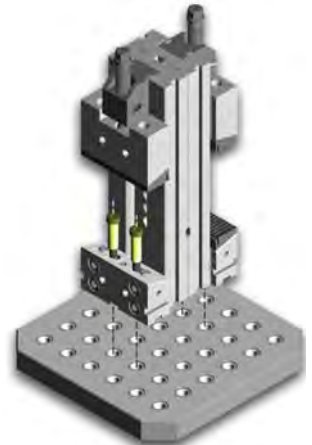
Possibilità di accoppiamento anche verticale
 Riconfigurazione rapidissima
 Migliore protezione dai trucioli
 Effetto discendente amplificato e migliorato
 Altissima ripetibilità di posizionamento
 Ganasce tipo "A" applicabili anche su morse standard

Vertical gang operations too
 Great savings in vise resetting times
 Better protection from chips
 Increased and better pull down action
 Highest repositioning accuracy
 Jaws type "A" fit standard vise bases too

Possibilité d'accouplement même verticale
 Reconfiguration très rapide
 Protection améliorée contre les copeaux
 Effet plaqueur amélioré et accru
 Importante répétabilité de positionnement
 Plaques mors type "A" adaptables également sur les étaux standard

Selbst vertikale Einsatzmöglichkeit
 Schnelles Umrüsten mit effektiver Zeitersparnis
 Besserer Schutz vor Spänen
 Kraftvoller und präziser Niederzug der Werkstücke
 Hohe Wiederholgenauigkeit
 Der Backentyp "A" kann auf der Standardbasis montiert werden

N° 2 fori rettificati e calibrati
 N° 2 ground calibrated holes
 N° 2 trous rectifiés et calibrés
 2 rektifiziert und kalibriert Löcher

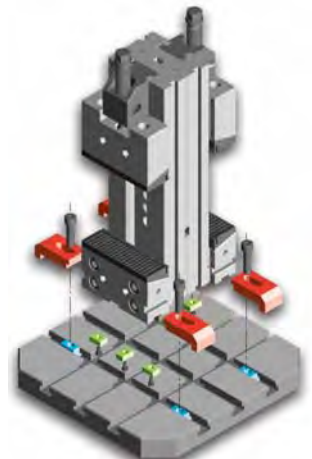


PREDISPOSIZIONE PER POSIZIONAMENTO VERTICALE RAPIDO
 SIA SU PALLET A RETICOLO CHE A CAVE

QUICK AND EASY VERTICAL SET UP
 ON GRID AND SLOTTED PALLETS

EQUIPES POUR UN POSITIONNEMENT VERTICAL RAPIDE SUR DES PALETTES A TROUS OU A RAINURES

SCHNELLE UND EINFACHE MONTAGE AUF DEN VERSCHIEDENSTEN WERKSTÜCKPALETTEN



| mm | TIPO MORSA | | | | VISE SIZE | | | | TYPE D'ETAU | | | | SCHRAUBSTOCKTYP | | | | | | | |
|-----------|------------|------|------|------|-----------|-----|-----|-----|-------------|-----|-----|-----|-----------------|-----|-----|-----|-----|------|------|------|
| | 1 | 2 | 3 | 4 | | | | | | | | | | | | | | | | |
| A | 96 | 121 | 146 | 171 | | | | | 196 | | | | 296 | | | | | | | |
| B | 28 | 38 | 48 | 58 | | | | | 63 | | | | 78 | | | | | | | |
| C | 80 | 150 | 200 | 300 | 200 | 300 | 400 | 500 | 200 | 300 | 400 | 500 | 600 | 200 | 300 | 400 | 500 | 600 | 700 | 800 |
| D | 270 | 345 | 420 | 520 | 455 | 555 | 655 | 755 | 495 | 595 | 695 | 795 | 895 | 535 | 635 | 735 | 835 | 935 | 1035 | 1135 |
| E | 320 | 410 | 500 | 600 | 530 | 630 | 730 | 830 | 580 | 680 | 780 | 880 | 980 | 630 | 730 | 830 | 930 | 1030 | 1130 | 1230 |
| F | 35 | 40 | 50 | 58 | | | | | 70 | | | | 78 | | | | | | | |
| G | 75 | 95 | 125 | 145 | | | | | 170 | | | | 195 | | | | | | | |
| H | 77.9 | 77.9 | 89.4 | 96.9 | | | | | 113.4 | | | | 120.4 | | | | | | | |
| L | 16 | 16 | 16 | 16 | | | | | 16 | | | | 16 | | | | | | | |
| kg | 6.8 | 12.9 | 25.5 | 29 | 37 | 42 | 47 | 52 | 64 | 69 | 74 | 79 | 84 | 95 | 105 | 115 | 125 | 135 | 145 | 155 |

MORSE MODULARI SERIE "XL"

MODULAR VISES "XL" SERIES

ETAUX MODULAIRES SERIE "XL"

MODULARSCHRAUBSTÖCKE SERIE "XL"



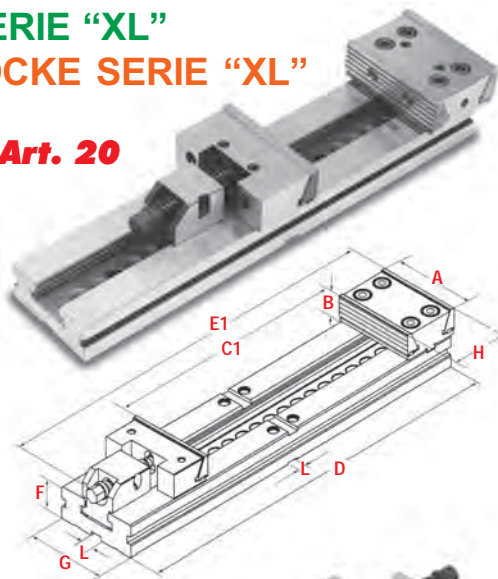
Altissima precisione
Possibilità di allineamento di più morse
Ganasce discendenti
Durata illimitata
Costruzione solida e compatta
Usura praticamente inesistente
Capacità di bloccaggi illimitati
Acciaio temprato e rettificato HRC60

High precision and gang operation
Pull down easy to change jaws
Unlimited longevity
Space saving design
No "wear" construction
Unlimited clamping range
All steel construction
hardened and ground HRC60

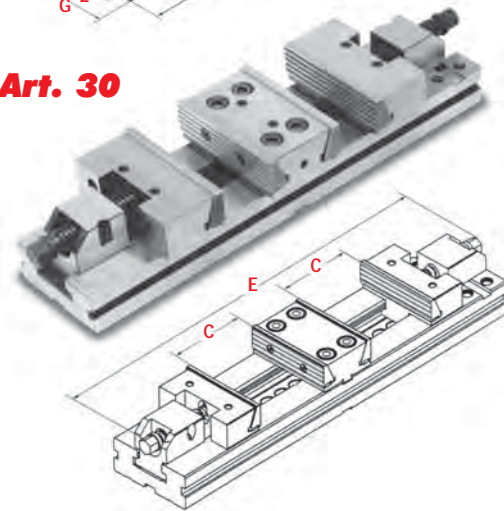
Haute précision
Possibilité d'alignement des mors
Mors auto plaqueurs à changement simple
Grande longévité
Conception compacte
Usure quasi inexistant
Possibilité de serrages illimités
En acier trempé 60 HRc

Hohe Präzision
Einfache Handhabung
Einfachwechselbare Spannbacken
Langlebig
Geringe Aufbauhöhe
Vielseitige Spannmöglichkeiten
Hohe Verschleißfestigkeit
Aus gehärtetem und geschliffenem Stahl HRC60

Art. 20



Art. 30



DOTAZIONE STANDARD

Ciascuna morsa completa viene fornita con la seguente dotazione:
2 arresti laterali Art. 370 (solo per Art. 30)
1 coppia di tasselli di posizionamento Art. 297 (standard per cava da 16 mm)
1 chiave a pipa Art. 375 - 1 chiave a "T" Art. 376
OPTIONAL: FORI CALIBRATI SU RICHIESTA, GANASCE A PETTINE



STANDARD EQUIPMENT

Each complete vise is supplied with the following standard accessories:
2 workstops Art. 370 (only for Art. 30)
1 pair of positioning key-nuts Art. 297 (standard for 16 mm slot)
1 box-wrench Art. 375 - 1 wrench a "T" Art. 376
OPTION: GROUND HOLES ON REQUEST, JAWS WITH COMB SYSTEM



EQUIPMENT STANDARD

Chaque étou est fourni complet avec les articles suivants:
2 bûtes latérales Art. 370 (seulement pour Art. 30)
1 jeu de tasseaux de positionnement Art. 297 (pour rainure de 16 en standard)
1 clé coudée Art. 375 - 1 clé en T Art. 376
OPTIONS: TROUS CALIBRES SUR DEMANDE, MORS AVEC SYSTEME A STRIES



STANDARD AUSSTATTUNG

Jeder Schraubstock wird mit der folgenden Standardausstattung geliefert:
2 Werkstückanschlag Art. 370 (nur für Art. 30)
1 Paar Nutensteine Art. 297 (für T-Nutenbreite 16 mm)
1 Spannschlüssel Art. 375
1 Inbusschlüssel Art. 376
OPTIONAL: KALIBRIERTE BOHRUNGEN AUF ANFRAGE, KAMMSYSTEM

| mm | TIPO MORSA | | | | | | | | VISE SIZE | | | | TYPE D'ETAU | | | | SCHRAUBSTOCKTYP | | | |
|--------------------|------------|-------|--------|------|--------|-------|-------|-------|-----------|-------|-------|-------|-------------|-------|-------|-------|-----------------|-------|-------|-------|
| Art. 20 Art. 30 | 1 | 2 | 3 | | 4 | | | | 5 | | | | 6 | | | | | | | |
| A | 100 | 125 | 150 | | 175 | | | | 200 | | | | 300 | | | | | | | |
| B | 30 | 40 | 50 | | 60 | | | | 65 | | | | 80 | | | | | | | |
| C | 90 | 100 | 110 | 160 | 120 | 170 | 220 | 270 | 150 | 200 | 250 | 300 | 350 | 160 | 210 | 260 | 310 | 360 | 410 | 460 |
| C1 | 290 | 320 | 360 | 460 | 400 | 500 | 600 | 700 | 500 | 600 | 700 | 800 | 900 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 |
| D | 460 | 520 | 580 | 680 | 666 | 766 | 866 | 966 | 805 | 905 | 1005 | 1105 | 1205 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| E | 546 | 640 | 730 | 830 | 786 | 886 | 986 | 1086 | 965 | 1065 | 1165 | 1265 | 1365 | 1060 | 1160 | 1260 | 1360 | 1460 | 1560 | 1660 |
| E1 | 510 | 585 | 660 | 760 | 740 | 840 | 940 | 1040 | 890 | 990 | 1090 | 1190 | 1290 | 995 | 1095 | 1195 | 1295 | 1395 | 1495 | 1595 |
| F | 35 | 40 | 50 | | 58 | | | | 70 | | | | 78 | | | | | | | |
| G | 75 | 95 | 125 | | 145 | | | | 170 | | | | 195 | | | | | | | |
| H | 84.78 | 84.78 | 101.78 | | 110.78 | | | | 132.78 | | | | 146.78 | | | | | | | |
| L | 16 | 16 | 16 | | 16 | | | | 16 | | | | 16 | | | | | | | |
| kg /20 | 10 | 17 | 31 | 34 | 46 | 51 | 56 | 61 | 85 | 92 | 99 | 106 | 113 | 127 | 137 | 147 | 157 | 167 | 177 | 187 |
| kg /30 | 14 | 20.5 | 38 | 42 | 58 | 63 | 68 | 73 | 95 | 101 | 107 | 113 | 119 | 154 | 162 | 170 | 178 | 186 | 194 | 212 |
| inch | TIPO MORSA | | | | | | | | VISE SIZE | | | | TYPE D'ETAU | | | | SCHRAUBSTOCKTYP | | | |
| Art. 20 Art. 30 | 4" | 5" | 6" | | 7" | | | | 8" | | | | 12" | | | | | | | |
| A | 3.9 | 4.9 | 5.9 | | 6.8 | | | | 7.8 | | | | 11.8 | | | | | | | |
| B | 1.1 | 1.5 | 1.9 | | 2.3 | | | | 2.5 | | | | 3.1 | | | | | | | |
| C | 3.5 | 3.9 | 4.3 | 6.2 | 4.7 | 6.6 | 8.6 | 10.6 | 5.9 | 7.8 | 9.8 | 11.8 | 13.7 | 6.2 | 8.2 | 10.2 | 12.2 | 14.1 | 16.1 | 18.1 |
| C1 | 11.4 | 12.5 | 14.1 | 18.1 | 15.7 | 19.6 | 23.6 | 27.5 | 19.6 | 23.6 | 27.5 | 31.4 | 35.4 | 19.6 | 23.6 | 27.5 | 31.4 | 35.4 | 39.3 | 43.3 |
| D | 18.1 | 20.4 | 22.8 | 26.7 | 26.2 | 30.1 | 34 | 38 | 31.6 | 35.6 | 39.5 | 43.5 | 47.4 | 35.4 | 39.3 | 43.3 | 47.2 | 51.1 | 55.1 | 59 |
| E | 21.4 | 25.1 | 28.7 | 32.6 | 30.9 | 34.8 | 38.8 | 42.7 | 37.9 | 41.9 | 45.8 | 49.8 | 53.7 | 41.7 | 45.6 | 49.6 | 53.5 | 57.4 | 61.4 | 65.3 |
| E1 | 20 | 23 | 25.9 | 29.9 | 29.13 | 33 | 37 | 40.9 | 35 | 38.9 | 42.9 | 46.8 | 50.7 | 39.1 | 43.1 | 47 | 50.9 | 54.9 | 58.8 | 62.7 |
| F | 1.3 | 1.5 | 1.9 | | 2.2 | | | | 2.7 | | | | 3 | | | | | | | |
| G | 2.9 | 3.7 | 4.9 | | 5.7 | | | | 6.6 | | | | 7.6 | | | | | | | |
| H | 3.3 | 3.3 | 4 | | 4.3 | | | | 5.2 | | | | 5.7 | | | | | | | |
| L | 0.6 | 0.6 | 0.6 | | 0.6 | | | | 0.6 | | | | 0.6 | | | | | | | |
| lb /20 | 22 | 37.4 | 68.2 | 74.8 | 101.3 | 112.3 | 123.3 | 134.3 | 187.2 | 202.6 | 218 | 233.4 | 248.8 | 279.7 | 301.7 | 323.7 | 345.8 | 367.8 | 389.8 | 411.8 |
| lb /30 | 30.8 | 45.1 | 83.7 | 92.5 | 127.7 | 138.7 | 149.7 | 260.7 | 209.2 | 222.4 | 235.6 | 248.8 | 262.1 | 339.2 | 356.8 | 374.4 | 392 | 409.6 | 427.3 | 466.9 |

ELEMENTI MODULARI

MODULAR ELEMENTS

ELEMENTS MODULAIRES

MODULAR ELEMENTE

Senza alcuna dotazione
Without accessory equipment
Sans aucun équipement
Ohne Zubehör

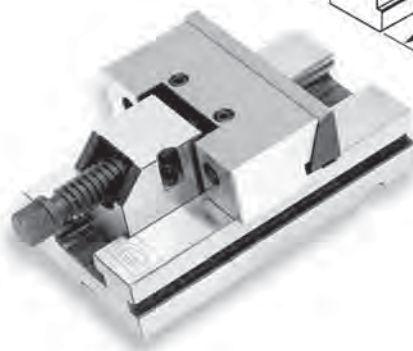
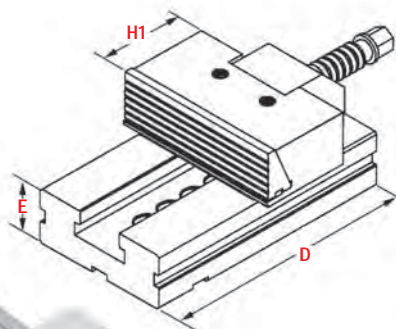
OPTIONAL:
FORI CALIBRATI Ø 12 o Ø 16,
GANASCE A PETTINE

OPTION:
GROUND HOLES Ø 12 or Ø 16,
JAWS WITH COMB SYSTEM

OPTIONS:
TROUS CALIBRES Ø 12 ou Ø 16,
MORS AVEC SYSTEME A STRIES

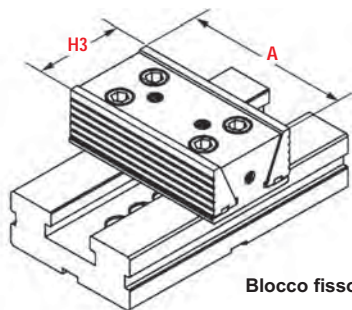
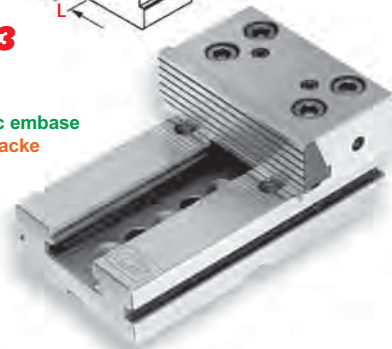
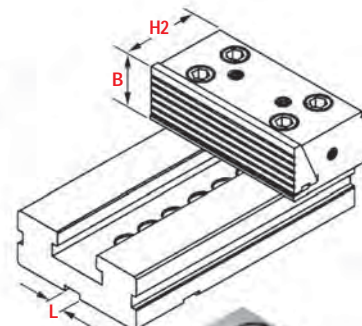
OPTIONAL:
KALIBRIERTE BOHRUNGEN Ø 12 oder Ø 16,
KAMMSYSTEM

Art. 102
Blocco tenditore
Movable section
Mors mobile avec embase
Bewegliche Spannbacke

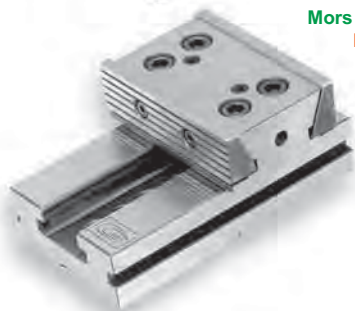


Art. 103

Blocco fisso
Fixed section
Mors fixe avec embase
Feste Spannbacke



Art. 104
Blocco fisso con ganascia doppia
Double fixed section
Mors fixe double avec embase
Feste Doppelspannbacke

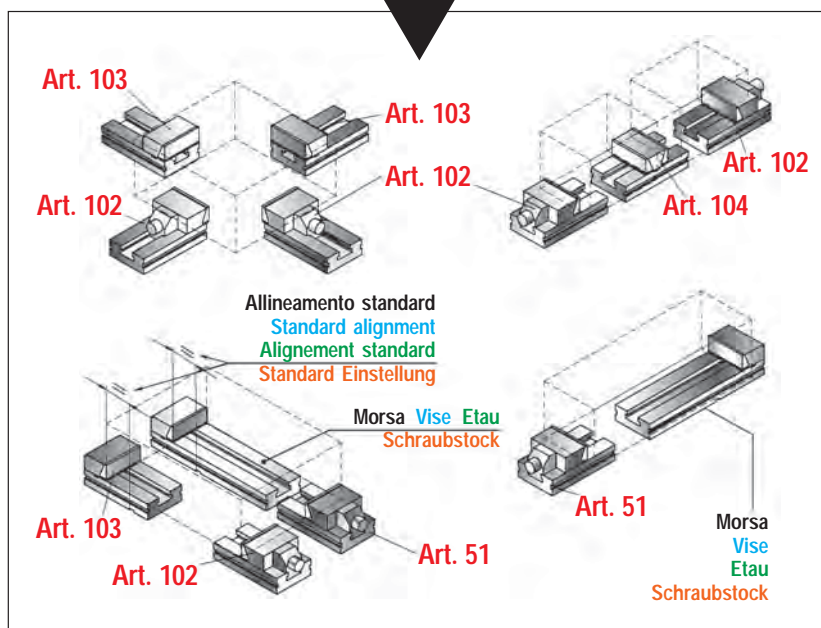


Esempi di impiego con elementi modulari
Typical arrangements
Exemple d'utilisation des éléments modulaires
Einsatzmöglichkeiten der Modular Elemente

Art. 102 - 103 - 104

| mm | TIPO MORSA | WISE SIZE | TYPE D'ETAU | SCHRAUBSTOCKTYP | | |
|----|------------|-----------|-------------|-----------------|--------|--------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| A | 100 | 125 | 150 | 175 | 200 | 300 |
| B | 30 | 40 | 50 | 60 | 65 | 80 |
| D | 140 | 160 | 230 | 240 | 330 | 350 |
| F | 35 | 40 | 50 | 58 | 70 | 78 |
| H1 | 50 | 60 | 80 | 90 | 100 | 120 |
| H2 | 77.9 | 77.9 | 89.4 | 96.9 | 113.4 | 120.4 |
| H3 | 84.78 | 84.78 | 101.78 | 110.78 | 132.78 | 146.78 |
| L | 16 | 16 | 16 | 16 | 16 | 16 |

| Inch | TIPO MORSA | WISE SIZE | TYPE D'ETAU | SCHRAUBSTOCKTYP | | |
|------|------------|-----------|-------------|-----------------|------|-------|
| | 4" | 5" | 6" | 7" | 8" | 12" |
| A | 3.93 | 4.92 | 5.90 | 6.88 | 7.87 | 11.81 |
| B | 1.18 | 1.57 | 1.96 | 2.36 | 2.55 | 3.14 |
| D | 5.51 | 6.29 | 9 | 9.4 | 12.9 | 13.7 |
| F | 1.3 | 1.5 | 1.9 | 2.2 | 2.7 | 3 |
| H1 | 1.9 | 2.3 | 7.4 | 3.5 | 3.9 | 4.7 |
| H2 | 3 | 3 | 3.5 | 3.8 | 4.4 | 4.7 |
| H3 | 3.3 | 3.3 | 3.9 | 4.3 | 5.2 | 5.7 |
| L | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |



ACCESSORI ACCESSORIES ACCESSOIRES ZUBEHÖR



- A** Base girevole - ART. 105
- B** Gruppo di bloccaggio idraulico - ART. 271
- C** Gruppo di bloccaggio a vite draulica - ART. 257
- D** Ganascia mobile intermedia con doppio gradino - ART. 212
- E** Ganascia mobile oscillante per pezzi tondi - ART. 210
- F** Ganascia fissa prismatica sovrapponibile - ART. 150
- G** Ganascia mobile o fissa sovrapponibile per pezzi tondi - ART. 131
- H** Ganascia fissa o mobile sovrapponibile a squadra - ART. 138
- I** Ganascia mobile guidata con due elementi oscillanti - ART. 190
- J** Ganascia mobile oscillante con puntali idraulici - ART. 188
- K** Ganascia mobile guidata prismatica - ART. 217
- L** Ganascia mobile guidata piana - ART. 146
- M/N** Prolunga con viti per ganascia fissa o mobile - ART. 132/133



- A** Swivel base - ART. 105
- B** Blocking support with hydraulic cylinder - ART. 271
- C** Hydraulic hand screw blocking device - ART. 257
- D** Intermediate movable jaw with double step - ART. 212
- E** Floating movable jaw for round parts - ART. 210
- F** Fixed stack type prismatic jaw - ART. 150
- G** Fixed and movable stack-type jaws for round parts - ART. 131
- H** Square stack-type jaws - ART. 138
- I** Movable jaw with 2 floating segments - ART. 190
- J** Floating movable jaw - hydraulic control - ART. 188
- K** Step-prismatic guided movable jaw - ART. 217
- L** Guided movable jaw - straight plate - ART. 146
- M/N** Extension for fixed and movable jaw with screws - ART. 132/133



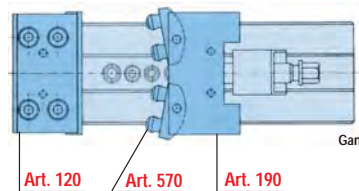
- A** Base tournante - ART. 105
- B** Bloc de serrage avec vérin hydraulique - ART. 271
- C** Bloc de serrage avec vis hydraulique - ART. 257
- D** Mors mobile intermédiaire avec double gradin - ART. 212
- E** Mors mobile oscillant pour pièces cylindriques - ART. 210
- F** Mors fixe prismatique superposable - ART. 150
- G** Mors mobile ou fixe superposable pour pièces cylindriques - ART. 131
- H** Mors mobile ou fixe superposable en équerre - ART. 138
- I** Mors mobile guidé avec deux éléments oscillants - ART. 190
- J** Mors mobile oscillant avec doigts hydrauliques - ART. 188
- K** Mors mobile prismatique guidé - ART. 217
- L** Mors mobile plan guidé - ART. 146
- M/N** Rallonge pour mors fixe ou mobile avec la visserie - ART. 132/133



- A** Drehplatte - ART. 105
- B** Hydraulischer Zylinder - ART. 271
- C** Mechanische Hydraulikspindel - ART. 257
- D** Bewegliche Backen mit Doppelstufe - ART. 212
- E** Bewegliche Backen für runde Teile - ART. 210
- F** Feste prismatische Aufsatzbacken - ART. 150
- G** Feste und bewegliche Aufsatzbacken für runde Teile - ART. 131
- H** Feste und bewegliche Winkel Aufsatzbacken - ART. 138
- I** Oszillierende bewegliche Backen - ART. 190
- J** Backe mit hydraulischen Stiften - ART. 188
- K** Bewegliche Prismabacke - ART. 217
- L** Bewegliche Backen mit parallel Platte - ART. 146
- M/N** Feste und bewegliche Verlängerung - ART. 132/133



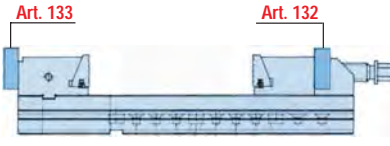
MORSA Art.1
VISE Art.1
ETAU Art.1
SCHRAUBSTOCK Art.1



Art. 570
Puntali sferici extra
Spherical points (extra)
Embout sphérique strié (en Option)
Kugelauflegeelement

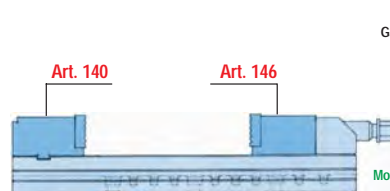
Art. 190
Ganascia mobile guidata con 2 elementi oscillanti
Movable jaw - with 2 floating segments
Mors mobile guidé avec 2 éléments oscillants
Oszillierende bewegliche Backen

Art. 120 Art. 570 Art. 190



Art. 132/133
Prolunga con viti per ganascia mobile e fissa
Extension for movable and fixed jaw with screws
Rallonge pour mors fixe ou mobile avec la visserie
Feste und bewegliche Verlängerung

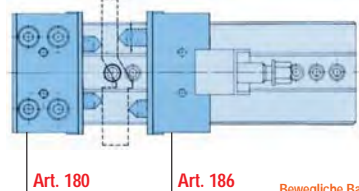
Art. 133 Art. 132



Art. 140
Ganascia fissa con piastra piana standard
Straight plate fixed jaw - normal width
Mors fixe avec plaque mors droite
Feste Backen mit parallel Platte

Art. 146
Ganascia mobile guidata (piana) larghezza normale
Straight plate guided jaw - normal width
Mors mobile guidé avec plaque mors droite
Bewegliche Backen mit parallel Platte

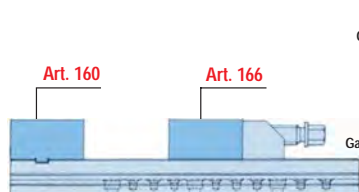
Art. 140 Art. 146



Art. 180
Ganascia fissa con puntali meccanici
Fixed jaws - with adjustable set screws
Mors fixe avec vis réglables
Feste Backen mit verstellbaren mechanischen Spitzen

Art. 186
Ganascia mobile con puntali meccanici
Movable jaw - with adjustable set screws
Mors mobile avec vis de réglages
Bewegliche Backen mit verstellbaren mechanischen Spitzen

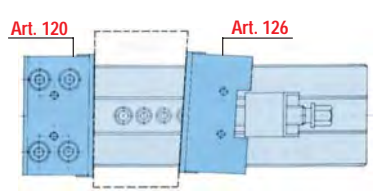
Art. 180 Art. 186



Art. 160
Ganascia fissa monoblocco dolce o temperato
Fixed solid jaws - case hard or soft
Mors fixe monobloc doux ou trempé
Feste Backen weich

Art. 166
Ganascia mobile monoblocco dolce o temperato
Movable solid jaws - case hard or soft
Mors mobile monobloc doux ou trempé
Bewegliche Backen weich

Art. 160 Art. 166



Art. 120
Ganascia fissa standard
Standard fixed jaws
Mors fixe standard
Feste Backen

Art. 126
Ganascia mobile oscillante
Floating movable jaws
Mors mobile oscillant
Oszillierende bewegliche Backen

Art. 120 Art. 126

Art. 200
Ganascia fissa monoblocco con gradino
Step solid fixed jaws
Mors fixe monobloc avec gradin
Feste Backen mit Stufe

Art. 208
Ganascia mobile monoblocco con gradino
Step solid movable jaws
Mors mobile monobloc avec gradin
Bewegliche Backen mit Stufe

| TIPO | TYPE | 3 | 4 |
|-------|------|----|----|
| Ø MAX | | 65 | 50 |

Art. 160
Ganascia fissa monoblocco dolce o temperato
Fixed solid jaws - case hardened or soft
Mors fixe monobloc doux ou trempé
Feste Backen weich

Art. 210
Ganascia mobile oscillante per pezzi tondi
Floating movable jaw for round parts
Mors mobile oscillant pour pièces cylindriques
Bewegliche Backen für runde Teile

Art. 151 F **Art. 151 M**

Art. 151 F/M
Ganascie speciali a doppio gradino
Special double step jaws
Mors spéciaux à double gradin
Feste und bewegliche Stufenbacken

| TIPO | TYPE | 1 | 2 | 3 | 4 | 5 | 6 |
|-------|------|----|----|----|----|----|----|
| Ø MAX | | 16 | 24 | 38 | 40 | 42 | 46 |

Art. 120
Ganascia fissa standard
Standard fixed jaw
Mors fixe standard
Feste Backen

Art. 217
Ganascia mobile guidata prismatica
Step prismatic movable guided jaw
Mors mobile prismatique guidé
Bewegliche Prismbacken

Art. 120 **Art. 212** **Art. 217**

Art. 212
Ganascia mobile intermedia con doppio gradino
Intermediate movable jaw with double step
Mors mobile intermédiaires avec double gradin
Bewegliche Backen mit doppelter Stufe

Art. 136 **Art. 136**

Art. 136
Ganascia sovrapponibile piana
Stack-type plain jaws
Mors superposables plan
Aufsatzbacken

Art. 138 **Art. 138**

Art. 138
Ganascia sovrapponibile a squadra
Stack-type angle plate jaw
Mors en équerre superposables
Winkel Aufsatzbacken

Art. 150 **Art. 138**

Art. 150
Ganascia fissa prismatica sovrapponibile
Fixed stack-type prismatic jaw
Mors fixe prismatique superposables
Feste prismatische Aufsatzbacken

Art. 131 **Art. 131**

Art. 131
Ganascia sovrapponibile per pezzi tondi
Stack-type for round parts jaws
Mors superposables pour pièces cylindriques
Aufsatzbacken für runde Teile

Art. 130 **Art. 130**

Art. 130
Ganascia sovrapponibile piana extra larga dolce o temperata
Stack-type extra large plain jaw, hardened or soft
Mors superposable plan extra-large doux ou trempé
Feste und bewegliche Aufsatzbacken, extra breit

Art. 105

Art. 105
Base girevole
Swivel base
Base tournante
Drehplatte

Art. 296

Art. 296
Dispositivo di bloccaggio
Clamping blocks
Brides completes de serrage
Spannpratzen

Art. 258

Art. 258
Gruppo di bloccaggio meccanico
Mechanical blocking device
Bloc de serrage complet
Mechanische Spindel

Art. 271

Art. 271
Gruppo di bloccaggio idraulico
Hydraulic blocking device
Bloc de serrage hydraulique
Hydraulische Spindel

Art. 257

Art. 257
Gruppo di bloccaggio a vite idraulica
Hydraulic hand screw blocking device
Bloc de serrage avec vis hydraulique
Mechanisch-hydraulische Spindel

Art. 393 **Art. 401** **Art. 402** **Art. 400**

Art. 393
Moltiplicatore di pressione oleopneumatico
Pneumo-hydraulic pressure multiplier
Multiplificateur de pression oleopneumatique
Spanngruppe mit Drucküberwachung

Art. 401
Controllo valvola solenoide
Solenoid control valve
Electro distributeur hydraulique
Ventil mit Drucktaster

Art. 402
Controllo valvola ad aria
Air control valve
Distributeur pneumatique
Pneumatikventil

Art. 400
Pedale bistabile
Foot valve
Pedale de commande
Fußschalter

Art. 390

Art. 390
Gruppo di bloccaggio oleopneumatico
Pneumo-hydraulic blocking device
Groupe oleo-pneumatique avec 1 bloc de serrage hydraulique
Pneumatisch-hydraulische Spannheit

Art. 1

Art. 267

Art. 267
Gruppo di bloccaggio per centralina oleodinamica
Hydraulic blocking device with motor-power unit
Groupe de serrage hydraulique avec commande et centrale électrique
Hydraulische Spannheit

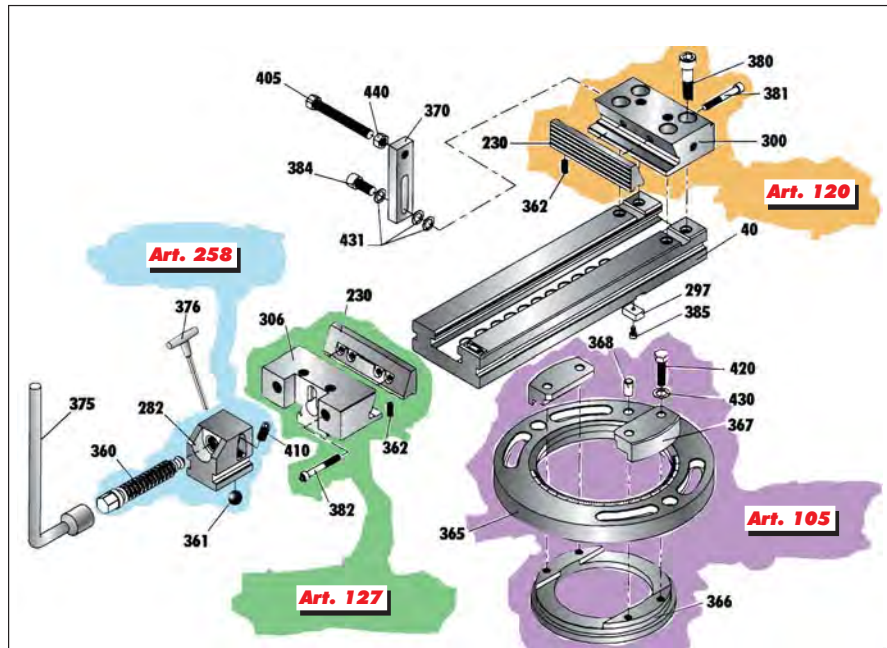
Art. 267

RICAMBI
SPARE PARTS
PIECES DE RECHANGE
ERSATZTEILE



Art. 2

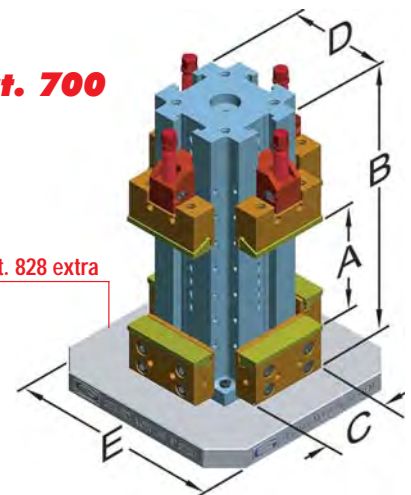
Morsa con base girevole
 Vise with swivel base
 Etou avec base tournante
 Schraubstock mit Drehplatte



CUBIMORSA SERIE "STANDARD"
"STANDARD" VISE TOWERS
CUBES-ETAUX SERIE "STANDARD"
CUBIMORSA SERIE STANDARD

| mm | TIPO MORSA | | VISE SIZE | | TYPE D'ETAU | | | SCHRAUBSTOCKTYP | | | |
|----|------------|-----|-----------|-----|-------------|-----|-----|-----------------|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| A | 80 | 130 | 155 | 205 | 180 | 280 | 380 | 145 | 245 | 345 | 445 |
| B | 250 | 300 | 350 | 400 | 400 | 500 | 600 | 400 | 500 | 600 | 700 |
| C | 120 | | 160 | | 190 | | | 230 | | | |
| D | 100 | | 125 | | 150 | | | 175 | | | |
| E | 300 | | 350 | | 400 | | | 450 | | | |

Art. 700

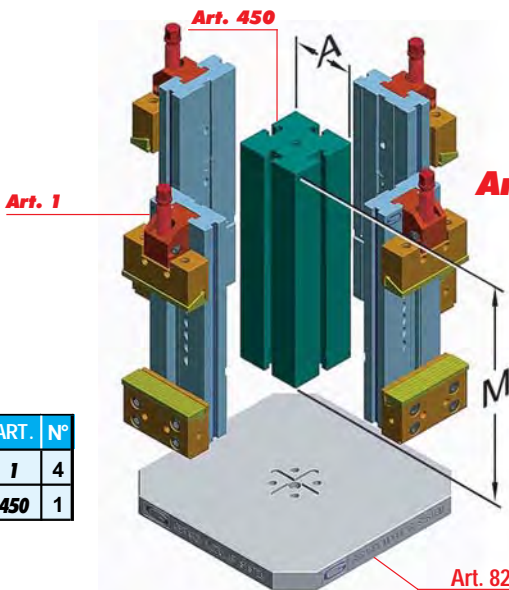


Cubomorsa monoblocco specifico per centri di lavoro ad asse orizzontale

Vise towers specific for horizontal machining centers

Cube-etau monobloc spécifique pour centres d'usage à axe horizontal

Schraubstockurm für horizontale Bearbeitungen



| ART. | N° |
|------|----|
| 1 | 4 |
| 450 | 1 |

Art. 750

Applicazioni verticali di morse STD per utilizzatori di centri di lavoro ad asse orizzontale

STD vise vertical application for horizontal machining centers uses

Utilisation verticale d' étaux STD pour des centres d' usage à axes horizontaux

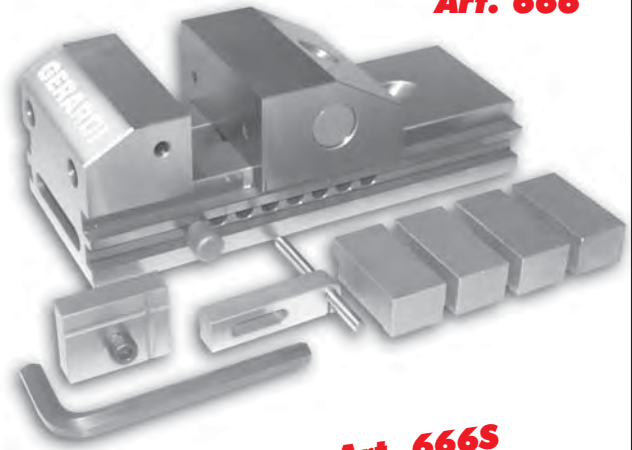
Verwendung von Standardschraubstöcken bei horizontalen Bearbeitungen

| mm | TIPO MORSA | | VISE SIZE | | TYPE D'ETAU | | SCHRAUBSTOCKTYP | |
|----|------------|-----|-----------|-----|-------------|-----|-----------------|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| A | 75 | 95 | 125 | 145 | 170 | 195 | 220 | 245 |
| M | 270 | 345 | 420 | 455 | 495 | 535 | 575 | 615 |

MORSE SERIE "OK"
"OK" SERIES VISES
ETAUX SERIE "OK"
SCHRAUBSTÖCKE SERIE "OK"



Art. 666



L'ALTISSIMA PRECISIONE E' "O.K."

UNA SERIE DI MORSE PER LE ESIGENZE PIU' IMPEGNATIVE
 E PER LAVORI CON LE TOLLERANZE PIU' RISTRETTE

ALCUNE DELLE PRINCIPALI CARATTERISTICHE DELLE MORSE "O.K." :

- ORTOGONALITA' E PARALLELISMO : 0.003 mm/100 mm
- SUPERFICI RETTIFICATE, TEMPERATE E LAPPATE
- IDEALI PER OPERAZIONI DI CONTROLLO, RETTIFICA E FRESATURA.

FORNITE CON 4 STAFFE DI FISSAGGIO , 1 ARRESTO LATERALE FISSO,
 1 ARRESTO LATERALE MOBILE.

Art. 666S

TOP HIGH PRECISION "O.K." VISE

A SERIES OF VISES FOR THE MOST TOP HIGH PRECISION WORKS

A FEW OF THE PRINCIPLE HIGH CHARACTERISTIC OF THE "O.K." VISES:

- PERPENDICULARITY AND PARALLELISM: 0,003 mm/100mm
- ALL CASE HARDENING AND HARDENED HRC 60.
- COMPACT DESIGN AND EASY TO CLEAN, IDEAL FOR HOLDING PARTS
- FOR CHECKING AND CONTROL, AND FOR MILLING OPERATIONS.

STANDARD EQUIPMENT 4 CLAMPING JAWS, 1 FIXED WORK STOP, 1 MOVABLE WORK STOP.

MORSA SERIE "OK" IN ACCIAIO INOX
 PER ELETTROEROSIONE
 STESSE CARATTERISTICHE E DIMENSIONI DELL'ART 666
 SERIES "OK" VISES IN STAINLESS STEEL
 FOR E.D.M. MACHINES
 SAME CHARACTERISTIC AND DIMENSION OF THE ART. 666
 ETAU SERIE "OK" EN ACIER INOX
 POUR ELECTROEROSION
 MEMES CARACTERISTIQUES ET DIMENSIONS DE L'ART. 666
 SCHRAUBSTOCK "OK" AUS ROSTFREIEM STAHL
 FÜR ERODIERARBEITEN
 GLEICHE EIGENSCHAFTEN UND ABMESSUNGEN WIE ART. 666

"O.K." SIGNIFIE TRES HAUTE PRECISION

UNE SERIE D' ETAUX REpondANT AUX PLUS GRANDES
 EXIGENCES ET AUX TOLERANCES LES PLUS REDUITES

LES CARACTERISTIQUES PRINCIPALES DES ETAUX "O.K." :

- PERPENDICULARITE ET PARALLELISME : 0.003 mm/100 mm
 - SURFACES TREMPÉES, RECTIFIÉES ET POLIES
 - IDEAL POUR DES OPERATIONS DE CONTROLE, RECTIFICATION ET FRAISAGE.
- FOURNI AVEC 4 BRIDES DE FIXATION, 1 BUTEE LATERALE FIXE ET UNE MOBILE.

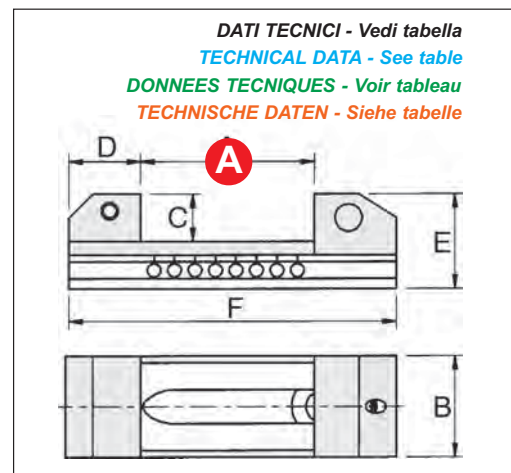
"O.K." DER HOCHPRÄZISE SCHRAUBSTOCK

EIN PRÄZISIONSSCHRAUBSTOCK FÜR DIE ANSPRUCHSVOLLE
 BEARBEITUNG, BEI DER NIEDRIGSTE TOLERANZEN GEFORDERT SIND

DIE EINGENSCHAFTEN DER SCHRAUBSTÖCKE SERIE "OK" :

- WINKLIGKEIT UND UND PARALLELITÄT : 0.003 mm/100 mm
- GEHÄRTETE, GESCHLIFFENE UND GELÄPPETE OBERFLÄCHE
- GEEIGNET FÜR SCHLEIF, UND FRÄSBEARBEITUNGEN.

LIEFERUMFANG: 1 FESTER UND 1 EINSTELLBARER WERKSTÜCKANSCHLAG.



Art. 666/Art. 666S A= APERTURA MASSIMA A = MAXIMUM SPREAD A= OUVERTURE MAX A= SPANNWEITE

| mm | TIPO MORSA | | VISE SIZE | | TYPE D'ETAU | | SCHRAUBSTOCKTYP | |
|-----------|------------|------------|------------|------------|-------------|------------|-----------------|------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| A | 80 | 100 | 120 | 160 | 180 | 200 | 260 | 200 |
| B | 60 | 75 | 100 | 125 | 125 | 125 | 125 | 160 |
| C | 28 | 40 | 45 | 50 | 50 | 50 | 50 | 63 |
| D | 40 | 50 | 55 | 65 | 65 | 65 | 65 | 80 |
| E | 56 | 75 | 87 | 100 | 100 | 100 | 100 | 126 |
| F | 175 | 200 | 260 | 330 | 350 | 370 | 430 | 410 |
| kg | 2,820 | 5,820 | 10,740 | 19,450 | 20,080 | 20,720 | 26,720 | 38 |

SISTEMA MODULARE FLESSIBILE "FMS"
"FMS" FLEXIBLE MODULAR SYSTEM
SYSTEME MODULAIRE FLEXIBLE "FMS"
"FMS" FLEXIBLES MODULAR SYSTEM

**3 MORSE
IN UNA**

Di speciale interesse per gli utilizzatori di centri di lavoro orizzontali e verticali le **morse FMS** presentano le stesse caratteristiche costruttive illustrate per le morsa della serie STD, XL, gli elementi modulari e gli accessori: accuratamente rettificati, in acciaio ad alta resistenza cementato e temprato con durezza 60 HRC. Inoltre:

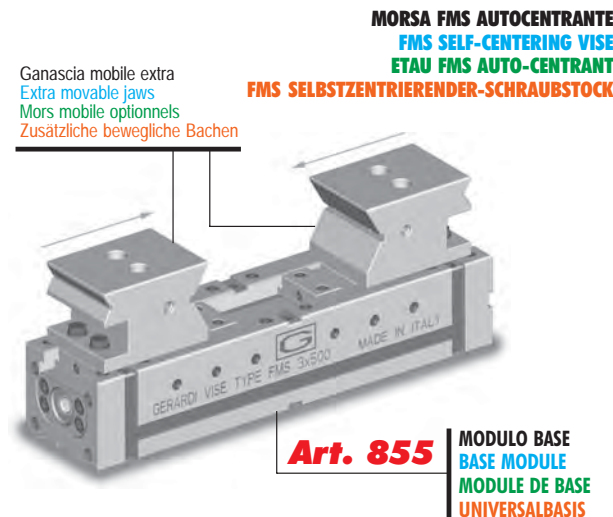
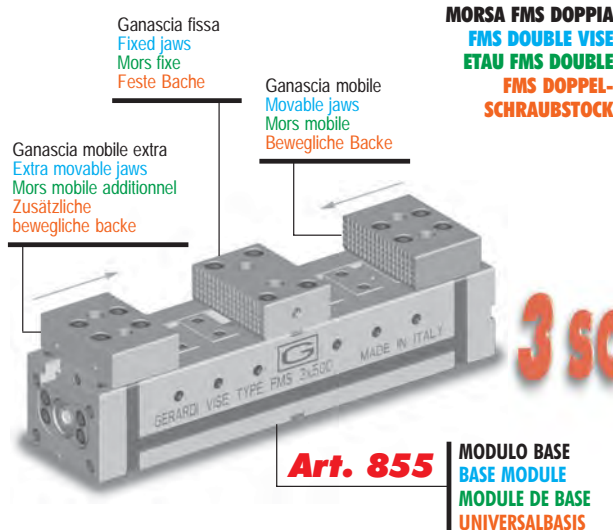
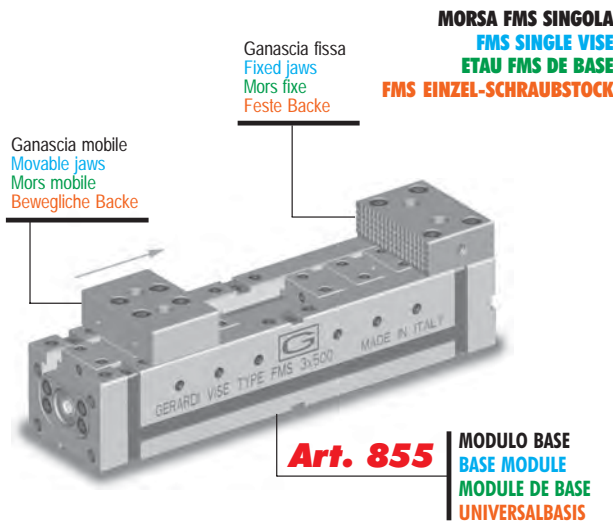
- ◆ **Protezione integrale dalla penetrazione di corpi estranei tramite ripari telescopici;**
- ◆ Possibilità di trasformazione di **ogni morsa singola in morsa autocentrante o in morsa doppia** tramite la semplice sostituzione delle ganasce sul corpo base universale.
*Ganasce da 75 a 190 mm.
 Serraggi di qualsiasi lunghezza.*

**3 VISES
IN ONE**

Of special interest to horizontal and vertical machining centres users **FMS vises** present the same building characteristics of STD and XL vises, modular elements and accessories: hardened HRC 60 & ground steel construction throughout. Further more:

- ◆ **Integral protection from chips and dirt through telescope protection;**
- ◆ The **FMS single station vise** transforms to **self-centering** (inside and outside) or **double station vise** quickly and easily through simple substitution of vise jaws on the universal body and locking or unlocking vise screw.

*Jaws widths from 75 to 190 mm.
 Grip any work length.*



**3 ÉTAUX
EN UN**

Particulièrément destinés aux centres d'usinages verticaux et horizontaux, les **étaux FMS** présentent les mêmes principes de fabrication que les étaux STD et XL. Les éléments modulaires et les accessoires sont en acier cémentés et trempés avec une dureté de 60 HRC. En outre:

- ◆ **Protection télescopique évitant toute introduction de pollution;**
- ◆ Chaque étau **FMS** de "base" peut être transformé en étau double ou en étau auto centrant par la modification des mors.
*Plaques mors de 75 à 190 mm.
 Serrages de n'importe quelle longueur*

**3 SCHRAUBSTÖCKE
IN EINEM**

Die **FMS** Schraubstöcke sind besonders für Betriebe interessant, die mit Vertikal- bzw. mit Horizontalbearbeitungszentren arbeiten. Die **FMS** Schraubstöcke haben die gleichen Eigenschaften wie die Schraubstöcke der Serie STD, XL, sowie die der **MODULAR ELEMENTE** und den Zubehörteilen. Gefertigt aus hochlegiertem Werkzeugstahl und auf 60HRC gehärtet, alle Flächen präzise geschliffen.

- ◆ **Sehr gut abgeschottet gegen das Eindringen von Spänen und Schmutz;**
- ◆ Anwendbar für: **Einzel- und/oder Doppelspannungen** (selbstzentrierend) **durch das Austauschen der Backen** auf der Universalbasis.
*Backenbreite von 75 mm bis 190 mm lieferbar.
 Spannungen jeder Länge.*

SISTEMA MODULARE FLESSIBILE "FMS"

"FMS" FLEXIBLE MODULAR SYSTEM

SYSTEME MODULAIRE FLEXIBLE "FMS"

"FMS" FLEXIBLES MODULAR SYSTEM



- 1- possibilità di 3 posizioni per la ganascia fissa;
- 2- possibilità di bloccaggio dall'esterno all'interno e viceversa;
- 3- possibilità di *posizionamento verticale-orizzontale-laterale*;
- 4- possibilità di *collegamento fra loro: fianco a fianco, dorso a dorso, fianco a dorso*;
- 5- possibilità illimitata per ganasce speciali;
- 6- sistema di bloccaggio meccanico, idraulico, pneumatico elettrico o con moltiplicatore di potenza, tutti tramite comando manuale, a pedale o mediante pulsante elettrico;
- 7- costruzione solida e compatta e massima apertura rispetto alla sua lunghezza;
- 8- flessioni praticamente ridotte di due volte rispetto alle precedenti morse modulari STANDARD;
- 9- accurata ripetibilità di posizionamento del pezzo da lavorare.



- 1- possibility of 3 positions for the fixed jaw;
- 2- possibility to block from outside to inside and viceversa;
- 3- possibility to *position the vise vertically, horizontally and sideways*;
- 4- possibility to *match the vises between them side to side, back to back and back to side*;
- 5- possibility of using unlimited special jaws;
- 6- mechanic, hydraulic or pneumatic or electrical blocking system or with pressure multiplier all through manual, pedal or push button board control;
- 7- space saving design, solid construction and maximum blocking ratio to total length;
- 8- deflection reduced two times with respect to the STANDARD modular vises;
- 9- very accurate repeatability of workpiece position.

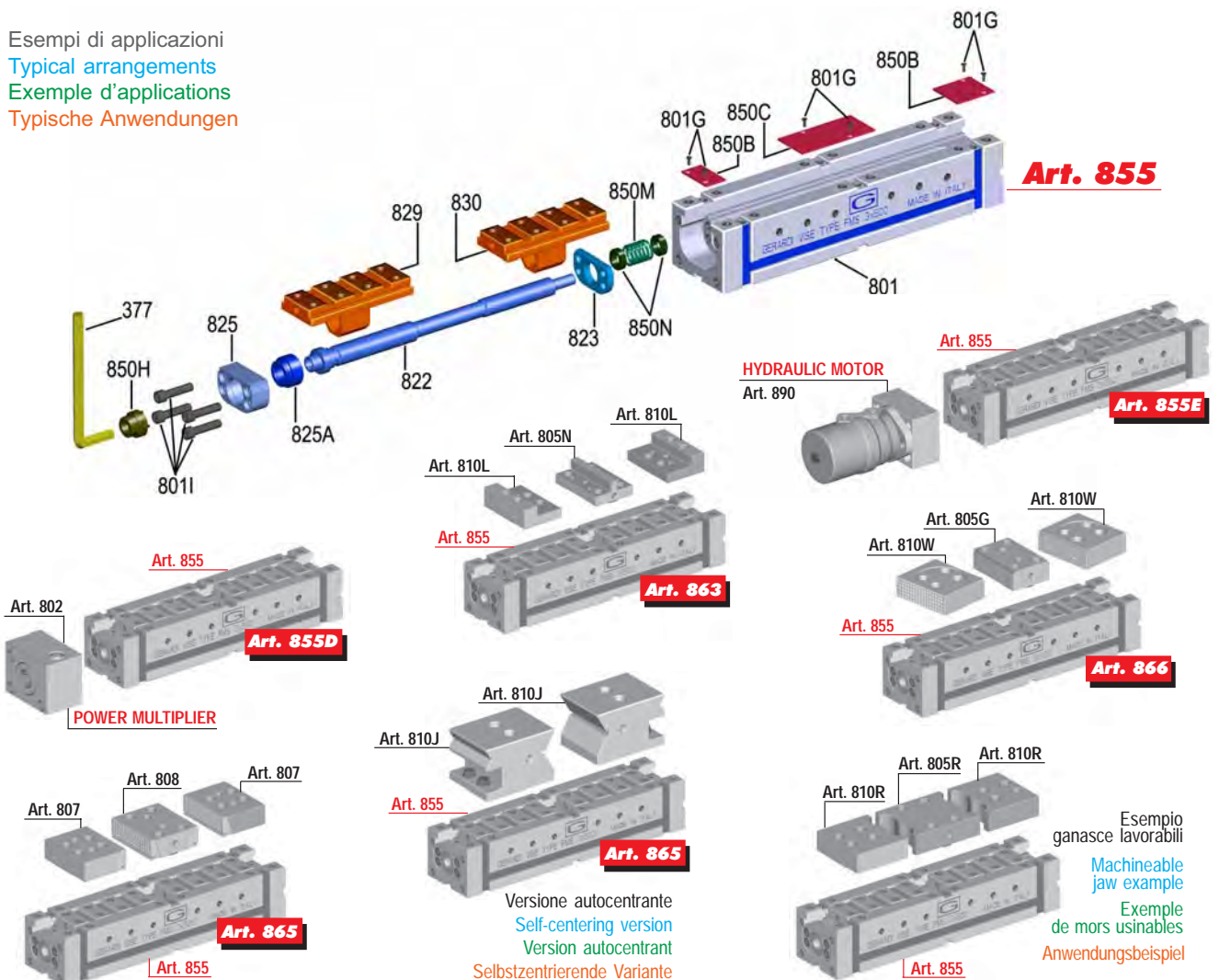


- 1- 3 positions possibles pour le mors fixe;
- 2- serrage de l'extérieur vers l'intérieur et réciproquement;
- 3- *positionnement vertical-horizontal-lateral*;
- 4- *liaison d'ètaux entre eux côté à côté, dos à dos ou côté à dos*;
- 5- plaques mors spéciales à l'infini;
- 6- serrage mécanique, hydraulique, pneumatique électrique ou multiplicateur d'effort avec des commandes manuelles, aux pieds ou électriques;
- 7- fabrication compacte et robuste avec le meilleur rapport ouverture/longueur;
- 8- flexions réduites de moitié par rapport aux ètaux modulaires STANDARD;
- 9- excellente répétabilité de positionnement des pièces.

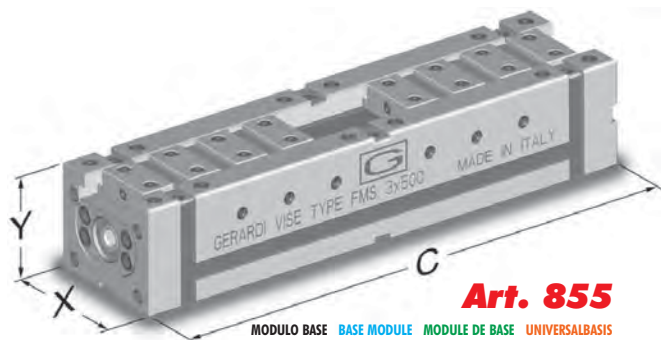


- 1- 3 Positionierungen der festen Bache möglich;
- 2- Möglichkeit des Spanns vom Außen nach Innen und umgekehrt;
- 3- *Horizontal-, Vertikal und seitlich einsetzbar*;
- 4- *Mögliche Schraubstockverbingung: Seite an Seite, Rücken an Rücken und Seite an Rücken*;
- 5- Einsatzmöglichkeiten fon verschiedensten Sonderbacken möglich;
- 6- Mechanisch-Hydraulische-, Electropneumatisch-Hydraulische-Spannmöglichkeiten mit oder ohne Kraftverstärker durch Hand und/oder Fußbetrieb;
- 7- Kompakte und solide Bauart;
- 8- Sehr hohe Biegesteifigkeit im Vergleich zu den Standard Modulare Schraubstöcken;
- 9- Hohe Wiederholgenauigkeit bei der Positionierung des Werkstücke.

Esempi di applicazioni
 Typical arrangements
 Exemple d'applications
 Typische Anwendungen



SISTEMA MODULARE FLESSIBILE "FMS"
"FMS" FLEXIBLE MODULAR SYSTEM
SYSTEME MODULAIRE FLEXIBLE "FMS"
"FMS" FLEXIBLES MODULAR SYSTEM

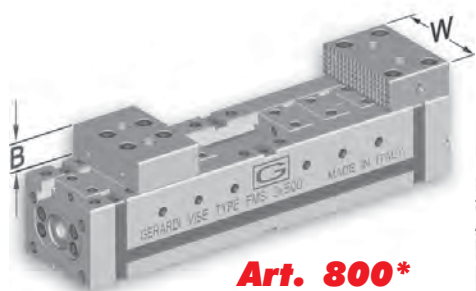


| | | |
|----|----------|-----|
| mm | 1 | |
| C | 200 | 300 |
| Y | 70 | |
| X | 75 | |
| kg | 7 | 10 |

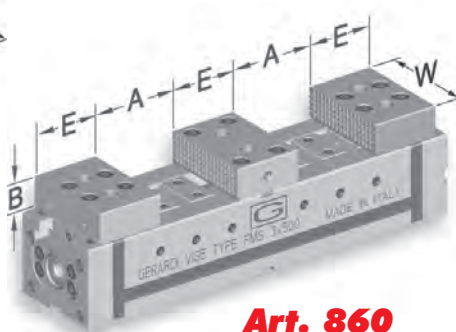
Art. 855

POSSIBILI COMBINAZIONI

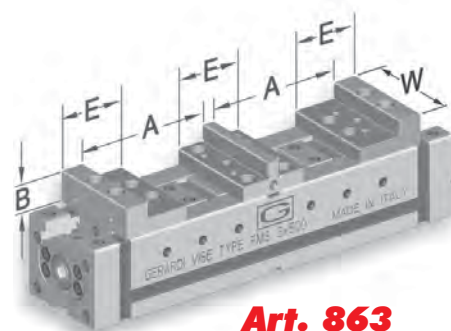
TYPICAL ARRANGEMENTS



Art. 800*



Art. 860



Art. 863

* F A . 800
 A A . 800
 O A . 800
 W A . 800 E

| mm | TIPO DI MORSA | WISE SIZE | TYPE D'ETAU | SCHRAUBSTOCKTYP | 1 | |
|----------------------------|---|-----------|---|-----------------|----------|---------|
| A (860) | Apertura massima morsa FMS doppia Maximum opening double FMS vise | | Etau FMS double ouverture maxi Maximale Spannweite bei FMS-Doppelschraubstock | | 2 x 16 | 2 x 66 |
| A (863) | Apertura massima morsa FMS doppia con ganasce a gradino Max. opening FMS double vise with step jaws | | Etau FMS double avec mors à gradin ouverture maxi Maximale Spannweite bei FMS-Doppelschraubstock mit Stufenbacken | | 2 x 60 | 2 x 110 |
| A (865) | Apertura max morsa FMS doppia con ganasce discendenti intercambiabili Max. opening FMS double vise with interchangeable pull down jaws | | Etau FMS double avec changement rapide des mors auto plaqueurs ouverture maxi Maximale Spannweite bei FMS-Doppelschraubstock mit Niederzugbacken | | 2 x 52 | |
| A (866) | Apertura massima morsa FMS doppia con ganasce oscillanti Max opening FMS double vise with floating jaws | | Etau FMS double avec mors oscillants ouverture maxi Maximale Spannweite bei FMS-Doppelschraubstock mit drehbaren-schwimmenden Backen | | 2 x 50 | |
| A₁ (870) | Ø massima e minima Apertura morsa FMS autocentrante Ø max/min opening FMS self centering vise | | Etau FMS auto centrant diamètre mini maxi Max/min spannbarer Durchmesser mit selbstzentrierenden Backen | | 10/25 | 10/25 |
| A₂ (870) | Ø massima e minima Apertura morsa FMS autocentrante Ø max/min opening FMS self centering vise | | Etau FMS auto centrant diamètre mini maxi Max/min spannbarer Durchmesser mit selbstzentrierenden Backen | | 10/15 | 10/15 |
| B | Altezza ganascia Jaw height Hauteur de mors Backenhöhe | | | | 25 | |
| D | Altezza ganascia prismatica Prismatic jaw height Hauteur de mors prismatique Prismabackenhöhe | | | | 34 | |
| E | | | | | 56 | |
| F | Lunghezza ganasce Jaw length Longueur de mors Backenlänge | | | | 63 | |
| G | | | | | 70 | |
| H | | | | | 72 | |
| W | Larghezza ganascia Jaw width Largeur de mors Backenbreite | | | | 74 | |
| W (870) | Larghezza ganascia prismatica Prismatic jaw width Largeur de mors prismatique Prismabackenbreite | | | | 50 | |

DOTAZIONE STANDARD
Ciascuna morsa completa viene fornita con la seguente dotazione:
2 arresti laterali Art. 370
1 coppia di tasselli di posizionamento Art. 297 (standard per cava da 16 mm)
1 chiave esagonale Art. 377



STANDARD EQUIPMENT
Each complete vise is supplied with the following standard accessories:
2 workstops Art. 370
1 pair of positioning key-nuts Art. 297 (standard for 16 mm slot)
1 hexagon wrench Art. 377



EQUIPMENT STANDARD
Chaque étau complet est livré complet avec l'équipement suivant:
2 butées latérales Art. 370
1 jeu de tasseaux de positionnement Art. 297 (pour rainures de 16 en standard)
1 clé hexagonale Art. 377

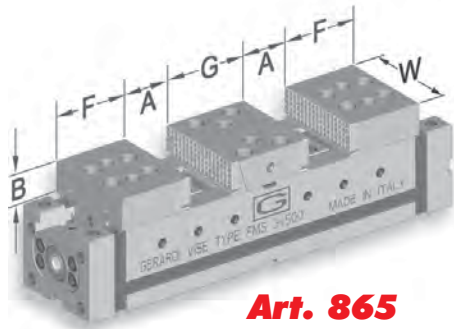


STANDARD AUSSTATTUNG
Jeder Schraubstock wird mit der folgenden Standardausstattung geliefert:
2 Werkstückanschlag Art. 370
1 Paar Nutensteine Art. 297 (für T-Nutenbreite 16 mm)
1 Inbusschlüssel Art. 376

| TIPO DI MORSA | | | | VISE SIZE | | | | | TYPE D'ETAU | | | | | SCHRAUBSTOCKTYP | | | | | |
|---------------|-----|-----|-----|-----------|-----|-----|-----|-----|-------------|-----|-----|-----|-----|-----------------|-----|-----|-----|------|--|
| 2 | | | | 3 | | | | | 4 | | | | | 5 | | | 6 | | |
| 300 | 400 | 500 | 600 | 400 | 500 | 600 | 700 | 800 | 500 | 600 | 700 | 800 | 600 | 700 | 800 | 800 | 900 | 1000 | |
| 90 | | | | 100 | | | | | 120 | | | | | 140 | | | 160 | | |
| 95 | | | | 125 | | | | | 145 | | | | | 170 | | | 190 | | |
| 18 | 25 | 32 | 39 | 40 | 45 | 50 | 55 | 60 | 66 | 72 | 80 | 88 | 115 | 125 | 135 | 170 | 190 | 210 | |

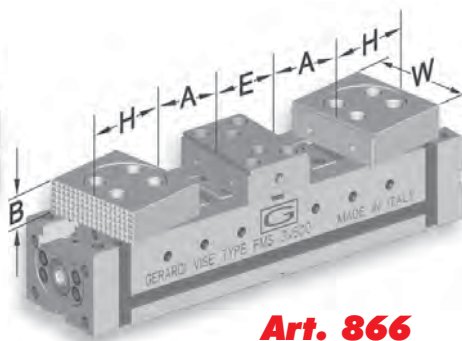
COMBINAISONS POSSIBLES

TYPISCHE ANWENDUNGEN

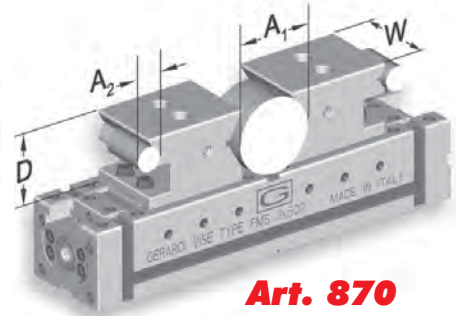


Art. 865

Ganasce discendenti a pettine
Comb pull down jaws
Ganasce discendenti a pettine
Verzahnte Niederzugbacken



Art. 866



Art. 870

AUTOCENTRANTE
SELF-CENTERING
AUTO CENTRANT
SELBST ENTRIENDER

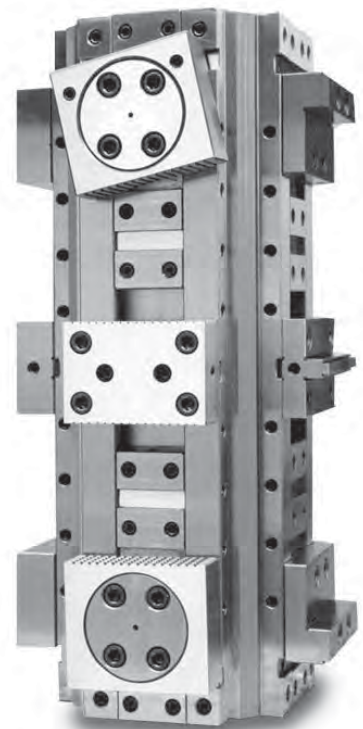
| 2 | | | | 3 | | | | | 4 | | | | | 5 | | | 6 | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|
| 2 x 54 | 2 x 104 | 2 x 154 | 2 x 204 | 2 x 74 | 2 x 124 | 2 x 174 | 2 z 224 | 2 x 274 | 2 x 103 | 2 x 153 | 2 x 203 | 2 x 253 | 2 x 138 | 2 x 188 | 2 x 238 | 2 x 238 | 2 x 288 | 2 x 338 | |
| 2 x 118 | 2 x 168 | 2 x 218 | 2 x 268 | 2 x 162 | 2 x 212 | 2 x 262 | 2 x 312 | 2 x 362 | 2 x 204 | 2 x 254 | 2 x 304 | 2 x 354 | 2 x 254 | 2 x 304 | 2 x 354 | 2 x 354 | 2 x 404 | 2 x 454 | |
| 2 x 80 | 2 x 80 | 2 x 130 | 2 x 180 | 2 x 60 | 2 x 110 | 2 x 160 | 2 x 210 | 2 x 260 | 2 x 85 | 2 x 135 | 2 x 185 | 2 x 235 | 2 x 116 | 2 x 166 | 2 x 216 | 2 x 216 | 2 x 256 | 2 x 316 | |
| 2 x 34 | 2 x 84 | 2 x 134 | 2 x 184 | 2 x 52 | 2 x 102 | 2 x 152 | 2 x 202 | 2 x 252 | 2 x 73 | 2 x 123 | 2 x 173 | 2 x 223 | 2 x 111 | 2 x 161 | 2 x 211 | 2 x 203 | 2 x 235 | 2 x 303 | |
| 20/50 | 20/50 | 20/50 | 20/50 | 40/100 | 40/100 | 40/100 | 40/100 | 40/100 | 45/150 | 45/150 | 45/150 | 45/150 | 63/200 | 63/240 | 63/280 | 73/300 | 73/350 | 73/400 | |
| 10/25 | 10/25 | 10/25 | 10/25 | 25/50 | 25/50 | 25/50 | 25/50 | 25/50 | 30/60 | 30/60 | 30/60 | 30/60 | 35/70 | 35/70 | 35/70 | 40/80 | 40/80 | 40/80 | |
| 30 | | | | 40 | | | | | 50 | | | | | 60 | | | 60 | | |
| 55 | | | | 90 | | | | | 132 | | | | | 175 | | | 260 | | |
| 64 | | | | 84 | | | | | 98 | | | | | 108 | | | 108 | | |
| 76 | | | | 91 | | | | | 107 | | | | | 119 | | | 119 | | |
| 88 | | | | 98 | | | | | 116 | | | | | 130 | | | 130 | | |
| 84 | | | | 106 | | | | | 128 | | | | | 135 | | | 143 | | |
| 94 | | | | 124 | | | | | 144 | | | | | 169 | | | 189 | | |
| 75 | | | | 100 | | | | | 132 | | | | | 140 | | | 160 | | |

CUBIMORSA FMS specifici per centri di lavoro ad asse orizzontale
FMS VISE TOWERS specific for horizontal machining centers
CUBE-ETAUX FMS pour centres d'usinage à axe horizontal
FMS-SCHRAUBSTOCK-TURM
 speziell für horizontale Bearbeitungszentren

Una struttura monoblocco permette, con la massima rigidità, di realizzare anche in verticale tutte le composizioni possibili (pag. 12-13); inoltre al posto delle ganasce si possono applicare delle apposite piastre per realizzare portapezzi dedicati.
 I CUBIMORSA monoblocco per centri di lavoro ad asse orizzontale offrono la possibilità di abbattere il numero il numero delle riprese dato che consentono di lavorare i pezzi non solo nella parte frontale, ma anche nelle 2 facce laterali durante lo stesso ciclo di lavoro.
 In tale maniera tutti i sei lati di un tipico pezzo prismatico possono venire lavorati in soli due serraggi.
 Tutto ciò aumenta anche l'accuratezza delle operazioni.
 La flessibilità di un tale sistema di bloccaggio può talvolta costituire la base per un ciclo di lavoro continuo, inserendo per ogni faccia il particolare nelle sue successive fasi di lavoro.

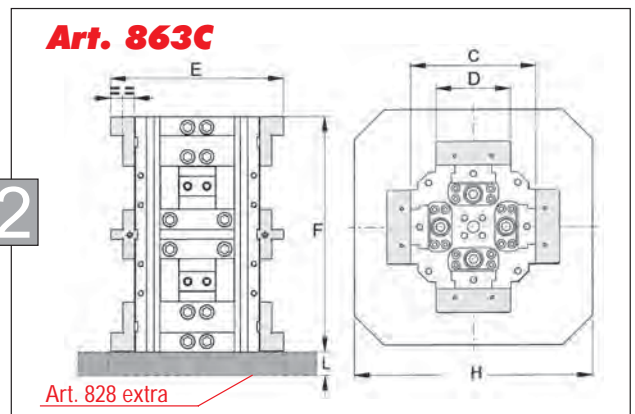
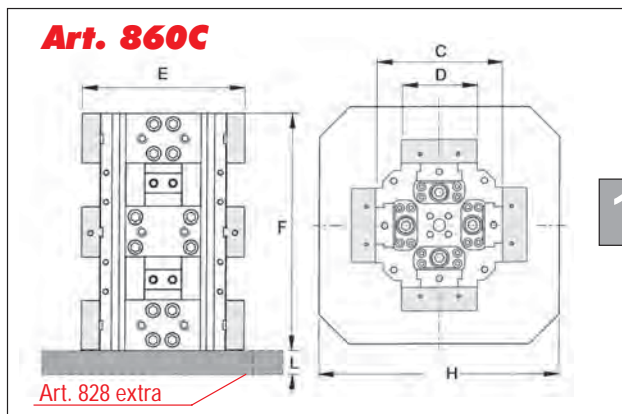
A solid 1 piece structure allows to position also in vertical way, all the possible vise combinations (pag. 12-13) with maximum rigidity.
 FMS vise cubes offer the possibility of economically reducing batch sizes as they permit work pieces to be machined not only front but also on their sides during the same work cycle.
 Thus six sides of a typical prismatic workpiece can be machined in only two clampings. Work accuracy is also improved.
 Under certain conditions the flexibility of this approach enables a continuous work cycle when work is transferred successively to different jaw positions during the progress of the work cycle.

Une structure monobloc garantit un maximum de rigidité et permet des montages verticaux avec des variantes à l'infini (pag. 12-13) et entre autres d'adapter des plaques mors particulières pour la réalisation par exemple de pièces spéciales.
 Les CUBES-ETAUX monoblocs pour centres d'usinages à axe horizontal permettent de réduire le nombre de reprises puisqu'ils offrent la possibilité d'usiner une face frontale et deux faces latérales pendant le même cycle.
 Ainsi les six faces d'un pièces prismatique élémentaire peuvent être usinées en seulement deux posages et cela en améliorant également la précision.
 La flexibilité d'une tel système peut constituer point de départ d'un cycle en continu en mettant en place une phase d'usinage par face de cube.



Art. 855C

con montate ganasce lisce, oscillanti e a gradino
 assembled with smooth, floating and step type jaws
 équipé de mors lisses, à gradins et oscillants
 vormontiert mit glatten, schwimmenden und abgestuften Spannbacken



1 CUBOMORSA doppio con ganasca centrale fissa per il bloccaggio di 8 pezzi
 VISE TOWER with fixed middle jaw for 8 clamping stations
 CUBE-ETAUX avec mors fixe central pour serrage de 8 pièces
 SCHRAUBSTOCKTURM mit fester Mittelbacke und 8 Spannstationen

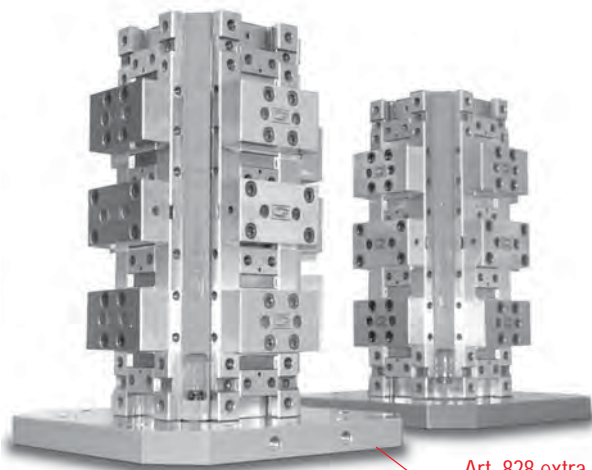
3 CUBOMORSA doppio con ganasce discendenti (intercambiabili manualmente) per il bloccaggio di 8 pezzi
 VISE TOWER with pull down jaws (manually interchangeable) for 8 clamping stations
 CUBE-ETAUX double avec mors auto plaqueurs et à changements rapides pour serrage de 8 pièces
 SCHRAUBSTOCKTURM mit Niederzugbacken (manuell wechselbar) und 8 Spannstationen

2 CUBOMORSA doppio con ganasca a gradino per il bloccaggio di 8 pezzi
 VISE TOWER with step-type jaw for 8 clamping stations
 CUBE-ETAUX double avec mors à gradins pour le serrage de 8 pièces
 SCHRAUBSTOCKTURM mit Stufenbacken und 8 Spannstationen

4 CUBOMORSA doppio con ganasce oscillanti a gradino per il bloccaggio di 8 pezzi
 VISE TOWER with step floating jaws jaw for 8 clamping stations
 CUBE-ETAUX double avec mors oscillants à gradins pour le serrage de 8 pièces
 SCHRAUBSTOCKTURM mit schwimmenden Backen und 8 Spannstationen

Die Schraubstocktürme ermöglichen die unterschiedlichsten vertikalen Werkstückspannungen (pag. 12-13).
 Selbstverständlich können auch die verschiedensten Sonderbacken für dieses System geliefert werden.
 Außerdem reduziert sich die Anzahl der Umspannungen, da die gespannten Werkstücke auch seitlich bearbeitet werden können.
 Dadurch ist eine 6-Seitenbearbeitung mit nur 2 Aufspannungen möglich.
 Hierdurch wird gleichzeitig eine höhere Werkstückgenauigkeit erzielt.
 Durch die hohe Flexibilität dieses Spannsystems vereinfacht sich der Fertigungsablauf erheblich.

| mm | 1 | |
|----|----------|-----|
| C | 120 | |
| D | 74 | |
| E | 170 | |
| F | 200 | 300 |
| H | 300 | |
| L | 33 | |
| kg | 34 | 57 |



Art. 828 extra

Art. 860C

CUBIMORSA per bloccaggi doppi
 VISE TOWERS for double clamping
 CUBES-ETAUX pour blocages doubles
 SCHRAUBSTOCKTURM Für Doppelspannungen



CUBIMORSA su sistema di pallet a giorra per centri di lavoro
 VISE TOWERS assembled on round transpallet system for machining centers
 CUBES-ETAUX sur un centre d'usinage à palettes rotatives
 SCHRAUBSTOCKTURM in einem automatischen Palettenwechslers

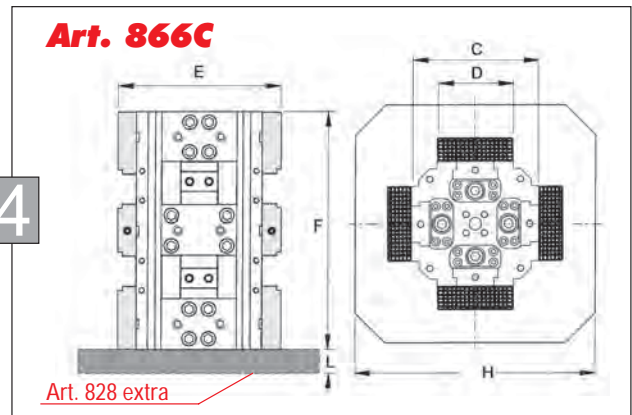
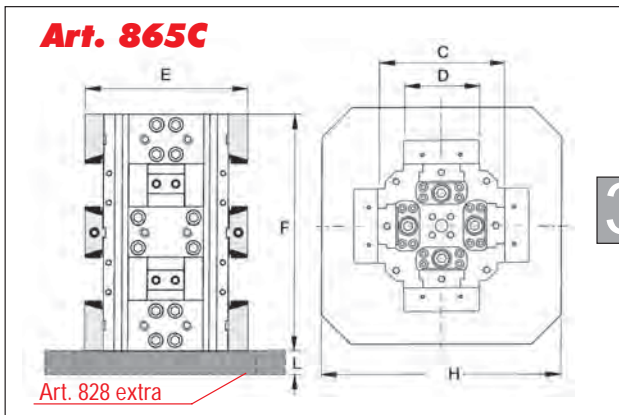


Meccanismo **TERZA MANO** di serie: nella morsa versione doppia, tale meccanismo consente il carico del primo pezzo con un bloccaggio lieve, mentre nel frattempo viene caricato il secondo pezzo anche di dimensioni diverse.

Mécanisme **TROISIEME MAIN** incluse dans le prix de l'étau double. Ce mécanisme permet de positionner la première pièce avec un serrage léger, puis de positionner la seconde pièce qui peut être de dimensions différentes avant de serrer l'ensemble.

Standard **THIRD HAND** device: in the double station vise configuration, allows the first workpiece loaded to be clamped with a small load while the second workpiece even of different size, is being loaded.

ZWEIHANDBEDIENUNG serienmäßig!
 Mit dieser Bedienmöglichkeit werden die Werkstücke auf jeder Spannebene (auch mit unterschiedlicher Größe) nacheinander gespannt.



| | TIPO MORSA | | | | VISE SIZE | | | | TYPE D' ETAU | | | | SCHRAUBSTOCKTYP | | | | | | | | | | | |
|-----|------------|-----|-----|-----|-----------|-----|-----|-----|--------------|-----|-----|-----|-----------------|-----|-----|-----|-----|-----|------|--|-----|--|--|--|
| | 1 | | | | 2 | | | | 3 | | | | 4 | | | | 5 | | | | 6 | | | |
| 120 | | | | | 175 | | | | 210 | | | | 245 | | | | 280 | | | | 290 | | | |
| 74 | | | | | 94 | | | | 124 | | | | 144 | | | | 169 | | | | 189 | | | |
| 170 | | | | | 235 | | | | 290 | | | | 345 | | | | 400 | | | | 410 | | | |
| 300 | 300 | 400 | 500 | 600 | 400 | 500 | 600 | 700 | 800 | 500 | 600 | 700 | 800 | 600 | 700 | 800 | 800 | 900 | 1000 | | | | | |
| 300 | | | | | 350 | | | | 400 | | | | 450 | | | | 500 | | | | 550 | | | |
| 33 | | | | | 33 | | | | 38 | | | | 38 | | | | 38 | | | | 38 | | | |
| 57 | 56 | 80 | 104 | 128 | 100 | 130 | 160 | 190 | 220 | 223 | 274 | 325 | 356 | 275 | 330 | 380 | 505 | 588 | 671 | | | | | |

SISTEMA MODULARE FLESSIBILE "FMS"

"FMS" FLEXIBLE MODULAR SYSTEM

SYSTEME FLEXIBLE MODULAIRE "FMS"

FLEXIBLES MODULAR SYSTEM "FMS"

Applicazioni verticali di morse FMS per utilizzatori di centri di lavoro orizzontali

FMS vises vertical applications for horizontal machining centers uses

Montage vertical d' étaux FMS pour des applications sur centres d' usinage à axe horizontal

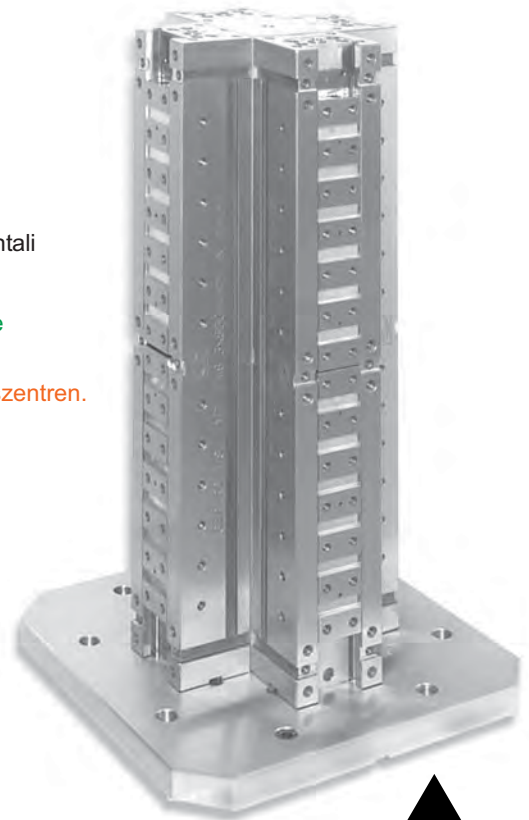
Vertikalanwendungen von FMS Schraubstöcke für Horizontalbearbeitungszentren.

In alternativa alle strutture monoblocco:
Applicazioni di morse FMS in verticale sempre con la possibilità di applicare apposite piastre per realizzare portapezzi dedicati

Alternative to the solid vise cube:
FMS vises vertically assembled. Still possible to mount plates instead of jaws for the creation of specific tomstones.

Une alternative aux structures monobloc
est le montage d' étaux FMS en vertical avec bien sur toujours la possibilité d' adapter des plaques mors spécifiques pour la réalisation de pièces "dédiées"

Alternativ zum massiven Schraubstockurm:
vertikal montierte FMS-Schraubstöcke mit der Möglichkeit seitlich Ausspannplatten zu befestigen, um individuelle Spannösungen zu erzeugen.

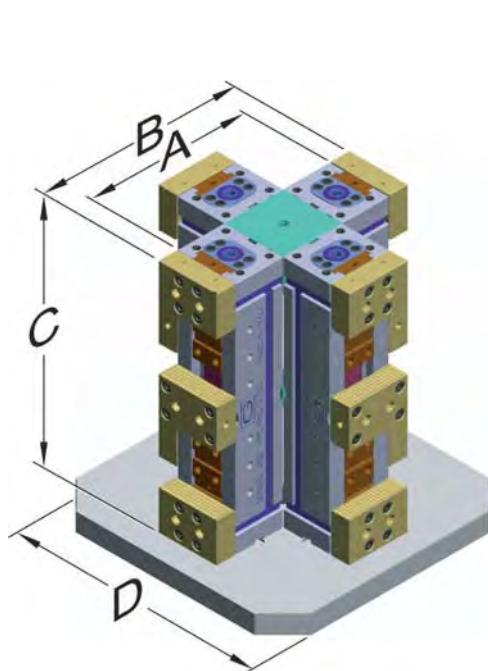
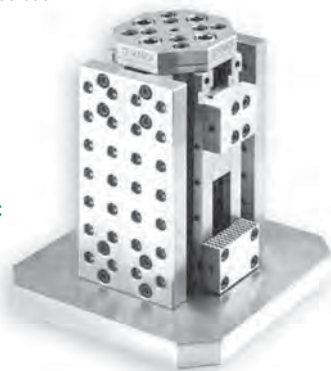


Moduli base FMS montati verticalmente

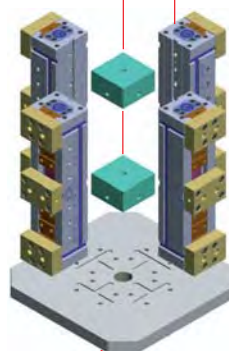
FMS base module vertically assembled

Modules de base FMS montés verticalement

Vertikal montiertes FMS-Basismodul



Art. 835 Art. 860

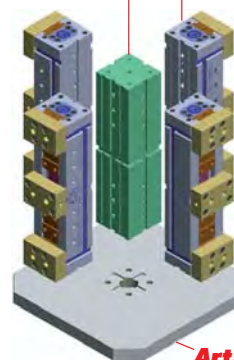


Art. 827

| ART. | N° |
|------|----|
| 860 | 4 |
| 835 | 2 |
| 827 | 1 |

| ART. | N° |
|------|----|
| 860 | 4 |
| 836 | 1 |
| 828 | 1 |

Art. 836 Art. 860



Art. 828

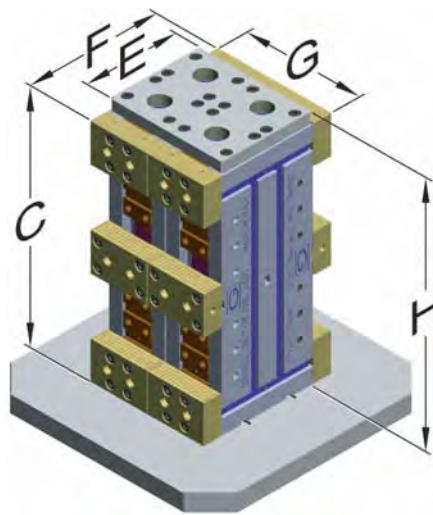
| mm | 1 |
|----|-----------|
| A | 215 |
| B | 265 |
| C | 200 300 |
| D | 300 |
| E | 140 |
| F | 190 |
| G | 150 |
| H | 220 320 |
| X | |

Morse FMS montate verticalmente
con diverse tipologie di ganasce

FMS vises vertically mounted
with different types of jaws

Etaux FMS montés verticalement
avec différents types de mors

FMS-Schraubstock mit diversen
Spannbacken, vertikal montiert

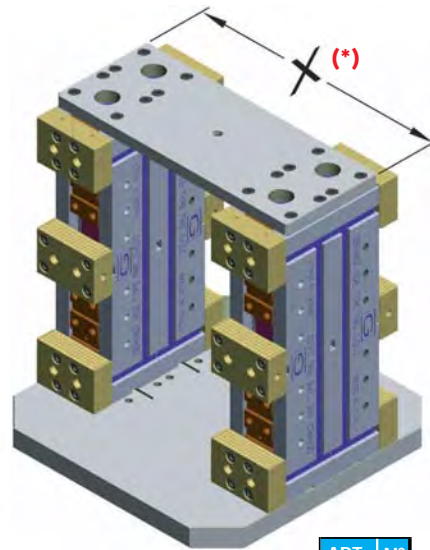
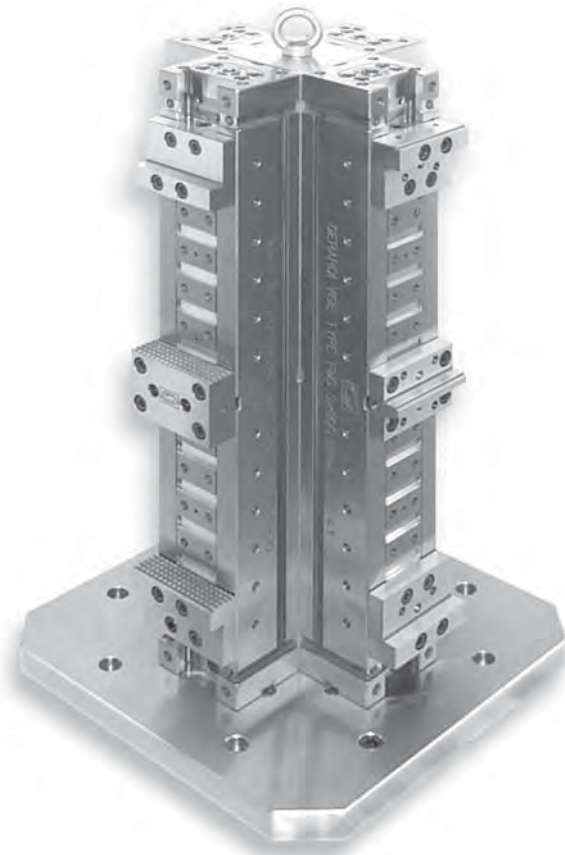


| ART. | N° |
|------|----|
| 860 | 4 |
| 832 | 1 |
| 827 | 1 |

Art. 832

Art. 860

Art. 827



| ART. | N° |
|------|----|
| 860 | 4 |
| 832 | 1 |
| 827 | 1 |

Art. 832

Art. 860

Art. 827

TIPO MORSA

WISE SIZE

TYPE D' ETAU

SCHRAUBSTOCKTYP

| 1 | 2 | | | | 3 | | | | | 4 | | | | 5 | | | 6 | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 215 | 275 | | | | 325 | | | | | 385 | | | | 450 | | | 510 | | |
| 265 | 335 | | | | 405 | | | | | 485 | | | | 570 | | | 630 | | |
| 300 | 300 | 400 | 500 | 600 | 400 | 500 | 600 | 700 | 800 | 500 | 600 | 700 | 800 | 600 | 700 | 800 | 800 | 900 | 1000 |
| 300 | 350 | | | | 400 | | | | | 450 | | | | 500 | | | 550 | | |
| 140 | 180 | | | | 200 | | | | | 240 | | | | 280 | | | 320 | | |
| 190 | 240 | | | | 280 | | | | | 340 | | | | 400 | | | 440 | | |
| 150 | 190 | | | | 250 | | | | | 290 | | | | 340 | | | 380 | | |
| 320 | 325 | 425 | 525 | 625 | 425 | 525 | 625 | 725 | 825 | 525 | 625 | 725 | 825 | 625 | 725 | 825 | 825 | 925 | 1025 |

(*) a richiesta on request à la demande auf Anfrage

MORSE E CUBI SERIE "MULTIFLEX"

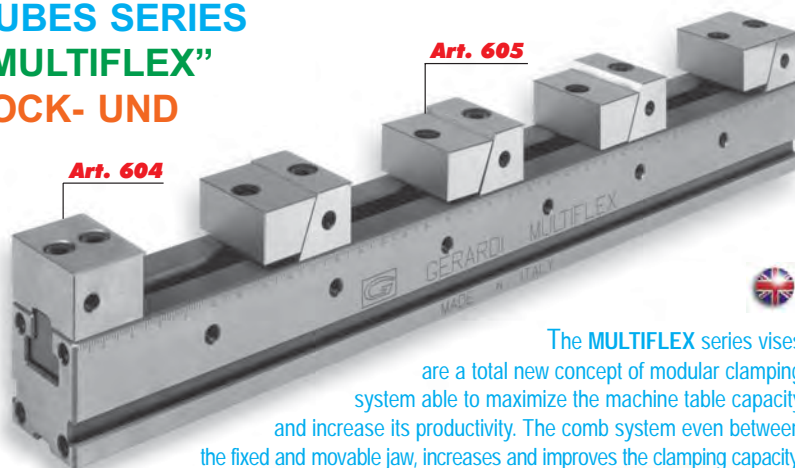
"MULTIFLEX" VISES AND CUBES SERIES

TOURS ET ETAUX SERIE "MULTIFLEX"

"MULTIFLEX" SCHRAUBSTOCK- UND AUFSPANNSYSTEME

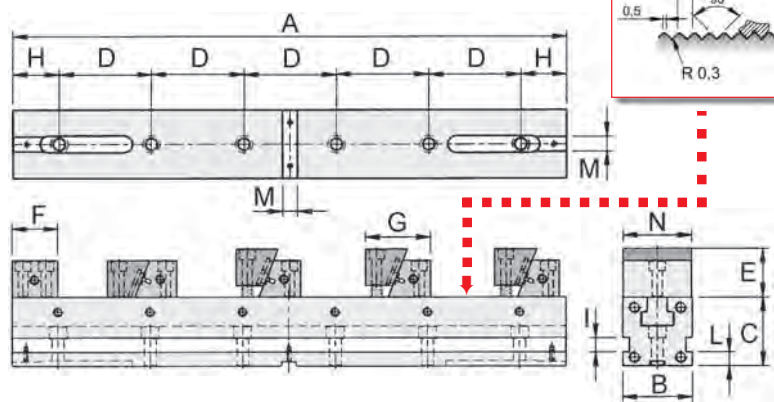
Art. 600

Morsa con ganasce lisce o zigrinate
 Vise with smooth or serrated jaws
 Etou avec mors lisses ou striés
 Schraubstock mit glatten oder verzahnten Backen



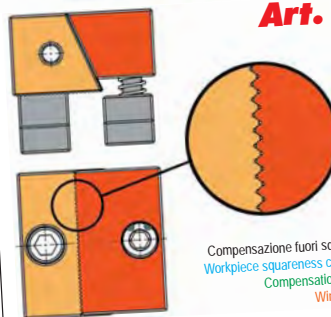
Le morse della serie MULTIFLEX rappresentano l'innovativo sistema modulare di bloccaggio in grado di sfruttare al massimo la capacità della tavola della macchina e di aumentarne, di conseguenza, la produttività. Il sistema a pettine, riportato anche sulle ganasce, amplifica e migliora le capacità di serraggio.

The MULTIFLEX series vises are a total new concept of modular clamping system able to maximize the machine table capacity and increase its productivity. The comb system even between the fixed and movable jaw, increases and improves the clamping capacity.



SISTEMA A PETTINE COMB SYSTEM SYSTEME A STRIES KAMMSYSTEM

Art. 605



Compensazione fuori squadra pezzo: $\pm 3^\circ$
 Workpiece squareness compensation: $\pm 3^\circ$
 Compensation de la pièce: $\pm 3^\circ$
 Winkelgleichheit: $\pm 3^\circ$

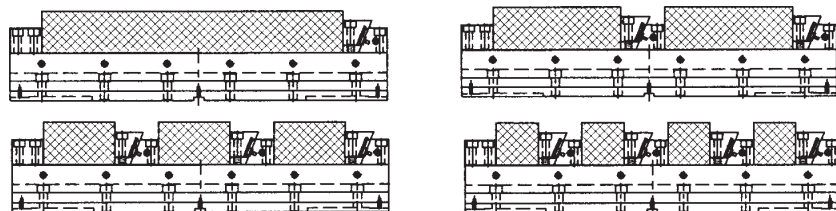
| | mm | A | B ^{-0,02} | C ^{-0,02} | D | E | F | G | H | I | L | M ^{#7} | N |
|-----------|-----|----|--------------------|--------------------|-------|----|-------|----|----|----|----|-----------------|---|
| SIZE 1 | 300 | 50 | 50 | 100 | 32/25 | 34 | 55/58 | 50 | 12 | 10 | 16 | 49 | |
| | 400 | 50 | 50 | 100 | 32/25 | 34 | 55/58 | 50 | 12 | 10 | 16 | 49 | |
| | 500 | 50 | 50 | 100 | 32/25 | 34 | 55/58 | 50 | 12 | 10 | 16 | 49 | |
| | 600 | 50 | 50 | 100 | 32/25 | 34 | 55/58 | 50 | 12 | 10 | 16 | 49 | |
| TIPO 2 | 400 | 75 | 75 | 100 | 53/40 | 50 | 70/75 | 50 | 16 | 15 | 16 | 74 | |
| | 500 | 75 | 75 | 100 | 53/40 | 50 | 70/75 | 50 | 16 | 15 | 16 | 74 | |
| | 600 | 75 | 75 | 100 | 53/40 | 50 | 70/75 | 50 | 16 | 15 | 16 | 74 | |
| | 700 | 75 | 75 | 100 | 53/40 | 50 | 70/75 | 50 | 16 | 15 | 16 | 74 | |

Ogni morsa è completa di 1 ganasca fissa e 4 ganasce fisse-mobili, 1 chiave a "T", tasselli di posizionamento e 4 arresti laterali.

Each vise is supplied with 1 fixed jaw and 4 fixed- movable jaws, one "T" wrench, 1 pair of positioning key nuts and 4 workstops.

Chaque étou est fourni avec 1 mors fixe, 4 mors fixe-mobile, 1 clé en T, tasseaux de positionnement et 4 butées latérales.

Jeder Schraubstock mit 1 festen Backe und mit 4 (festen) beweglichen Backen, einem "T"-Inbusschlüssel, Nutensteinen und 4 verstellbaren Werkstückanschlägen geliefert.



Esempi di combinazioni
 Typical arrangements
 Exemples de combinaisons
 Montagebeispiel

| | mm | A | B ^{-0,02} | N°pezzi / Number of pieces / Numero de pièces / Nr Stückzahl | | | | | | | | |
|-----------|-----|----|--------------------|--|-----|-----|----|----|----|----|----|---|
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| SIZE 1 | 300 | 50 | 50 | 208 | 75 | 30 | 8 | \ | \ | \ | \ | \ |
| | 400 | 50 | 50 | 308 | 125 | 64 | 33 | 15 | 3 | \ | \ | \ |
| | 500 | 50 | 50 | 408 | 175 | 96 | 58 | 35 | 19 | 8 | \ | \ |
| | 600 | 50 | 50 | 508 | 225 | 129 | 83 | 55 | 36 | 22 | 12 | 5 |
| TIPO 2 | 400 | 75 | 75 | 275 | 100 | 41 | 12 | \ | \ | \ | \ | \ |
| | 500 | 75 | 75 | 375 | 150 | 75 | 37 | 15 | \ | \ | \ | \ |
| | 600 | 75 | 75 | 475 | 200 | 108 | 62 | 35 | 16 | 3 | \ | \ |
| | 700 | 75 | 75 | 575 | 250 | 141 | 87 | 55 | 33 | 17 | 6 | \ |

APERTURA MASSIMA IN RELAZIONE AL NUMERO DEI PEZZI
 MAX OPENING ACCORDING TO PIECES TO BE CLAMPED
 OUVERTURE MAXI PAR RAPPORT AU NOMBRE DE PIECES
 DIE MAXIMALE SPANNWEITE RICHTET SICH NACH DER ANZAHL DER ZU SPANNENDEN WERKSTÜCKE.

MORSE E CUBI SERIE "MULTIFLEX"

"MULTIFLEX" VISES AND CUBES SERIES

TOURS ET ETAUX SERIE "MULTIFLEX"

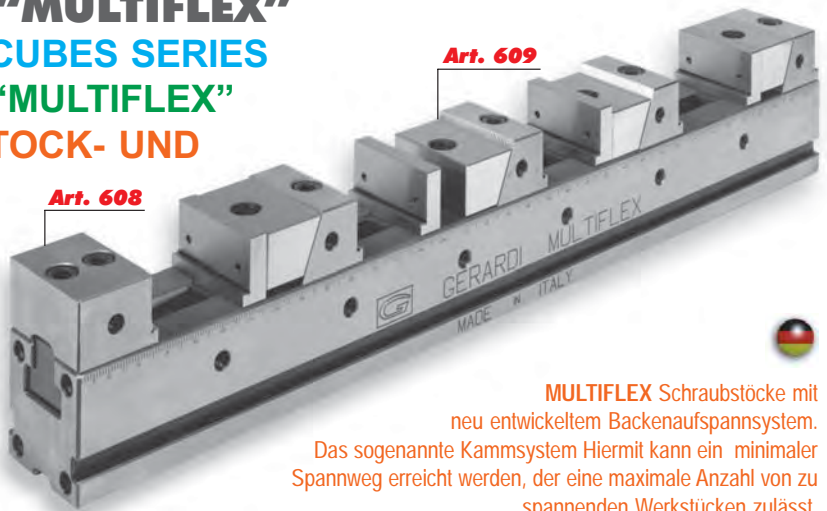
"MULTIFLEX" SCHRAUBSTOCK- UND AUFSPANNSYSTEME

Art. 606

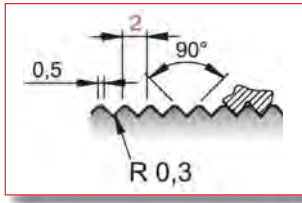
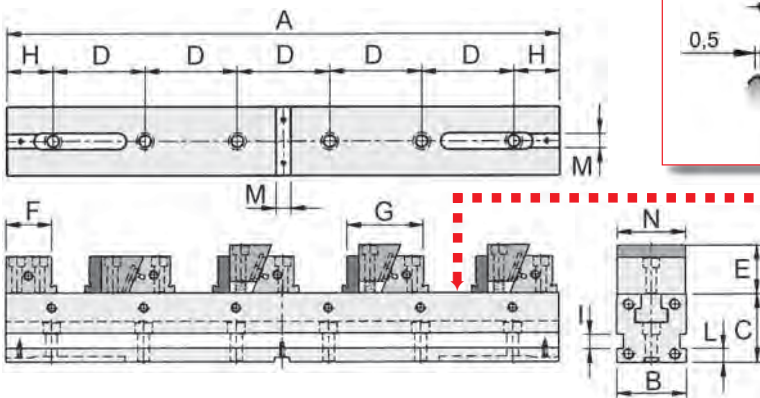
Morsa con ganasce a gradino
 Vise with step jaws
 Etou avec mors à gradins
 Schraubstock mit Stufenbacken



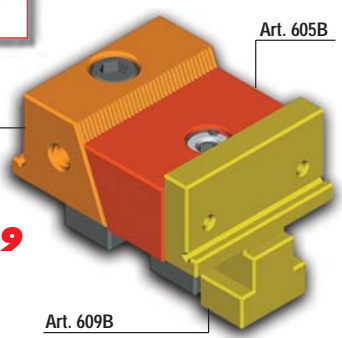
Les étaux **MULTIFLEX** sont les nouveaux système de bridage capable d'exploiter au maximum la capacité de la table machine et en conséquence d'augmenter la productivité. Le système à stries améliore et augmente les capacités de serrage.



MULTIFLEX Schraubstöcke mit neu entwickeltem Backenaufspannsystem. Das sogenannte Kammsystem Hiermit kann ein minimaler Spannungsweg erreicht werden, der eine maximale Anzahl von spannenden Werkstücken zulässt.



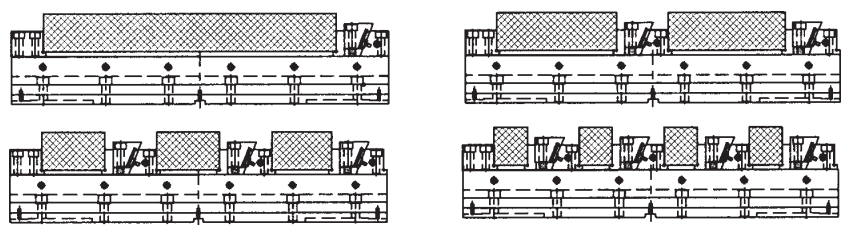
- 2 = PASSO DELLE RIGHE
- 2 = ROWS PITCH
- 2 = PAS DES STRIES
- 2 = STEIGUNG DER VERZÄHNUNG



Art. 609

| mm | | A | B ^{-0,02} | C ^{-0,02} | D | E | F | G | H | I | L | M ^{#7} | N |
|-----------|-----|----|--------------------|--------------------|-------|----|-------|----|----|----|----|-----------------|----|
| TIPO 1 | 300 | 50 | 50 | 100 | 32/25 | 34 | 65/68 | 50 | 12 | 10 | 16 | 16 | 49 |
| | 400 | 50 | 50 | 100 | 32/25 | 34 | 65/68 | 50 | 12 | 10 | 16 | 16 | 49 |
| | 500 | 50 | 50 | 100 | 32/25 | 34 | 65/68 | 50 | 12 | 10 | 16 | 16 | 49 |
| | 600 | 50 | 50 | 100 | 32/25 | 34 | 65/68 | 50 | 12 | 10 | 16 | 16 | 49 |
| TIPO 2 | 400 | 75 | 75 | 100 | 53/40 | 50 | 83/88 | 50 | 16 | 15 | 16 | 16 | 74 |
| | 500 | 75 | 75 | 100 | 53/40 | 50 | 83/88 | 50 | 16 | 15 | 16 | 16 | 74 |
| | 600 | 75 | 75 | 100 | 53/40 | 50 | 83/88 | 50 | 16 | 15 | 16 | 16 | 74 |
| | 700 | 75 | 75 | 100 | 53/40 | 50 | 83/88 | 50 | 16 | 15 | 16 | 16 | 74 |

Ogni morsa è completa di 1 ganascia fissa e 4 ganasce fisse-mobili, 1 chiave a "T", tasselli di posizionamento e 4 arresti laterali.
 Each vise is supplied with 1 fixed jaw and 4 fixed- movable jaws, one "T" wrench, 1 pair of positioning key nuts and 4 workstops.
 Chaque étau est fourni avec 1 mors fixe, 4 mors fixe-mobile, 1 clé en Té, tasseaux de positionnement et 4 butées latérales.
 Jeder Schraubstock mit 1 festen Backe und mit 4 (festen) beweglichen Backen, einem "T"-Inbusschlüssel, Nutensteinen und 4 verstellbaren Werkstückanschlägen geliefert.



Esempi di combinazioni
 Typical arrangements
 Exemples de combinaisons
 Montagebeispiel

| TIPO | SIZE | mm | A | B ^{-0,02} | N°pezzi / Number of pieces / Numero de pièces / Nr Stückzahl | | | | | | | | |
|------|------|----|-----|--------------------|--|----|----|----|----|---|---|---|---|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | 300 | 50 | 193 | 63 | 19 | \ | \ | \ | \ | \ | \ | \ | \ |
| | 400 | 50 | 293 | 113 | 53 | 23 | \ | \ | \ | \ | \ | \ | \ |
| | 500 | 50 | 393 | 163 | 86 | 48 | 25 | \ | \ | \ | \ | \ | \ |
| | 600 | 50 | 493 | 213 | 119 | 73 | 45 | 26 | 13 | \ | \ | \ | \ |
| 2 | 400 | 75 | 257 | 85 | 28 | \ | \ | \ | \ | \ | \ | \ | \ |
| | 500 | 75 | 357 | 135 | 61 | 24 | \ | \ | \ | \ | \ | \ | \ |
| | 600 | 75 | 457 | 185 | 94 | 49 | 21 | \ | \ | \ | \ | \ | \ |
| | 700 | 75 | 557 | 235 | 127 | 74 | 41 | 20 | \ | \ | \ | \ | \ |

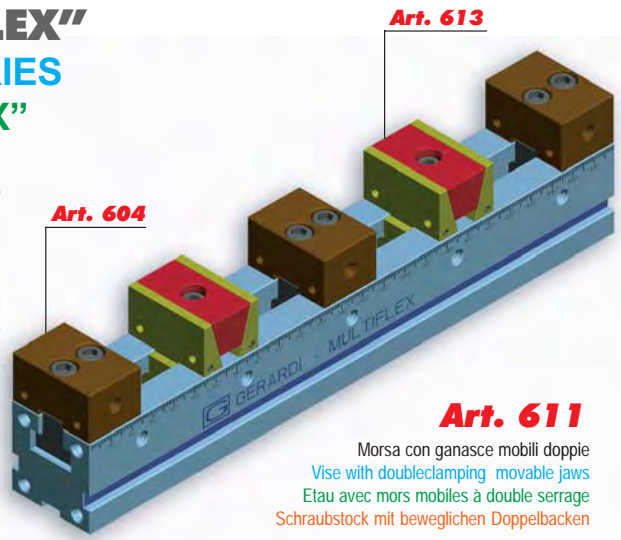
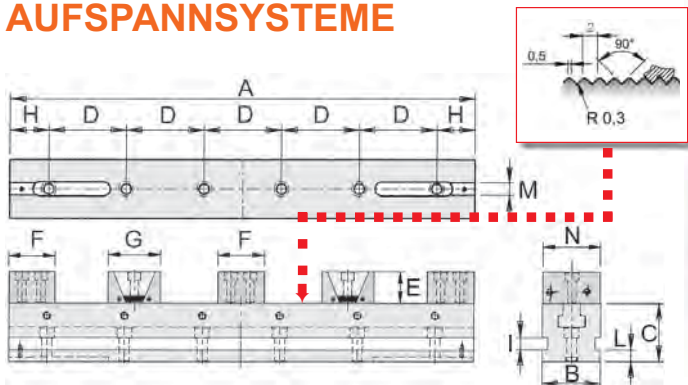
APERTURA MASSIMA IN RELAZIONE AL NUMERO DEI PEZZI
 MAX OPENING ACCORDING TO PIECES TO BE CLAMPED
 OUVERTURE MAXI PAR RAPPORT AU NOMBRE DE PIECES
 DIE MAXIMALE SPANNWEITE RICHTET SICH NACH DER ANZAHL DER ZU SPANNENDEN WERKSTÜCKE.

MORSE E CUBI SERIE "MULTIFLEX"

"MULTIFLEX" VISES AND CUBES SERIES

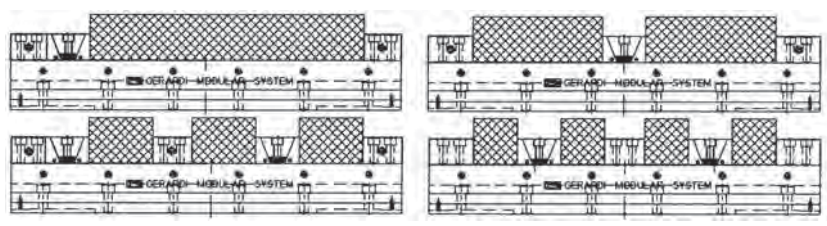
TOURS ET ETAUX SERIE "MULTIFLEX"

"MULTIFLEX" SCHRAUBSTOCK- UND AUFSPANNSYSTEME



| | | mm | A | B ^{-0,02} | C ^{-0,02} | D | E | F | G | H | I | L | M ^{#7} | N |
|------|------|-----|-----|--------------------|--------------------|-------|-------|-------|-------|----|----|----|-----------------|----|
| TIPO | SIZE | 1 | 300 | 50 | 50 | 100 | 32/25 | 38 | 44/50 | 50 | 12 | 15 | 16 | 49 |
| | | 400 | 50 | 50 | 100 | 32/25 | 38 | 44/50 | 50 | 12 | 15 | 16 | 49 | |
| | | 500 | 50 | 50 | 100 | 32/25 | 38 | 44/50 | 50 | 12 | 15 | 16 | 49 | |
| | | 600 | 50 | 50 | 100 | 32/25 | 38 | 44/50 | 50 | 12 | 15 | 16 | 49 | |
| TIPO | SIZE | 2 | 400 | 75 | 75 | 100 | 46/40 | 50 | 52/58 | 50 | 16 | 20 | 16 | 74 |
| | | 500 | 75 | 75 | 100 | 46/40 | 50 | 52/58 | 50 | 16 | 20 | 16 | 74 | |
| | | 600 | 75 | 75 | 100 | 46/40 | 50 | 52/58 | 50 | 16 | 20 | 16 | 74 | |
| | | 700 | 75 | 75 | 100 | 46/40 | 50 | 52/58 | 50 | 16 | 20 | 16 | 74 | |

Ogni morsa è completa di 3 ganasce fisse, 2 ganasce mobili doppie di spinta, 1 chiave a "T", tasselli di posizionamento e 4 arresti laterali.
 Each vise is supplied with 3 fixed jaw and 2 movable double clamping jaws, one "T" wrench, 1 pair of positioning key nuts and 4 workstops.
 Chaque étau est fourni avec 3 mors fixes, 2 mors mobiles de serrage, 1 clé en T, tasseaux de positionnement et 4 butées latérales.
 Jeder Schraubstock mit 3 festen Backe und mit 2 (festen) beweglichen Backen, einem "T"-Inbusschlüssel, Nutensteinen und 4 verstellbaren Werkstückanschlägen geliefert.

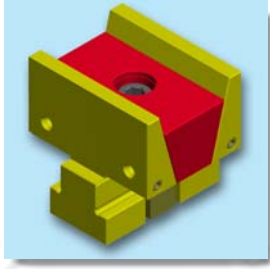


Esempi di combinazioni
 Typical arrangements
 Exemples de combinaisons
 Montagebeispiel


| | | mm | A | B ^{-0,02} | N° pezzi / Number of pieces / Numero de pièces / Nr Stueckenzahl | | | | | | | | | | |
|------|------|-----|-----|--------------------|--|-----|----|----|-----|-----|---|---|---|----|---|
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| TIPO | SIZE | 1 | 300 | 50 | 174 | 87 | 28 | 21 | \ | \ | \ | \ | \ | \ | \ |
| | | 400 | 50 | 274 | 137 | 62 | 46 | 19 | 1,5 | \ | \ | \ | \ | \ | \ |
| | | 500 | 50 | 374 | 185 | 95 | 71 | 39 | 18 | 2,5 | \ | \ | \ | \ | \ |
| | | 600 | 50 | 474 | 237 | 128 | 96 | 59 | 34 | 15 | 3 | \ | \ | \ | \ |
| TIPO | SIZE | 2 | 400 | 75 | 242 | 121 | 44 | 6 | \ | \ | \ | \ | \ | \ | \ |
| | | 500 | 75 | 342 | 171 | 78 | 31 | 35 | \ | \ | \ | \ | \ | \ | \ |
| | | 600 | 75 | 442 | 221 | 111 | 56 | 23 | 7 | \ | \ | \ | \ | \ | \ |
| | | 700 | 75 | 542 | 271 | 144 | 81 | 43 | 18 | 2 | \ | \ | \ | \ | \ |

APERTURA MASSIMA
 IN RELAZIONE AL NUMERO DEI PEZZI
 MAX OPENING ACCORDING
 TO PIECES TO BE CLAMPED
 OUVERTURE MAXI PAR RAPPORT
 AU NOMBRE DE PIECES
 DIE MAXIMALE SPANNWEITE RICHTET
 SICH NACH DER ANZAHL DER ZU
 SPANNENDEN WERKSTÜCKE.


Art. 613



Art. 613A




Art. 613E

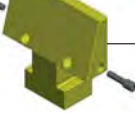


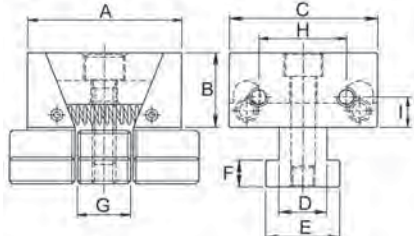
Gruppo ganascia mobile di spinta doppia
 Double clamping movable jaw system
 Mors mobile à double serrage
 Bewegliche Doppelbacke

Art. 613D



Art. 613A





| | | mm | A | B | C | D | E | F | G | H | I |
|------|------|----|-------|----|----|----|----|----|----|----|----|
| TIPO | SIZE | 1 | 44/50 | 25 | 49 | 14 | 22 | 9 | 13 | 30 | 38 |
| | | 2 | 52/58 | 40 | 74 | 22 | 35 | 15 | 15 | 50 | 50 |

MORSE E CUBI SERIE "MULTIFLEX"

"MULTIFLEX" VISES AND CUBES SERIES

TOURS ET ETAUX SERIE "MULTIFLEX"

"MULTIFLEX" SCHRAUBSTOCK- UND AUFSPANNSYSTEME



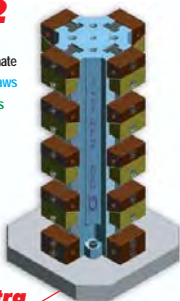
Art. 602

Art. 602

Con ganasce lisce o zigrinate
With smooth or serrated jaws
Avec mors lisses et striés
Mit glatten oder verzahnten Backen

| |
|-----------|
| N° 1 603 |
| N° 4 604 |
| N° 16 605 |

Art. 828 extra

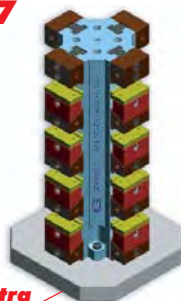


Art. 607

Con ganasce a gradino
With step jaws
Avec mors à gradins
Mit Stufenbacken

| |
|-----------|
| N° 1 603 |
| N° 4 608 |
| N° 16 609 |

Art. 828 extra

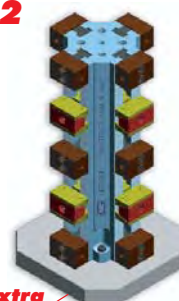


Art. 612

Con ganasce doppie
With double jaws
Avec mobiles doubles
Mit Doppelbacken

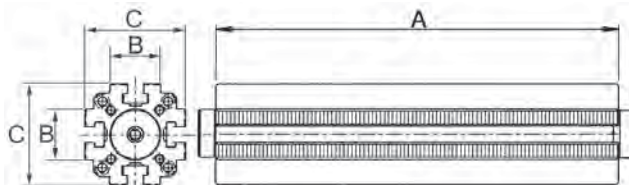
| |
|-----------|
| N° 1 603 |
| N° 12 604 |
| N° 8 613 |

Art. 828 extra



Art. 603

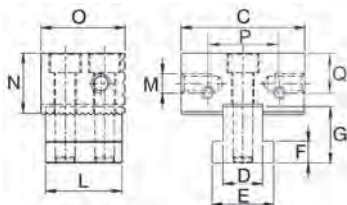
Corpo base cubo
Vise base body
Corps de base
Grundkörper



| | mm | A | B ^{-0,02} | C ^{-0,02} |
|-------------------|-----|----|--------------------|--------------------|
| TIPO SIZE 1 | 300 | 50 | 100 | |
| | 400 | 50 | 100 | |
| | 500 | 50 | 100 | |
| | 600 | 50 | 100 | |
| TIPO SIZE 2 | 400 | 75 | 150 | |
| | 500 | 75 | 150 | |
| | 600 | 75 | 150 | |
| | 700 | 75 | 150 | |

Art. 604

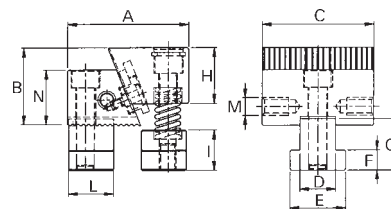
Ganascia fissa
Fixed jaws
Mors fixe
Feste Backe



| TIPO SIZE | mm | C | D | E | F | G | L | M | N | O | P | Q |
|--------------|----|----|----|----|----|----|-----|----|----|----|----|---|
| 1 | 49 | 18 | 28 | 10 | 25 | 30 | M10 | 25 | 38 | 30 | 18 | |
| 2 | 74 | 22 | 35 | 14 | 33 | 45 | M10 | 40 | 50 | 50 | 30 | |

Art. 605

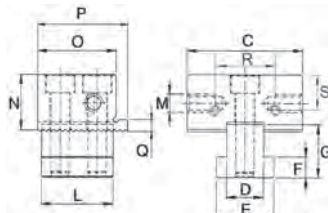
Gruppo ganasce mobile e fissa a pettine
Fixed and movable jaw comb system
Mors mobile et fixe avec guidage sur stries
Feste und bewegliche Backe mit Kammsystem



| TIPO SIZE | mm | A | B | C | D | E | F | G | H | I | L | M | N | P | Q |
|--------------|-------|-------|----|----|----|----|----|----|----|----|-----|----|----|----|---|
| 1 | 54/58 | 35/25 | 49 | 18 | 28 | 10 | 25 | 25 | 18 | 20 | M10 | 25 | 30 | 18 | |
| 2 | 70/75 | 53/40 | 74 | 22 | 35 | 14 | 33 | 40 | 26 | 26 | M10 | 40 | 50 | 30 | |

Art. 608

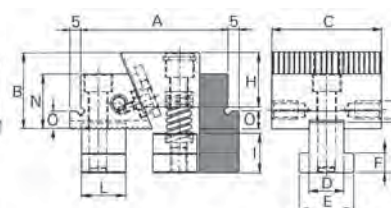
Ganascia fissa con gradino
Fixed jaw with step
Mors fixe à gradin
Feste Backe mit Stufe



| TIPO SIZE | mm | C | D | E | F | G | L | M | N | O | P | Q |
|--------------|----|----|----|----|----|----|-----|----|----|----|---|---|
| 1 | 49 | 18 | 28 | 10 | 25 | 30 | M10 | 25 | 38 | 43 | 5 | |
| 2 | 74 | 22 | 35 | 14 | 33 | 45 | M10 | 40 | 50 | 55 | 8 | |

Art. 609

Gruppo ganasce mobile e fissa a pettine con gradino
Fixed and movable jaw comb system with step
Mors mobile avec guidage sur stries et à gradin
Feste und bewegliche Stufenbacke mit Kammsystem



| TIPO SIZE | mm | A | B | C | D | E | F | G | H | I | L | M | N | O |
|--------------|-------|-------|----|----|----|----|----|----|----|----|-----|----|---|---|
| 1 | 55/58 | 35/25 | 49 | 18 | 28 | 10 | 25 | 25 | 18 | 20 | M10 | 25 | 5 | |
| 2 | 70/75 | 46/40 | 74 | 22 | 35 | 14 | 33 | 40 | 26 | 26 | M10 | 40 | 8 | |

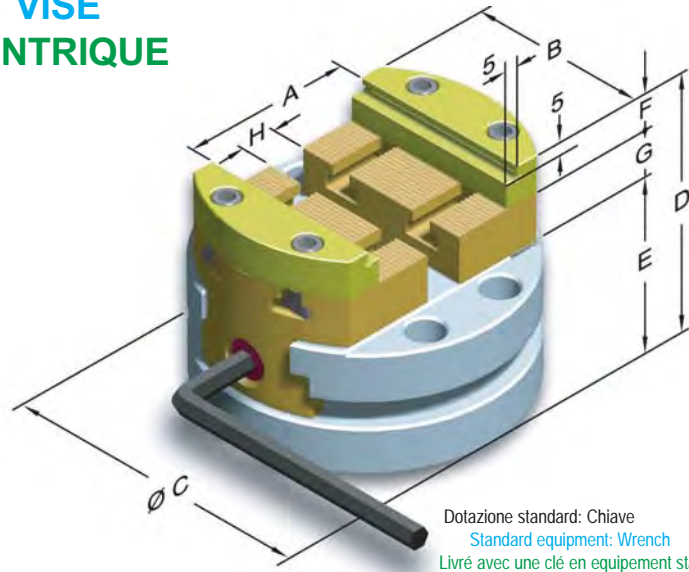
MORSA AUTOCENTRANTE ECCENTRICA

SELF-CENTERING ECCENTRIC VISE

ETAU AUTO CENTRANT EXCENTRIQUE

SELBSTZENTRIERENDER EXZENTER-SCHRAUBSTOCK

- Possibilità di disassamento centraggio per multipli di 2 mm
- Costruzione completamente in acciaio temprato e rettificato HRc60
- Precisione entro 0,015 mm
- Minimi ingombri (Costruzione solida e compatta)
- Serie di ganasce intercambiabili
- Jaw adjustment in steps of 2 mm
- Precision hardened (HRc60) and ground construction
- Gripping accuracy within 0,015 mm
- Solid, rigid construction for minimum deflection
- Series of interchangeable jaws available
- Possibilità d' excentrazione par pas de 2 mm
- Construction entièrement en acier trempé et rectifié HRc60
- Précision d' auto centrage inférieure à 0,015 mm
- Encombrements au minimum (Construction solide et compacte)
- Une vaste gamme de mors interchangeables
- Spannbacken in Stufen von 2 mm verstellbar
- Einsatzstahl gehärtet auf 60 HRC
- Genauigkeit innerhalb 0,015 mm
- Robuste Konstruktion für maximale Stabilität
- Serie von Tauschbacken verfügbar



Dotazione standard: Chiave
 Standard equipment: Wrench
 Livré avec une clé en équipement standard
 Standardausstattung: Schlüssel

Art. 640

Azionamento manuale - Bloccaggio meccanico
 Manual operation - Mechanical clamping
 Commande manuelle - Blocage mécanique
 Manuelle Ausführung - Mechanische Klemmung

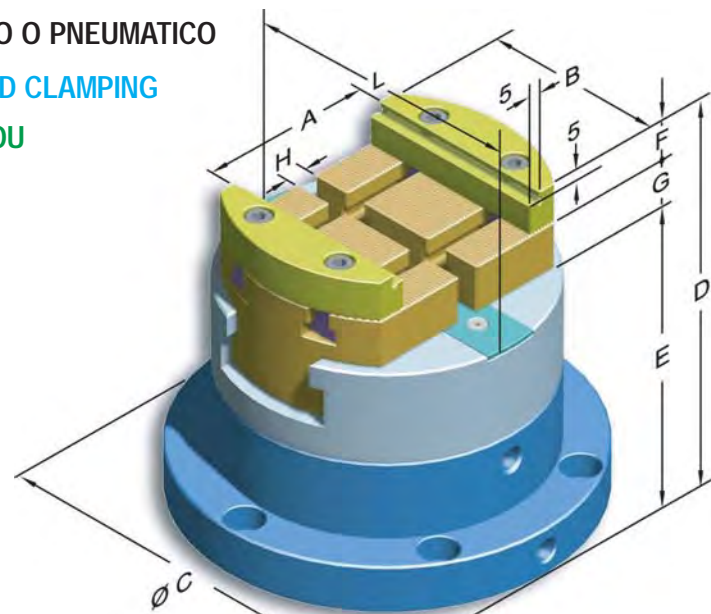
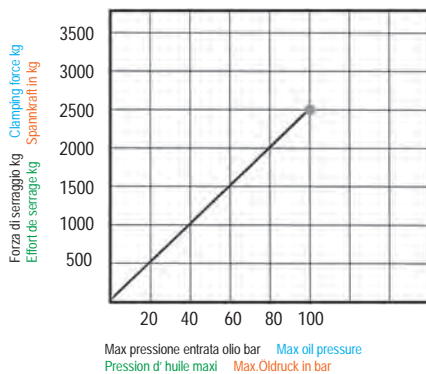
| | mm | A | B | C | D | E | F | G | H |
|--------------|----|-----|----|-----|-----|----|----|----|----|
| TIPO SIZE | 1 | 74 | 74 | 120 | 85 | 50 | 15 | 20 | 20 |
| | 2 | 104 | 99 | 160 | 115 | 70 | 20 | 25 | 40 |

AZIONAMENTO E BLOCCAGGIO IDRAULICO O PNEUMATICO

PNEUMATIC OR HYDRAULIC CONTROL AND CLAMPING

SERRAGE ET CONTROLE HYDRAULIQUE OU PNEUMATIQUE

PNEUMATISCHE ODER HYDRAULISCHE SPANNUNG



Art. 670

Corsa totale slitta: 12 mm
 Corsa massima cilindro: 10 mm
 Area effettiva del cilindro in chiusura: cm² 31,4
 Area effettiva del cilindro in apertura: cm² 44

Total slide stroke: 12 mm
 Maximum cylinder stroke: 10 mm
 Clamping effective cylinder area: 314 sq mm
 Opening effective cylinder area: 44 sq mm

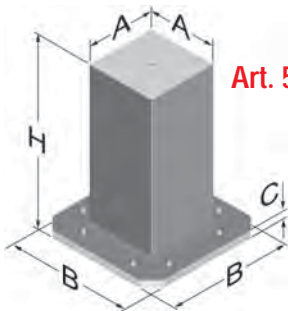
Course totale de serrage: 12 mm
 Course maxi du vérin: 10 mm
 Surface effective du vérin en serrage: 314 cm²
 Surface effective du vérin en desserrage: 44 cm²

| | mm | A | B | C | D | E | F | G | H | L |
|--------------|----|----|----|-----|-----|-----|----|----|----|-----|
| TIPO SIZE | 1 | 74 | 74 | 163 | 120 | 85 | 15 | 20 | 8 | 120 |
| | 2 | 89 | 99 | 198 | 158 | 113 | 20 | 25 | 10 | 155 |

Max. Spannweg: 12 mm
 Max. Zylinderweg: 10 mm
 Spannen: Beaufschlagte Zylinderfläche 314 cm²
 Öffnen: Beaufschlagte Zylinderfläche 44 cm²

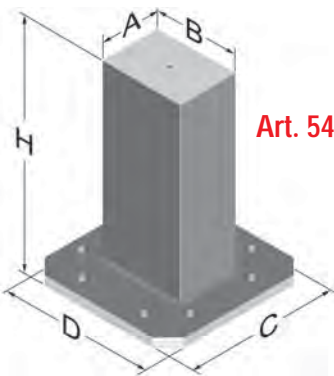
PORTAPEZZI MODULARI - Cubi, Spalle, Squadre, Piastre, Pallets
MODULAR TOMBSTONE - Cubes, Crankwebs, Angle Plates, Plates, Pallets
PORTE PIECES MODULAIRES - Cubes, Tés, Equerres, Plaques, Palettes
MODULARE AUFSPANNELEMENTE - Würfel, Profile, Winkel, Platten, Paletten

Ghisa monoblocco stabilizzata
 Solid cast iron heat treated
 Fonte monobloc stabilisée
 Wärmebehandelter Vollguß



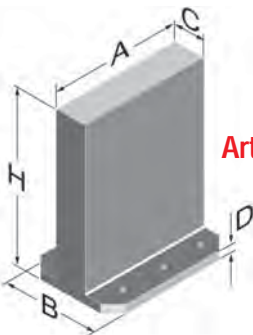
Art. 53

| A | B | C | D | H | kg |
|-----|-----|----|---|-----|-----|
| 200 | 350 | 40 | - | 370 | 124 |
| 250 | 400 | 40 | - | 450 | 179 |
| 250 | 400 | 40 | - | 550 | 225 |
| 250 | 500 | 40 | - | 610 | 250 |
| 250 | 500 | 40 | - | 650 | 280 |
| 350 | 500 | 40 | - | 550 | 330 |
| 350 | 630 | 40 | - | 820 | 470 |
| 450 | 630 | 40 | - | 650 | 460 |
| 550 | 750 | 40 | - | 850 | 760 |



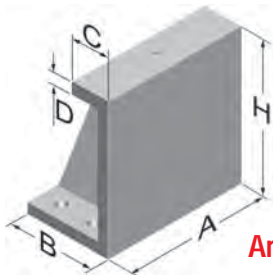
Art. 54

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| 300 | 200 | 450 | 300 | 360 | 158 |
| 350 | 250 | 400 | 400 | 550 | 270 |
| 350 | 250 | 500 | 500 | 750 | 360 |
| 300 | 200 | 400 | 400 | 550 | 215 |
| 450 | 350 | 630 | 630 | 650 | 495 |



Art. 55

| | | | | | |
|-----|-----|-----|----|-----|-----|
| 350 | 250 | 80 | 50 | 415 | 120 |
| 400 | 350 | 100 | 50 | 525 | 230 |
| 450 | 350 | 100 | 50 | 525 | 250 |
| 550 | 350 | 100 | 60 | 650 | 354 |
| 500 | 350 | 100 | 60 | 625 | 314 |
| 450 | 350 | 150 | 50 | 610 | 295 |
| 550 | 350 | 150 | 60 | 620 | 332 |
| 550 | 450 | 150 | 60 | 820 | 464 |
| 630 | 450 | 150 | 60 | 820 | 560 |
| 350 | 450 | 150 | 60 | 650 | 272 |



Art. 56

| | | | | | |
|-----|-----|-----|----|-----|-----|
| 400 | 330 | 150 | 40 | 510 | 200 |
| 450 | 330 | 150 | 40 | 460 | 180 |
| 500 | 230 | 100 | 40 | 360 | 129 |
| 550 | 330 | 150 | 40 | 560 | 250 |
| 650 | 330 | 150 | 40 | 660 | 314 |

Vedere ns. Listino Prezzi n° 9/2003 per gamma completa
 See our List price n° 9/2003 for complete range
 Voir n/Tarif n 9/2003 pour gamme complète
 Komplettes Angebot: Siehe Preisliste 9/2003

Chiedere quotazioni per costruzione in alluminio o altre leghe
 We will be glade to quote on request for aluminium or other alloy versions.
 Demander une offre pour les constructions en aluminium ou autres alliages
 Aluminium-und/oder andere Ausführungen auf Anfrage

Vedi a lica i alla agi a eg e e
 See a lica i he e age
 Via lica i la age ia e
 Siehe A e d ge a f de ch e Sei e

VERSIONI DISPONIBILI: **VERSIONS DISPONIBLES:**
 AVAILABLE AS: **LIEFERBAR WIE FOLGT:**

A

Sgrossati di fresa, in fusione di ghisa G30 integrale, con pareti spessore 43-45 mm circa, con doppio trattamento di distensione

G30 cast iron cube with 43-45 mm wall thickness.
 Rough milled double stress relieved heat treatment

En fonte G30 moulée, pré usinée, parois 43 à 45 mm environ, double stabilisation

Grob gefräst, vollständig aus G30 mit einer Wandstärke von 43-45 mm
 Wärmebehandelt - Spannungsfrei

B

Personalizzati con base di appoggio raschiata e interfacciato per fissaggio cubo alla Vs. macchina. 5° faccia superiore finita

Base hand scraped and tailored for direct clamping to users machine. Top face machined too.

Personalisé avec base rectifié et interfacé pour la fixation du cube sur votre machine. 5eme face supérieure finie.

Vorgefertigt für den Einsatz auf Ihrer Maschine
 Handgeschabt - 5Pkt. -Finish

C

Finiti con pareti spessore 38-40 mm circa. Tolleranza ±0,02 mm

Finished with 38-40 mm wall thickness. Tolerance ± 0,02

Usiné avec parois 38 à 40 mm environ. Tolérances ± 0,02 mm

Gefertig mit 38-40 mm Wandstärke. Toleranz ± 0,02

D

Per piastre riportate con pareti spessore 38-40 mm circa. Tolleranza ±0,02 mm

For modular plates with 38-40 mm wall thikness. Tolerance ± 0,02 mm

Pour plaques rapportées avec parois 38 à 40 mm environ. Tolérance ± 0,02 mm

Für Modularplatten. Mit 38-40 mm Wandstärke. Toleranz ± 0,02 mm

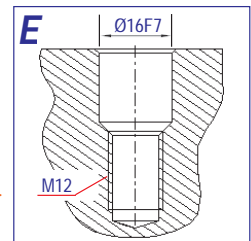
E

A reticolo con fori calibrati e filetti integrali
 Tolleranza ±0,02 con pareti spessore 38-40 mm circa. 5 facce

Grid style faces with calibrated hole and solid threads. Tolerance ± 0,02 with 38-40 mm wall thickness. Top face finish machined.

Avec une trame de trous calibrés et taraudés. Tolérances ± 0,02 mm avec parois 38 à 40 mm environ. 5 faces

Mit Raster, kalibrierten Bohrungen und Gewinden. 38-40 mm Wandstärke. Toleranz ± 0,02 5Pkt.-Finish



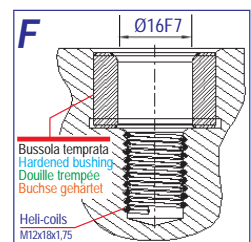
F

A reticolo con bussole di centraggio temprate e filetti riportati in acciaio inox. Tolleranza ±0,02 con pareti spessore 38-40 mm circa. 5 facce.

Grid style faces with bushes and stainless steel helicoils. Tolerance ± 0,02 with 38-40 mm wall thickness. Top face finish machined.

Avec un trame de douilles trempées rapportées et filets inox rapportés également parois 38 à 40 mm environ tolérances ± 0,02 mm. 5 faces

Mit Raster, Buchsen und Gewindeeinsätzen aus Stahl. 38-40 mm Wandstärke. Toleranz ±0,02. 5Pkt.-Finish



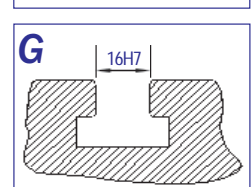
G

Con cave. Tolleranza ± 0.02 mm

Slotted type. Tolerance ± 0,02 mm

Avec rainures. Tolérances ± 0.02 mm

Mit T-Nuten. Toleranz ± 0,02 mm



E e i d i a l i c a i i
 E a l e f a l i c a i
 E e l e d a l i c a i
 A e d g b e i l e l e



Art. 53D

Cubo per piastre riportate con montate piastre e morse MULTIFLEX in verticale
 Cube for modular plates with MULTIFLEX vises and plates assembled vertically
 Cubes pour plaques modulaires avec des étaux MULTIFLEX et plaques assemblées verticalement
 Aufspannwürfel mit MULTIFLEX-Spannsystem



Morse XL doppie montate su spalla in orizzontale
 XL double vises assembled horizontally on crankweb
 EtauX XL doubles montés horizontalement sur profile en té
 XL-Doppelschraubstock horizontal auf einem Aufspannelement montiert



Art. 53D

Cubo per piastre riportate con montate piastre ed elementi modulari con sovraganasce
 Cube for modular plates with fixed and movable vise sections, stack type jaws and plates

Cube pour plaques modulaires équipées de mors fixe et mobile avec plaques montées

Würfel auf Modularplatte mit Schraubstock

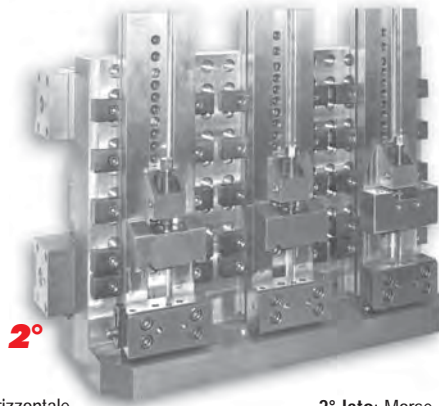


Art. 53G

Cubo con cave, con montate n° 8 morse doppie FMS in verticale
 Slotted cube with 8 double FMS vises mounted vertically
 Cube avec rainures et 8 étaux double FMS montés en vertical
 Aufspannwürfel mit Raster und 8 FMS-Doppelschraubstöcken vertikal montiert

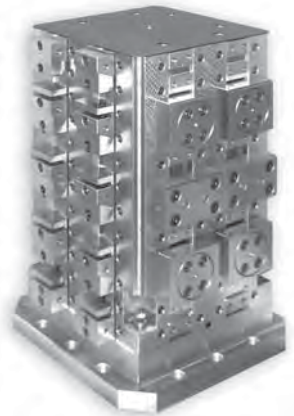
1° lato: Morse STD montate verticalmente
 1st side: STD vises vertically assembled
 1^{er} coté: EtauX STD montés verticalement
 1^{ste} Seite: STD-Schraubstock vertikal montiert

Sistema modulare multiplo
 Multi-modular system
 Systeme multi modulaire
 Multi-Modular system



2°

2° lato: Morse FMS montate orizzontalmente
 2nd side: FMS vises mounted horizontally
 2^{me} coté: EtauX FMS montés horizontalement
 2^{te} Seite: FMS-Schraubstock horizontal montiert



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