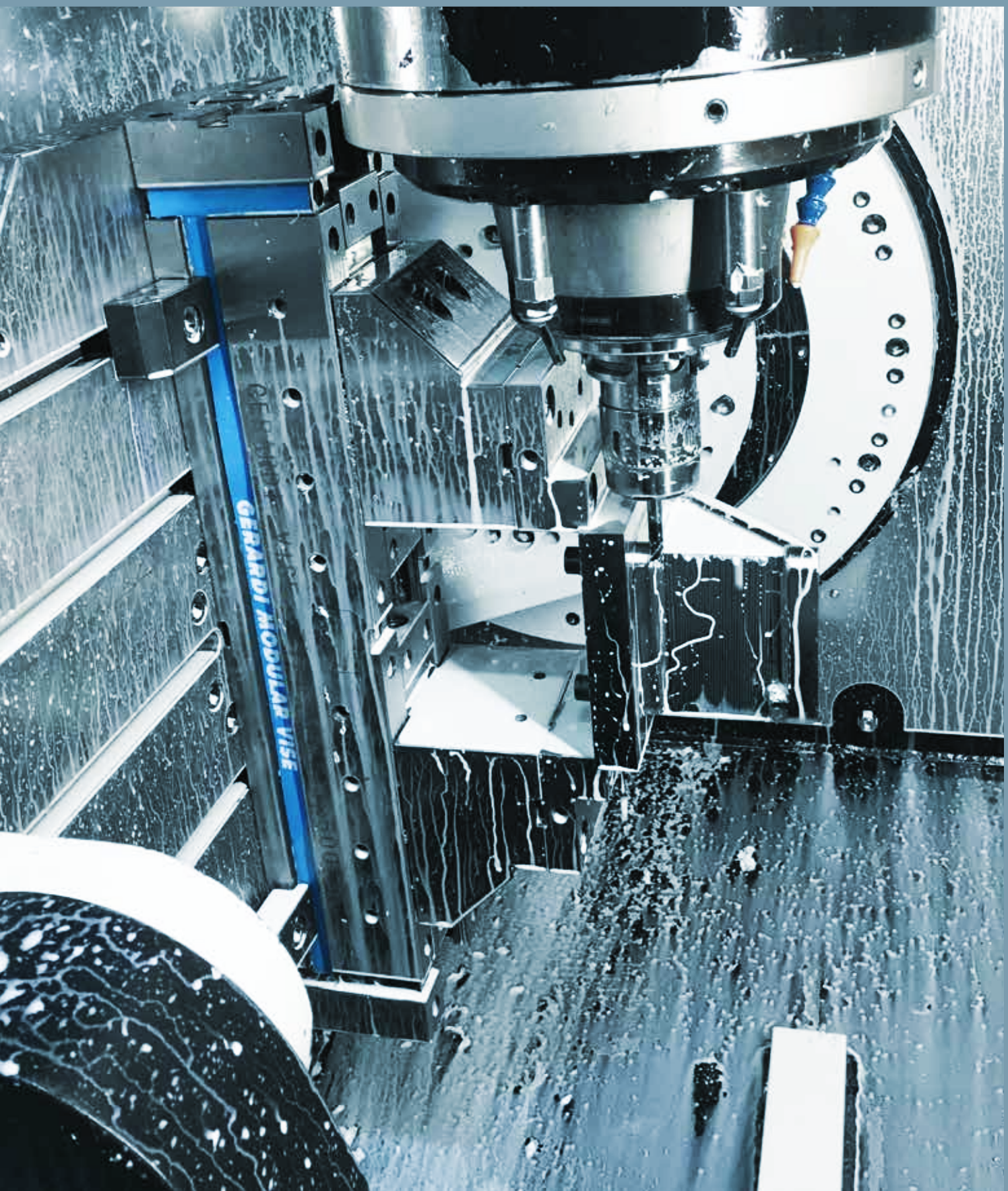
GERARDI

FMS Series
MORSE & CUBI-MORSA - VISES & VISE-TOWERS



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

NEW!

Art.860 T.1x300

Art. 983

Valigetta di campionatura morsa Art.860 T.1x300
Sample kit case Art.860 T.1x300 vise

Cod.	0.98.30000

All'Interno - Inside:

Art.810L	Art. 806B	Art.297 16/18
Art. 807	Art. 806C	Art.850H
Art. 810X	Art.806D	Art.370 T1 Std
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SIMBOLOGIA DATI TECNICI
TECHNICAL DATA ICONS

GANASCE JAWS		Piane Straights	A gradino With step	Oscillanti a gradino Floating step	Oscillanti regolabili Floating adjustable	Alte e rialzate High and raised	Prismatiche Prismatic
PIASTRE GANASCE JAW PLATES			Discendente Pull down	Piana Straight	Cambio rapido manuale Quick manual change	GRIP GRIP	Inserti GRIP Inserti GRIP
POSSIBILITÀ DI POSSIBILITY OF						Predisposizione Zero Point Zero Point Ready	Cubi-morsa Vise tower
PAGINE PAGES			Lavorazioni a 5 assi 5 axis machining	Accessori & Ricambi Accessories & Spare Parts	Istruzioni corretto utilizzo Instruction for a proper use	Diagrammi forze di serraggio Clamping force diagrams	Sistema Idraulico Hydraulic System

SISTEMA MODULARE FLESSIBILE
FLEXIBLE MODULAR SYSTEM

3 MORSE IN VISES IN 1

Morse e Cubi-Morsa serie FMS - Morse Singole, Doppie, Autocentranti & centinaia di ganasce disponibili

FMS vises and Vise-Towers series - Single, Double and Self-centering Vises and hundreads of jaws available

Di speciale interesse per gli utilizzatori di centri di lavoro orizzontali e verticali le morse FMS presentano le stesse caratteristiche costruttive illustrate per le morse della serie STD, XL, gli elementi modulari e gli accessori (accuratamente rettificate in acciaio ad alta resistenza cementato e temprato con durezza 60 HRC).
Nata espressamente per i centri di lavoro, la gamma FMS permette ottimizzazioni di serraggio con riferimenti precisi in spazi contenuti, usure inesistenti e rigidità impensabile (spessore della base raddoppiato), possibilità di bloccare più pezzi contemporaneamente con l'ausilio di sistemi meccanici, pneumatici, elettrici o idraulici. Tutte sono disponibili/predisposte sia per piazzamenti verticali che orizzontali. Ganasce da 75 a 190 mm. Serraggi di qualsiasi lunghezza.

La caratteristica (Brevettata) che meglio contraddistingue questa serie di morse consiste nella possibilità di trasformare ogni morsa singola (cioè adibita al serraggio di un singolo pezzo) in una morsa autocentrante con bloccaggio concentrico dall'esterno all'interno e viceversa e in morsa doppia tramite la semplice sostituzione delle ganasce sul corpo base universale. Un semplice e rapido accorgimento permetterà quindi le seguenti alternative di serraggio: un singolo pezzo lungo, due pezzi più piccoli oppure operare in modo auto-centrante. Tutto ciò ne suggerisce l'impiego in situazioni produttive caratterizzate da lotti di pezzi estremamente diversi fra loro riducendo tempi di set-up e garantendo un'accurata ripetibilità di posizionamento e quindi di precisione migliorando l'efficienza globale del sistema produttivo.

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 acces-sories (hardened HRC 60 & ground steel contruction throughout). Born to be dedicated to machining centres, FMS series of vises allow workholdings with perfect alignment in a space saving design, extremenly high wear resistence, with deflection reduced 2 times in respect to the STD modular vises (base thickness doubled), possibility to clamp more pieces simultaneously with mechanic, hydraulic pneumatic or electric devices. You can use them both for vertical and horizontal clamping without any price charge. Jaws widhts from 75 to 190 mm. Grip any work lenght.

The feature (Pathented) which identifies this line of vises consists in the possibility to trasform each single vise (1 piece clamping) in a self-centering vise with possibility to block from outside to inside and viceversa and in a double vise through the simple substitution of the jaws on the universal vise body base.
A simple and quick adjustment will then allow following clamping alternatives: single long piece, 2 smaller pieces or to operate in the self-centering way.
All that suggests their use in the production of lots of highly different pieces reducing set-up times and assuring very accurate repetability of workpiece position and precision, increasing the global efficiency of the production process.

ESTREMA VERSATILITÀ

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

EXTREME VERSATILITY

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

1 SISTEMA TERZA MANO

Per preserraggi in verticali

1 THIRD HAND SERVICE

For vertical workpieces preload

2 3 MORSE IN UNA

Ghiera per trasformazione morsa da doppia in autocentrante e viceversa

2 3 VISES IN ONE

Nut for vise configuration resetting from double lo self-centering and viceversa

3 GANASCE MOBILI OSCILLANTI

Ganasce mobili oscillanti (per serraggio di pezzi irregolari)

3 STEP MOVABLE JAWS

Floating movable jaws (for irregular workpieces)

4 GANASCE A CAMBIO RAPIDO

Ganasce con piastre discendenti a cambio rapido manuale

4 COMB SYSTEM JAWS

Pull down jaw plates with comb system (quick hand change)

5 GANASCE MOBILI A GRADINO

Ganasce mobili a gradino (ideali per fori passanti)

5 STEP MOVABLE JAWS

Step movable jaws (for drilling holes through)

6 RIGIDITÀ CUBO MORSA

Cubo monoblocco

6 VISE TOWER RIGIDITY

Solid vise tower

7 GANASCIA FISSA DOPPIA

Ganasce centrali fisse doppie con gradino piccolo e grande

7 DOUBLE FIXED JAWS

Central double fixed jaws with small and large step

8 SLITTE MORSA

Slitte destre e sinistre lunghe quanto il corpo base con piu chiavette per ganasce mobili

8 VISE SLIDES

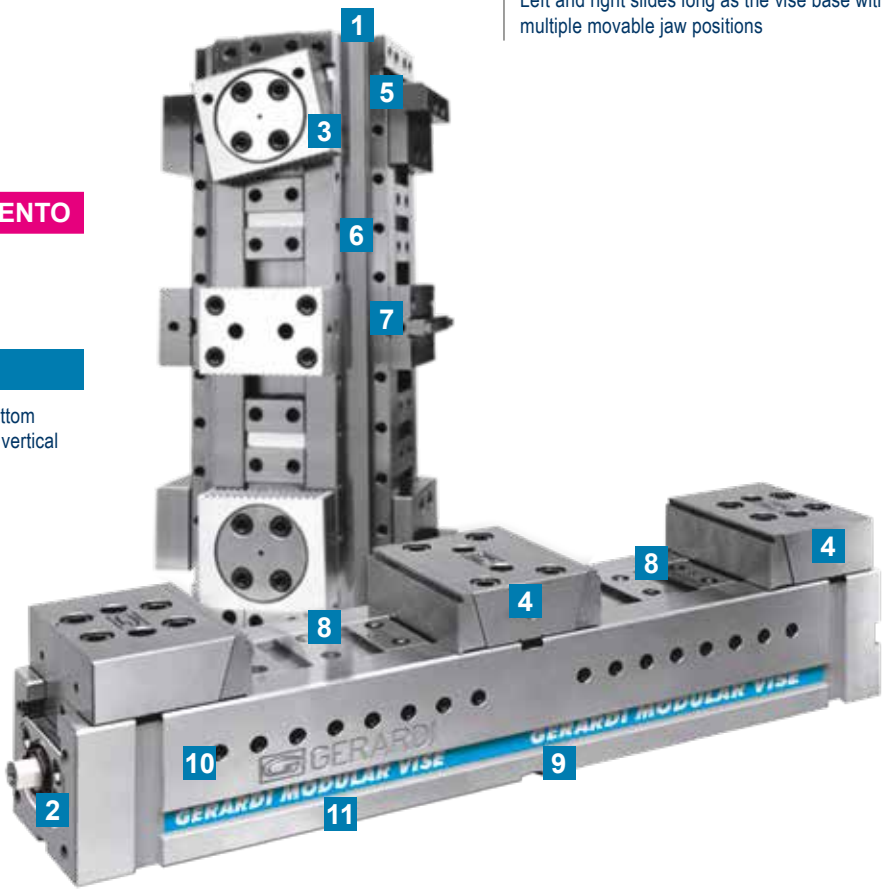
Left and right slides long as the vise base with multiple movable jaw positions

9 CHIAVETTE di POSIZIONAMENTO

Chiavette longitudinali e trasversali sia sulla base, per posizione orizzontale,che in testa per posizione verticale

9 POSITIONING KEYWAYS

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



10 VITE PRINCIPALE

All' interno vite principale (completamente protetta) con filetto destro e sinistro

10 MAIN SPINDLE

Inside (completely protected) main spindle with left and right thread

11 RIGIDITÀ MORSA

Base con una sezione doppia per garantire una maggiore rigidità

11 VISE BASE RIGIDITY

Higher vise base in order to guarantee a batter rigidity

TRE MORSE IN UNA
THREE VISES IN ONE

3 MORSE IN VISES IN 1

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

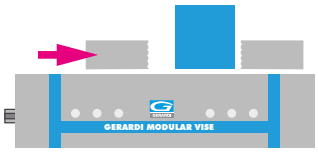
Buy the base body. A Versatile solution for present and future machining !

CORPO BASE Art.855
BASE BODY Art.855

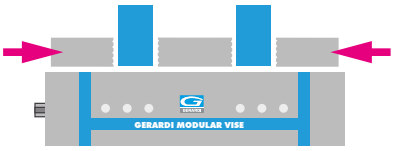
Modulo base universale
CENTINAIA DI GANASCE DISPONIBILI !!

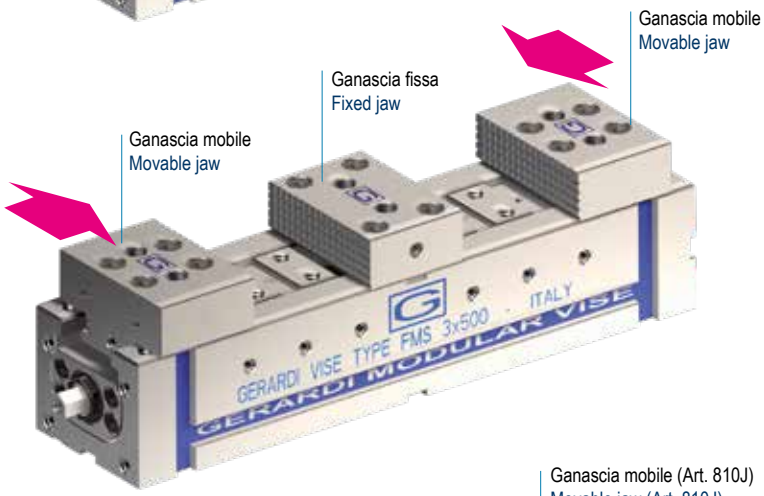
Universal vise body module
HUNDREDS OF JAWS AVAILABLE !!

SERRAGGI SINGOLI
SINGLE CLAMPING

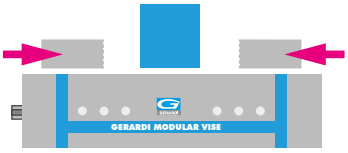


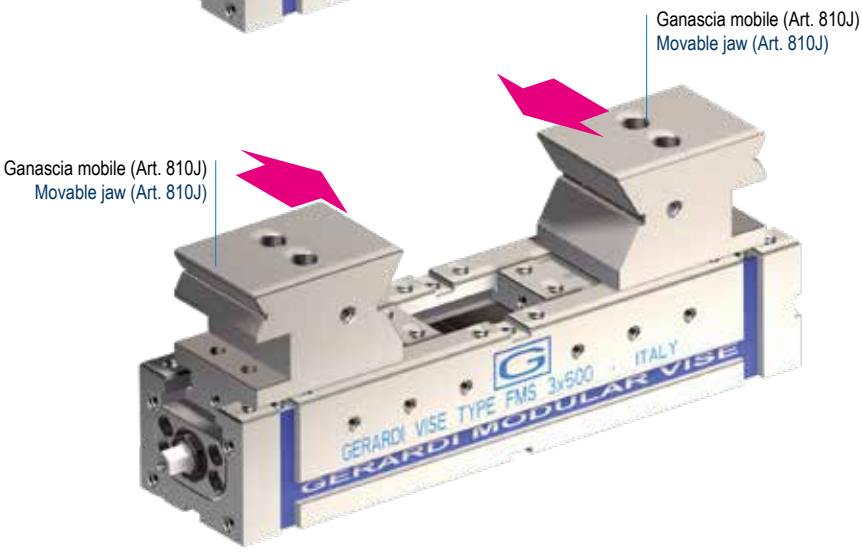
SERRAGGI DOPPI
DOUBLE CLAMPING



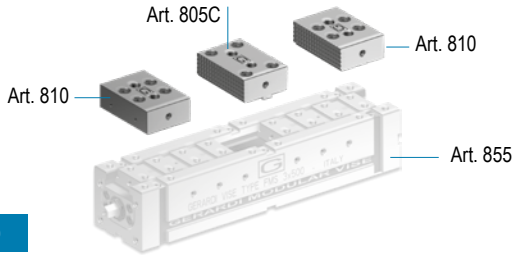


AUTOCENTRANTE
SELF-CENTERING

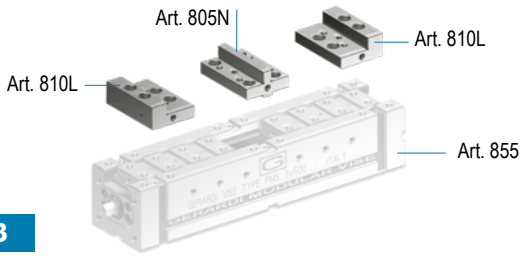




VERSIONI PER BLOCCAGGI DOPPI
DOUBLE CLAMPING CONFIGURATION



Art. 860



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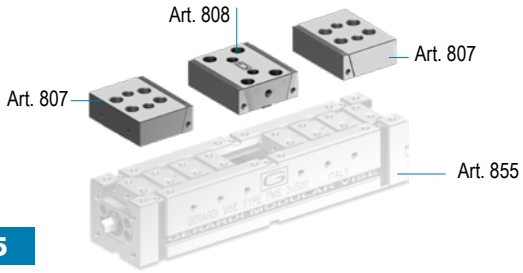

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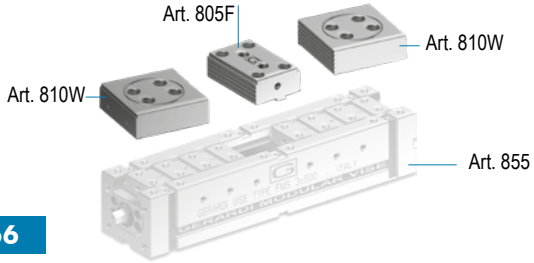
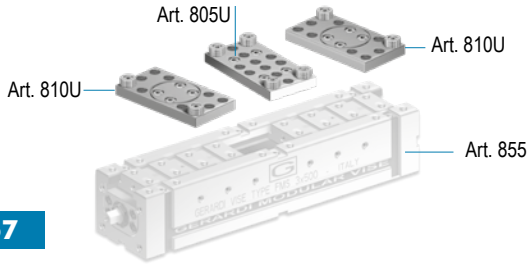


Art. 866



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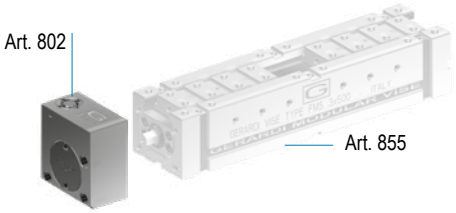
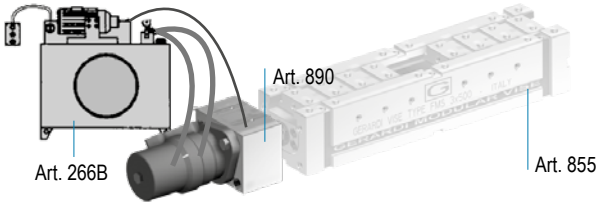
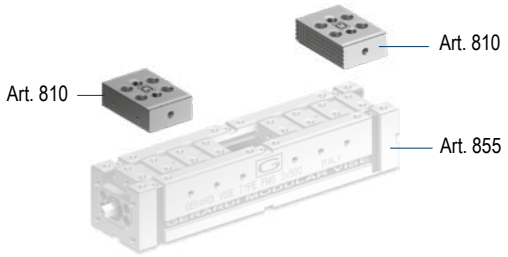


(Art. 855 + 802)
Art. 855D

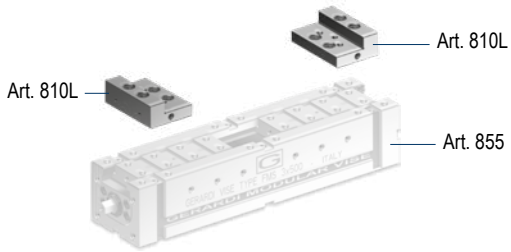


Art. 855F (Art. 855 + 890 + 266B)

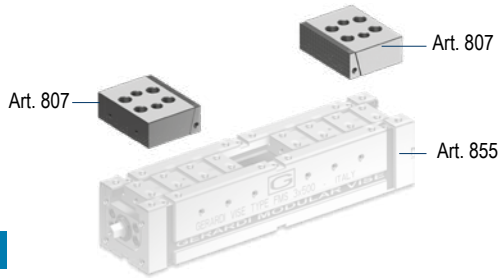
VERSIONI AUTOCENTRANTI
SELF-CENTERING TYPE



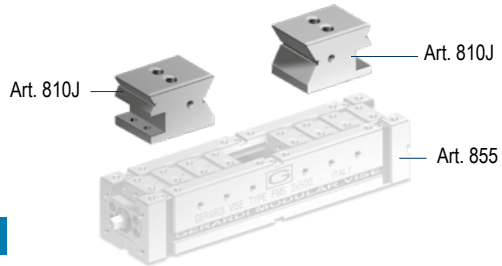
Art. 860



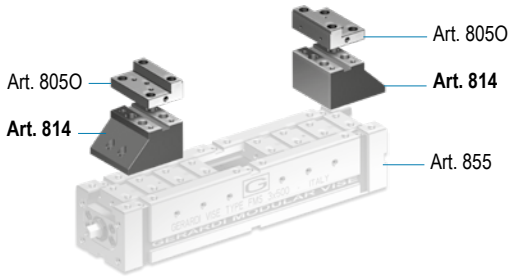
Art. 863



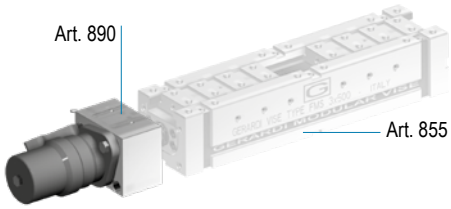
Art. 865



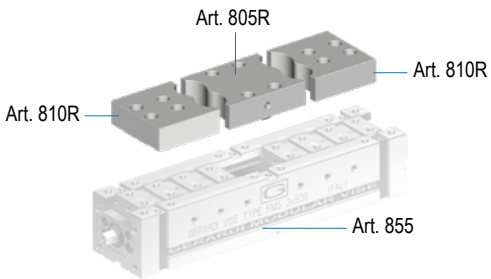
Art. 870



Art. 868

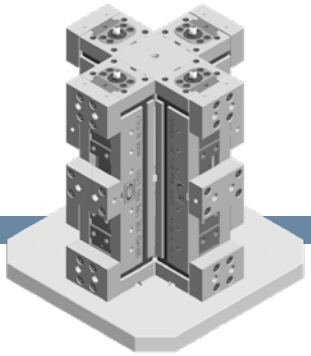


(Art. 855 + 890)
Art. 855E



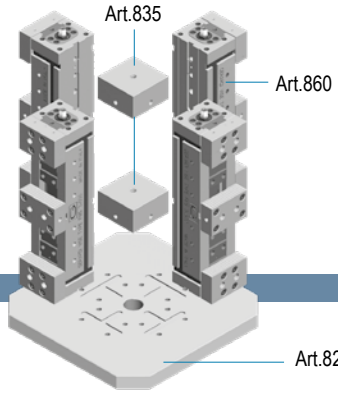
CUBI DI MORSE MONTATI A CROCE O DORSO A DORSO
VISE TOWERS CROSS OR BACK TO BACK MOUNTED

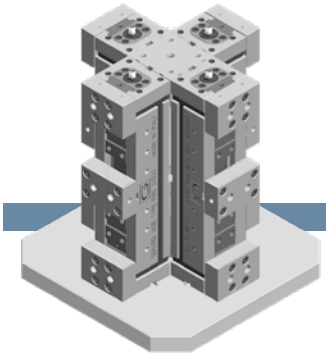
Art.850P (Pag - Page 5.61)



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

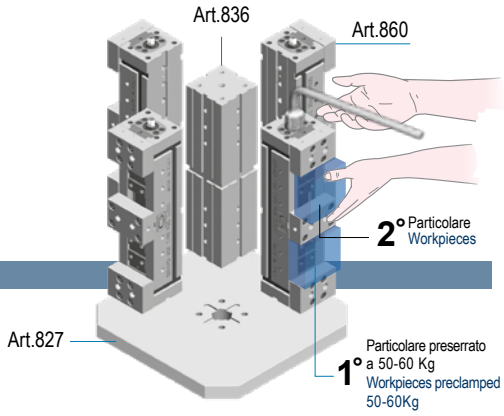
N° 4 FMS VISES
cross-mounted on base plate (Art. 827)
with spacers (Art. 835)



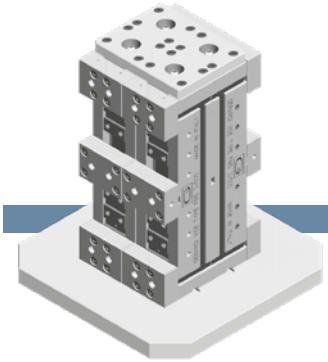


N° 4 MORSE FMS
montate a croce su piastra base (Art. 827)
con supporto centrale (Art.836)

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

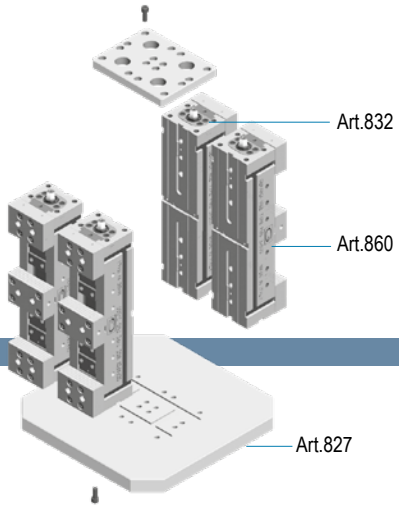


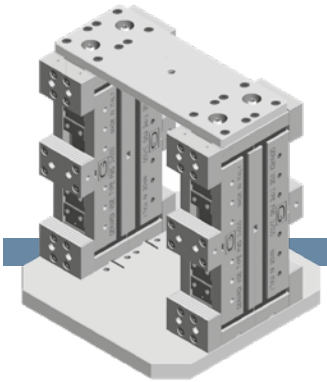
MECCANISMO TERZA MANO INCLUSO
THIRD HAND DEVICE INCLUDED



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

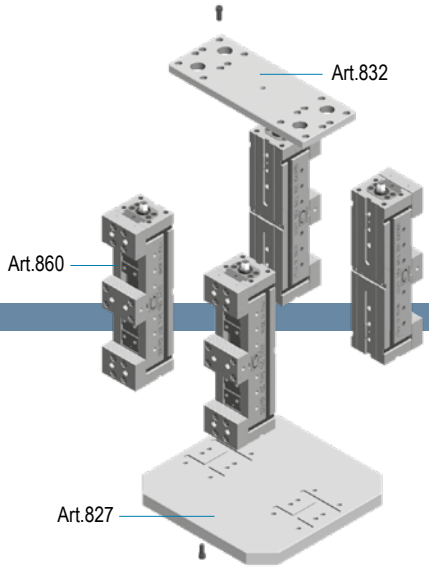
N° 4 FMS VISES
cross-mounted back-to-back,side by side, on base
plate (Art. 827) with connecting plate (Art. 832)





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

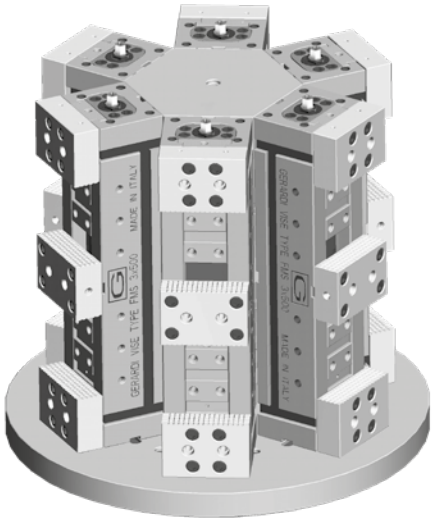
N° 4 FMS VISES
cross-mounted back-to-back,on base plate
(Art. 827) with connecting plate (Art. 832)

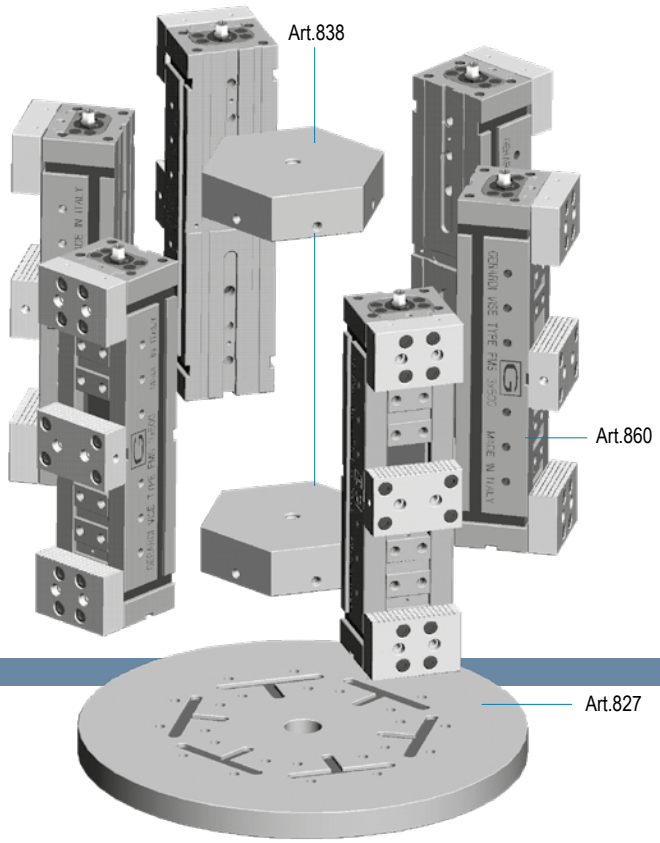


Montaggio ed allineamento morsa con distanziali, supporto centrale o piastra di collegamento
Vise and alignement mounted with spacers, center support or connecting plate

CUBI DI MORSE MONTATI VERTICALMENTE
VISE TOWERS VERTICALLY ASSEMBLED

Art.850P (Pag - Page 5.70)

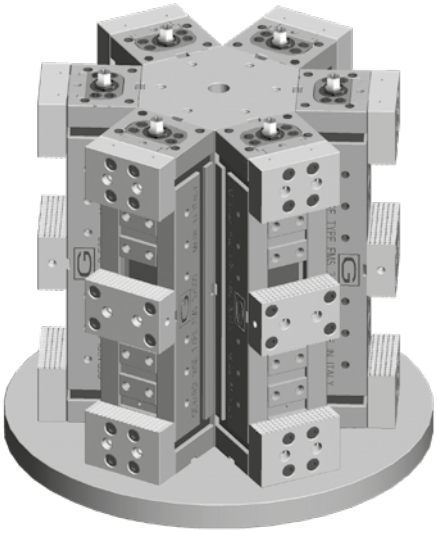


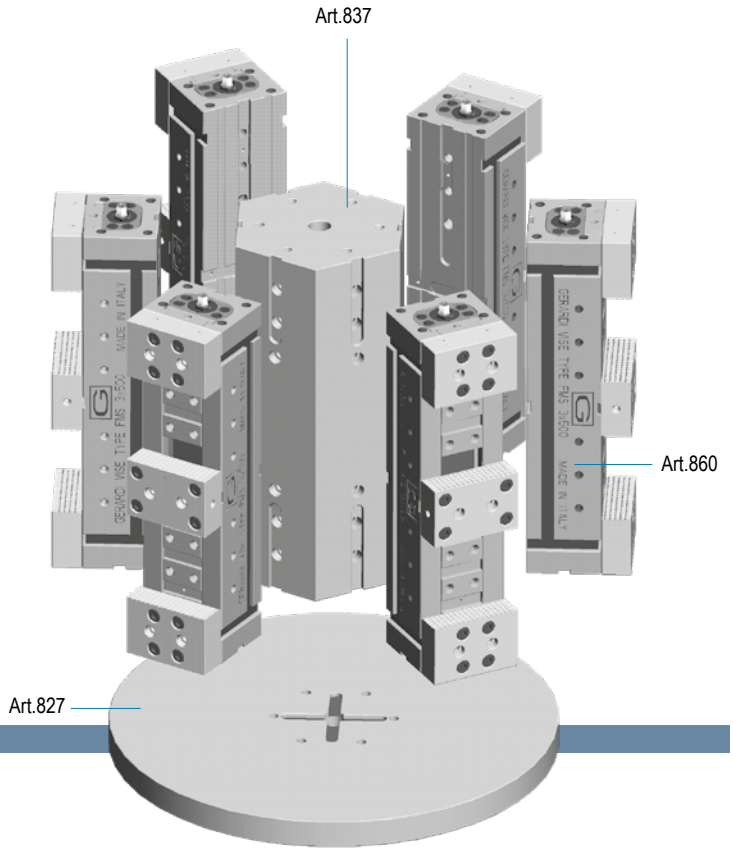


N° 6 morse FMS
montate verticalmente su piastra base (Art. 827) con distanziali esagonali (Art. 838)

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

MECCANISMO TERZA MANO INCLUSO
THIRD HAND DEVICE INCLUDED





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

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

Montaggio ed allineamento morsa con distanziali, supporto centrale o piastra di collegamento .
Vise and alignement mounted with spacers, center support or connecting plate

5

Tipo (grandezza) morsa / Vise type (size)		1		2				3	
	kN	25 kN		25 kN				30 kN	
Apertura massima fra le slitte / Maximum opening between slides	A	56	68	96	116	136	156	136	136
	C	70		90				100	
	D	200 + 32	300 + 32	300	400	500	600	400	500
	E	249	349	320	420	520	620	425	525
	G	75		95				125	
	R	74		94				124	
	S	69		89				99	
	T	72	116	102	142	182	222	132	182
	Y	277	377	360	460	560	660	470	570
	X	389	483	537	637	737	837	637	737
	kg	7	10	18	25	32	39	40	45
	Cod.	5.85.51200	5.85.51300	5.85.52300	5.85.52400	5.85.52500	5.85.52600	5.85.53400	5.85.53500

Art. 855

3 MORSE IN VISES IN 1

Modulo base universale
CENTINAIA DI GANASCE DISPONIBILI !!

Universal vise body module
HUNDREDS OF JAWS AVAILABLE !!

Art. 855D

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

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

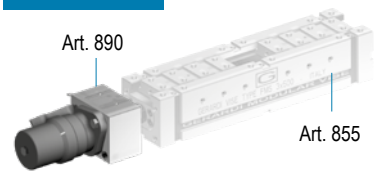
Art. 802

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

Chiave dinamometrica Art.357 **(Inclusa)** - Torque wrench Art.357 **(Included)**

Cod.	5.80.21000	5.80.22000	5.80.23000

Art. 855E

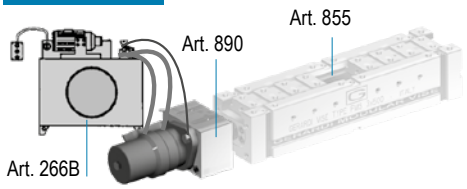


(Art. 855 + 890) Morsa + motore idraulico / Vise + hydraulic motor

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

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

Art. 855F

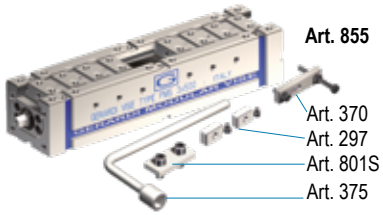


(Art. 855 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

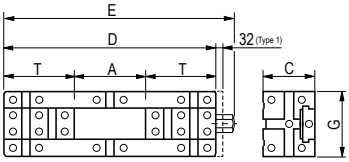
Cod.	5.85.5F120	5.85.5F130	5.85.5F230	5.85.5F240	5.85.5F250	5.85.5F260	5.85.5F340	5.85.5F350

Meccanica elettroidraulica completa di centralina idraulica apparecchiatura elettrica con pulsantiera

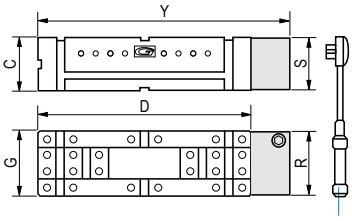
Dotazione standard:
- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:
- 2 workstops Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S

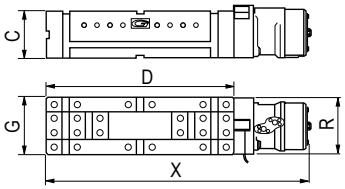


Art. 855

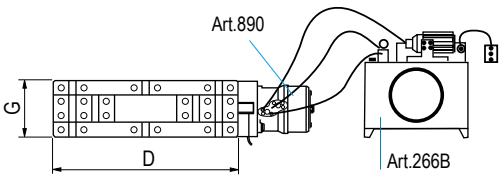


Art. 855D

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



Art. 855E



Art. 855F

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

Art. 855D

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

5.85.5D360	5.85.5D370	5.85.5D380	5.85.5D450	5.85.5D460	5.85.5D470	5.85.5D480	5.85.5D560	5.85.5D570	5.85.5D580	5.85.5D680	5.85.5D690	5.85.5D610

Art. 802

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

5.80.23000	5.80.24000	5.80.25000	5.80.26000

Art. 855E

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

5.85.5E360	5.85.5E370	5.85.5E380	5.85.5E450	5.85.5E460	5.85.5E470	5.85.5E480	5.85.5E560	5.85.5E570	5.85.5E580	5.85.5E680	5.85.5E690	5.85.5E610

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

Art. 855F

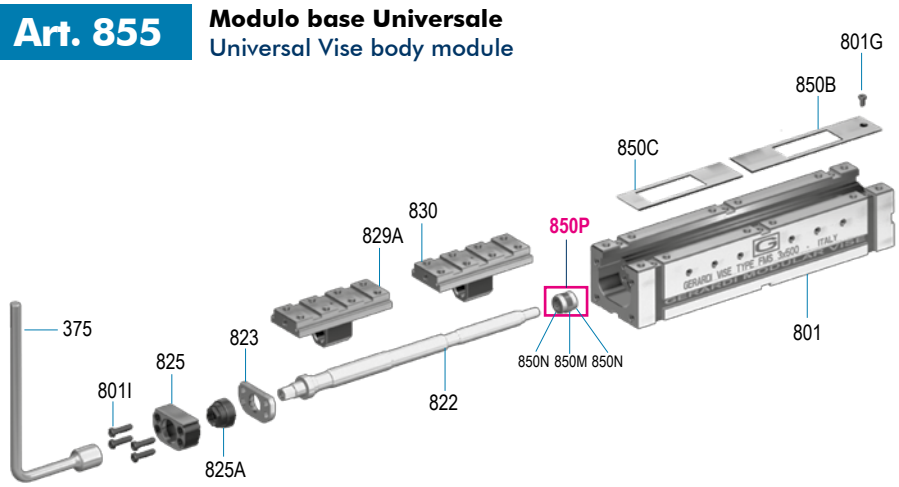
(Art. 855 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

5.85.5F360	5.85.5F370	5.85.5F380	5.85.5F450	5.85.5F460	5.85.5F470	5.85.5F480	5.85.5F560	5.85.5F570	5.85.5F580	5.85.5F680	5.85.5F690	5.85.5F610

Mechanical with elettrohydraulicpower-pack ready to work

Art. 855

Modulo base Universale
Universal Vise body module



Art.	Pag.
375	4.31
801	5.46
801G	5.61
801I	5.61
822	5.52
823	5.59
825	5.59
825A	5.61
829A	5.50
830	5.50
850B	5.61

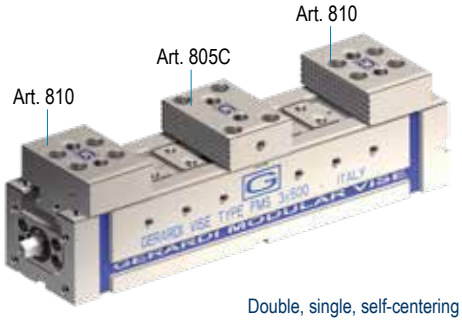
Art.	Pag.
850C	5.61
850P	5.61
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

5

Art. 860

3 MORSE IN VISES IN 1

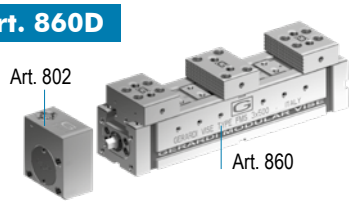
Morsa **FMS** doppia, singola, autocentrante con ganasce piane



Double, single, self-centering **FMS** vise with straight jaws

Tipo (grandezza) morsa / Vise type (size)	kN	1		2				3	
		25 kN		25 kN				30 kN	
Apertura massima / Maximum opening	A	2 x 16	2 x 66	2 x 54	2 x 104	2 x 154	2 x 204	2 x 74	2 x 124
	B	25		30				40	
	C	70		90				100	
	D	232	332	300	400	500	600	400	500
	E	249	349	320	420	520	620	425	525
	G	75		95				125	
	J	56		64				84	
	W	74		94				124	
	kg	9	12	22	29	35	42	44	49
	Cod.	5.86.01200	5.86.01300	5.86.02300	5.86.02400	5.86.02500	5.86.02600	5.86.03400	5.86.03500

Art. 860D



(Art. 860 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

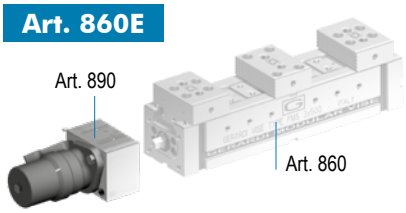
Cod.	5.86.0D120	5.86.0D130	5.86.0D230	5.86.0D240	5.86.0D250	5.86.0D260	5.86.0D340	5.86.0D350

Art. 802

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

Cod.	5.80.21000	5.80.22000	5.80.23000

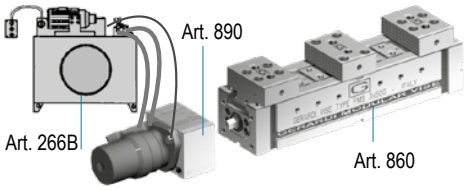
Art. 860E



(Art. 860 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	5.86.0E120	5.86.0E130	5.86.0E230	5.86.0E240	5.86.0E250	5.86.0E260	5.86.0E340	5.86.0E350

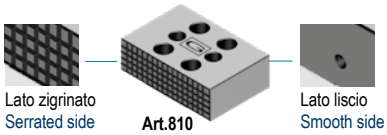
Art. 860F

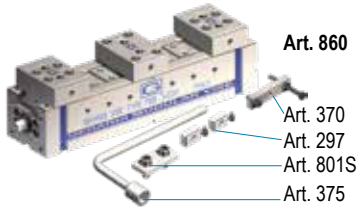


(Art. 860 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

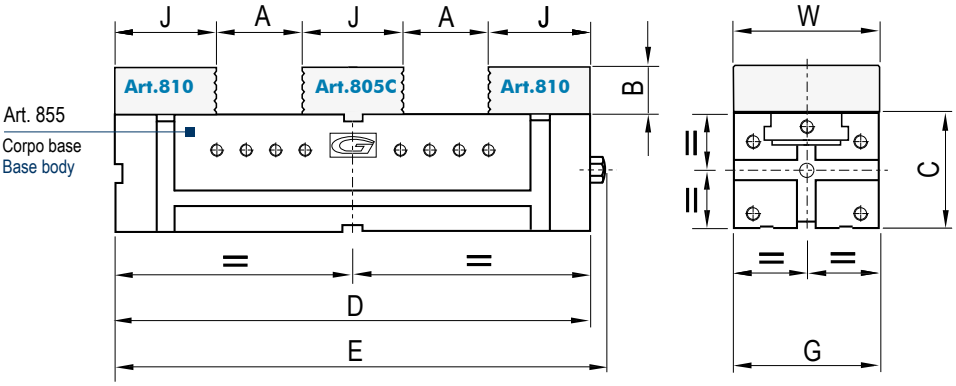
Cod.	5.86.0F120	5.86.0F130	5.86.0F230	5.86.0F240	5.86.0F250	5.86.0F260	5.86.0F340	5.86.0F350

Dotazione standard:
- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S





Standard equipment:
- 2 workstops Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN			4 30 kN				5 32 kN			6 32 kN		
2 x 174	2 x 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
40			50				60			60		
100			120				140			160		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
125			145				170			190		
84			98				108			108		
124			144				169			189		
54	59	64	71	79	88	96	130	140	150	210	230	250
5.86.03600	5.86.03700	5.86.03800	5.86.04500	5.86.04600	5.86.04700	5.86.04800	5.86.05600	5.86.05700	5.86.05800	5.86.06800	5.86.06900	5.86.06100

Art. 860D

(Art. 860 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

5.86.0D360	5.86.0D370	5.86.0D380	5.86.0D450	5.86.0D460	5.86.0D470	5.86.0D480	5.86.0D560	5.86.0D570	5.86.0D580	5.86.0D680	5.86.0D690	5.86.0D610

Art. 802

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

5.80.23000	5.80.24000	5.80.25000	5.80.26000

Art. 860E

(Art. 860 + 890) Morsa + motore idraulico / Vise + hydraulic motor

5.86.0E360	5.86.0E370	5.86.0E380	5.86.0E450	5.86.0E460	5.86.0E470	5.86.0E480	5.86.0E560	5.86.0E570	5.86.0E580	5.86.0E680	5.86.0E690	5.86.0E610

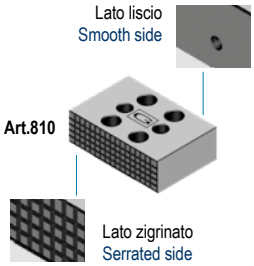
Art. 860F

(Art. 860 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

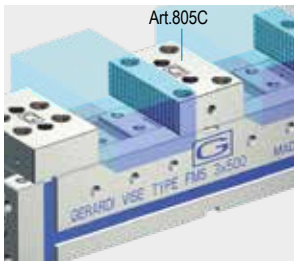
5.86.0F360	5.86.0F370	5.86.0F380	5.86.0F450	5.86.0F460	5.86.0F470	5.86.0F480	5.86.0F560	5.86.0F570	5.86.0F580	5.86.0F680	5.86.0F690	5.86.0F610

Art. 860

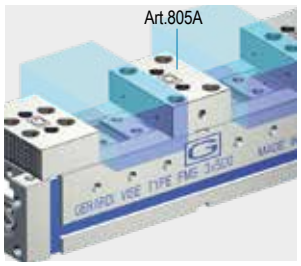
Esempi applicativi ganasce:
Jaw application examples:



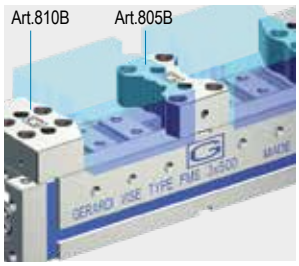
Ganascia Mobile reversibile
Reverible movable jaw



Ganascia Zigrinata Art.805C
Serrated Jaw Art.805C



Ganascia Liscia Art.805A
Smooth Jaw Art.805A



Ganasce Lavorabil Art.805B + Art.810B
Soft Jaws Art.805B + Art.810B

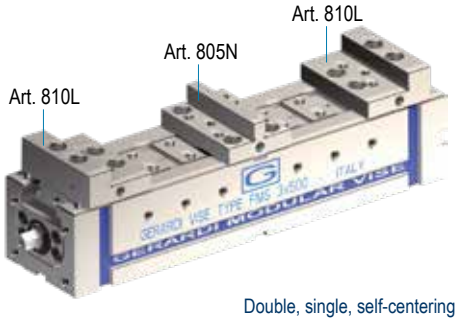
Art.	Pag.
810	5.56
805C	5.54
805A	5.54
805B	5.54
810B	5.56

Tipo (grandezza) morsa / Vise type (size)	kN	1		2				3	
		25 kN		25 kN				30 kN	
Apertura massima / Maximum opening	A	2 x 60	2 x 110	2 x 118	2 x 168	2 x 218	2 x 268	2 x 162	2 x 212
	B	25			30			40	
	C	70			90			100	
	D	232	332	300	400	500	600	400	500
	E	249	349	320	420	520	620	425	525
	G	75			95			125	
	J	56			64			84	
	J1	22			24			30	
	J2	16			16			16	
	W	74			94			124	
	kg	8	11	20	27	33	40	40	45
	Cod.	5.86.31200	5.86.31300	5.86.32300	5.86.32400	5.86.32500	5.86.32600	5.86.33400	5.86.33500

Art. 863

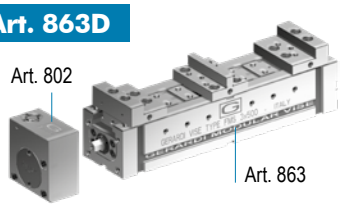
3 MORSE IN VISES IN 1

Morsa **FMS** doppia, singola, autocentrante con ganasce a gradino



Double, single, self-centering **FMS** vise with step jaws

Art. 863D



(Art. 863 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

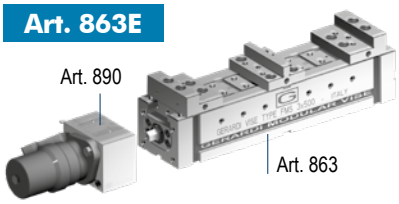
Cod.	5.86.3D120	5.86.3D130	5.86.3D230	5.86.3D240	5.86.3D250	5.86.3D260	5.86.3D340	5.86.3D350

Art. 802

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

Cod.	5.80.21000	5.80.22000	5.80.23000

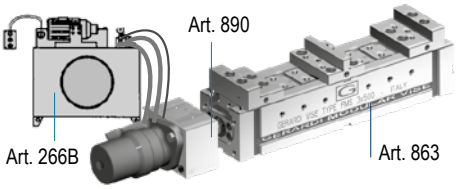
Art. 863E



(Art. 863 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	5.86.3E120	5.86.3E130	5.86.3E230	5.86.3E240	5.86.3E250	5.86.3E260	5.86.3E340	5.86.3E350

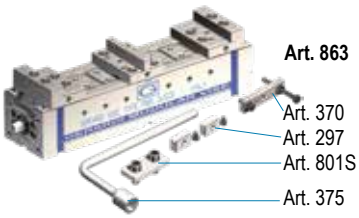
Art. 863F



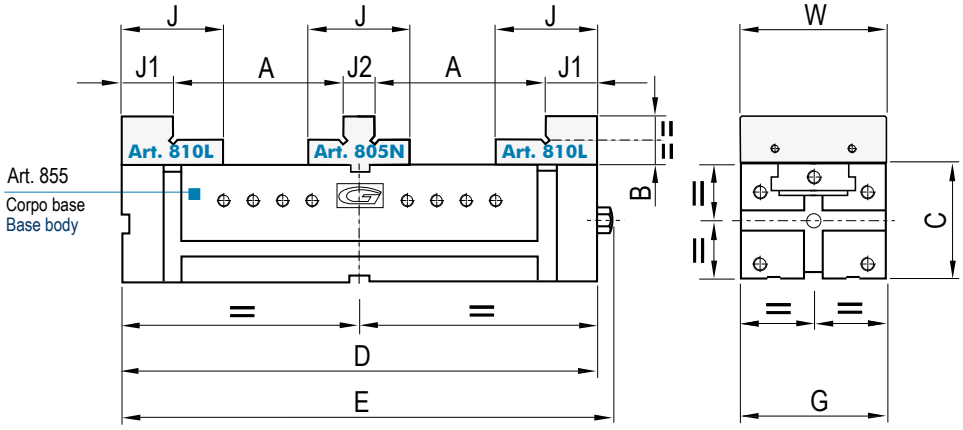
(Art. 863 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	5.86.3F120	5.86.3F130	5.86.3F230	5.86.3F240	5.86.3F250	5.86.3F260	5.86.3F340	5.86.3F350

Dotazione standard:
- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:
- 2 workstops Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN			4 30 kN				5 32 kN			6 32 kN		
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
40			50				60			60		
100			120				140			160		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
125			145				170			190		
84			98				108			108		
30			38				38			38		
16			16				16			16		
124			144				169			189		
50	55	60	68	76	85	93	124	134	144	200	220	240
5.86.33600	5.86.33700	5.86.33800	5.86.34500	5.86.34600	5.86.34700	5.86.34800	5.86.35600	5.86.35700	5.86.35800	5.86.36800	5.86.36900	5.86.36100

Art. 863D

(Art. 863 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

5.86.3D360	5.86.3D370	5.86.3D380	5.86.3D450	5.86.3D460	5.86.3D470	5.86.3D480	5.86.3D560	5.86.3D570	5.86.3D580	5.86.3D680	5.86.3D690	5.86.3D610

Art. 802

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

5.80.23000	5.80.24000	5.80.25000	5.80.26000

Art. 863E

(Art. 863 + 890) Morsa + motore idraulico / Vise + hydraulic motor

5.86.3E360	5.86.3E370	5.86.3E380	5.86.3E450	5.86.3E460	5.86.3E470	5.86.3E480	5.86.3E560	5.86.3E570	5.86.3E580	5.86.3E680	5.86.3E690	5.86.3E610

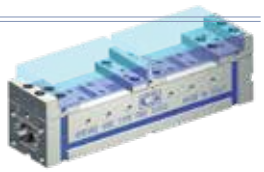
Art. 863F

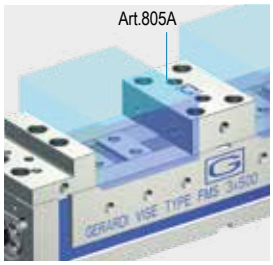
(Art. 863 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

5.86.3F360	5.86.3F370	5.86.3F380	5.86.3F450	5.86.3F460	5.86.3F470	5.86.3F480	5.86.3F560	5.86.3F570	5.86.3F580	5.86.3F680	5.86.3F690	5.86.3F610

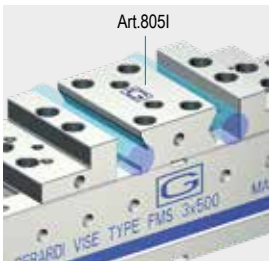
Art. 863

Esempi applicativi ganasce:
Jaw application examples:

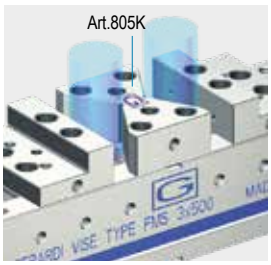




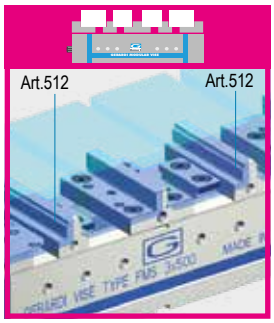
Ganasce liscie
Smooth jaws



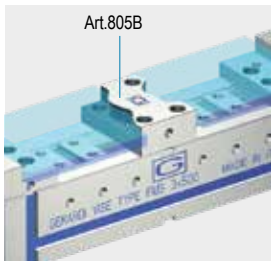
Ganascia primatica orizzontale
Horizontal prismatic jaws



Ganascia prismatica verticale
Vertical prismatic jaw



Serraggio simultaneo di 4 pezzi
4 Workpieces simultaneous clamping



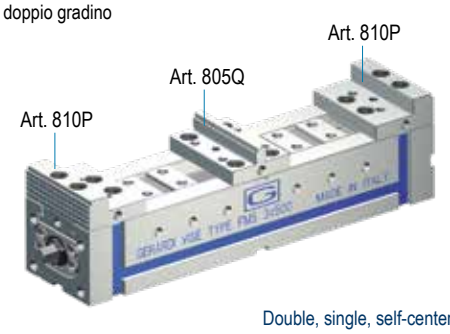
Ganascia lavorabile
Soft jaws

Tipo (grandezza) morsa / Vise type (size)	kN	1 25 kN		2 25 kN				3 30 kN	
Apertura massima / Maximum opening	A	2 x 32	2 x 82	2 x 54	2 x 104	2 x 154	2 x 204	2 x 77	2 x 127
	A1	2 x 84	2 x 134	2 x 118	2 x 168	2 x 218	2 x 268	2 x 162	2 x 212
	B	25		30				40	
	C	70		90				100	
	D	232	332	300	400	500	600	400	500
	E	249	349	320	420	520	620	425	525
	G	75		95				125	
	J	56		64				84	
	J1	24		24				30	
	J2	16		16				16	
	W	74		94				124	
	kg	8	11	20	27	33	40	40	45
	Cod.	5.86.41200	5.86.41300	5.86.42300	5.86.42400	5.86.42500	5.86.42600	5.86.43400	5.86.43500

Art. 864

NEW!

Morsa **FMS** doppia, singola, autocentrante con ganasce a con doppio gradino



Double, single, self-centering **FMS** vise with double step jaws

Art. 805F

Ganascia fissa con doppio gradino 3x5 LISCIA

Fixed jaw with double 3x5 step SMOOTH

Cod.	5.80.5F100	5.80.5F200	5.80.5F300

Art. 805G

Ganascia fissa con doppio gradino 3x5 ZIGRINATA

Fixed jaw with double 3x5 step SERRATED

Cod.	5.80.5G100	5.80.5G200	5.80.5G300

Art. 810O

Ganascia mobile con gradino piccolo e grande

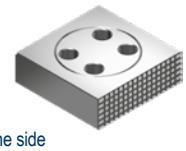
Movable jaw with small and large step

Cod.	5.81.0O100	5.81.0O200	5.81.0O300

Art. 810X

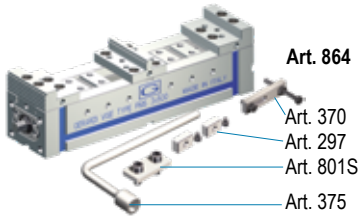
Ganascia mobile oscillante con gradino 3x5 zigrinata da un lato con albero a gradino (**Art. 810Z**)

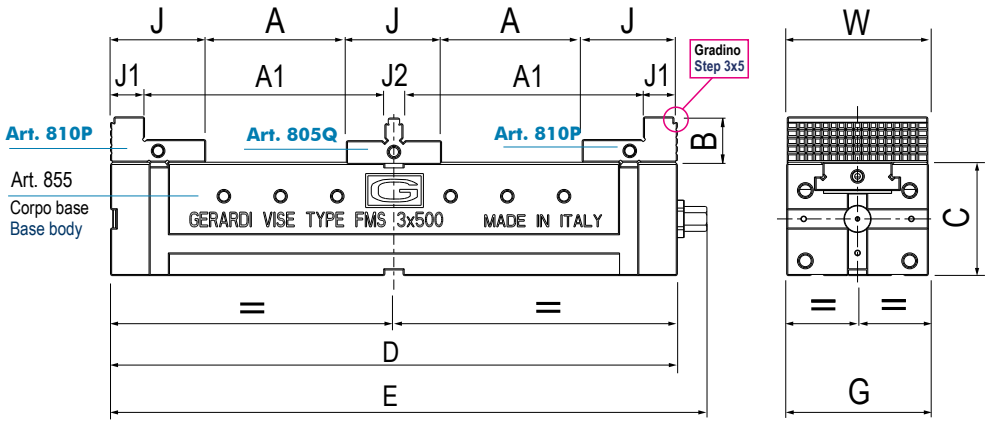
Floating movable jaw with 3x5 step one side serrated with step block pin (**Art. 810Z**)



Cod.	5.81.0X100	5.81.0X200	5.81.0X300

Dotazione standard:
- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S





Standard equipment:
- 2 workstops Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S

3 30 kN			4 30 kN				5 32 kN			6 32 kN		
2 x 177	2 x 227	2 x 277	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 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
40			50				60			60		
100			120				140			160		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
125			145				170			190		
84			98				108			108		
30			38				38			38		
16			16				16			16		
124			144				169			189		
50	55	60	68	76	85	93	124	134	144	200	220	240
5.86.43600	5.86.43700	5.86.43800	5.86.44500	5.86.44600	5.86.44700	5.86.44800	5.86.45600	5.86.45700	5.86.45800	5.86.46800	5.86.46900	5.86.46100

Art. 805F

5.80.5F300	5.80.5F400	5.80.5F500	5.80.5F300

Art. 805G

5.80.5G300	5.80.5G400	5.80.5G500	5.80.5G600

Art. 810O

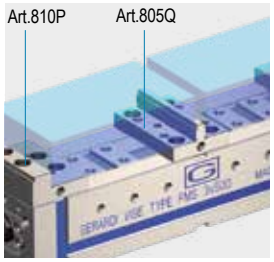
5.81.0O300	5.81.0O400	5.81.0O500	5.81.0O600

Art. 810X

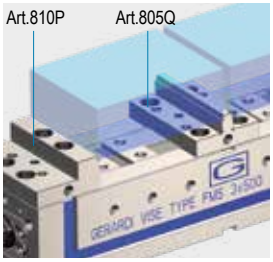
5.81.0X300	5.81.0X400	5.81.0X500	5.81.0X600

Art. 864

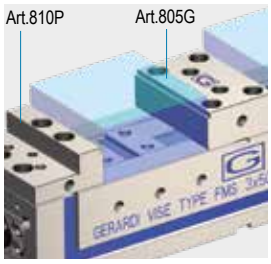
Esempi applicativi ganasce a doppio gradino:
Double step jaw application examples:

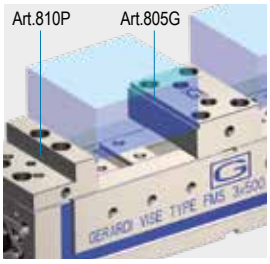


Utilizzo del gradino standard per alzare il particolare rispetto alla base
Use the main step for raising the workpiece



Per utilizzare il 2° gradino (3x5) ruotare le ganasce mobili di 180°
In order to use the second 3x5mm step turn the movable jaw 180°





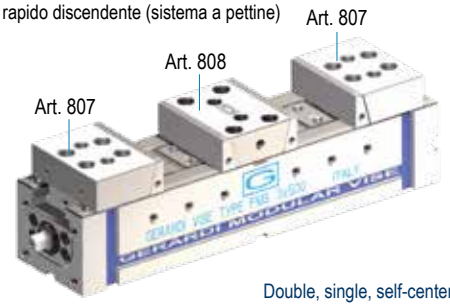
Per sfruttare il lato zigrinato delle ganasce mobili Art.810P sostituisci la ganascia fissa con l'Art.805G
To exploit the serrated side of the movable jaws Art.810P, change the fixed jaw with Art.805G

Tipo (grandezza) morsa / Vise type (size)	kN	1 25 kN	2 25 kN				3 30 kN	
Apertura massima / Maximum opening	A	2 x 52	2 x 30	2 x 80	2 x 130	2 x 180	2 x 46	2 x 96
	B	25	30				40	
	C	70	90				100	
	D	332	300	400	500	600	400	500
	E	349	320	420	520	620	425	525
	G	75	95				125	
	J	63	76				98	
	J1	70	88				111	
	W	74	94				124	
	kg	12	23	30	36	43	46	51
	Cod.	5.86.51300	5.86.52300	5.86.52400	5.86.52500	5.86.52600	5.86.53400	5.86.53500

Art. 865

3 MORSE IN VISES IN 1

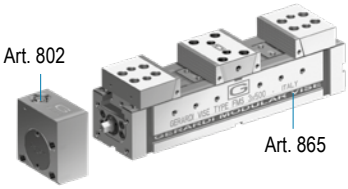
Morsa **FMS** doppia, singola, autocentrante con ganasce a cambio rapido discendente (sistema a pettine)



Double, single, self-centering **FMS** vise with quick change pull down jaws (comb system)

Art. 865D

(Art. 865 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier



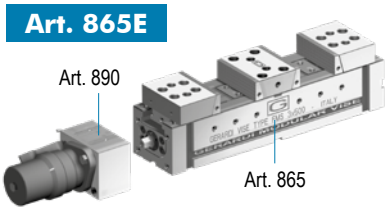
Cod.	5.86.5D130	5.86.5D230	5.86.5D240	5.86.5D250	5.86.5D260	5.86.5D340	5.86.5D350

Art. 802

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

Cod.	5.80.21000	5.80.22000	5.80.23000

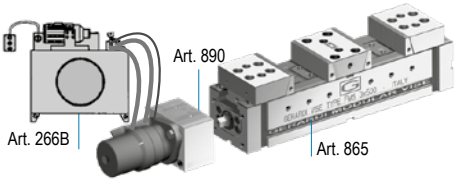
Art. 865E



(Art. 865 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	5.86.5E130	5.86.5E230	5.86.5E240	5.86.5E250	5.86.5E260	5.86.5E340	5.86.5E350

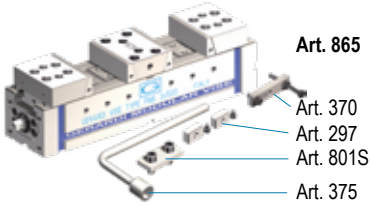
Art. 865F



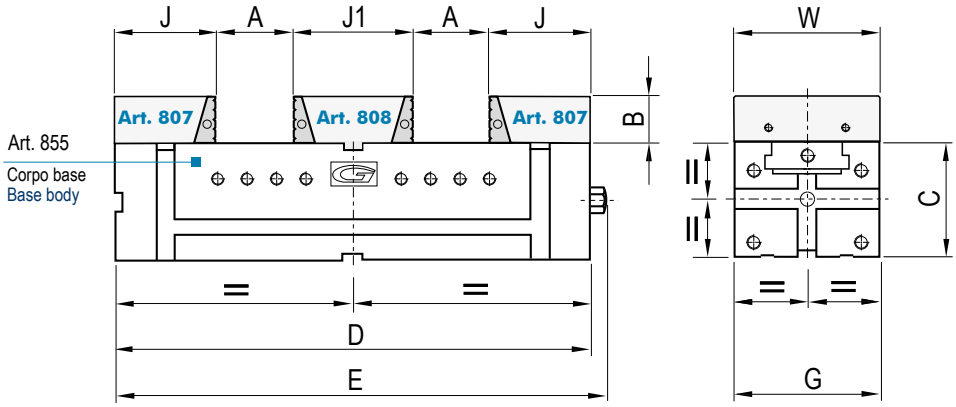
(Art. 865 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	5.86.5F130	5.86.5F230	5.86.5F240	5.86.5F250	5.86.5F260	5.86.5F340	5.86.5F350

Dotazione standard:
- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:
- 2 workstops Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN			4 30 kN				5 32 kN			6 32 kN		
2 x 146	2 x 196	2 x 246	2 x 65	2 x 115	2 x 165	2 x 215	2 x 90	2 x 140	2 x 190	2 x 216	2 x 256	2 x 316
40			50				60			60		
100			120				140			160		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
125			145				170			190		
98			117				132			119		
111			136				155			130		
124			144				169			189		
54	59	64	74	82	91	99	134	144	154	215	235	255
5.86.53600	5.86.53700	5.86.53800	5.86.54500	5.86.54600	5.86.54700	5.86.54800	5.86.55600	5.86.55700	5.86.55800	5.86.56800	5.86.56900	5.86.56100

Art. 865D

(Art. 865 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

5.86.5D360	5.86.5D370	5.86.5D380	5.86.5D450	5.86.5D460	5.86.5D470	5.86.5D480	5.86.5D560	5.86.5D570	5.86.5D580	5.86.5D680	5.86.5D690	5.86.5D610

Art. 802

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

5.80.23000	5.80.24000	5.80.25000	5.80.26000

Art. 865E

(Art. 865 + 890) Morsa + motore idraulico / Vise + hydraulic motor

5.86.5E360	5.86.5E370	5.86.5E380	5.86.5E450	5.86.5E460	5.86.5E470	5.86.5E480	5.86.5E560	5.86.5E570	5.86.5E580	5.86.5E680	5.86.5E690	5.86.5E610

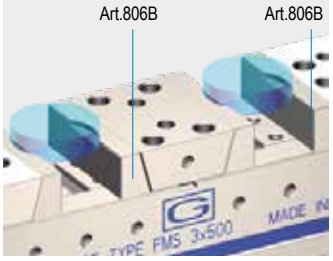
Art. 865F

(Art. 865 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

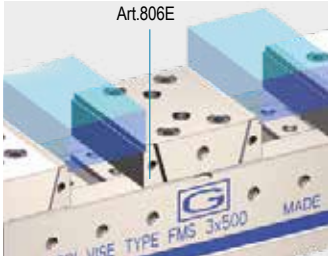
5.86.5F360	5.86.5F370	5.86.5F380	5.86.5F450	5.86.5F460	5.86.5F470	5.86.5F480	5.86.5F560	5.86.5F570	5.86.5F580	5.86.5F680	5.86.5F690	5.86.5F610

Art. 865

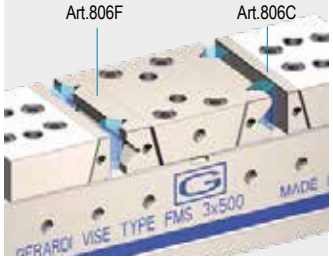
Esempi applicativi piastre ganasce:
Jaw plates application examples:



Piastre ganasce Art.806B
Jaw plates Art.806B



4 Piastre ganasce Art.806E
4 Jaw plates Art.806E



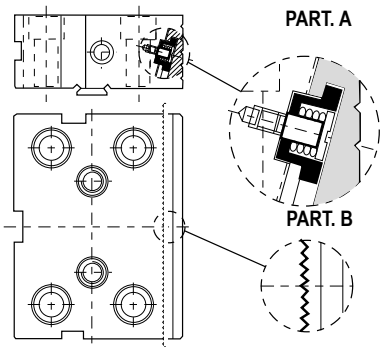
2 piastre ganasce Art.806F + 2 Art.806C
2 jaw plates Art.806F + 2 Art.806C

CORPI GANASCE FMS & PIASTRE GANASCE INTERCAMBIABILI RAPIDE

FMS COMB JAW BODIES & QUICK INTERCHANGEABLE JAW PLATES

Tipo (grandezza) / Vise type	1	2	3	4	5	6
Art. 806* Ganascia fissa con piastra ganascia intercambiabile rapida / Fixed jaw with quick interchangeable jaw plate	Cod. 5.80.61000	5.80.62000	5.80.63000	5.80.64000	5.80.65000	5.80.66000
Art. 807* Ganascia mobile con piastra ganascia intercambiabile rapida / Movable jaw with quick interchangeable jaw plate	Cod. 5.80.71000	5.80.72000	5.80.73000	5.80.74000	5.80.75000	5.80.76000
Art. 808* Ganascia fissa doppia con piastre ganasce intercambiabili rapide / Double fixed jaw with quick interchangeable jaw plate	Cod. 5.80.81000	5.80.82000	5.80.83000	5.80.84000	5.80.85000	5.80.86000
Art. 806A Corpo ganascia fissa per piastra ganascia intercambiabile rapida / Fixed jaw body for quick interchangeable jaw plate	Cod. 5.80.6A100	5.80.6A200	5.80.6A300	5.80.6A400	5.80.6A500	5.80.6A600
Art. 807A Corpo ganascia mobile per piastra ganascia intercambiabile rapida / Movable jaw body for quick interchangeable jaw plate	Cod. 5.80.7A100	5.80.7A200	5.80.7A300	5.80.7A400	5.80.7A500	5.80.7A600
Art. 808A Corpo ganascia fissa doppia per piastre ganasce intercambiabili rapide / Double fixed jaw body for quick interchangeable jaw plate	Cod. 5.80.8A100	5.80.8A200	5.80.8A300	5.80.8A400	5.80.8A500	5.80.8A600
Art. 808B Corpo ganascia fissa doppia ridotta per piastre ganasce intercambiabili rapide / Double fixed jaw body narrow for quick interchangeable jaw plate	Cod. 5.80.8B100	5.80.8B200	5.80.8B300	5.80.8B400	5.80.8B500	5.80.8B600

* Viti per fissaggio a richiesta Fixing screws on request



RAPIDA SOSTITUZIONE DELLE PIASTRE GANASCE DISCENDENTI SENZA BISOGNO DI ALCUN UTENSILE

Il nuovo sistema con piastre ganasce intercambiabili, conferisce alla morsa FMS un ulteriore aumento di flessibilità dato dalla rapidità di sostituzione delle piastre ganasce e dalla precisione di riposizionamento.
La rapidità di sostituzione delle piastre ganasce è resa possibile dal nuovo sistema con perno a molla (**PART. A**), mentre le righe prismatiche (**PART. B**) effettuate con mola sagomata sui piani d'appoggio rendono possibile un riposizionamento di elevata precisione. La vasta gamma di piastre ganasce intercambiabili va a soddisfare le più svariate esigenze di lavorazione.

QUICK HAND CHANGE OF PULL- DOWN JAW PLATES - NO TOOLS NEEDED

The new system with quick interchangeable jaw plates, increase the FMS vise flexibility, and feature the quick jaw plates replacement and their high precision repositioning. The quickness of the jaw plates replacement is allowed by the new system of pin with spring (**PART. A**), while the prismatic grooves (**PART. B**), made with shaped grind wheel on the surface plates, allow a perfect repositioning. The wide range of interchangeable jaws plates can satisfy the most varied workholding needs.

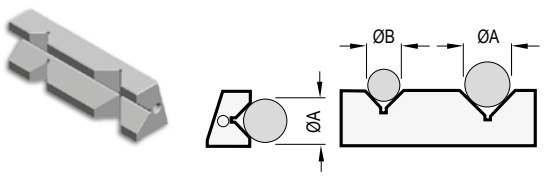
Art. 806F

Piastra ganascia intercambiabile prismatica a pettine
Prismatic comb interchangeable jaw plate

Solo 2 per morsa!! Just 2 pcs each vise!!

Cod.	5.80.6F100	5.80.6F200	5.80.6F300	5.80.6F400	5.80.6F500	5.80.6F600

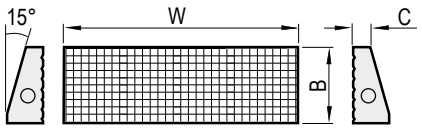
Piastra ganascia intercambiabile prismatica a pettine
Per serraggi autocentranti è necessario ordinare n. 2 piastrine prismatiche
Prismatic comb interchangeable jaw plate
For self-centering clamping is necessary to order n. 2 prismatic jaws



Ø Min / Max						
A	6 / 16	9 / 24	13 / 38	15 / 40	15 / 42	15 / 42
B	4 / 10	7 / 18	9 / 24	9 / 24	9 / 24	9 / 24

Vedi dimensioni prisma pag. 5.16 / See prisma dimensions pag. 5.16

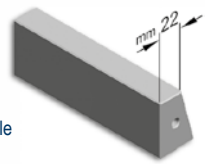
PIASTRE GANASCE INTERCAMBIABILI RAPIDE
QUICK INTERCHANGEABLE JAW PLATES

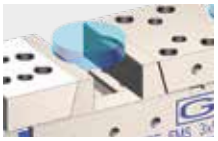


Tipo (grandezza) / Vise type	1	2	3	4	5	6
W	73	93	123	143	168	188
B	25	30	40	50	60	60
C	10	10	11	11	16	16

Art. 806B

Piastra ganascia intercambiabile dolce a pettine
Soft comb interchangeable jaw plate





Cod.	5.80.6B100	5.80.6B200	5.80.6B300	5.80.6B400	5.80.6B500	5.80.6B600

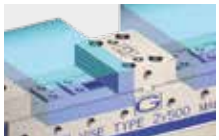
Art. 806C

Piastra ganascia intercambiabile liscia a pettine
Smooth comb interchangeable jaw plate

Cod.	5.80.6C100	5.80.6C200	5.80.6C300	5.80.6C400	5.80.6C500	5.80.6C600

Art. 806D

Piastra ganascia intercambiabile zigrinata a pettine
Serrated comb interchangeable jaw plate

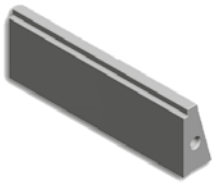


Cod.	5.80.6D100	5.80.6D200	5.80.6D300	5.80.6D400	5.80.6D500	5.80.6D600

Art. 806E

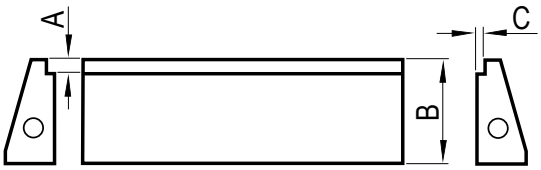
Piastra ganascia intercambiabile a gradino a pettine
Step comb interchangeable jaw plate

Cod.	5.80.6E100	5.80.6E200	5.80.6E300	5.80.6E400	5.80.6E500	5.80.6E600



KIT RISPARMIO
SAVING KIT

Piastra ganascia intercambiabile a gradino a pettine (SET di coppie)
Step comb interchangeable jaw plate (SET of pair)



A	Set di 8 pezzi / Set of 8 pcs.: 3, 5, 8, 13	Set di 10 pezzi / Set of 10 pcs.: 3, 5, 8, 13, 18	Set di 14 pezzi / Set of 14 pcs.: 3, 5, 8, 13, 18, 23, 28	Set di 14 pezzi / Set of 14 pcs.: 3, 5, 8, 13, 18, 23, 28	Set di 14 pezzi / Set of 14 pcs.: 3, 5, 8, 13, 18, 23, 28	Set di 14 pezzi / Set of 14 pcs.: 3, 5, 8, 13, 18, 23, 28
	-	18				
	-	-				
	-	-				
B	25	30	40	50	60	60
C	3	3	3	3	3	3
Cod.	5.80.6E112	5.80.6E212	5.80.6E312	5.80.6E412	5.80.6E512	5.80.6E612

Art. 806G

Piastra ganascia intercambiabile a pettine con arresto a 90°
90° interchangeable comb jaw plate

Solo 2 per morsa!! Just 2 pcs each vise!!

Cod.	5.80.6G100	5.80.6G200	5.80.6G300	5.80.6G400	5.80.6G500	5.80.6G600

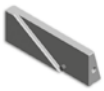
Art. 806H

Piastra ganascia intercambiabile bombata a pettine
Round comb interchangeable jaw plate

Cod.	5.80.6H100	5.80.6H200	5.80.6H300	5.80.6H400	5.80.6H500	5.80.6H600

Art. 806M

Piastra ganascia intercambiabile a pettine per angolo di 30° o 45°
30° or 45° angle interchangeable comb jaw plate



Solo 2 per morsa!! Just 2 pcs each vise!!

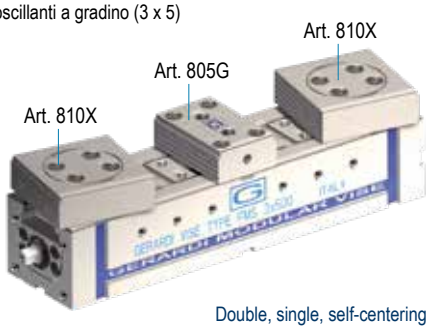
Cod.	5.80.6M100	5.80.6M200	5.80.6M300	5.80.6M400	5.80.6M500	5.80.6M600

Tipo (grandezza) morsa / Vise type (size)	kN	1 25 kN	2 25 kN				3 30 kN	
Apertura massima / Maximum opening	A	2 x 52	2 x 30	2 x 80	2 x 130	2 x 180	2 x 46	2 x 96
	B	25	30				40	
	C	70	90				100	
	D	332	300	400	500	600	400	500
	E	349	320	420	520	620	425	525
	G	75	95				125	
	J	63	76				98	
	J1	70	88				111	
	W	74	94				124	
	kg	12	23	30	36	43	46	51
	Cod.	5.86.61300	5.86.62300	5.86.62400	5.86.62500	5.86.62600	5.86.63400	5.86.63500

Art. 866

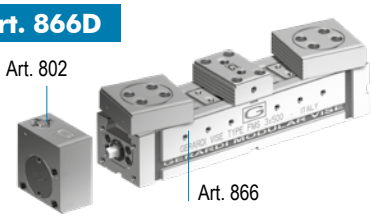
3 MORSE IN VISES IN 1

Morsa **FMS** doppia, singola, autocentrante con ganasce oscillanti a gradino (3 x 5)



Double, single, self-centering **FMS** vise with floating step jaws (3 x 5)

Art. 866D



(Art. 866 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

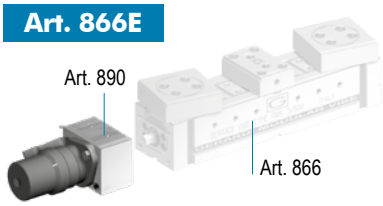
Cod.	5.86.6D130	5.86.6D230	5.86.6D240	5.86.6D250	5.86.6D260	5.86.6D340	5.86.6D350

Art. 802

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

Cod.	5.80.21000	5.80.22000	5.80.23000

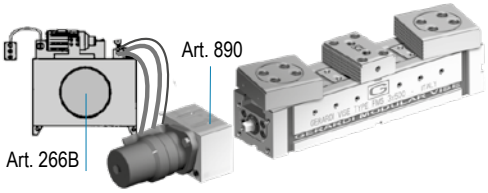
Art. 866E



(Art. 866 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	5.86.6E130	5.86.6E230	5.86.6E240	5.86.6E250	5.86.6E260	5.86.6E340	5.86.6E350

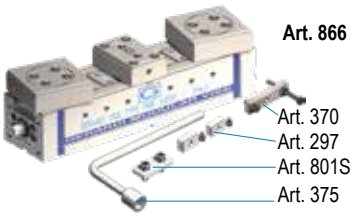
Art. 866F



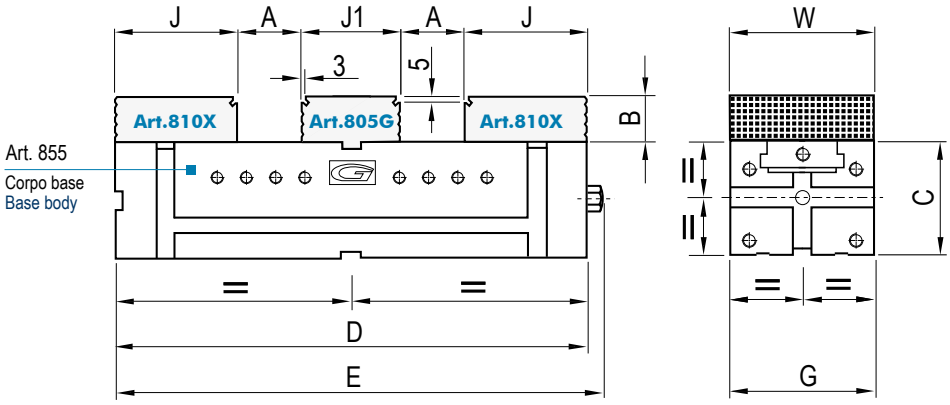
(Art. 866 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	5.86.6F130	5.86.6F230	5.86.6F240	5.86.6F250	5.86.6F260	5.86.6F340	5.86.6F350

Dotazione standard:
- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:
- 2 workstops Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN			4 30 kN				5 32 kN			6 32 kN		
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
40			50				60			60		
100			120				140			160		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
125			145				170			190		
106			128				135			143		
84			98				108			108		
124			144				169			189		
54	59	64	74	82	91	99	134	144	154	215	235	255
5.86.63600	5.86.63700	5.86.63800	5.86.64500	5.86.64600	5.86.64700	5.86.64800	5.86.65600	5.86.65700	5.86.65800	5.86.66800	5.86.66900	5.86.66100

Art. 866D

(Art. 866 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

5.86.6D360	5.86.6D370	5.86.6D380	5.86.6D450	5.86.6D460	5.86.6D470	5.86.6D480	5.86.6D560	5.86.6D570	5.86.6D580	5.86.6D680	5.86.6D690	5.86.6D610

Art. 802

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

5.80.23000	5.80.24000	5.80.25000	5.80.26000

Art. 866E

(Art. 866 + 890) Morsa + motore idraulico / Vise + hydraulic motor

5.86.6E360	5.86.6E370	5.86.6E380	5.86.6E450	5.86.6E460	5.86.6E470	5.86.6E480	5.86.6E560	5.86.6E570	5.86.6E580	5.86.6E680	5.86.6E690	5.86.6E610

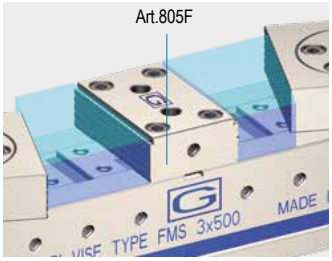
Art. 866F

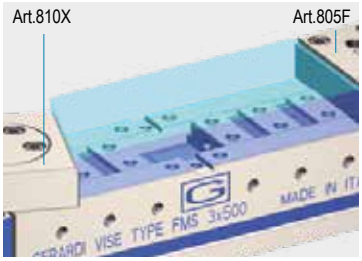
(Art. 866 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

5.86.6F360	5.86.6F370	5.86.6F380	5.86.6F450	5.86.6F460	5.86.6F470	5.86.6F480	5.86.6F560	5.86.6F570	5.86.6F580	5.86.6F680	5.86.6F690	5.86.6F610

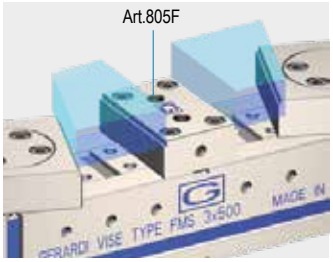
Art. 866

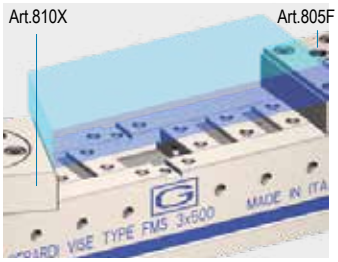
Esempi applicativi ganasce oscillanti:
Floating Jaws application examples:





Serraggio di particolari grezzi - Rough workpieces clamping





Serraggio particolari grezzi - Rough workpieces clamping

FUNZIONAMENTO DELLE GANASCE MOBILI OSCILLANTI
THE OPERATION OF MOVABLE JAWS

3 MORSE IN VISES IN 1

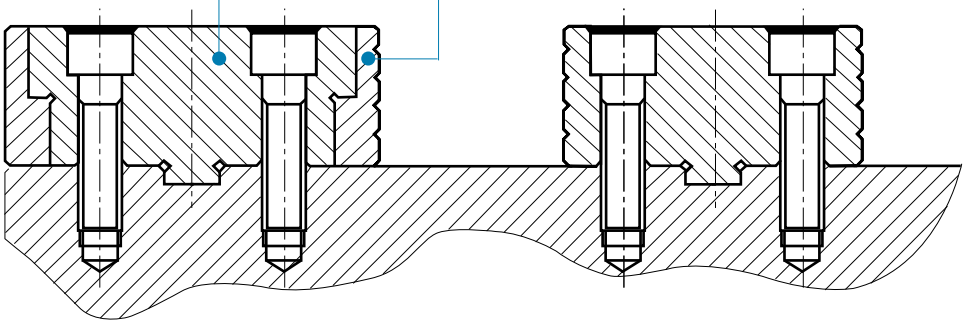
Art. 810Z

Albero a gradino per ganasce mobili oscillanti
Step block pin for floating movable jaw

Art. 810W

Ganascia mobile oscillante zigrinata da un lato, con albero a gradino (Art. 810Z)
Floating movable jaw one side serrated with step block pin (Art. 810Z)

Fig. 1 **Pic. 1**



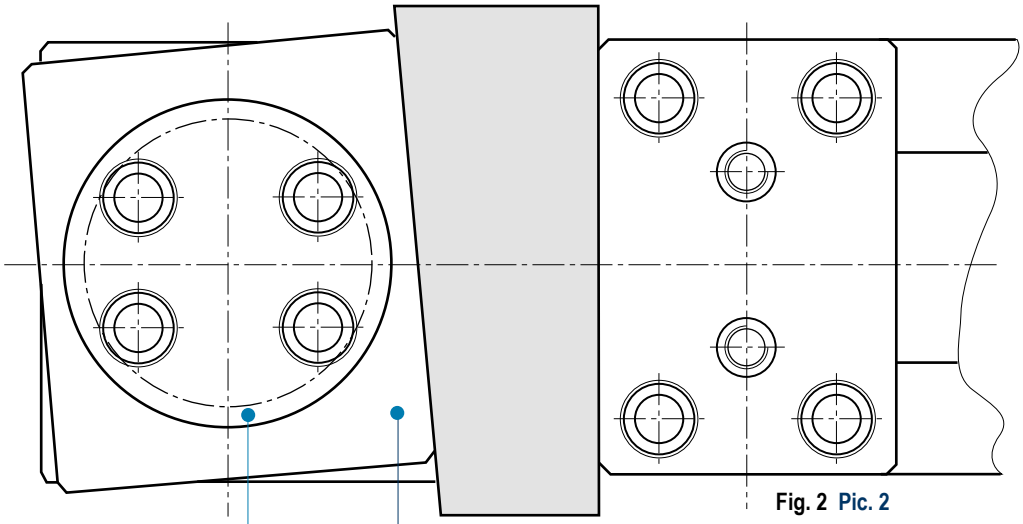


Fig. 2 **Pic. 2**

Art. 810Z

Albero a gradino per ganasce mobili oscillanti
Step block pin for floating movable jaw

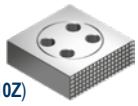
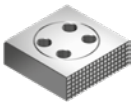
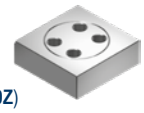
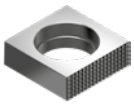
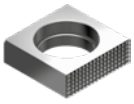
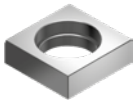
Art. 810W

Ganascia mobile oscillante zigrinata da un lato, con albero a gradino (Art. 810Z)
Floating movable jaw one side serrated with step block pin (Art. 810Z)

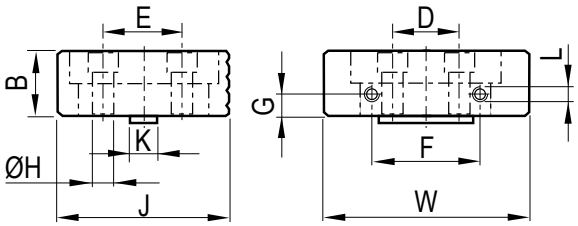
Le ganasce mobili oscillanti consentono il serraggio di pezzi di forma irregolare i cui lati non risultino paralleli (**Fig. 2**). Questo è reso possibile dall'albero a gradino (**Art. 810Z - Fig. 1**), posto al centro della ganascia, che pur permettendo la rotazione della ganascia, ne mantiene la precisione ed evita il sollevamento del pezzo mentre viene lavorato.
Il tutto a garanzia di un serraggio in piena sicurezza.

Floating movable jaws allow to clamp workpieces with irregular shapes whose sides are not parallels (**Pic. 2**). In fact thanks to the step block spindle (**Art. 810Z - Pic. 1**), positioned in the centre of the jaw body, the jaw can float and guarantee at the same time maximum precision and no tilting of the parts while being worked. The safety of the workholding is guaranteed.

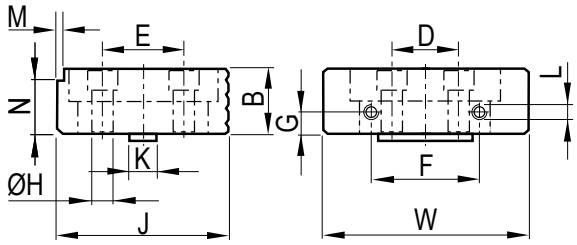
GANASCE MOBILI OSCILLANTI
FLOATING MOVABLE JAWS

Tipo (grandezza) / Vise type	1	2	3	4	5	6
Art. 810W* Ganascia mobile oscillante zigrinata da un lato con albero a gradino (**Art. 810Z**) / Floating movable jaw one side serrated with step block pin (**Art. 810Z**) 	Cod. 5.81.0W100	5.81.0W200	5.81.0W300	5.81.0W400	5.81.0W500	5.81.0W600
	* Viti per fissaggio a richiesta Fixing screws on request					
Art. 810X* Ganascia mobile oscillante con gradino 3x5 zigrinata da un lato con albero a gradino (**Art. 810Z**) / Floating movable jaw with 3x5 step one side serrated with step block pin (**Art. 810Z**) 	Cod. 5.81.0X100	5.81.0X200	5.81.0X300	5.81.0X400	5.81.0X500	5.81.0X600
	* Viti per fissaggio a richiesta Fixing screws on request					
Art. 810Y* Ganascia mobile oscillante con gradino 3x5 con albero a gradino (**Art. 810Z**) / Floating movable jaw with 3x5 step with step block pin (**Art. 810Z**) 	Cod. 5.81.0Y100	5.81.0Y200	5.81.0Y300	5.81.0Y400	5.81.0Y500	5.81.0Y600
	* Viti per fissaggio a richiesta Fixing screws on request					
Art. 810Z Albero a gradino per ganasce mobili oscillanti / Step block pin for floating movable jaw	Cod. 5.81.0Z100	5.81.0Z200	5.81.0Z300	5.81.0Z400	5.81.0Z500	5.81.0Z600
Art. 810WA Corpo ganascia mobile oscillante zigrinata da un lato / Body floating movable jaw one side serrated 	Cod. 5.81.0WA10	5.81.0WA20	5.81.0WA30	5.81.0WA40	5.81.0WA50	5.81.0WA60
Art. 810XA Corpo ganascia mobile oscillante con gradino 3x5 zigrinata da un lato / Body floating movable jaw with 3x5 step one side serrated 	Cod. 5.81.0XA10	5.81.0XA20	5.81.0XA30	5.81.0XA40	5.81.0XA50	5.81.0XA60
Art. 810YA Corpo ganascia mobile oscillante con gradino 3x5 / Body floating movable jaw with 3x5 step 	Cod. 5.81.0YA10	5.81.0YA20	5.81.0YA30	5.81.0YA40	5.81.0YA50	5.81.0YA60

Art. 810W



Art. 810X



Tipo (grandezza) morsa / Vise (type) size

mm	1	2	3	4	5	6	Tolleranze / Tolerance
B	25	30	40	50	60		- 0,02
D	20	25	38	48	44	54	-
E	32	40	50	60	68	68	-
F	40	50		65		100	-
G	10		15	20	25		-
H	9	11	13	17		22	-
L	M5	M6					-
K	16						H7
M	5						± 0,01
N	3						± 0,02
J	72	84	106	128	135	143	- 0,02
W	74	94	124	144	169	189	-

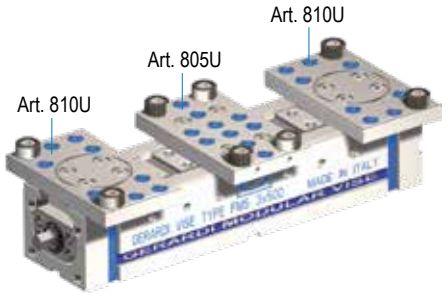
5

Tipo (grandezza) morsa / Vise type (size)	1	2				3	
kN	25 kN	25 kN				30 kN	
A1	91	91	141	191	241	141	191
B	20	20				20	
C	70	90				100	
D	332	300	400	500	600	400	500
E	349	320	420	520	620	425	525
G	75	95				125	
J1	50	50				70	
J2	25	25				35	
Ø	30 (H = 16)	30 (H = 16)				30 (H = 16)	
W	100	120				170	
kg	11	20	27	33	40	40	45
Cod.	5.86.71300	5.86.72300	5.86.72400	5.86.72500	5.86.72600	5.86.73400	5.86.73500

Art. 867

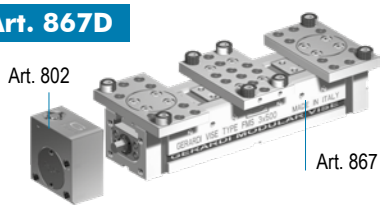
3 MORSE IN VISES IN 1

Morsa **FMS** doppia, singola, autocentrante con ganasce oscillanti regolabili con inserti



Double, single, self-centering **FMS** vise with floating adjustable jaws with inserts

Art. 867D



(Art. 867 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

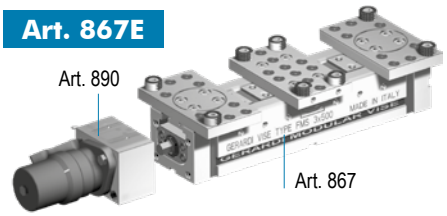
Cod.	5.86.7D130	5.86.7D230	5.86.7D240	5.86.7D250	5.86.7D260	5.86.7D340	5.86.7D350

Art. 802

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

Cod.	5.80.21000	5.80.22000	5.80.23000

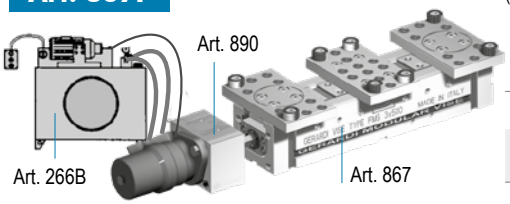
Art. 867E



(Art. 867 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	5.86.7E130	5.86.7D230	5.86.7E240	5.86.7E250	5.86.7E260	5.86.7E340	5.86.7E350

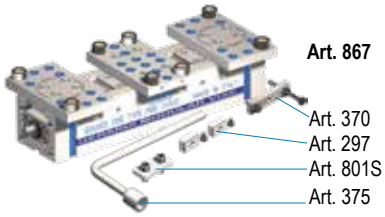
Art. 867F



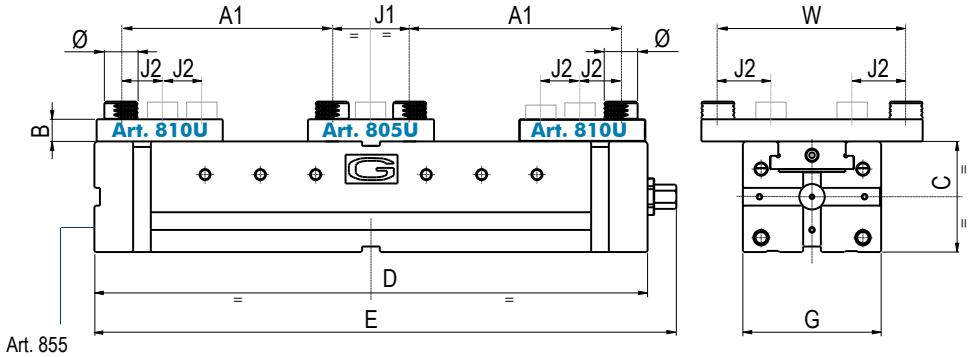
(Art. 867 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	5.86.7F130	5.86.7F230	5.86.7F240	5.86.7F250	5.86.7F260	5.86.7F340	5.86.7F350

Dotazione standard:
- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:
- 2 workstops Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN			4 30 kN				5 32 kN			6 32 kN		
241	291	341	191	241	291	341	231	281	331	331	381	431
20			30				35			35		
100			120				140			160		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
125			145				170			190		
70			80				100			100		
35			40				40			40		
30 (H = 16)			30 (H = 16)				40 (H = 30)			40 (H = 30)		
170			220				250			300		
50	55	60	68	76	85	93	124	134	144	200	220	240
5.86.73600	5.86.73700	5.86.73800	5.86.74500	5.86.74600	5.86.74700	5.86.74800	5.86.75600	5.86.75700	5.86.75800	5.86.76800	5.86.76900	5.86.76100

Art. 867D

(Art. 867 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

5.86.7D360	5.86.7D370	5.86.7D380	5.86.7D450	5.86.7D460	5.86.7D470	5.86.7D480	5.86.7D560	5.86.7D570	5.86.7D580	5.86.7D680	5.86.7D690	5.86.7D610

Art. 802

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

5.80.23000	5.80.24000	5.80.25000	5.80.26000

Art. 867E

(Art. 867 + 890) Morsa + motore idraulico / Vise + hydraulic motor

5.86.7E360	5.86.7E370	5.86.7E380	5.86.7E450	5.86.7E460	5.86.7E470	5.86.7E480	5.86.7E560	5.86.7E570	5.86.7E580	5.86.7E680	5.86.7E690	5.86.7E610

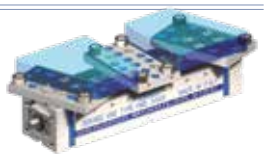
Art. 867F

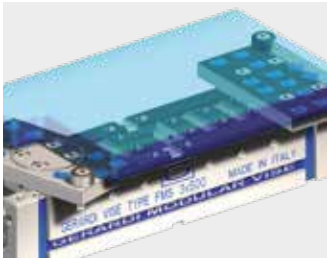
(Art. 867 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

5.86.7F360	5.86.7F370	5.86.7F380	5.86.7F450	5.86.7F460	5.86.7F470	5.86.7F480	5.86.7F560	5.86.7F570	5.86.7F580	5.86.7F680	5.86.7F690	5.86.7F610

Art. 867

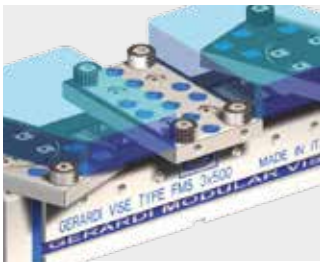
Esempi applicativi ganasce oscillanti regolabili:
Floating adjustable jaws application examples:





4 inserti - 4 jaw inserts

6 inserti - 6 jaw inserts



8 inserti - 8 jaw inserts

FUNZIONAMENTO DELLE GANASCE MOBILI OSCILLANTI CON INSERTI

HOW TO OPERATE FLOATING MOVABLE JAWS WITH INSERTS

3 MORSE IN VISES IN 1

Art. 810UA
Corpo ganascia mobile oscillante
Body floating movable jaw

Art. 805UA
Corpo ganascia fissa con inserti
Body fixed jaw with inserts

Art. 810UZ
Albero a gradino per ganasce mobili oscillanti
Step block pin for floating movable jaw

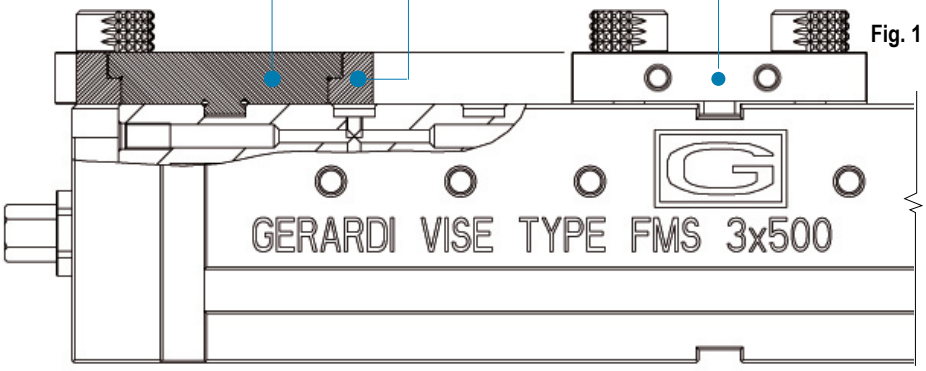


Fig. 1 Pic. 1

Art. 812

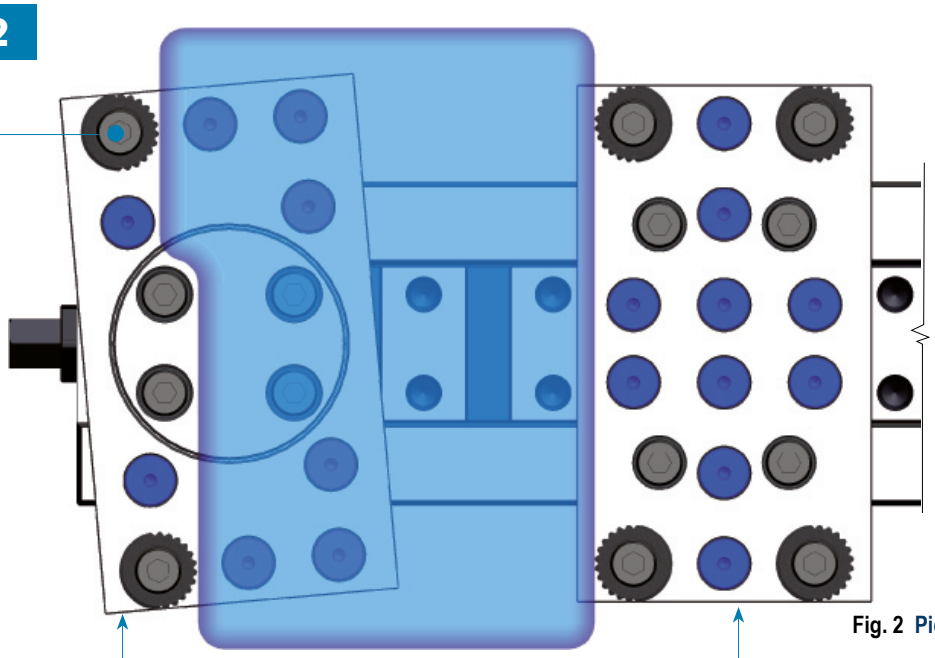


Fig. 2 Pic. 2

Art. 810U
Ganascia mobile oscillante con inserti
Floating movable jaw with inserts

Art. 805U
Ganascia fissa con inserti
Fixed jaw with inserts

Le ganasce mobili oscillanti consentono il serraggio di pezzi di forma irregolare i cui lati non risultino paralleli (**Fig. 2**). Questo è reso possibile dall'albero a gradino (**Art. 810UZ - Fig. 1**), posto al centro della ganascia, che pur permettendo la rotazione della ganascia, ne mantiene la precisione ed evita il sollevamento del pezzo mentre viene lavorato.
Il tutto a garanzia di un serraggio in piena sicurezza. Gli inserti estremizzano ulteriormente la versatilità delle ganasce mobili oscillanti della morsa FMS.

Floating movable jaws allow to clamp workpieces with irregular shapes whose sides are not parallels (**Pic. 2**).In fact thanks to the step block spindle (**Art. 810UZ - Pic. 1**), positioned in the centre of the jaw body, the jaw can float and guarantee at the same time maximum precision and no tilting of the parts while being worked.
The safety of the workholding is guaranteed. The insert further increase the versatility of the FMS floating movable jaws.

GANASCE FISSE & MOBILI FMS
FMS FIXED AND MOVABLE JAWS

Tipo (grandezza) morsa / Vise type (size)	1	2	3	4	5	6
Art. 810U* Ganascia mobile regolabile oscillante con inserti / Floating movable jaw with inserts	Cod. 5.81.0U100	5.81.0U200	5.81.0U300	5.81.0U400	5.81.0U500	5.81.0U600
* Viti per fissaggio a richiesta Fixing screws on request						
Art. 810UA Corpo ganascia mobile oscillante / Body floating movable jaw	Cod. 5.81.0UA10	5.81.0UA20	5.81.0UA30	5.81.0UA40	5.81.0UA50	5.81.0UA60
Art. 810UZ* Albero a gradino per ganasce mobili oscillanti / Step block pin for floating movable jaw	Cod. 5.81.0UZ10	5.81.0UZ20	5.81.0UZ30	5.81.0UZ40	5.81.0UZ50	5.81.0UZ60
* Viti per fissaggio a richiesta Fixing screws on request						
Art. 810Q* Ganascia mobile regolabile con inserti / Movable jaw with inserts	Cod. 5.81.0Q100	5.81.0Q200	5.81.0Q300	5.81.0Q400	5.81.0Q500	5.81.0Q600
* Viti per fissaggio a richiesta Fixing screws on request						
Art. 810QA Corpo ganascia regolabile mobile per inserti / Body movable jaw for inserts	Cod. 5.81.0QA10	5.81.0QA20	5.81.0QA03	5.81.0QA40	5.81.0QA50	5.81.0QA60
Art. 805U* Ganascia fissa regolabile con inserti / Fixed jaw with inserts	Cod. 5.80.5U100	5.80.5U200	5.80.5U300	5.80.5U400	5.80.5U500	5.80.5U600
* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805UA Corpo ganascia fissa regolabile per inserti / Body fixed jaw per inserti	Cod. 5.80.5UA10	5.80.5UA20	5.80.5UA30	5.80.5UA40	5.80.5UA50	5.80.5UA60

Art. 812 Coppia di inserti lisci e zigrinati / Pair of smooth and serrated insert	Ø	30	40
	H	16	30
Art. 812A Coppia di inserti lisci / Pair of smooth insert	Cod.	5.81.21000	5.81.25000
	Cod.	5.81.2A100	5.81.2A500
Art. 812C Coppia di inserti zigrinati / Pair of serrated insert	Cod.	5.81.2C100	5.81.2C500

Art. 813 Coppia di inserti lisci e zigrinati alti / Pair of smooth and serrated high insert	Ø	30	40
	H	28	50
Art. 813A Coppia di inserti lisci alti / Pair of smooth high insert	Cod.	5.81.31000	5.81.35000
	Cod.	5.81.3A100	5.81.3A500
Art. 813C Coppia di inserti zigrinati alti / Pair of serrated high insert	Cod.	5.81.3C100	5.81.3C500

Art. 815 Coppia di inserti lisci e zigrinati a gradino / Pair of smooth and serrated step insert	H	16	30
Art. 815A Coppia di inserti lisci a gradino / Pair of smooth step insert	Cod.	5.81.51000	5.81.55000
	Cod.	5.81.5A100	5.81.5A500
Art. 815C Coppia di inserti zigrinati a gradino / Pair of serrated step insert	Cod.	5.81.5C100	5.81.5C500

Art. 812B Coppia di inserti in acciaio lavorabile / Pair of insert in machineable steel metal	Ø	40	60
	H	40	60
	Cod.	5.81.2B100	5.81.2B500

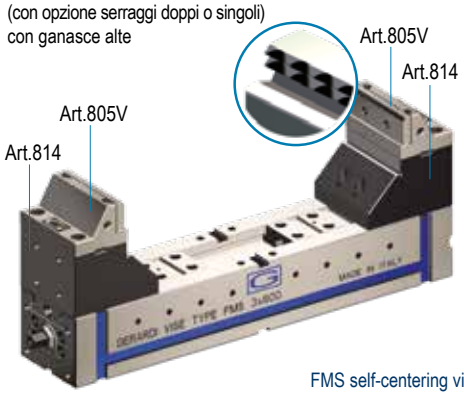
Art. 84U Tappo in alluminio / Aluminum cap	Cod.	5.84.U1000	5.84.U5000

5

Art. 868

3 MORSE IN VISES IN 1

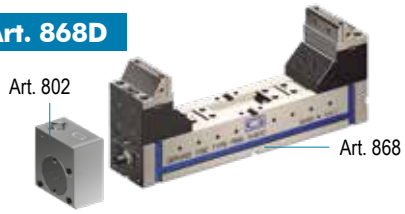
Morsa **FMS** autocentrante
(con opzione serraggi doppi o singoli)
con ganasce alte



FMS self-centering vise
(with double or single
clamping option) with high jaws

Tipo (grandezza) morsa / Vise type (size)	1		2				3	
kN	25 kN		25 kN				30 kN	
A	130	230	182	282	382	482	244	344
B	99,5		117				137	
C	70		90				100	
D	232	332	300	400	500	600	400	500
E	249	349	320	420	520	620	425	525
F	169,5		207				237	
G	75		95				125	
H	75		85				98	
L	56		64				84	
J3	76	76	101				132	
J4	55	55	63				82	
X	39,5		47				57	
W	74		94				124	
kg	-		-				-	
Cod.	5.86.81200	5.86.81300	5.86.82300	5.86.82400	5.86.82500	5.86.82600	5.86.83400	5.86.83500

Art. 868D



(Art. 868 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

Cod.	5.86.8D120	5.86.8D130	5.86.8D230	5.86.8D240	5.86.8D250	5.86.8D260	5.86.8D340	5.86.8D350

Art. 802

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

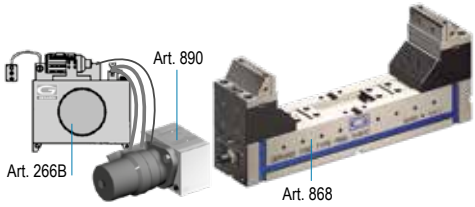
Cod.	5.80.21000	5.80.22000	5.80.23000

Art. 868E

(Art. 868 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	5.86.8E120	5.86.8E130	5.86.8E230	5.86.8E240	5.86.8E250	5.86.8E260	5.86.8E340	5.86.8E350

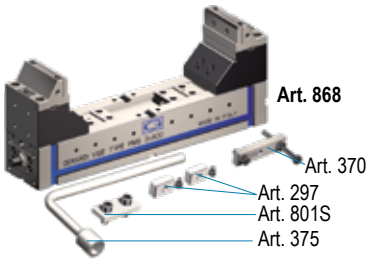
Art. 868F



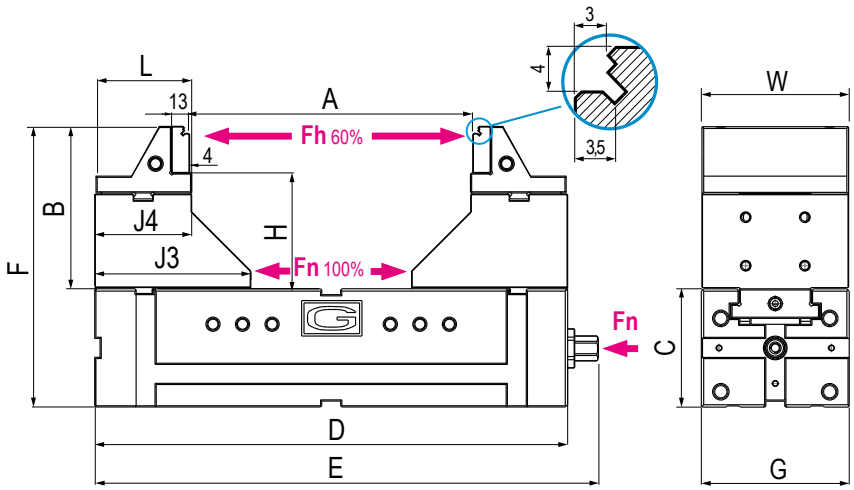
(Art. 868 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	5.86.8F120	5.86.8F130	5.86.8F230	5.86.8F240	5.86.8F250	5.86.8F260	5.86.8F340	5.86.8F350

Dotazione standard:
- 1 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art.375
- 1 piastrina di collegamento Art.801S



Standard equipment:
- 1 workstops Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3			4				5			6		
30 kN			30 kN				32 kN			32 kN		
444	544	644	316	416	516	616	396	496	596	596	696	796
137			171				186			246		
100			120				140			160		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
237			291				326			406		
125			145				170			190		
98			128				138			180		
84			97				107			107		
132			154				169			189		
82			96				106			106		
57			64				66			86		
124			144				169			189		
-			-				-			-		
5.86.83600	5.86.83700	5.86.83800	5.86.84500	5.86.84600	5.86.84700	5.86.84800	5.86.85600	5.86.85700	5.86.85800	5.86.86800	5.86.86900	5.86.86100

Art. 868D

(Art. 868 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

5.86.8D360	5.86.8D370	5.86.8D380	5.86.8D450	5.86.8D460	5.86.8D470	5.86.8D480	5.86.8D560	5.86.8D570	5.86.8D580	5.86.8D680	5.86.8D690	5.86.8D610

Art. 802

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

5.80.23000	5.80.24000	5.80.25000	5.80.26000

Art. 868E

(Art. 868 + 890) Morsa + motore idraulico / Vise + hydraulic motor

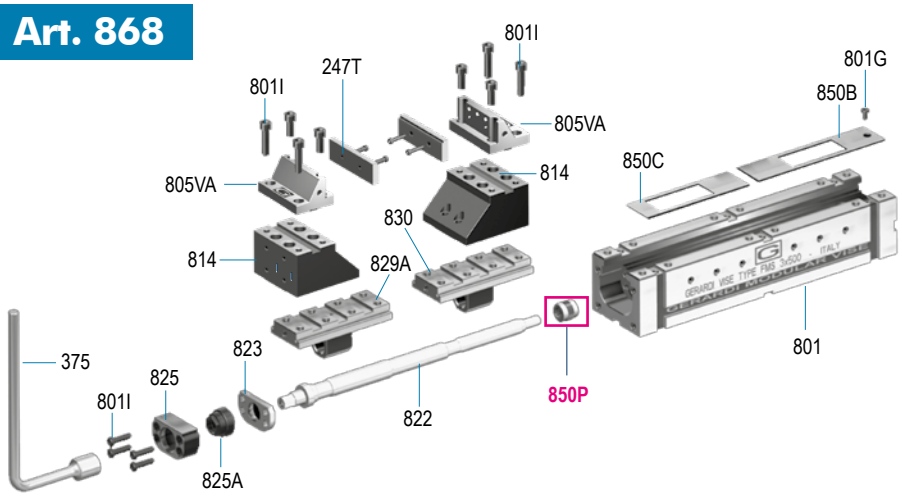
5.86.8E360	5.86.8E370	5.86.8E380	5.86.8E450	5.86.8E460	5.86.8E470	5.86.8E480	5.86.8E560	5.86.8E570	5.86.8E580	5.86.8E680	5.86.8E690	5.86.8E610

Art. 868F

(Art. 868 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

5.86.8F360	5.86.8F370	5.86.8F380	5.86.8F450	5.86.8F460	5.86.8F470	5.86.8F480	5.86.8F560	5.86.8F570	5.86.8F580	5.86.8F680	5.86.8F690	5.86.8F610

Art. 868



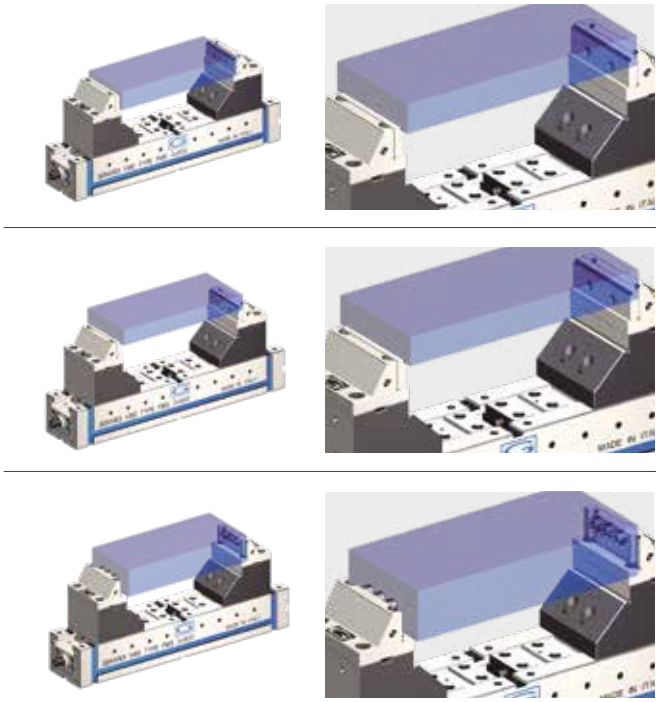
Art.	Pag.
375	4.33
801	5.46
801G	5.61
801I	5.61
810J	5.56
822	5.52
823	5.59
825	5.59
825A	5.61
829A	5.50
830	5.50

Art.	Pag.
850B	5.61
850C	5.61
850P	5.61
814	5.56
805VA	5.33
247T	5.33
-	-
-	-
-	-
-	-
-	-

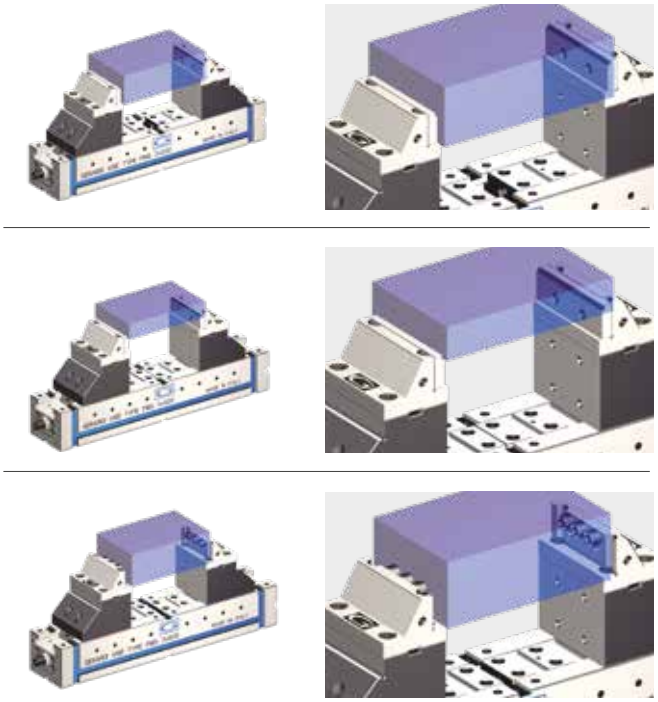
POSSIBILI COMBINAZIONI DELLA MORSA Art.868

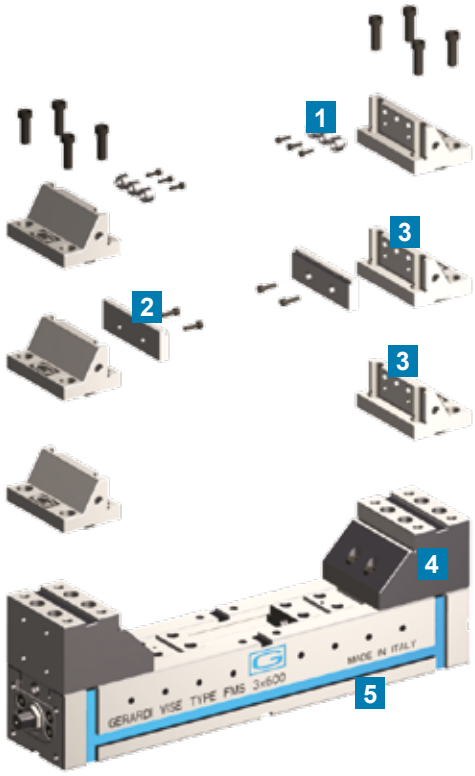
POSSIBLE ARRANGEMENTS OF THE Art.868 VISE

Orientamento base mobile Art.814 per massima apertura ganasce
Movable base Art.814 oriented for the maximum jaws opening

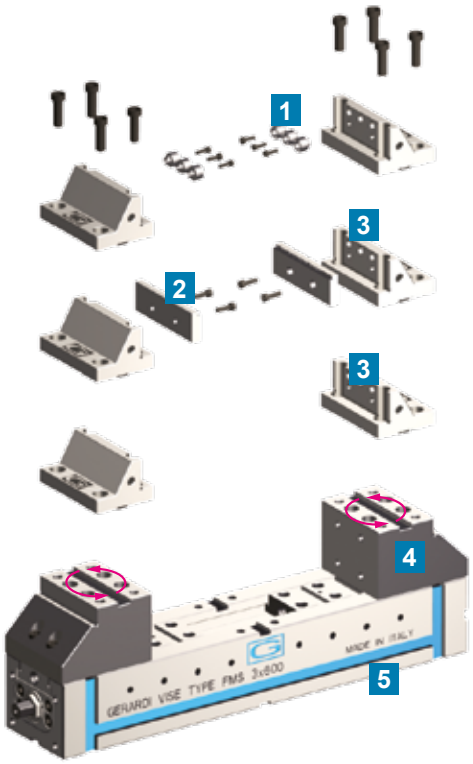


Orientamento base mobile Art.814 per chiusura ganasce a zero
Movable base Art.814 oriented in order to close jaws completely





1	Art. 90
2	Art. 247T
3	Art. 805VA
4	Art. 814
5	Art. 855



Possibilità di utilizzo di qualsiasi ganascia fissa FMS anzichè del corpo ganascia 805V. Possibilità di due posizioni per ciascuna ganascia fissa e per base ganascia mobile Art.814
Possibility to use each FMS fixed jaw instead of jaw body Art.805V. Possibility of two positions (at 180°) for each fixed jaw and for movable base jaw Art.814

GANASCE & PIASTRE GANASCE PER Art.868

JAWS & JAW PLATES FOR Art.868

Tipo (grandezza) morsa / Vise type (size)	1	2	3	4	5	6

Art. 805V*

Ganascia per piastrine e puntali
Jaw for plates and points

Cod.	5.80.5V100	5.80.5V200	5.80.5V300	5.80.5V400	5.80.5V500	5.80.5V600

* Viti per fissaggio a richiesta Fixing screws on request

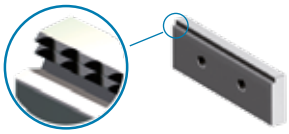
Art. 90

Puntale temprato GRIP
Hardened GRIP Insert

Cod.	5.90.10000

Art. 247T (W2)

Piastrina piana temprata GRIP con larghezza ridotta
Hardened straight jaw plate GRIP with narrow width



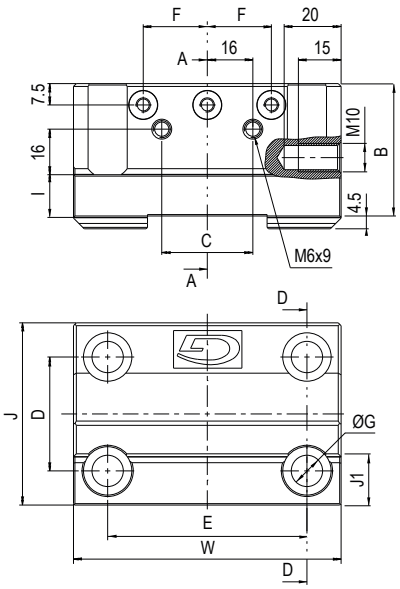
Cod.	4.24.7T100	4.24.7T200	4.24.7T300	4.24.7T400	4.24.7T500	4.24.7T600

PIASTRE GANASCE "GRIP"
Minor Superficie → Maggior Pressione
Less Surface → More Pressure

Per qualsiasi piastra piana speciale, raddoppiare il prezzo
For specia l taylor made straighr jaw plate double the price

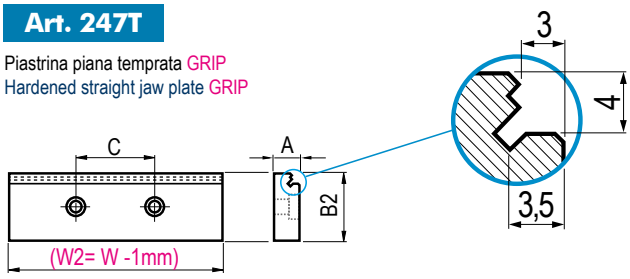
Art. 805VA

Corpo Ganascia
Jaw for plates and points



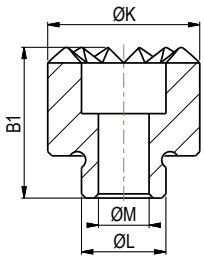
Art. 247T

Piastrina piana temprata GRIP
Hardened straight jaw plate GRIP



Art. 90

Puntale temprato GRIP
Hardened GRIP Point



mm	1	2	3	4	5	6
W	74	94	124	144	169	189
A	12	12	13	13	18	
B	39,5	47	57	61	66	86
B2	24,5	32	39	43	48	56
C	25	32	50	50	75	90
D	32	40	50	60	68	68
E	56	70	92	108	126	144
F	2X26	3x20	3x25	4x20	4x25	4x30
ØG	9	11	13	17	17	21
I	15	15	18	18	18	20
J	56	64	84	97	107	107
J1	17					
ØK	-	18				-
ØL	-	10 h8				-
ØM	-	6				-

Tipo (grandezza) morsa / Vise type (size)	kN	1		2				3	
		25 kN		25 kN				30 kN	
Apertura minima - massima / minimum - maximum Aperture	A	10 / 25	10 / 25	20 / 50	20 / 50	20 / 50	20 / 50	40 / 100	40 / 100
Apertura minima - massima / minimum - maximum Aperture	A1	10 / 15	10 / 15	10 / 25	10 / 25	10 / 25	10 / 25	25 / 50	25 / 50
	B	34		55				90	
	C	70		90				100	
	D	232	332	300	400	500	600	400	500
	E	249	349	320	420	520	620	425	525
	F	104		145				190	
	G	75		95				125	
	J	48	60	102				132	
	W	50		75				100	
	kg	9	12	23	30	63	43	47	52
	Cod.	5.87.01200	5.87.01300	5.87.02300	5.87.02400	5.87.02500	5.87.02600	5.87.03400	5.87.03500

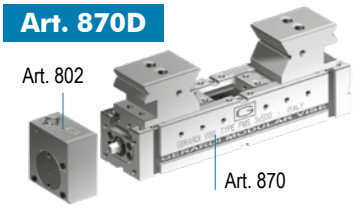
Art. 870

3 MORSE IN 1 VISES IN

Morsa **FMS** autocentrante
(opzione doppia o singola)
con ganasce primatiche

FMS self-centering vise
(double or single option) with prismatic jaws

Art. 870D



(Art. 870 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

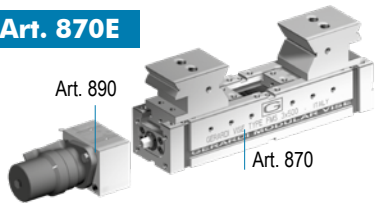
Cod.	5.87.0D120	5.87.0D130	5.87.0D230	5.87.0D240	5.87.0D250	5.87.0D260	5.87.0D340	5.87.0D350

Art. 802

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

Cod.	5.80.21000	5.80.22000	5.80.23000

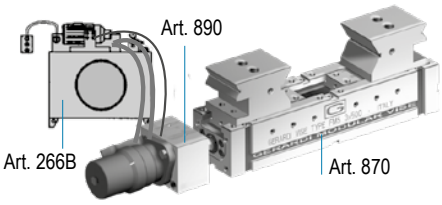
Art. 870E



(Art. 870 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	5.87.0E120	5.87.0E130	5.87.0E230	5.87.0E240	5.87.0E250	5.87.0E260	5.87.0E340	5.87.0E350

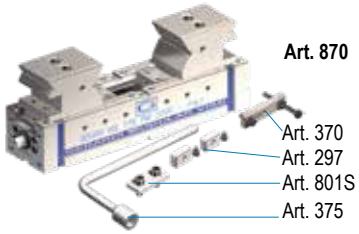
Art. 870F



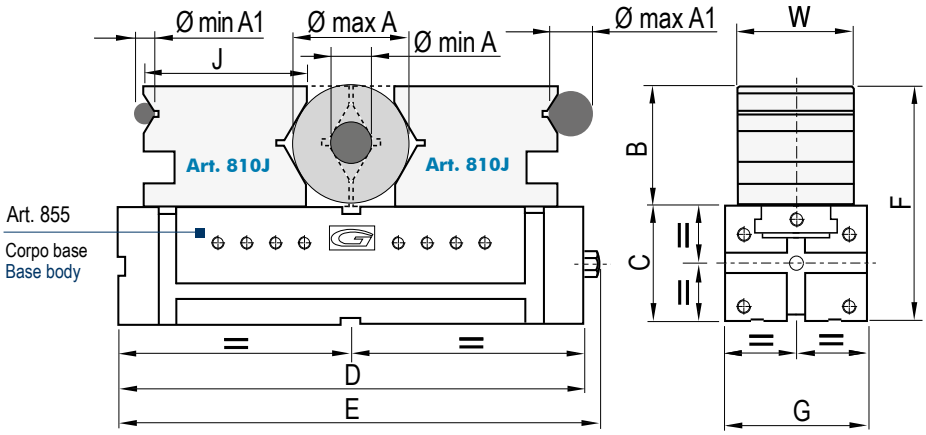
(Art. 870 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	5.87.0F120	5.87.0F130	5.87.0F230	5.87.0F240	5.87.0F250	5.87.0F260	5.87.0F340	5.87.0F350

Dotazione standard:
- 1 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:
- 1 workstops Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN			4 30 kN				5 32 kN			6 32 kN		
40 / 100	40 / 100	40 / 100	40 / 150	40 / 150	40 / 150	40 / 150	63 / 200	65 / 240	80 / 280	100 / 300	120 / 350	140 / 400
25 / 50	25 / 50	25 / 50	30 / 60	30 / 60	30 / 60	30 / 60	35 / 70	35 / 70	35 / 80	40 / 140	40 / 140	40 / 140
	90			132			171	191	226	250	275	300
	100			120				140			160	
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
	190			252			311	331	366	410	435	460
	125			145				170			190	
	132			156				176			174	
	100			132				140			160	
57	62	67	74	82	91	99	135	145	155	225	245	265
5.87.03600	5.87.03700	5.87.03800	5.87.04500	5.87.04600	5.87.04700	5.87.04800	5.87.05600	5.87.05700	5.87.05800	5.87.06800	5.87.06900	5.87.06100

Art. 870D

(Art. 870 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

5.87.0D360	5.87.0D370	5.87.0D380	5.87.0D450	5.87.0D460	5.87.0D470	5.87.0D480	5.87.0D560	5.87.0D570	5.87.0D580	5.87.0D680	5.87.0D690	5.87.0D610

Art. 802

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

5.80.23000	5.80.24000	5.80.25000	5.80.26000

Art. 870E

(Art. 870 + 890) Morsa + motore idraulico / Vise + hydraulic motor

5.87.0E360	5.87.0E370	5.87.0E380	5.87.0E450	5.87.0E460	5.87.0E470	5.87.0E480	5.87.0E560	5.87.0E570	5.87.0E580	5.87.0E680	5.87.0E690	5.87.0E610

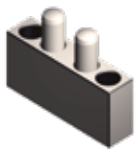
Art. 870F

(Art. 870 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

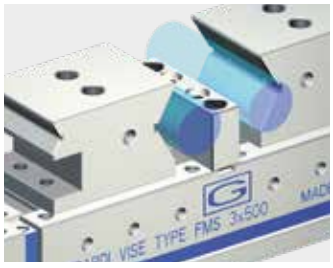
5.87.0F360	5.87.0F370	5.87.0F380	5.87.0F450	5.87.0F460	5.87.0F470	5.87.0F480	5.87.0F560	5.87.0F570	5.87.0F580	5.87.0F680	5.87.0F690	5.87.0F610

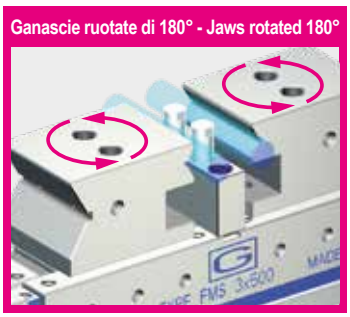
Art. 870

Esempi applicativi ganasce prismatiche:
Prismatic jaws application examples:



Art. 870A





Serraggio di 2 particolari tondi per mezzo della ganascia intermedia alta Art.870A
Round workpieces clamping by intermediate high jaw Art.870A

Pag.5.54 Page. 5.54

N.B: Realizzabili versioni speciali per diametro **Max.1500** - Special Types available on request for **up to Ø1500**

Tipo (grandezza) morsa / Vise type (size)	kN	1		2				3	
		25 kN		25 kN				30 kN	
Apertura massima / Maximum opening	A	85	185	170	270	370	470	230	330
Minima apertura interno-esterno / Minimum opening inside-outside	A1	115 / 200	115 / 300	130 / 300	130 / 400	130 / 500	130 / 600	170 / 400	170 / 500
	B	25		30				40	
	C	70		90				100	
	D	232	332	300	400	500	600	400	500
	E	249	349	320	420	520	620	425	525
	G	75		95				125	
	W	74		94				124	
	kg	7	10	18	25	32	39	40	45
Mechanical Clamping vise only for single clamping	Cod.	5.80.01200	5.80.01300	5.80.02300	5.80.02400	5.80.02500	5.80.02600	5.80.03400	5.80.03500

Art. 800

Morsa a Serraggio Meccanico solo per serraggi singoli

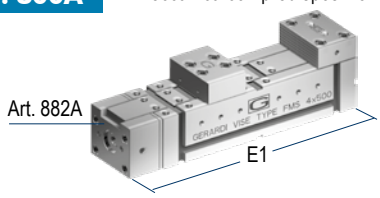
SPECIFICA SOLO PER SERRAGGI SINGOLI

SPECIFIC FOR SINGLE CLAMPING ONLY

Questa morsa, pur essendo parte del programma FMS, non è predisposta per serraggi doppi o autocentranti

Art. 800A

Meccanica con predisposizione idraulica solo per serraggi singoli / Mechanical with prepared hydraulic connection only for single clamping



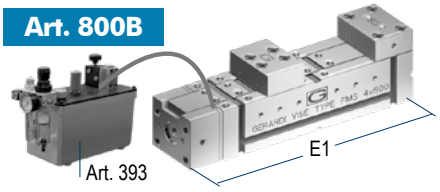
E1	273	373	370,5	470,5	570,5	670,5	485	585
Cod.	5.80.0A120	5.80.0A130	5.80.0A230	5.80.0A240	5.80.0A250	5.80.0A260	5.80.0A340	5.80.0A350

Connettore Idraulico - Hydraulic Connexion

Art. 882A

Corsa - Stroke	mm	4	7	10
Superficie - Surface	cm^2	6	21	21
Pressione - Pressure	bar	417	119	143

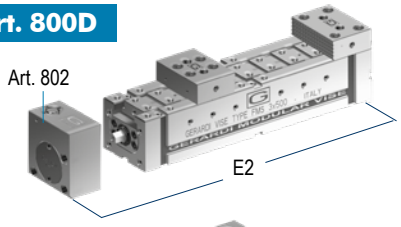
Art. 800B



(Art. 800A + Art.393) Morsa + centralina a comando manuale singolo / Vise + power unit with single manual control

E1	273	373	370,5	470,5	570,5	670,5	485	585
Cod.	5.80.0B120	5.80.0B130	5.80.0B230	5.80.0B240	5.80.0B250	5.80.0B260	5.80.0B340	5.80.0B350

Art. 800D



(Art. 800 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

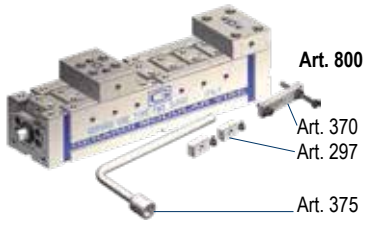
E2	277	377	360	460	560	660	470	570
Nm	Max 20		Max 25				Max 20	
Cod.	5.80.0D120	5.80.0D130	5.80.0D230	5.80.0D240	5.80.0D250	5.80.0D260	5.80.0D340	5.80.0D350

Art. 802

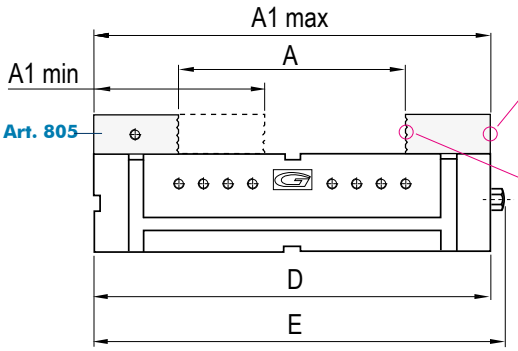
Moltiplicatore di coppia con rivio angolare - Mechanical with torque multiplier with angular transmission

Cod.	5.80.21000	5.80.22000	5.80.23000

Dotazione standard:
- 1 arresto laterale Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375



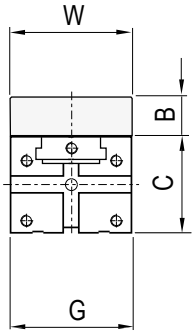
Standard equipment:
- 1 workstop Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375



Lato liscio
Smooth side

Art. 810
Gan. reversibile
Reversible jaw

Lato zigrinato
Serrated side



3 30 kN			4 30 kN				5 32 kN			6 32 kN		
430	530	630	300	400	500	600	380	480	580	580	680	780
170 / 600	170 / 700	170 / 800	200 / 500	200 / 600	200 / 700	200 / 800	220 / 600	220 / 700	220 / 800	220 / 800	220 / 800	220 / 100
40			50				60			60		
100			120				140			160		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
125			145				170			190		
124			144				169			189		
50	55	60	66	72	80	88	115	125	135	170	190	210
5.80.03600	5.80.03700	5.80.03800	5.80.04500	5.80.04600	5.80.04700	5.80.04800	5.80.05600	5.80.05700	5.80.05800	5.80.06800	5.80.06900	5.80.06100

This type of vise even if it is part of the FMS series is not suitable for double or self-centering clamping

Art. 800A

Meccanica con predisposizione idraulica solo per serraggi singoli / Mechanical with prepared hydraulic connection only for single clamping

685	785	885	585	685	785	885	-	-	-	-	-	-
5.80.0A360	5.80.0A370	5.80.0A380	5.80.0A450	5.80.0A460	5.80.0A470	5.80.0A480	5.80.0A560	5.80.0A570	5.80.0A580	5.80.0A680	5.80.0A690	5.80.0A610

Art. 882A

Connettore Idraulico - Hydraulic Connexion

10	10	-	-
21	21	-	-
143	143	-	-

Art. 800B

(Art. 800A + Art.393) Morsa + centralina a comando manuale singolo / Vise + power unit with single manual control

685	785	885	585	685	785	885	-	-	-	-	-	-
5.80.0B360	5.80.0B370	5.80.0B380	5.80.0B450	5.80.0B460	5.80.0B470	5.80.0B480	5.80.0B560	5.80.0B570	5.80.0B580	5.80.0B680	5.80.0B690	5.80.0B610

Art. 800D

(Art. 800 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

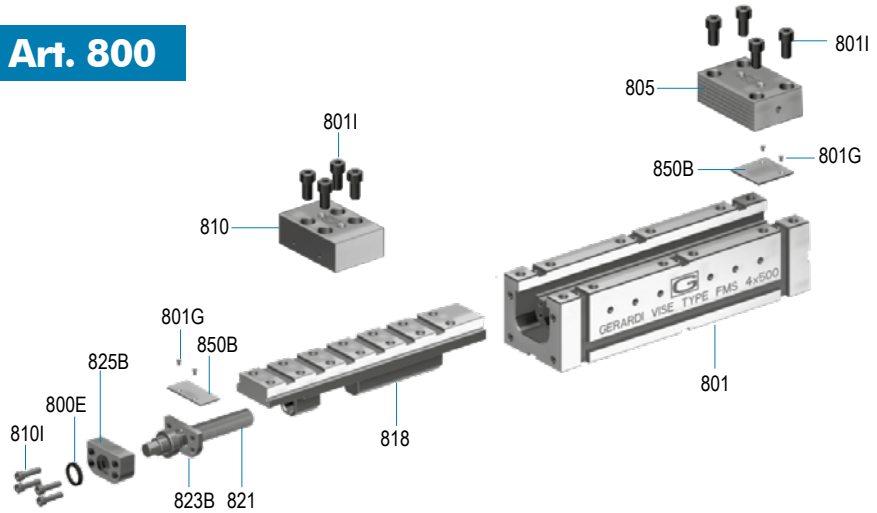
670	770	870	570	670	770	870	685	785	885	-	-	-
Max 20			Max 20				Max 20			Max 20		
5.87.0D360	5.87.0D370	5.87.0D380	5.87.0D450	5.87.0D460	5.87.0D470	5.87.0D480	5.87.0D560	5.87.0D570	5.87.0D580	5.87.0D680	5.87.0D690	5.87.0D610

Art. 802

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

5.80.23000	5.80.24000	5.80.25000	5.80.26000

Art. 800



Art.	Pag.
800E	5.61
801	5.46
801G	5.61
801I	5.61
805	5.54
810	5.56
818	5.50
821	5.52
823B	5.59
825B	5.59
850B	5.61

Art.	Pag.
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

Tipo (grandezza) morsa / Vise type (size)	kN	1		2				3	
		25 kN		25 kN				30 kN	
Apertura massima / Maximum opening	A	-	-	-	-	-	-	232	332
	B	-		-				40	
	C	-		-				100	
	D	-	-	-	-	-	-	510	610
	E	-	-	-	-	-	-	400	500
	G	-		-				125	
	W	-		-				124	
	kg	-	-	-	-	-	-		
	Cod.	-	-	-	-	-	-	5.90.03400	5.90.03500

Art. 900

NEW!

Morsa a Serraggio Meccanico con Limitatore di Forza solo per serraggi singoli

Mechanical Clamping vise with Limiting Device only for single clamping

SPECIFICA SOLO PER SERRAGGI SINGOLI

SPECIFIC FOR SINGLE CLAMPING ONLY

Questa morsa, pur essendo parte del programma FMS, non è predisposta per serraggi doppi o autocentranti

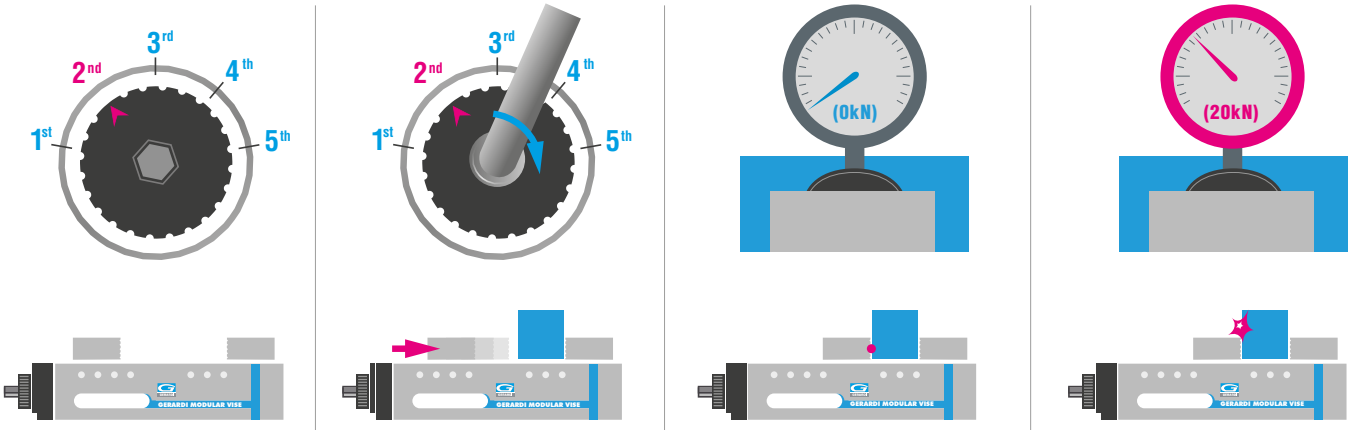
Art. 900Y

Modulo per serraggio idraulico
Module for hydraulic clamping

Cod.	-	-	5.90.0Y300

5

FUNZIONAMENTO LIMITATORE DI FORZA - HOW TO USE THE LIMITING DEVICE



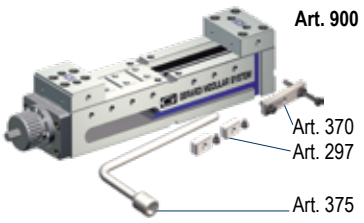
1 Scegliere forza di serraggio tramite ghiera limitatore di forza.
Presetting of the clamping force through the clamping limiter

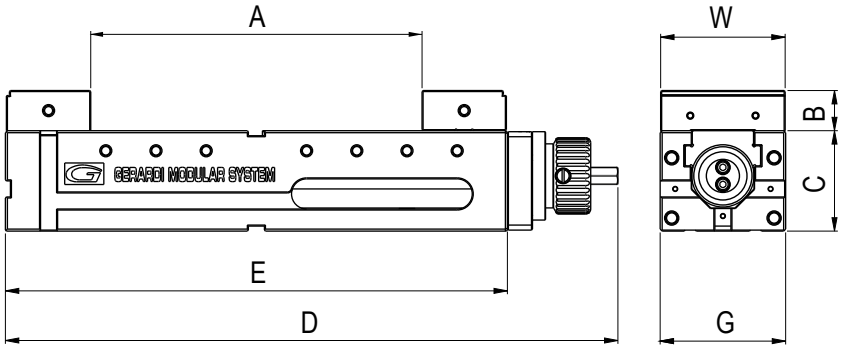
2 Rapido avvicinamento ganascia mobile al pezzo da serrare
Quick approach of the jaw to the workpiece

3 Contatto ganascia-particolare e sblocco frizione limitatore di forza.
First contact jaw-workpiece and clamping limiter friction release

4 Avvio meccanismo moltiplica forza Fermarsi a fine corsa.
Force multiplier device start. At the end-stroke stop clamping.

Dotazione standard:
- 1 arresto laterale Art. 370
- 1 coppia di tasselli di posizionamento precisi Art. 297
- 1 chiave a pipa Art. 375





Standard equipment:
- 1 workstop Art. 370
- 1 pair of precision positioning key-nuts Art. 297
- 1 box wrench Art. 375

3 30 kN			4 30 kN				5 32 kN			6 32 kN		
432	532	632	304	404	505	605	384	484	584	-	-	-
	40			50				60			-	
	100			120				140			-	
710	810	910	610	710	810	910	710	810	910	-	-	-
600	700	800	500	600	700	800	600	700	800	-	-	-
	125			145				170			-	
	124			144				169			-	
										-	-	-
5.90.03600	5.90.03700	5.90.03800	5.90.04500	5.90.04600	5.90.04700	5.90.04800	5.90.05600	5.90.05700	5.90.05800	-	-	-

This type of vise even if it is part of the FMS series is not suitable for double or self-centering clamping

Art. 900Y

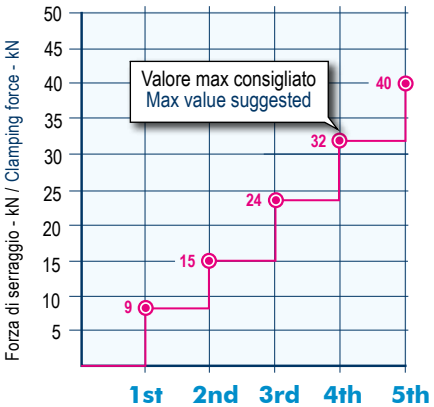
5.90.0Y300	5.90.0Y300	5.90.0Y300	-

DIAGRAMMI CON FORZE DI SERRAGGIO - DIAGRAMS WITH CLAMPING FORCE

5

MORSE **FMS** TIPO
FMS VISES TYPE 3

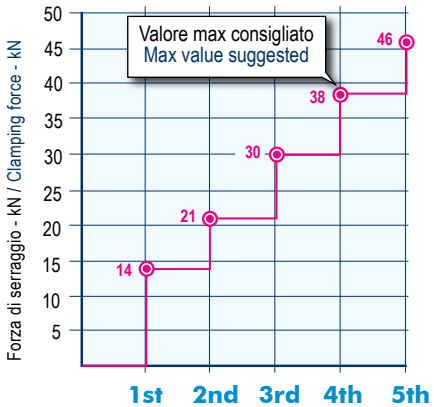
VITE: Ø 24 mm / Ø 30 mm PASSO: 2 mm
SCREW: Ø 24 mm / Ø 30 mm PITCH: 2 mm
Chiave dinamometrica / Torque wrench



Posizioni ghiera limitatore / Fixed nut positions

MORSE **FMS** TIPO
FMS VISES TYPE 4

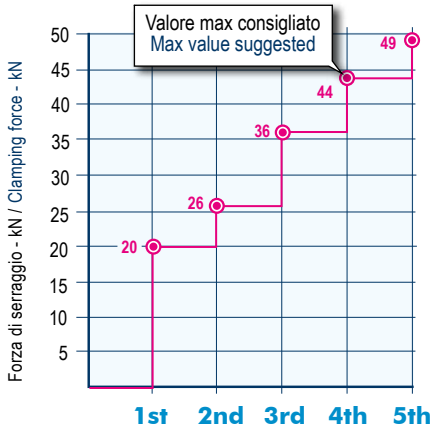
VITE: Ø 24 mm / Ø 30 mm PASSO: 2 mm
SCREW: Ø 24 mm / Ø 30 mm PITCH: 2 mm
Chiave dinamometrica / Torque wrench



Posizioni ghiera limitatore / Fixed nut positions

MORSE **FMS** TIPO
FMS VISES TYPE 5

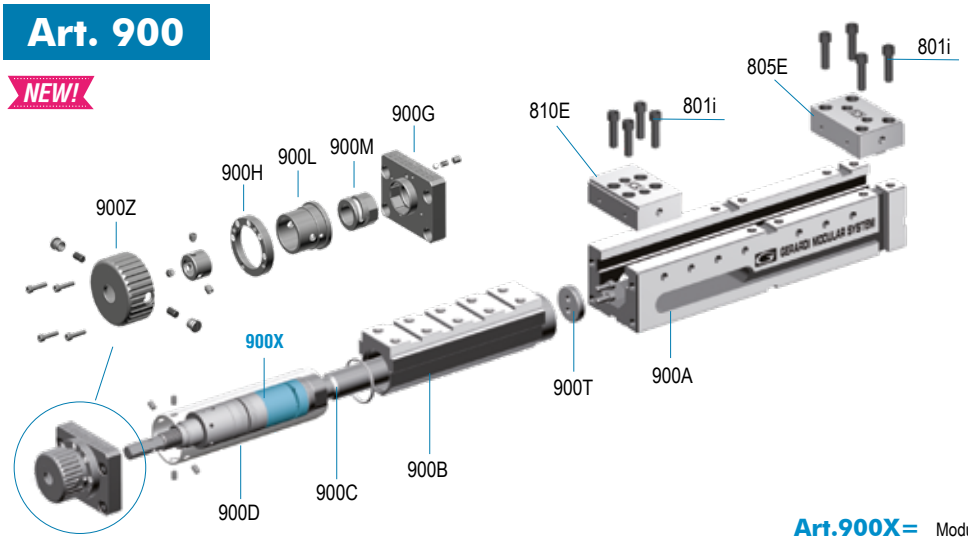
VITE: Ø 24 mm / Ø 30 mm PASSO: 2 mm
SCREW: Ø 24 mm / Ø 30 mm PITCH: 2 mm
Chiave dinamometrica / Torque wrench



Posizioni ghiera limitatore / Fixed nut positions

Art. 900

NEW!



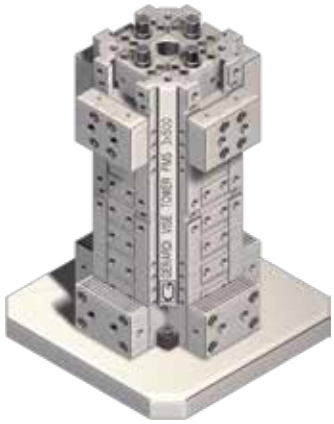
Art.	Pag.
900Y	38
810E	57
805E	55

Art.900X= Modulo per serraggio meccanico - Module for mechanical clamping

Art. 800C

Cubo-morsa FMS con ganasce piane per il serraggio di 4 pezzi

FMS vise tower with straight jaws for 4 clamping stations



Tipo (grandezza) morsa / Vise type (size)	kN	1		2				3	
		25 kN		25 kN				30 kN	
Apertura massima / Max. opening	A	85	185	170	270	370	470	230	330
	A1	115		130				170	
	B	25		30				40	
	D	200	300	300	400	500	600	400	500
	E	232	332	320	420	520	620	425	525
	G1	120		175				210	
	L	300		350				400	
	M	33		33				38	
	W	74		94				124	
	kg	30	45	53	70	88	106	90	112
	Cod.	5.80.0C120	5.80.0C130	5.80.0C230	5.80.0C240	5.80.0C250	5.80.0C260	5.80.0C340	5.80.0C350

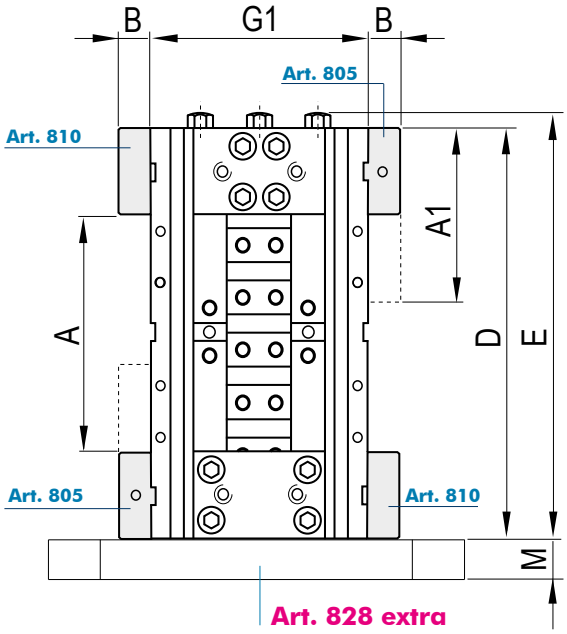
SPECIFICA SOLO PER SERRAGGI SINGOLI

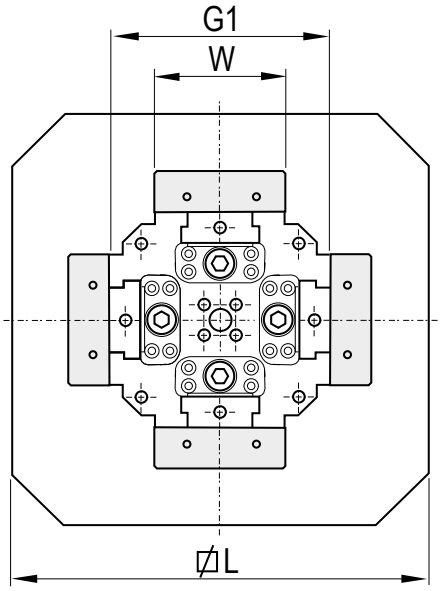
SPECIFIC FOR SINGLE CLAMPING ONLY

Questa morsa, pur essendo parte del programma FMS, non è predisposta per serraggi doppi o autocentranti

5

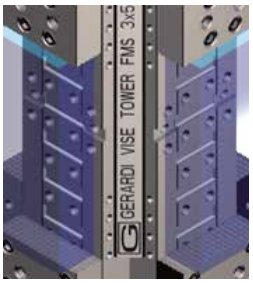
GANASCE REVERSIBILI
REVERSIBLE JAWS





Dotazione standard per Art. 800C
- 1 chiave a pipa Art. 375
- 4 arresti laterali Art. 370
- 2 coppie di tasselli di posizionamento precisi Art. 297
- 1 golfare di sollevamento Art. 848
- Imballo in cassa di legno

Standard equipment for Art. 800C
- 1 box wrench Art. 375
- 4 workstops Art. 370
- 2 pair of precision positioning key-nuts Art. 297
- 1 lifting hook Art. 848
- Wooden box packaging



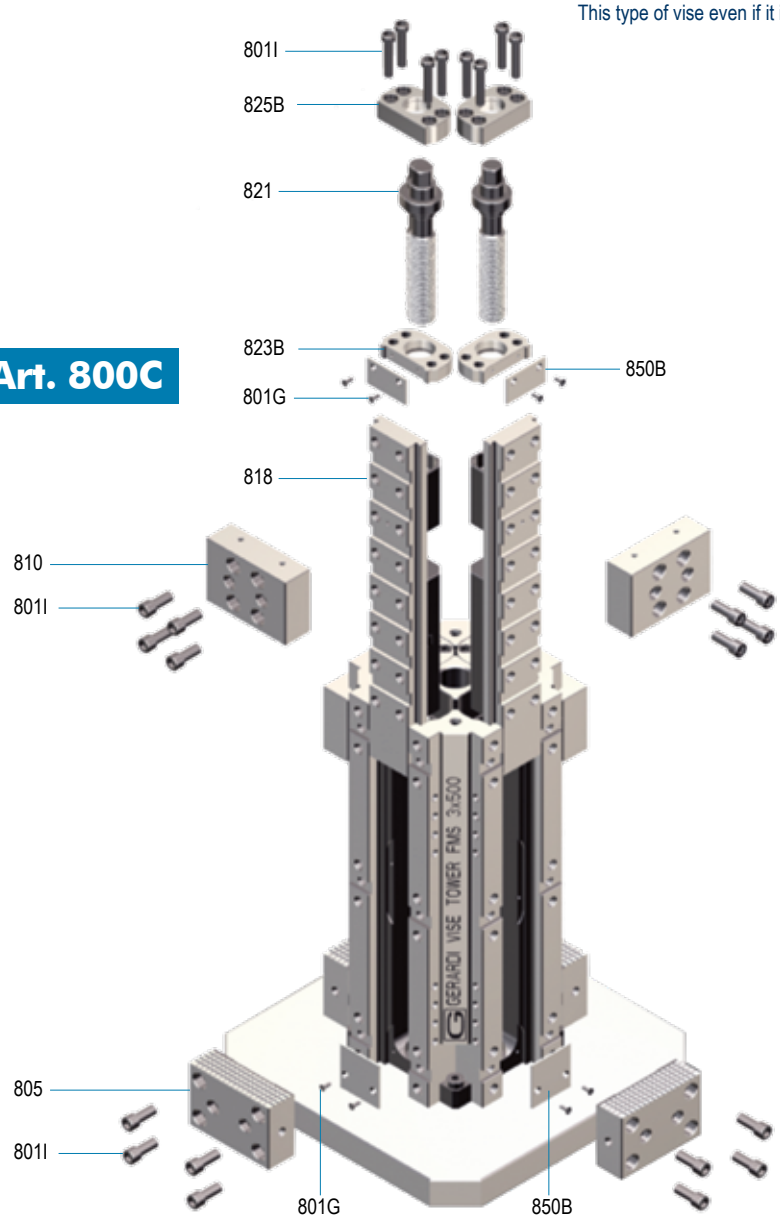
3 30 kN			4 30 kN				5 32 kN			6 32 kN		
430	530	630	300	400	500	600	380	480	580	480	580	680
170			509				630			810		
40			50				60			60		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
210			245				280			290		
400			450				500			550		
38			38				38			38		
124			144				169			189		
135	157	180	180	210	252	288	260	303	340	500	562	625
5.80.0C360	5.80.0C370	5.80.0C380	5.80.0C450	5.80.0C460	5.80.0C470	5.80.0C480	5.80.0C560	5.80.0C570	5.80.0C580	5.80.0C680	5.80.0C690	5.80.0C610

This type of vise even if it is part of the FMS series is not suitable for double or self-centering clamping

GANASCE REVERSIBILI
REVERSIBLE JAWS

Art. 800C

Esploso di cubo-morsa FMS con ganasce piane per il serraggio di 4 pezzi
Explose of FMS vise tower with straight jaws for 4 clamping stations

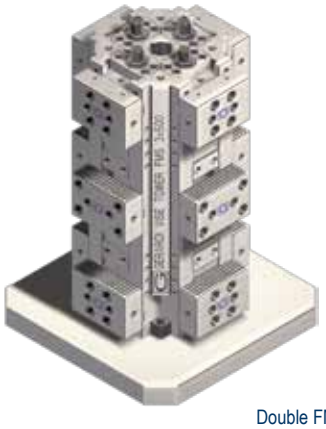


Art.	Pag.	Art.	Pag.
801G	5.61	-	-
801I	5.61	-	-
810	5.56	-	-
818	5.50	-	-
821	5.52	-	-
823B	5.59	-	-
825B	5.59	-	-
850B	5.61	-	-
-	-	-	-
-	-	-	-
-	-	-	-

Art. 860C

3 MORSE IN 1 VISES IN

Cubo-morsa FMS doppio per il serraggio di 8 pezzi



Double FMS vise tower for 8 clamping stations

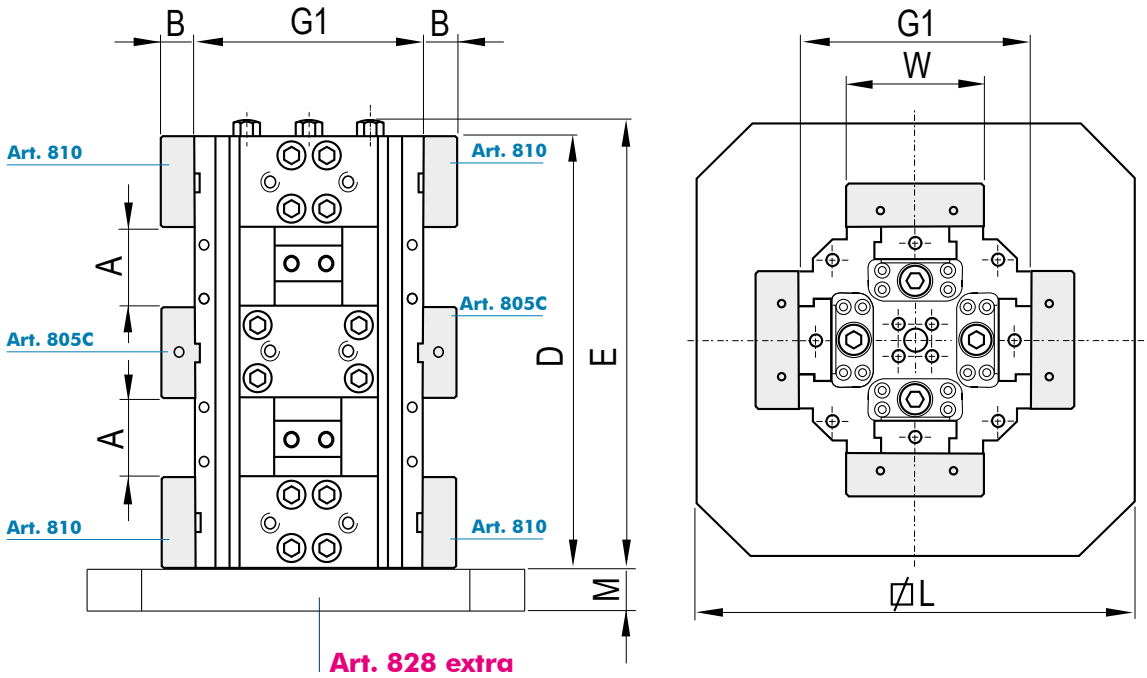
Tipo (grandezza) morsa / Vise type (size)	kN	1		2				3	
		25 kN		25 kN				30 kN	
Apertura massima / Max. opening	A	2 x 16	2 x 66	2 x 54	2 x 104	2 x 154	2 x 204	2 x 74	2 x 124
	B	25		30				40	
	D	200	300	300	400	500	600	400	500
	E	232	332	320	420	520	620	425	525
	G1	120		175				210	
	L	300		350				400	
	M	33		33				38	
	W	74		94				124	
	kg	30	45	53	70	88	106	90	112
	Cod.	5.86.0C120	5.86.0C130	5.86.0C230	5.86.0C240	5.86.0C250	5.86.0C260	5.86.0C340	5.86.0C350

Art. 855C

Modulo base cubo morsa FMS doppia (senza ganasce)
FMS Double vise tower base (without jaws)

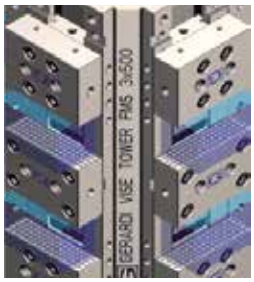
Cod.	5.85.5C120	5.85.5C130	5.85.5C230	5.85.5C240	5.85.5C250	5.85.5C260	5.85.5C340	5.85.5C350

GANASCE REVERSIBILI
REVERSIBLE JAWS



Dotazione standard per Art. 860C
- 1 chiave a pipa Art. 375
- 4 arresti laterali Art. 370
- 2 coppie di tasselli di posizionamento precisi Art. 297
- 1 golfare di sollevamento Art. 848
- Imballo in cassa di legno
- Meccanismo 3ª mano

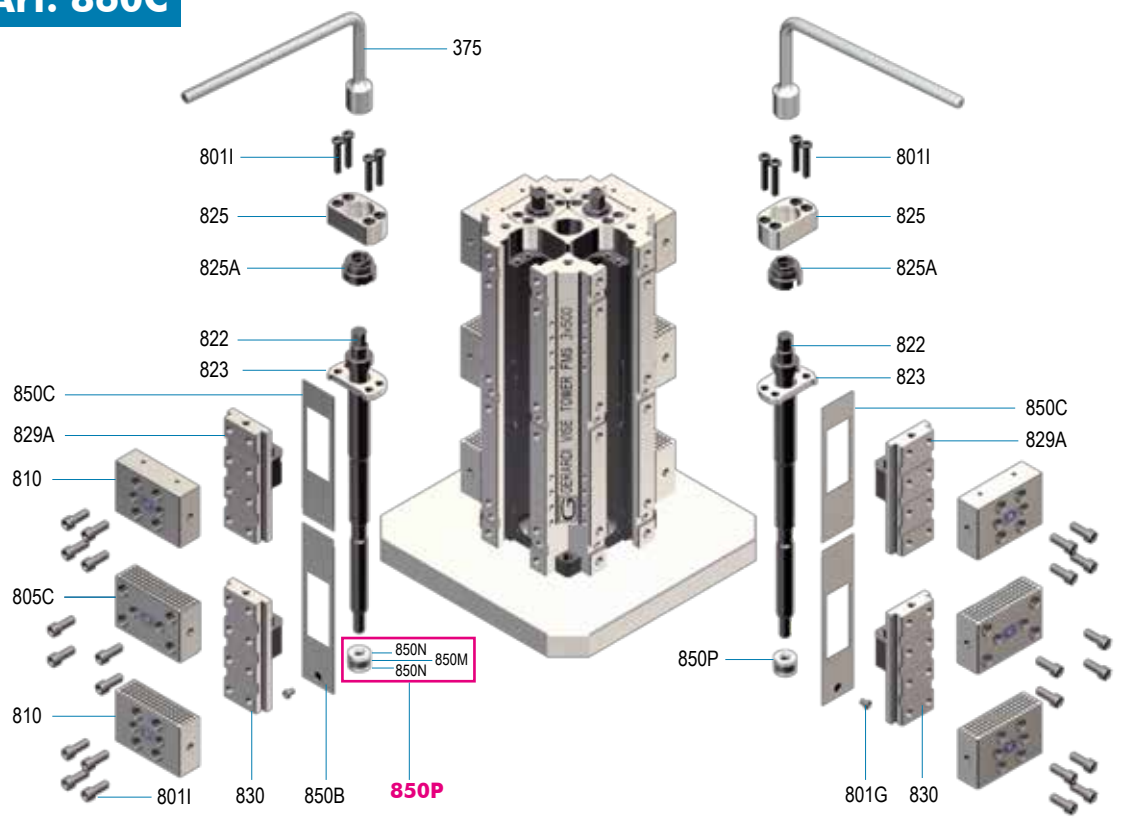
Standard equipment for Art. 860C
- 1 box wrench Art. 375
- 4 workstops Art. 370
- 2 pair of precision positioning key-nuts Art. 297
- 1 lifting hook Art. 848
- Wooden box packaging
- Third hand device



3 30 kN			4 30 kN				5 32 kN			6 32 kN		
2 x 174	2 x 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
40			50				60			60		
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
210			245				280			290		
400			450				500			550		
38			38				38			38		
124			144				169			189		
135	157	180	180	210	252	288	260	303	340	500	562	625
5.86.0C360	5.86.0C370	5.86.0C380	5.86.0C450	5.86.0C460	5.86.0C470	5.86.0C480	5.86.0C560	5.86.0C570	5.86.0C580	5.86.0C680	5.86.0C690	5.86.0C610
5.85.5C360	5.85.5C370	5.85.5C380	5.85.5C450	5.85.5C460	5.85.5C470	5.85.5C480	5.85.5C560	5.85.5C570	5.85.5C580	5.85.5C680	5.85.5C690	5.85.5C610

GANASCE REVERSIBILI
REVERSIBLE JAWS

Art. 860C



Art.	Pag.
375	4.31
801G	5.61
801I	5.61
805C	5.54
810	5.56
822	5.52
823	5.59
825	5.59
825A	5.61
829A	5.50
830	5.50
850B	5.61
850C	5.61
850P	5.61
-	-
-	-
-	-

Tipo (grandezza) morsa / Vise type (size)		1		2				3	
	kN	25 kN		25 kN				30 kN	
Apertura massima / Max. opening	A	2 x 60	2 x 110	2 x 118	2 x 168	2 x 218	2 x 268	2 x 162	2 x 212

Art. 863C

Cubo morsa FMS doppio con ganasce a gradino per il serraggio di 8 pezzi

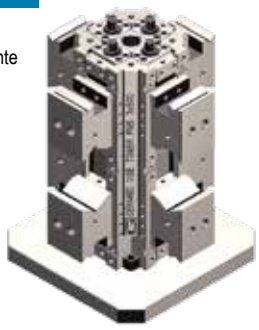
Double FMS vise tower with step-type jaws for 8 clamping stations

Cod.	5.86.3C120	5.86.3C130	5.86.3C230	5.86.3C240	5.86.3C250	5.86.3C260	5.86.3C340	5.86.3C350

Ø Apertura Minima / Massima Ø Minimum - Max Opening	A	10 / 25		10 / 50				25 / 100	

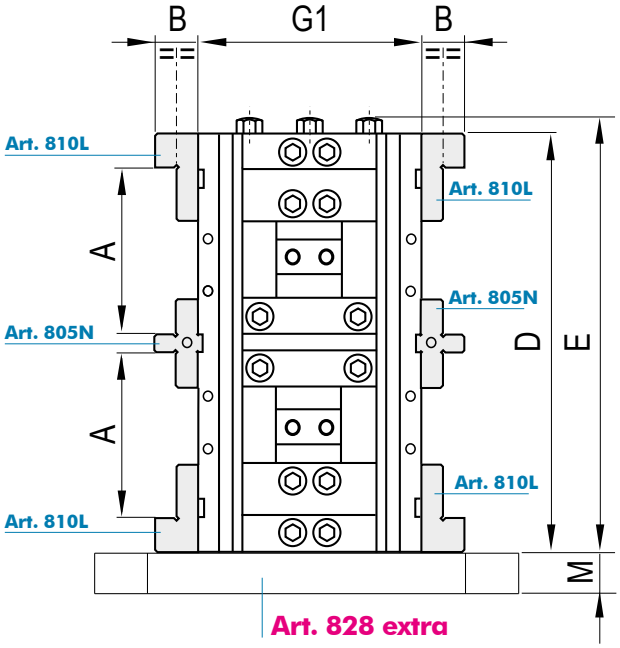
Art. 870C

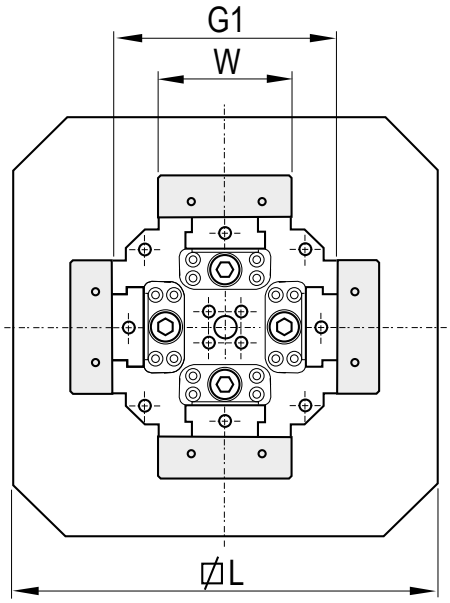
Cubo morsa FMS autocentrante con ganasce prismatiche

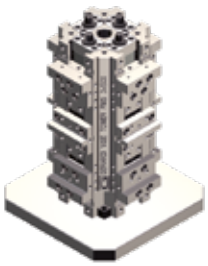


Self-centering FMS vise tower with prismatic jaws

Cod.	5.87.0C120	5.87.0C130	5.87.0C230	5.87.0C240	5.87.0C250	5.87.0C260	5.87.0C340	5.87.0C350
D	200	300	300	400	500	600	400	500
E	232	332	320	420	520	620	425	525
G1	120		175				210	
L	300		350				400	
M	33		33				38	
W	74		94				124	
W1	60		75				100	
kg	42	63	68	90	113	130	118	147







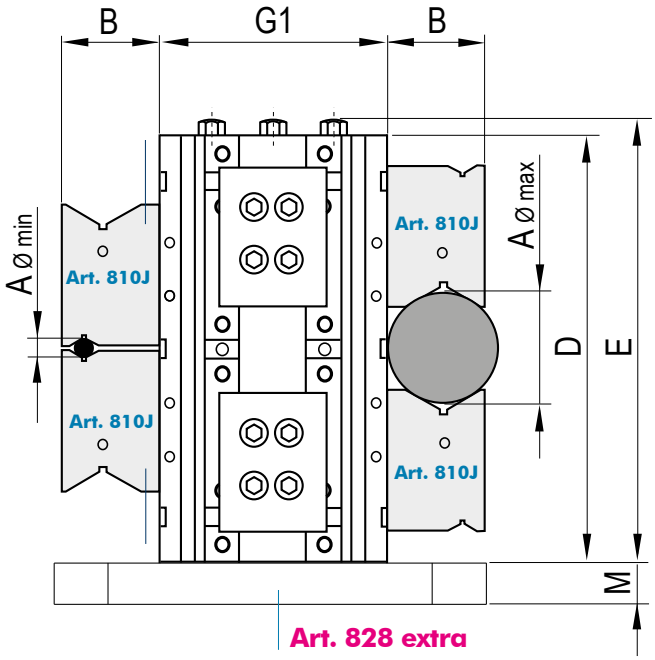
Dotazione standard per Art. 863C e Art. 870C:

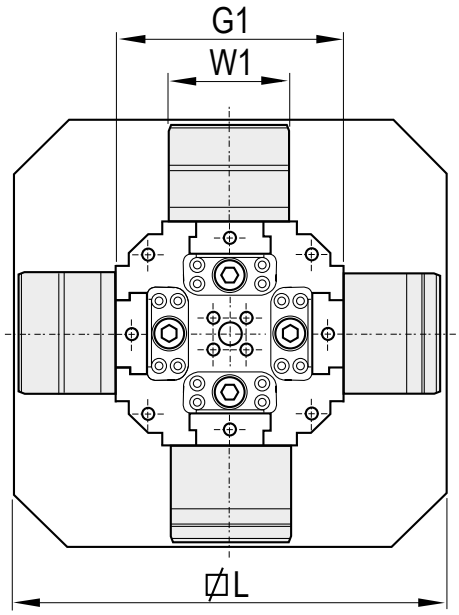
- 1 chiave a pipa Art. 375
- 4 arresti laterali Art. 370
- 2 coppie di tasselli di posizionamento precisi Art. 297
- 1 golfare di sollevamento Art. 848
- Imballo in cassetta di legno
- Meccanismo 3ª mano

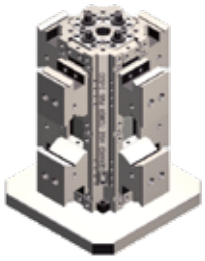
Standard equipment for Art. 863C and Art. 870C:

- 1 box wrench Art. 375
- 4 workstops Art. 370
- 2 pair of precision positioning key-nuts Art. 297
- 1 lifting hook Art. 848
- Packaging wooden box
- Third hand device

3 30 kN			4 30 kN				5 32 kN			6 32 kN		
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
5.86.3C360	5.86.3C370	5.86.3C380	5.86.3C450	5.86.3C460	5.86.3C470	5.86.3C480	5.86.3C560	5.86.3C570	5.86.3C580	5.86.3C680	5.86.3C690	5.86.3C610
25 / 100			30 / 150				35 / 200			40 / 300		
5.87.0C360	5.87.0C370	5.87.0C380	5.87.0C450	5.87.0C460	5.87.0C470	5.87.0C480	5.87.0C560	5.87.0C570	5.87.0C580	5.87.0C680	5.87.0C690	5.87.0C610
600	700	800	500	600	700	800	600	700	800	800	900	1000
625	725	825	525	625	725	825	625	725	825	825	925	1025
210			245				280			290		
400			450				500			550		
38			38				38			38		
124			144				169			189		
100			132				140			160		
177	206	236	242	290	339	388	328	383	437	656	738	820





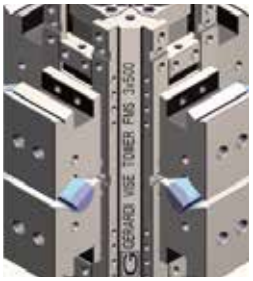


Dotazione standard per Art. 863C e Art. 870C:

- 1 chiave a pipa Art. 375
- 4 arresti laterali Art. 370
- 2 coppie di tasselli di posizionamento precisi Art. 297
- 1 golfare di sollevamento Art. 848
- Imballo in cassetta di legno
- Meccanismo 3ª mano

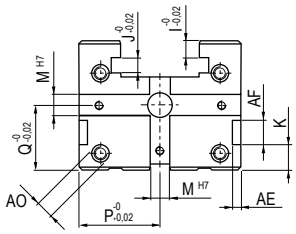
Standard equipment for Art. 863C and Art. 870C:

- 1 box wrench Art. 375
- 4 workstops Art. 370
- 2 pair of precision positioning key-nuts Art. 297
- 1 lifting hook Art. 848
- Packaging wooden box
- Third hand device

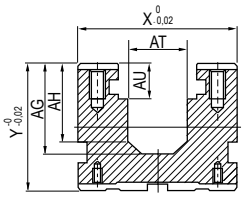


Art. 801

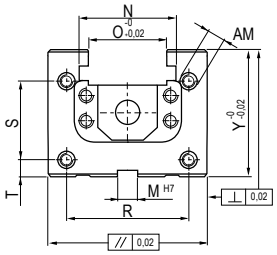
Base morsa FMS. Disegni e tabella dimensionale
FMS vise base body. Drawing and table dimension



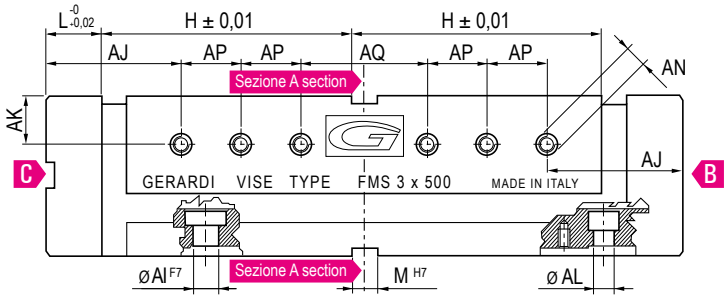
Vista da C / Side C



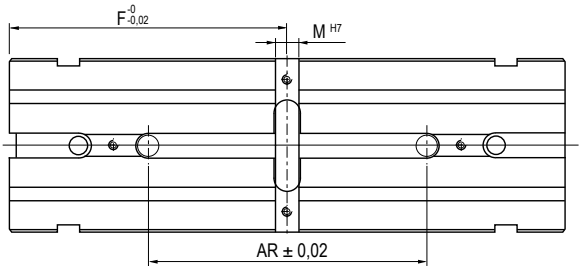
Sezione AA / AA section



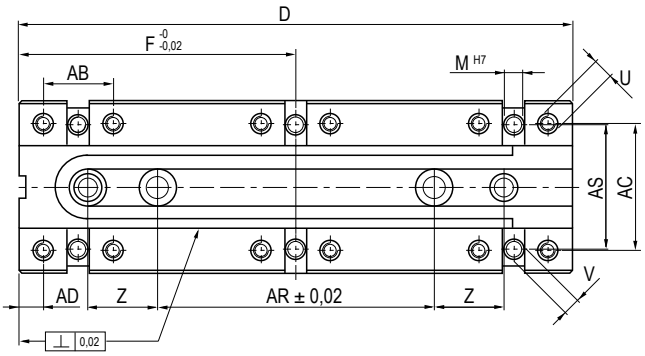
Vista da B / Side B



Vista dal basso / Show bottom



Vista dall'alto / Show top



Tipo (grandezza) morsa / Vise type (size)	1		2	
kg	4,7	7,3	12,8	19
Cod.	5.80.11200	5.80.11300	5.80.12300	5.80.12400
D	200	300	300	400
F	100	150	150	200
H	71	121	117	167
I	10		13	
J	10		12	
K	15		20	
L	21		25	
M	16		16	
N	45		53	
O	35		41	
P	37,5		47,5	
Q	35		45	
R	52		70	
S	30		48	
T	20		22	
U	M8		M10	
V	M8		M10	
Z	50		50	
X	75		95	
Y	70		90	
AB	32		40	
AC	56		70	
AD	13		13	
AE	4		6	
AF	16		16	
AG	49		62	
AH	41		53	
AI	Ø 16 X 2		Ø 16 X 2	
AJ	55		65	
AK	20		27	
AL	Ø 11		Ø 13	
	n°0	n°2	n° 2	n° 2
AM	M10		M10	
AN	M10		M10	
	n°8	n°12	n° 12	n° 16
AO	M10		M10	
AP	20	25	50	
AQ	50	70	70	
AR	100	200	200	
AS	56		68	
AT	28		34	
AU	23		28	

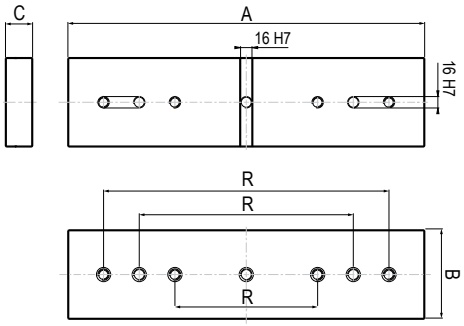
PIASTRE D'INTERFACCIA Art.62 per morse FMS
CONNECTING PLATES Art.62 for FMS vises

NEW!

Art. 62
FMS

Piastra di interfaccia
Zero Point per morse FMS

Zero Point connecting
plate for FMS vises



Tipo (grandezza) morsa / Vise type (size)	1		2	
A	232	332	300	400
B	75		95	
C	38		38	
R	200 / 300		200 / 300 / 400	
kg	5	7	11	13,4
Cod.	5.62.12000	5.62.13000	5.62.23000	5.62.24000

2		3					4				5			6		
23	27	26	31	39	46	52	47	56	65	75	71	82	94	140	156	174
5.80.12500	5.80.12600	5.80.13400	5.80.13500	5.80.13600	5.80.13700	5.80.13800	5.80.14500	5.80.14600	5.80.14700	5.80.14800	5.80.15600	5.80.15700	5.80.15800	5.80.16800	5.80.16900	5.80.16100
500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000
250	300	200	250	300	350	400	250	300	350	400	300	350	400	400	450	500
217	267	157	207	257	307	357	200	250	300	350	245	295	345	345	395	445
13		13					20				20			20		
12		12					18				18			18		
20		20					20				26			26		
25		35					42				47			47		
16		16					16				16			16		
53		76					86				96			110		
41		61					71				82			94		
47,5		62,5					72,5				85			95		
45		50					60				70			80		
70		92					108				126			144		
48		62					72				92			100		
22		13					16				18			20		
M10		M12					M16				M16			M20		
M10		M12					M12				M12			M12		
50		50					50				50			50		
95		125					145				170			190		
90		100					120				140			160		
40		50					60				68			68		
70		92					108				126			144		
13		18					20				21			20		
6		6					10				10			10		
16		16					16				16			16		
62		72					80				95			105		
53		62					70				82			95		
Ø 16 x 2		Ø 16 x 2					Ø 16 x 2				Ø 16 x 2			Ø 16 x 2		
65		100					100				100			125		
27		32					40				48			58		
Ø 13		Ø 13					Ø 13				Ø 17			Ø 17		
n° 4	n° 6	n° 2	n° 4	n° 6	n° 8	n° 10	n° 4	n° 6	n° 8	n° 10	n° 6	n° 8	n° 10	n° 10	n° 12	n° 14
M10		M12					M12				M16			M20		
M10		M10M					M10				M10					
n° 20	n° 24	n° 8	n° 12	n° 16	n° 20	n° 24	n° 12	n° 16	n° 20	n° 24	n° 16	n° 20	n° 24	n° 24	n° 28	n° 32
M10		M12					M16				M16			M20		
50		50					50				50			50		
70		100					100				100			125		
200		200					200				400	400	600	400	400	400
68		92					106				126			144		
34		44					44				52			49		
28		28					41				41			41		

PIASTRE D'INTERFACCIA Art.62 per morse FMS
CONNECTING PLATES Art.62 for FMS vises

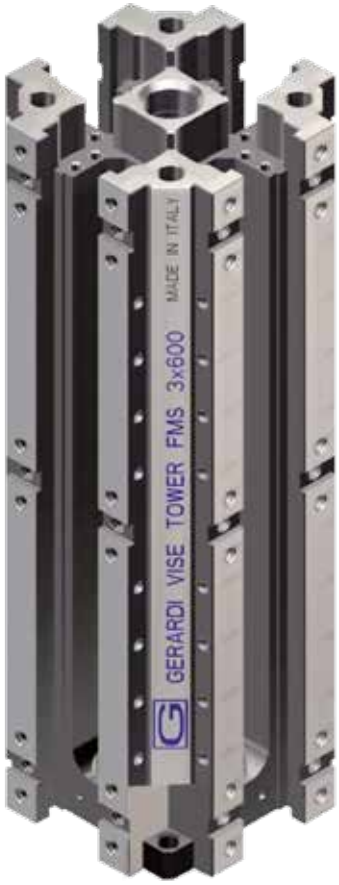
NEW!

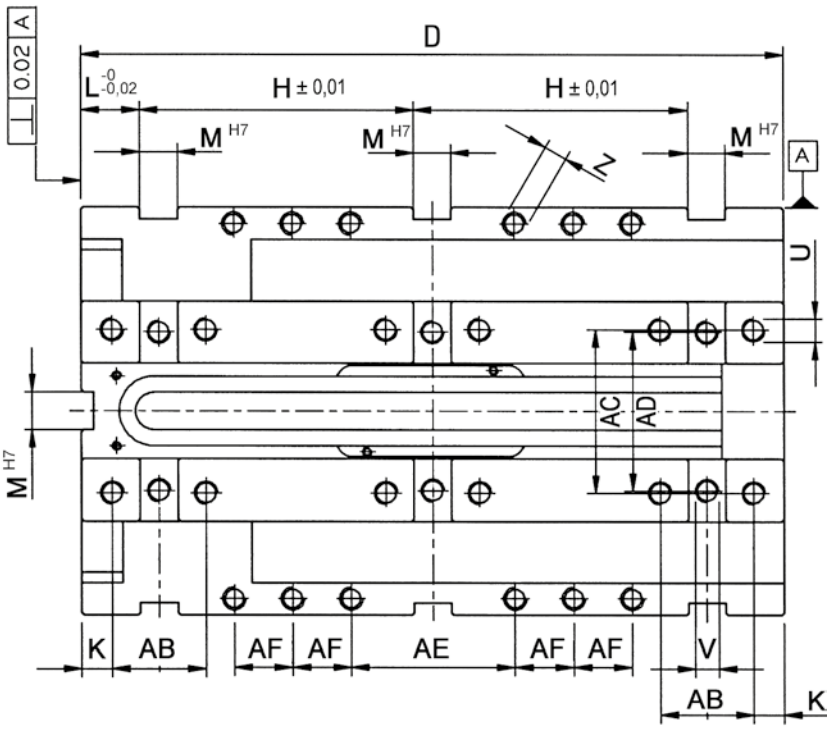
2		3					4				5			6		
500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000
95		125					145				170			190		
38		38					38				38			38		
200 / 300 / 400		200 / 300 / 400					200 / 300 / 400				200 / 300 / 400			200 / 300 / 400		
16,1	18,9	13,9	17,8	21,5	25,1	28,5	20,8	25	29,3	33,5	29	34	39	44	49	55
5.62.25000	5.62.26000	5.62.34000	5.62.35000	5.62.36000	5.62.37000	5.62.38000	5.62.45000	5.62.46000	5.62.47000	5.62.48000	5.62.56000	5.62.57000	5.62.58000	5.62.68000	5.62.69000	5.62.61000

Tipo (grandezza) morsa / Vise type (size)	1		2	
Cod.	5.80.41200	5.80.41300	5.80.42300	5.80.42400
D	200	300	300	400
F	140		175	
H	71	121	117	167
I	10		13	
J	10		12	
K	13		13	
L	21		25	
M	16		16	
N	45		53	
O	35		41	
P	M10		M12	
Q	11		13	
R	-		100	
S	-		40	
T	-		120	
U	M8		M10	
V	M8		M10	
Z	M10		M10	
X	75		95	
Y	70		85	
AB	32		40	
AC	56		70	
AD	56		68	
AE	50	70	70	
AF	10	25	50	
AG	49		62	
AH	41		53	

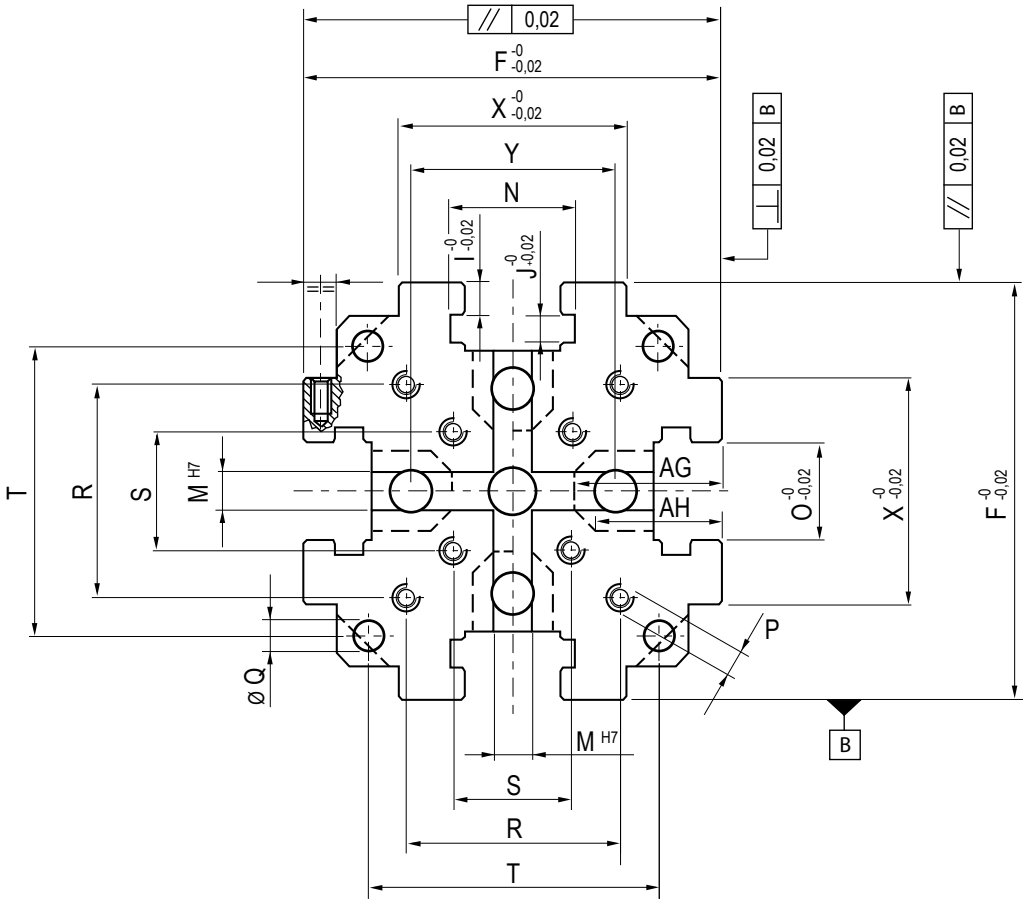
Art. 804

Corpo base cubo FMS. Disegni e tabella dimensionale
FMS cube base body. Drawing and table dimension





2		3					4				5			6		
5.80.42500	5.80.42600	5.80.43400	5.80.43500	5.80.43600	5.80.43700	5.80.43800	5.80.44500	5.80.44600	5.80.44700	5.80.44800	5.80.45600	5.80.45700	5.80.45800	5.80.46800	5.80.46900	5.80.46100
500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000
175		210					245				280			290		
217	267	157	207	257	307	357	200	250	300	350	235	285	335	345	395	445
13		13					20				20			20		
12		12					18				18			18		
13		18					20				21			21		
25		35					42				47			47		
16		16					16				16			16		
53		76					86				96			110		
41		61					71				82			94		
M12		M12					M16				M16			M20		
13		13					13				17			17		
100		120					150				150			150		
40		40					40				50			50		
120		150					170				210			210		
M10		M12					M16				M16			M20		
M10		M12					M12				M12			M12		
M10		M10					M10				M10			M10		
95		125					145				170			190		
85		110					125				140			130		
40		50					60				68			68		
70		92					108				126			144		
68		92					106				126			144		
70		100					100				100			125		
50		50					50				50			50		
62		62					80				95			105		
53		72					70				82			95		

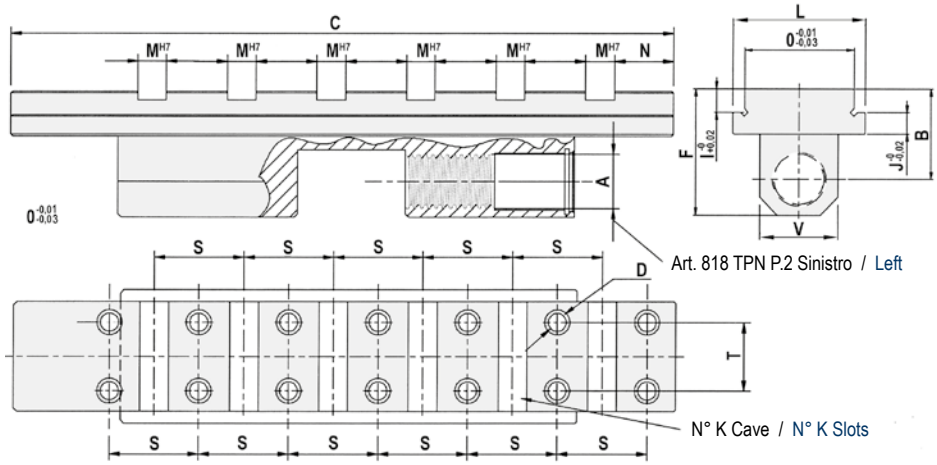


5

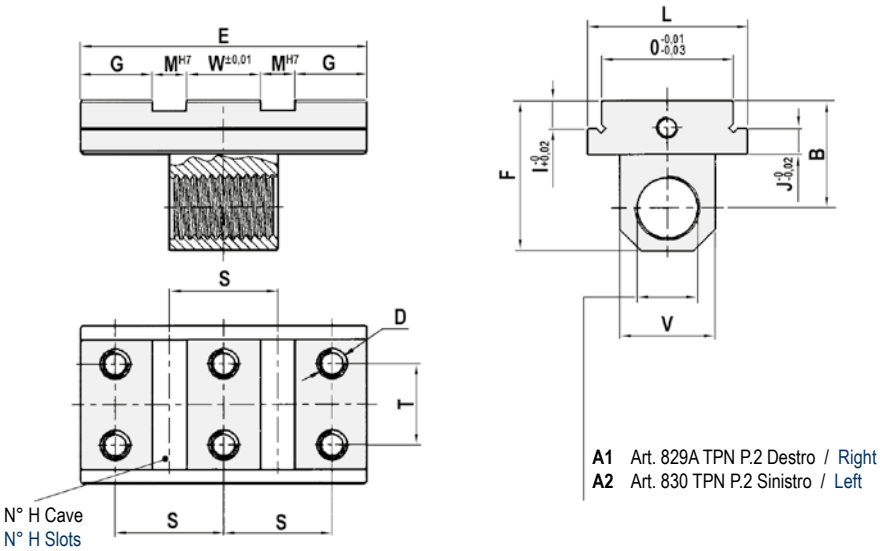
Tipo (grandezza) morsa / Vise type (size)	1		2	
Larghezza base / Base lenght	200	300	300	400
Cod.	5.81.81200	5.81.81300	5.81.82300	5.81.82400

Art. 818

Slitta integrale lunga / Solid long slide



	1		2	
A	18		24	
A1	18		18	
A2	24		24	
B	35		45	
C	170	264	256	356
D	M8		M10	
E	72	116	102	142
F	48,5		61,5	
G	15	18	23	
H	2	3	2	3
I	10		13	
J	10		12	
K	-	-	5	7
L	44		51	
M	16		16	
N	20		23	
O	35		41	
S	26	32	40	
T	20		25	
V	27		33	
W	10	16	24	



Art. 829A

Slitta con filetto sinistro / Slide Right Hand

Cod.	5.82.9A120	5.82.9A130	5.82.9A230	5.82.9A240

Art. 830

Slitta con filetto destro / Slide Left Hand

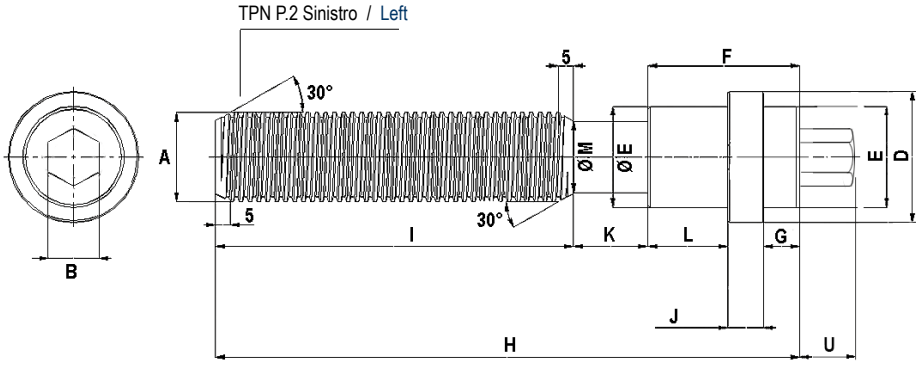
Cod.	5.83.01200	5.83.01300	5.83.02300	5.83.02400

2		3					4				5			6		
500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000
5.81.82500	5.81.82600	5.81.83400	5.81.83500	5.81.83600	5.81.83700	5.81.83800	5.81.84500	5.81.84600	5.81.84700	5.81.84800	5.81.85600	5.81.85700	5.81.85800	5.81.86800	5.81.86900	5.81.86100
24		30					30				36			36		
18		24					24				30			30		
24		30					30				36			36		
45		50					60				70			80		
456	556	346	446	546	646	746	435	535	635	735	525	625	725	725	825	925
M10		M12					M16				M16			M20		
182	222	132	182	232	282	332	156	216	276	336	174	242	310	242	310	378
61,5		71					80				95			106		
23		33					40				45			45		
4	5	2	3	4	5	6	2	3	4	5	2	3	4	3	4	5
13		13					20				20			20		
12		12					18				18			18		
9		5					5				6			9		
51		74					84				95			108		
16		16					16				16			16		
23		33					40				45			45		
41		61					71				82			94		
40		50					60				68			68		
25		38					44				44			54		
33		43					43				51			48		
24		34					44				52			52		
5.82.9A250	5.82.9A260	5.82.9A340	5.82.9A350	5.82.9A360	5.82.9A370	5.82.9A380	5.82.9A450	5.82.9A460	5.82.9A470	5.82.9A480	5.82.9A560	5.82.9A570	5.82.9A580	5.82.9A680	5.82.9A690	5.82.9A610
5.83.02500	5.83.02600	5.83.03400	5.83.03500	5.83.03600	5.83.03700	5.83.03800	5.83.04500	5.83.04600	5.83.04700	5.83.04800	5.83.05600	5.83.05700	5.83.05800	5.83.06800	5.83.06900	5.83.06100

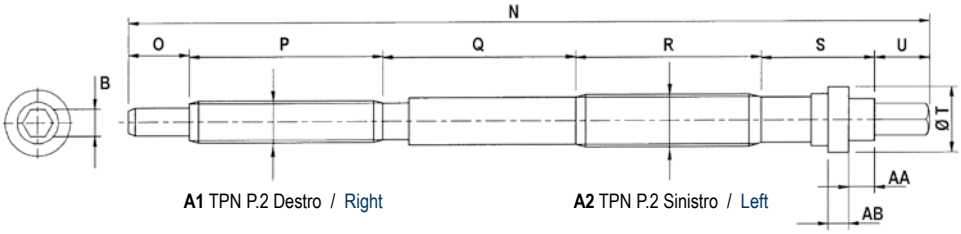
Tipo (grandezza) morsa / Vise type (size)	**1**		**2**	
Larghezza base / Base lenght	200	300	300	400
Cod.	5.82.11300		5.82.12600	

Art. 821

Vite di bloccaggio con filetto sinistro / Main screw left thread



A	18		24	
A1	18		18	
A2	20		24	
B	16		16	
D	35		35	
E	20		25	
F	82		33	
G	13		12	
H	152		135	
I	65		90	
J	14		12	
K	5		12	
L	55		9	
M	14		19	
N	242	333	308	399
O	12	17	25	32
P	65	84	84	98
Q	32	66	66	106
R	68	85	75	94
S	44	6	38	49
T	32		32	
U	21		15	
AA	10		10	
AB	10		10	



Art. 822

Vite di bloccaggio con filetto destro e sinistro
Main screw right and left thread

Viti con esagono maschio o femmina a seconda delle dimensioni
Screw available with external or internal exagon

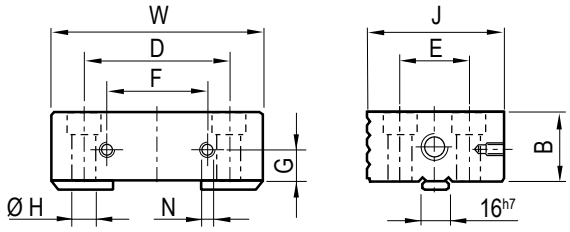
Cod.	5.82.21200	5.82.21300	5.82.22300	5.82.22400

2		3					4				5			6		
500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000
5.82.12600		5.82.14800					5.82.14800				5.82.16100			5.82.16100		
24		30					30				36			36		
18		24					24				30			30		
24		30					30				36			36		
16		19					19				19			19		
35		45					45				48			48		
25		30					30				30			30		
33		42					42				115			115		
12		16					16				15			15		
135		136					186				225			225		
90		118					118				135			135		
12		15					15				20			20		
12		26					26				55			55		
9		11					11				80			80		
19		24					24				30			30		
500	600	414	499	599	699	822	499	599	699	797	610	700	790	790	881	961
52	52	25	35	54	87	121	35	54	87	121	47	71	101	101	81	100
116	151	123	123	140	124	118	123	140	124	118	176	158	140	140	205	187
134	164	82	132	160	226	282	132	160	226	282	124	192	256	256	245	308
116	136	118	118	140	124	118	118	140	124	118	176	158	140	140	205	187
62	77	41	66	80	113	136	66	80	113	136	62	96	128	128	120	154
32		38					38				45			45		
20		25					25				25			25		
10		15					15				22			22		
10		12					12				15			15		
5.82.22500	5.82.22600	5.82.23400	5.82.23500	5.82.23600	5.82.23700	5.82.23800	5.82.24500	5.82.24600	5.82.24700	5.82.24800	5.82.25600	5.82.25700	5.82.25800	5.82.26800	5.82.26900	5.82.26100

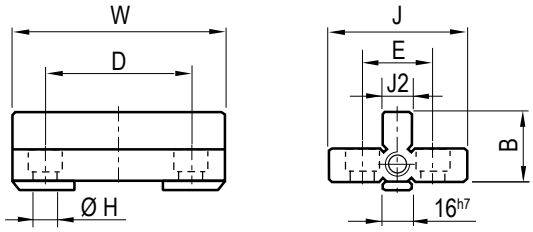
GANASCE FISSE PER MORSE FMS
FIXED JAWS FOR FMS VISES

Tipo (grandezza) / Type (size)		1	2	3	4	5	6
Art. 805* Ganascia fissa zigrinata da un lato / Fixed jaw one side serrated	Cod.	5.80.51000	5.80.52000	5.80.53000	5.80.54000	5.80.55000	5.80.56000
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805A* Ganascia fissa liscia / Smooth fixed jaw	Cod.	5.80.5A100	5.80.5A200	5.80.5A300	5.80.5A400	5.80.5A500	5.80.5A600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805B* Ganascia fissa dolce / Soft fixed jaw	Cod.	5.80.5B100	5.80.5B200	5.80.5B300	5.80.5B400	5.80.5B500	5.80.5B600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805C* Ganascia fissa zigrinata da ambo i lati / Fixed jaw serrated on both sides	Cod.	5.80.5C100	5.80.5C200	5.80.5C300	5.80.5C400	5.80.5C500	5.80.5C600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 870A* NEW! Ganascia fissa intermedia alta / Fixed Intermediate high jaw	Cod.	5.87.0A100	5.87.0A200	5.87.0A300	5.87.0A400	5.87.0A500	5.87.0A600
	* Viti per fissaggio a richiesta Fixing screws on request						

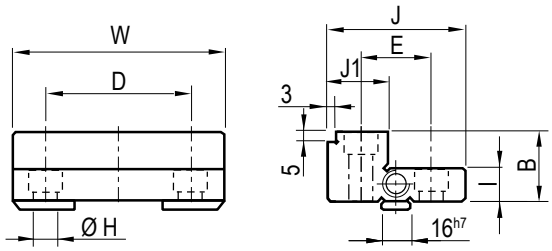
Art. 805 (Montata su Art. 860) (Assembled on Art. 860)



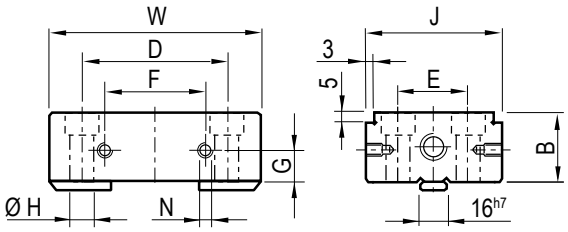
Art. 805N (Montata su Art. 863) (Assembled on Art. 863)



Art. 805O Ganascia fissa con gradino piccolo e grande / Fixed jaw with small and large step



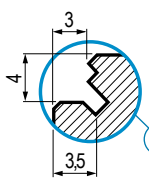
Art. 805F (Montata su Art. 866) (Assembled on Art. 866)



Tipo (grandezza) morsa / Vise (type) size

mm	1	2	3	4	5	6	Tolleranze Tolerance
W	74	94	124	144	169	189	-
J	56	64	84	98	108	108	- 0,02
J1	24	24	30	38	38	38	
J2	16	16	16	16	16	16	
B	25	30	40	50	60	60	- 0,02
D	56	70	92	108	126	144	-
E	32	40	50	60	68	68	-
F	40	50	65	65	65	100	-
G	10	10	15	20	25	25	-
H	9	11	13	17	17	22	-
I	12,5	15	20	25	30	30	- 0,02
N	M5	M6	M6	M6	M6	M6	-

Tipo (grandezza) / Type (size)		1	2	3	4	5	6
Art. 805D* Ganascia fissa con gradino 3x5 zigrinata da un lato / Fixed jaw with 3x5 step on side serrated	Cod.	5.80.5D100	5.80.5D200	5.80.5D300	5.80.5D400	5.80.5D500	5.80.5D600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805E* Ganascia fissa con gradino 3x5 liscia / Fixed jaw with 3x5 step smooth	Cod.	5.80.5E100	5.80.5E200	5.80.5E300	5.80.5E400	5.80.5E500	5.80.5E600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805F* Ganascia fissa con doppio gradino 3x5 liscia / Fixed jaw with double 3x5 step smooth	Cod.	5.80.5F100	5.80.5F200	5.80.5F300	5.80.5F400	5.80.5F500	5.80.5F600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805G* Ganascia fissa con doppio gradino 3x5 zigrinata / Fixed jaw with double 3x5 step serrated	Cod.	5.80.5G100	5.80.5G200	5.80.5G300	5.80.5G400	5.80.5G500	5.80.5G600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805H* Ganascia fissa con prisma verticale / Fixed jaw with vertical prism	Cod.	5.80.5H100	5.80.5H200	5.80.5H300	5.80.5H400	5.80.5H500	5.80.5H600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805I* Ganascia fissa con doppio prisma verticale / Fixed jaw with double vertical prism	Cod.	5.80.5I100	5.80.5I200	5.80.5I300	5.80.5I400	5.80.5I500	5.80.5I600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805J* Ganascia fissa con prisma orizzontale / Fixed jaw with horizontal prism	Cod.	5.80.5J100	5.80.5J200	5.80.5J300	5.80.5J400	5.80.5J500	5.80.5J600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805K* Ganascia fissa con doppio prisma orizzontale / Fixed jaw with double horizontal prism	Cod.	5.80.5K100	5.80.5K200	5.80.5K300	5.80.5K400	5.80.5K500	5.80.5K600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805L* Ganascia fissa con gradino / Step fixed jaw	Cod.	5.80.5L100	5.80.5L200	5.80.5L300	5.80.5L400	5.80.5L500	5.80.5L600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805M* Ganascia fissa con gradino zigrinata da un lato / Step fixed jaw one side serrated	Cod.	5.80.5M100	5.80.5M200	5.80.5M300	5.80.5M400	5.80.5M500	5.80.5M600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805N* Ganascia fissa con doppio gradino / Fixed jaw with double step	Cod.	5.80.5N100	5.80.5N200	5.80.5N300	5.80.5N400	5.80.5N500	5.80.5N600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805O* Ganascia fissa con gradino piccolo e grande liscia da un lato / Fixed jaw with small and large step on side smooth	Cod.	5.80.5O100	5.80.5O200	5.80.5O300	5.80.5O400	5.80.5O500	5.80.5O600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805P* Ganascia fissa con gradino piccolo e grande zigrin. da un lato / Fixed jaw with small and large step one side serrated	Cod.	5.80.5P100	5.80.5P200	5.80.5P300	5.80.5P400	5.80.5P500	5.80.5P600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805Q* Ganascia fissa doppia con gradino piccolo e grande / Double fixed jaw with small and large step	Cod.	5.80.5Q100	5.80.5Q200	5.80.5Q300	5.80.5Q400	5.80.5Q500	5.80.5Q600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805R* Ganascia fissa in alluminio / Fixed jaw aluminium	Cod.	5.80.5R100	5.80.5R200	5.80.5R300	5.80.5R400	5.80.5R500	5.80.5R600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805T* Ganascia fissa doppia GRIP per forti serraggi / GRIP Double fixed jaw for strongest clamping	Cod.	5.80.5T100	5.80.5T200	5.80.5T300	5.80.5T400	5.80.5T500	5.80.5T600
	* Viti per fissaggio a richiesta Fixing screws on request						
Art. 805DT* NEW! Ganascia fissa a coda di rondine / Dove tail fixed jaw	Cod.	5.80.5DT10	5.80.5DT20	5.80.5DT30	5.80.5DT40	5.80.5DT50	5.80.5DT60
	* Viti a richiesta - Screws on request						

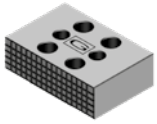
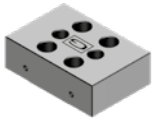
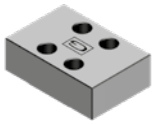


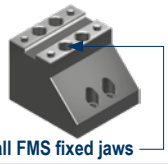
Richiedere scheda tecnica - Technical data sheet on request

5

GANASCE MOBILI PER MORSE FMS
MOVABLE JAWS FOR FMS VISES

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
Art. 810* Ganascia mobile zigrinata da un lato / Movable jaw one side serrated — Cod.	5.81.01000	5.81.02000	5.81.03000	5.81.04000	5.81.05000	5.81.06000
Art. 810A* Ganascia mobile liscia / Smooth movable jaw — Cod.	5.81.0A100	5.81.0A200	5.81.0A300	5.81.0A400	5.81.0A500	5.81.0A600
Art. 810B* Ganascia mobile dolce / Soft movable jaw — Cod.	5.81.0B100	5.81.0B200	5.81.0B300	5.81.0B400	5.81.0B500	5.81.0B600
Art. 810D* Ganascia mobile con gradino 3x5 zigrinata da un lato / Movable jaw with 3x5 step on side serrated — Cod.	5.81.0D100	5.81.0D200	5.81.0D300	5.81.0D400	5.81.0D500	5.81.0D600
Art. 814* Base mobile per ganasce fisse / Movable base for fixed jaws — Cod.	5.81.41000	5.81.42000	5.81.43000	5.81.44000	5.81.45000	5.81.4.6000

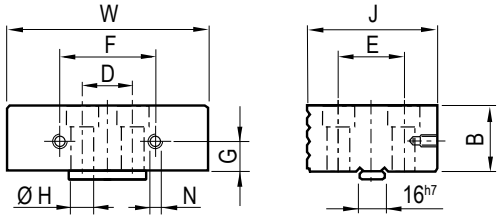


* Viti per fissaggio a richiesta Fixing screws on request

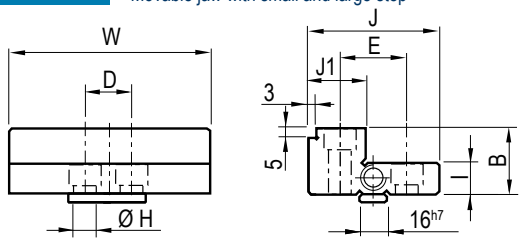
Predisposizione per tutte le ganasce FMS fisse - Fit all FMS fixed jaws

5

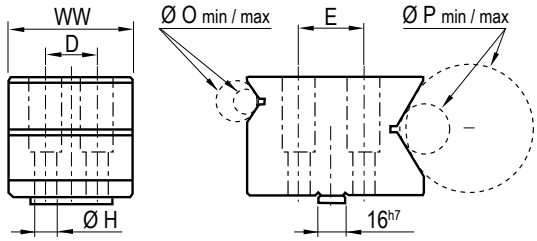
Art. 810
(Montata su Art. 860) / (Assembled on Art. 860)



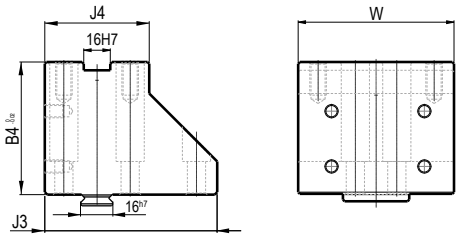
Art. 810O
Ganascia mobile con gradino piccolo e grande
Movable jaw with small and large step



Art. 810J
(Montata su Art. 870) / (Assembled on Art. 870)



Art. 814
Base mobile per ganasce fisse - Movable base for fixed jaws

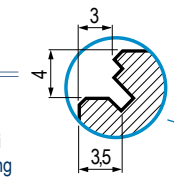


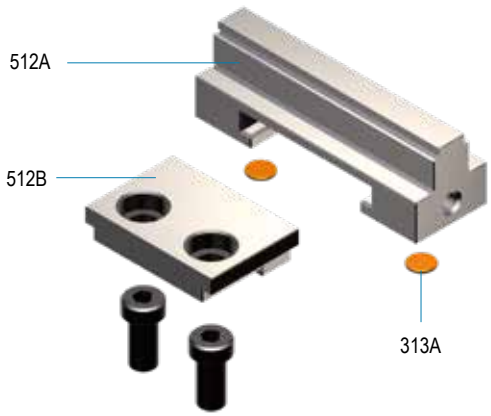
Tipo / Type	1x200	1x300	2	3	4	5	6	Tolleranze Tolerance
W	74		94	124	144	169	189	-
WW	60		75	100	132	140	160	-
B	25		30	40	50	60	60	- 0,02
B4	60		80	90	110	120	160	- 0,02
D	20		25	38	44	44	54	-
E	26	32	40	50	60	68	68	-
F	40		50	65	65	65	100	-
G	10		10	15	20	25	25	-
H	9		11	13	17	17	22	-
I	12,5		15	20	25	30	30	- 0,02
J	56		64	82	98	108	108	- 0,02
J1	24		24	30	38	38	38	- 0,02
J3	76	76	104	134	158	169	189	-
J4	55		63	83	97	106	107	-
N	M5		M6	M6	M6	M6	M6	-
Ø O	10 / 15		20 / 30	25 / 30	20 / 60	35 / 70	40 / 80	-
Ø P	10 / 25		20 / 50	40 / 100	45 / 150	63 / 200	73 / 300	-

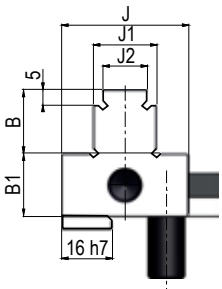
Tipo (grandezza) / Type (size)	1	2	3	4	5	6
Art. 810E* Ganascia mobile con gradino 3x5 liscia / Movable jaw with 3x5 step smooth	Cod. 5.81.0E100	5.81.0E200	5.81.0E300	5.81.0E400	5.81.0E500	5.81.0E600
Art. 810J* Ganascia mobile prismatica per tondi liscia / Prismatic movable jaw for round parts smooth	Cod. 5.81.0J100	5.81.0J200	5.81.0J300	5.81.0J400	5.81.0J500	5.81.0J600
Art. 810K* Ganascia mobile prismatica per tondi zigrinata / Prismatic movable jaw for round parts serrated	Cod. 5.81.0K100	5.81.0K200	5.81.0K300	5.81.0K400	5.81.0K500	5.81.0K600
Art. 810L* Ganascia mobile con gradino / Step movable jaw	Cod. 5.81.0L100	5.81.0L200	5.81.0L300	5.81.0L400	5.81.0L500	5.81.0L600
Art. 810M* Ganascia mobile con gradino zigrinata da un lato / Step movable jaw one side serrated	Cod. 5.81.0M100	5.81.0M200	5.81.0M300	5.81.0M400	5.81.0M500	5.81.0M600
Art. 810O* Ganascia mobile con gradino piccolo e grande / Movable jaw with small and large step	Cod. 5.81.0O100	5.81.0O200	5.81.0O300	5.81.0O400	5.81.0O500	5.81.0O600
Art. 810P* Ganascia mobile con gradino piccolo e grande zigrin. da un lato / Movable jaw with small and large step one side serrated	Cod. 5.81.0P100	5.81.0P200	5.81.0P300	5.81.0P400	5.81.0P500	5.81.0P600
Art. 810R* Ganascia mobile in alluminio / Movable jaw aluminium	Cod. 5.81.0R100	5.81.0R200	5.81.0R300	5.81.0R400	5.81.0R500	5.81.0R600
Art. 810T* Ganascia mobile GRIP per forti serraggi / GRIP movable jaw for strongest clamping	Cod. 5.81.0T100	5.81.0T200	5.81.0T300	5.81.0T400	5.81.0T500	5.81.0T600
Art. 810DT* NEW! Ganascia mobile a coda di rondine / Dove tail movable jaw	Cod. 5.81.0DT10	5.81.0DT20	5.81.0DT30	5.81.0DT40	5.81.0DT50	5.81.0DT60
Art. 810V* Ganascia mobile con segmenti oscillanti / Movable jaw with floating inserts	Cod. 5.81.0V100	5.81.0V200	5.81.0V300	5.81.0V400	5.81.0V500	5.81.0V600
Art. 512* Ganascia intermedia / Intermediate Jaw	Cod. 5.51.21000	5.51.22000	5.51.23000	5.51.24000	5.51.25000	5.51.26000

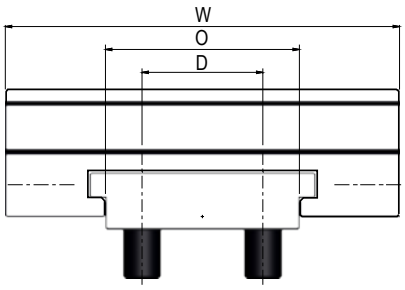
* Viti per fissaggio a richiesta Fixing screws on request

* Viti a richiesta - Screws on request Richiedere scheda tecnica - Technical data sheet on request









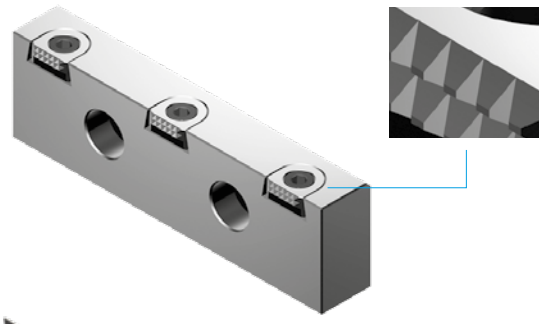
Type	1	2	3	4	5	6
W	74	94	124	144	169	189
J	25	35	40	40	50	50
J1	15	15	20	20	30	30
J2	9	9	14	14	19	19
B / B1	12,5	15	20	25	30	30
D	20	25	38	44	44	54
O	34	40	60	70	81	93

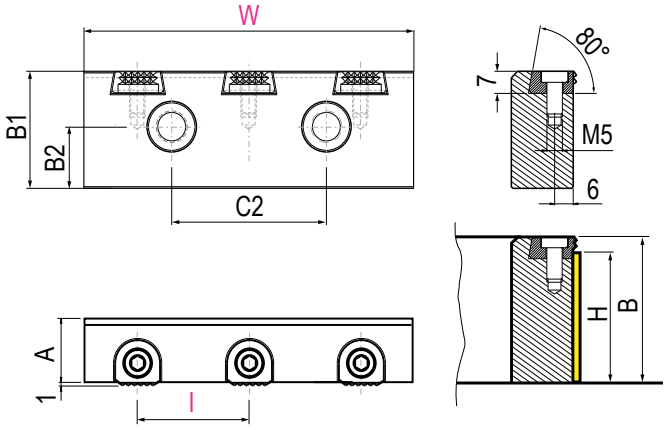
Vedi esempio applicativo - **See application example: Pag. 5.15**

PIASTRE GANASCE PIANE CON INSERTI GRIP PER MORSE FMS
STRAIGHT INSERT GRIP JAW PLATES FOR FMS VISES

NEW!

Art.547G Piastra Piana con inserti GRIP G01 per morse FMS
FMS vises Straight plate with G01 GRIP inserts





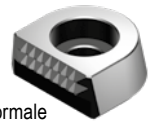
Dotazione Standard - Standard Equipment
1 pc. Art.313 parallela magnetica - 1 pc. Art.313 magnetic parallel

Tipe Type	1	2	3	4	5	6
W	76	94	124	144	169	194
I	26	33	23,5	29,5	23,5	27
C2	25	32	65	65	75	90
B	25	30	40	50	60	60
B1	25	30	40	50	60	60
B2	**12,25**	**16**	**15**	**21,5**	**24**	**24**
A	**20**	**20**	**20**	**20**	**20**	**20**
H	**20**	**25**	**35**	**45**	**55**	**55**
Cod.	5.54.7G100	5.54.7G200	5.54.7G300	5.54.7G400	5.54.7G500	5.54.7G600

INSERTI GRIP PER MORSE FMS
INSERT GRIP JAW PLATES FOR FMS VISES

NEW!

Art. 220 G01



Per materiali di durezza normale
For standard workpieces hardness clamping

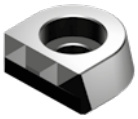
Cod.	4.22.01000 / G01

Art. 220 G02

Per materiali di notevole durezza.
For hardened workpieces clamping

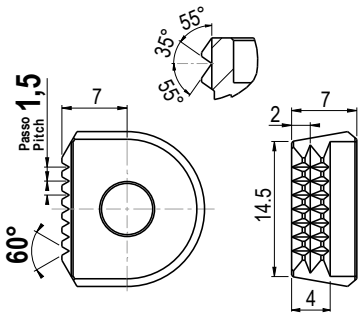
Cod.	4.22.01000 / G02

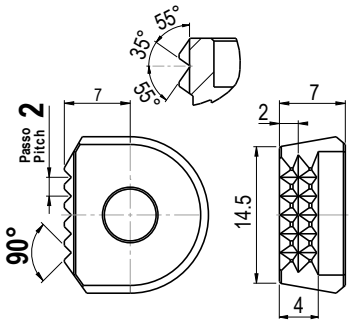
Art. 220 G11

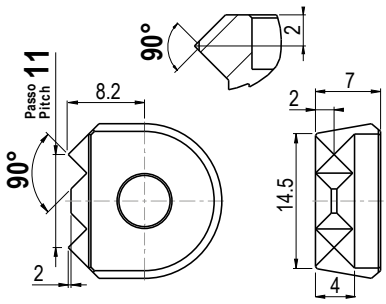


Per materiali teneri
For soft material clamping

Cod.	4.22.01000 / G11







Tipo Type	1	2	3	4	5	6
Art.547G	3 pcs each	3 pcs each	5 pcs each	5 pcs each	7 pcs each	7 pcs each

PIASTRE PER MORSE FMS
PLATES FOR FMS VISES

Tipo (grandezza) / Type (size)	1	2	3	4	5	6

Art. 823
Piastra intermedia per Art. 855
Middle plate for Art. 855

Cod.	5.82.31000	5.82.32000	5.82.33000	5.82.34000	5.82.35000	5.82.36000

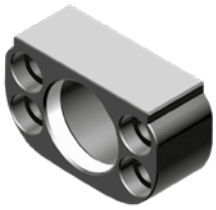
Art. 823B
Piastra intermedia per Art. 800
Middle plate for Art. 800

Cod.	5.82.3B100	5.82.3B200	5.82.3B300	5.82.3B400	5.82.3B500	5.82.3B600

Art. 825
Piastra di contenimento vite per morsa FMS per Art. 855
Screw holding plate for FMS vise for Art. 855

Cod.	5.82.51000	5.82.52000	5.82.53000	5.82.54000	5.82.55000	5.82.56000

Art. 825B
Piastra di contenimento vite per morsa FMS per Art. 800
Screw holding plate for FMS vise for Art. 800

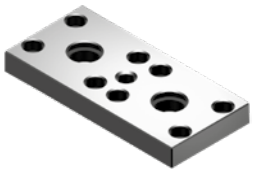


Cod.	5.82.5B100	5.82.5B200	5.82.5B300	5.82.5B400	5.82.5B500	5.82.5B600

Art. 825C
Piastra di contenimento vite per morsa FMS per Art. 855W
Screw holding plate for FMS vise for Art. 855W

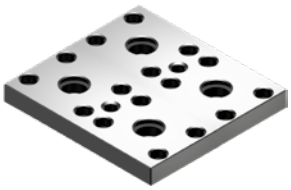
Cod.	5.82.5C100	5.82.5C200	5.82.5C300	5.82.5C400	5.82.5C500	5.82.5C600

Art. 831
Piastra di collegamento per **2** morse FMS
montate verticalmente dorso a dorso o fianco a fianco
Connecting plate for **2** FMS vises
vertcally mounted back-to-back or side by side



Cod.	5.83.11000	5.83.12000	5.83.13000	5.83.14000	5.83.15000	5.83.16000

Art. 832
Piastra di collegamento per **4** morse FMS montate
verticalmente dorso a dorso o fianco a fianco
Connecting plate for **4** FMS vises
vertcally mounted back-to-back or side by side



Cod.	5.83.21000	5.83.22000	5.83.23000	5.83.24000	5.83.25000	5.83.26000

Art. 833
Piastra di collegamento personalizzata per **2** morse FMS
Connecting plate for **2** FMS vises tailor made

Cod.	5.83.31000	5.83.32000	5.83.33000	5.83.34000	5.83.35000	5.83.36000

Art. 834
Piastra di collegamento personalizzata per **4** morse FMS
Connecting plate for **4** FMS vises tailor made

Cod.	5.83.41000	5.83.42000	5.83.43000	5.83.44000	5.83.45000	5.83.46000

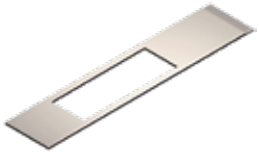
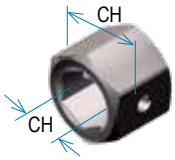
PIASTRE BASE PER MORSE FMS
BASE PLATES FOR FMS VISES

5

Tipo (grandezza) / Type (size)	1	2	3	4	5	6	7
Art. 827 Piastra base per una o più morse / Head plate for one or more vises							
C	33	33	38	38	38	38	38
H	300	350	400	450	500	630	800
Kg	22	30	44	56	71	113	182
Cod.	5.82.71000	5.82.72000	5.82.73000	5.82.74000	5.82.75000	5.82.76000	5.82.77000
Art. 827A Piastra base pesonalizzata per una o più morse / Tailor made head plate for one or more vises							
Kg	21,5	29,5	43,5	55	70	112	181
Cod.	5.82.7A100	5.82.7A200	5.82.7A300	5.82.7A400	5.82.7A500	5.82.7A600	5.82.7A700
Art. 828 Piastra base per cubo morsa / Head plate for vise tower							
Kg	22,5	30,5	45	57	72	114	183
Cod.	5.82.81000	5.82.82000	5.82.83000	5.82.84000	5.82.85000	5.82.86000	5.82.87000
Art. 828A Piastra base personalizzata per cubo morsa / Tailor made head plate for vise tower							
Kg	22	30	44,5	56,5	71	113	182
Cod.	5.82.8A100	5.82.8A200	5.82.8A300	5.82.8A400	5.82.8A500	5.82.8A600	5.82.8A700

Bussola di centraggio Art. 852 compresa
Centering bushing Art. 852 included

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
Art. 835 Distanziale quadrato per **4** morse FMS / Square spacer for **4** FMS vises						
A	75	95	125	145	170	190
Cod.	5.83.51000	5.83.52000	5.83.53000	5.83.54000	5.83.55000	5.83.56000
Art. 836 Supporto quadrato per **4** morse FMS / Square support for **4** FMS vises						
A	75	95	125	145	170	190
B	200	300	400	500	600	800
Cod.	5.83.61000	5.83.62000	5.83.63000	5.83.64000	5.83.65000	5.83.66000
Art. 837 Supporto esagonale per **6** morse FMS / Exagon support for **6** FMS vises						
B	200	300	400	500	600	800
C	132	170	220	255	300	335
D	76 ~	98 ~	127 ~	147 ~	173 ~	193 ~
Cod.	5.83.71000	5.83.72000	5.83.73000	5.83.74000	5.83.75000	5.83.76000
Art. 838 Distanziale esagonale per **6** morse FMS / Exagon spacer for **6** FMS vises						
C	132	170	220	255	300	335
D	76 ~	98 ~	127 ~	147 ~	173 ~	193 ~
Cod.	5.83.81000	5.83.82000	5.83.83000	5.83.84000	5.83.85000	5.83.86000
Art. 852 Bussola di centraggio per piastra base / Centering bushing for base plate						
Cod.	5.85.21000	5.85.22000	5.85.23000	5.85.24000	5.85.25000	5.85.26000
Art. 853 Centraggio orizzontale per cubo FMS / Horizontal centering for FMS cube						
Cod.	5.85.31000	5.85.32000	5.85.33000	5.85.34000	5.85.35000	5.85.36000

Tipo (grandezza) / Type (size)		1	2	3	4	5	6
Art. 825A Ghiera per morse e cubi FMS Nut for FMS vises and cubes		Cod.	5.82.5A100	5.82.5A200	5.82.5A300	5.82.5A400	5.82.5A500	5.82.5A600
Art. 850B Riparo lato vite Protection side screw		Cod.	5.85.0B100	5.85.0B200	5.85.0B300	5.85.0B400	5.85.0B500	5.85.0B600
Art. 850C Riparo Protection		Cod.	5.85.0C100	5.85.0C200	5.85.0C300	5.85.0C400	5.85.0C500	5.85.0C600
Art. 850P Dispositivo "**Terza Mano**" "**Third Hand**" device		Cod.	5.85.0P100	5.85.0P200	5.85.0P300	5.85.0P400	5.85.0P500	5.85.0P600
Art. 850E Bussola esagonale per innesto automatico Hexagonal bushing for automatic connection		CH Cod.	12 / 22 5.85.0E100	14 / 24 5.85.0E200	19 / 30 5.85.0E300	19 / 30 5.85.0E400	27 / 40 5.85.0E500	27 / 40 5.85.0E600
Art. 850T Distanziale per morsa solo autocentrante Spacer for Self-centering vise only		Cod.	5.85.0T100	5.85.0T200	5.85.0T300	5.85.0T400	5.85.0T500	5.85.0T600
Art. 850H Chiave esagonale per morsa FMS e cubo Hexagonal wrench for FMS vise and cube		Cod.	5.85.0H100	5.85.0H200	5.85.0H300		5.85.0H500	
Art. 801S Piastrina di collegamento slitte morsa Slides vise connecting plate		Cod.	5.80.1S100	5.80.1S200	5.80.1S300	5.80.1S400	5.80.1S500	5.80.1S600

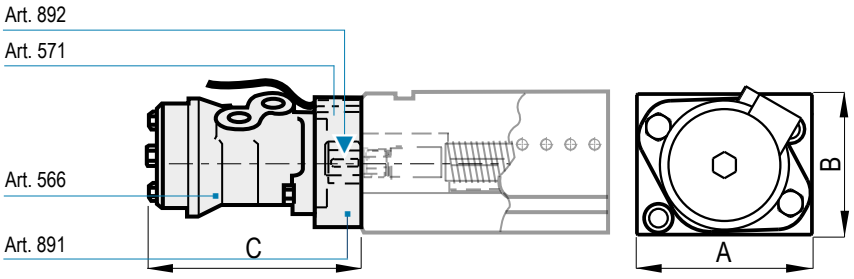
RICAMBI PER MORSE Art.800
SPARE PARTS FOR VISES Art.800

Art. 800E Guarnizione per slitta integrale O ring for solid slide		Cod.	5.80.0E100	5.80.0E200	5.80.0E300	5.80.0E400	5.80.0E500	5.80.0E600
Art. 801G Grano di bloccaggio protezione centrale Setscrew for clamping central protection		Cod.	5.80.1G100	5.80.1G200	5.80.1G300	5.80.1G400	5.80.1G500	5.80.1G600
Art. 800I Vite tcei per piastra di contenimento Hex.socket head screw for screw holding plate		Cod.	5.80.0I100	5.80.0I200	5.80.0I300	5.80.0I400	5.80.0I500	5.80.0I600
Art. 801H Vite tcei per ganasce a gradino Hex.socket head screw for step jaws		Cod.	5.80.1H100	5.80.1H200	5.80.1H300	5.80.1H400	5.80.1H500	5.80.1H600
Art. 801I Vite tcei per ganasce Hex.socket head screw for jawsw		Cod.	5.80.1I100	5.80.1I200	5.80.1I300	5.80.1I400	5.80.1I500	5.80.1I600

5

SERVOCOMANDI OLEODINAMICI PER MOTORI IDRAULICI
ELECTRO-HYDRAULIC POWER PACK FOR HYDRAULIC MOTORS

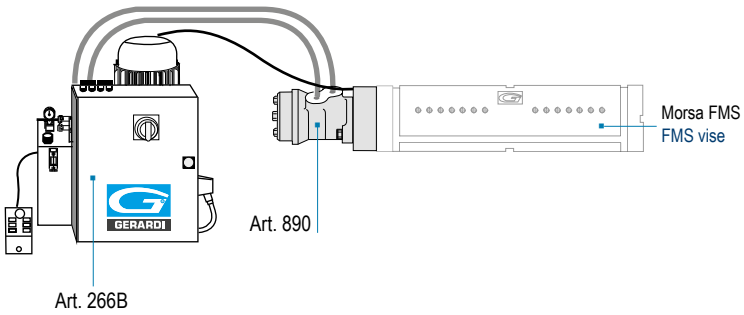
Tipo (grandezza) / Type (size)		1	2	3	4	5	6
Art. 566 *Motore idraulico / Hydraulic motor*		0MM32	OMP80	OMR200	OMR200	OMR200	OMR200
	bar			140			
Art.890	A mm	75	130	123	145	168	188
	B mm	70	100	104	119	139	159
Art. 566 + Art. 571 + Art. 891 + Art. 892	C mm	157	234	244	246	261	261
Motore idraulico completo di piastra d' interfaccia, boccola e fine corsa elettronico regolabile Hydraulic motor complete with connecting plate, bushing and adjustable electronic proximity switch	Cod.	5.89.01000	5.89.02000	5.89.03000	5.89.04000	5.89.05000	5.89.06000



Art. 891 Piastra attacco motore idraulico / Hydraulic motor mounting plate	Cod.	5.89.11000	5.89.12000	5.89.13000	5.89.14000	5.89.15000	5.89.16000
Art. 892 Boccola di trascinamento vite motore / Drive bushing screw-motor	Cod.	5.89.21000	5.89.22000	5.89.23000	5.89.24000	5.89.25000	5.89.26000
Art. 566 Motore Idraulico / Hydraulic motor	Cod.	5.56.61000	5.56.62000	5.56.63000	5.56.63000	5.56.63000	5.56.63000
Art. 571 Fine corsa elettronico / Electronic proximity switch	Cod.	5.57.11000	5.57.12000	5.57.13000	5.57.14000	5.57.15000	5.57.16000

Tipo (grandezza) / Type (size)		1	2	3	4	5	6
Art.890K/1	bar	130	100	100	100	120	120
	l/min	5	10	20	20	20	20
Art. 266B + Art. 890	Cod.	5.89.0K101	5.89.0K201	5.89.0K301	5.89.0K401	5.89.0K501	5.89.0K601
Kit per automazione morse FMS Kit for FMS vises automation.							

COMPOSIZIONE COMPLETA DI:
- N° 1 servocomando Art. 890
- N° 1 centralina elettroidraulica Art. 266B/1
- Comando manuale elettrico da pulsantiera con chiusura ed apertura indipendente, singola o simultanea vedi pag. 5.79
- Regolazione forza di bloccaggio desiderata
- Fine corsa elettronico regolabile



COMPOSITION COMPLETE OF:
- N° 1 hydraulic servo unit Art. 890
- N° 1 electro-hydraulic power pack Art. 266B/1
- Electrically controlled by manual switch board see pag. 5.79
- Adjustable clamping force as required
- Adjustable elettronic proximity switch

DATI TECNICI:
Velocità apertura-chiusura morsa da calcolarsi in base al diagramma idromotore (Vedi pag 5.65)
Per il diagramma forza di serraggio vedi pag. 5.72
Pressione massima di esercizio: 140 bar

TECHNICAL DATA:
Opening and closing speed of vise to be calculated from hydraulic motor diagram at page 5.65
For clamping forces diagram see pag. 5.72
Max operating pressure: 140 bar

Tubi e cavi di collegamento elettrici ed idraulici con massima lunghezza 1600 mm / Hydraulic pipes and electrical cables with max lenght 1600 mm

SERVOCOMANDI OLEODINAMICI PER MOTORI IDRAULICI
ELECTRO-HYDRAULIC POWER PACK FOR HYDRAULIC MOTORS

Art.890K/2

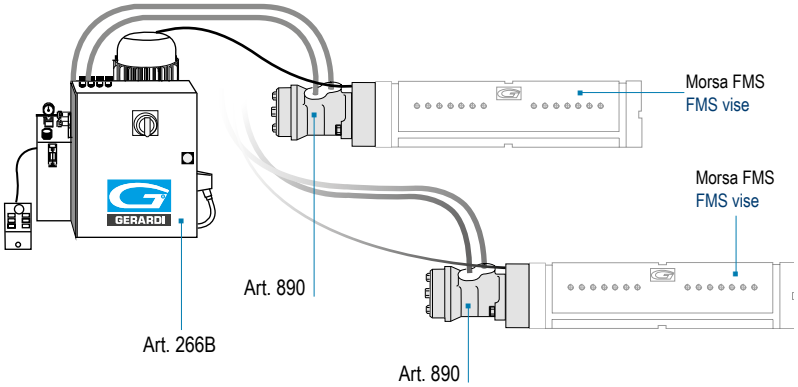
Art. 266B + 2 Art. 890

Kit per automazione morse FMS
Kit for FMS vises automation.

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
bar	130	100	100	100	120	120
l/min	10	20	40	40	40	40
Cod.	5.89.0K102	5.89.0K202	5.89.0K302	5.89.0K402	5.89.0K502	5.89.0K602

COMPOSIZIONE COMPLETA DI:
- N° 2 servocomandi Art. 890
- N° 1 centralina elettroidraulica Art. 266B/2
- Comando manuale elettrico da pulsantiera con chiusura ed apertura indipendente, singola o simultanea
- Regolazione forza di bloccaggio desiderata
- Fine corsa elettronico regolabile

COMPOSITION COMPLETE OF:
- N° 2 hydraulic servo unit Art. 890
- N° 1 electro-hydraulic power pack Art. 266B/2
- Electrically controlled by manual switch board
- Adjustable clamping force as required
- Adjustable elettronic proximity switch



DATI TECNICI:
Velocità apertura-chiusura morsa da calcolarsi in base al diagramma idromotore (Vedi pag 5.65)
Per il diagramma forza di serraggio vedi pag. 5.72
Pressione massima di esercizio: 140 bar

TECHNICAL DATA:
Opening and closing speed of vise to be calculated from hydraulic motor diagram at page 5.65
For clamping forces diagram see pag. 5.72
Max operating pressure: 140 bar

Tubi e cavi di collegamento elettrici ed idraulici con massima lunghezza 1600 mm / Hydraulic pipes and electrical cables with max lenght 1600 mm

Art.890K/3

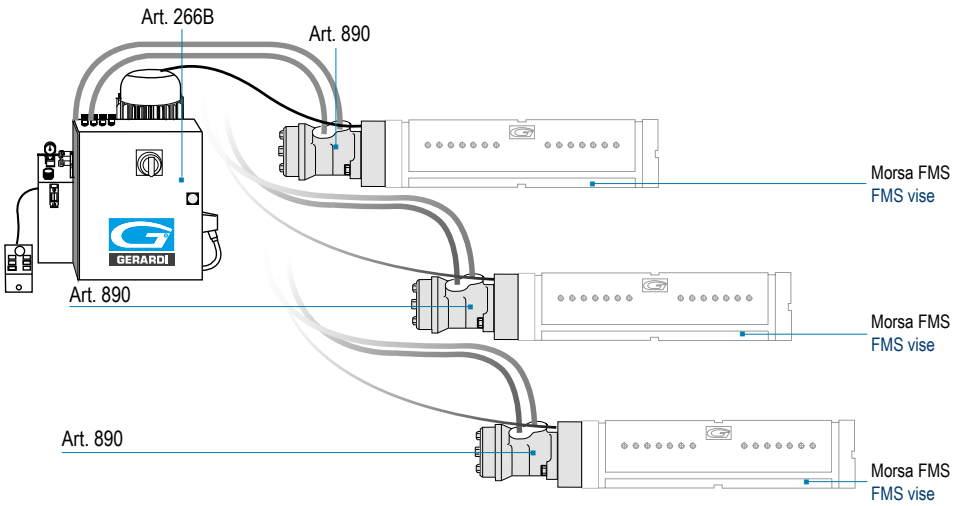
Art. 266B + 3 Art. 890

Kit per automazione morse FMS
Kit for FMS vises automation.

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
bar	130	100	100	100	120	120
l/min	15	30	60	60	60	60
Cod.	5.89.0K103	5.89.0K203	5.89.0K303	5.89.0K403	5.89.0K503	5.89.0K603

COMPOSIZIONE COMPLETA DI:
- N° 3 servocomandi Art. 890
- N° 1 centralina elettroidraulica Art. 266B/4
- Comando manuale elettrico da pulsantiera con chiusura ed apertura indipendente, singola o simultanea
- Regolazione forza di bloccaggio desiderata
- Fine corsa elettronico regolabile

COMPOSITION COMPLETE OF:
- N° 3 hydraulic servo unit Art. 890
- N° 1 electro-hydraulic power pack Art. 266B/4
- Electrically controlled by manual switch board
- Adjustable clamping force as required
- Adjustable elettronic proximity switch



DATI TECNICI:
Velocità apertura-chiusura morsa da calcolarsi in base al diagramma idromotore (Vedi pag 5.65)
Per il diagramma forza di serraggio vedi pag. 5.72
Pressione massima di esercizio: 140 bar

TECHNICAL DATA:
Opening and closing speed of vise to be calculated from hydraulic motor diagram at page 5.65
For clamping forces diagram see pag. 5.72
Max operating pressure: 140 bar

Tubi e cavi di collegamento elettrici ed idraulici con massima lunghezza 1600 mm / Hydraulic pipes and electrical cables with max lenght 1600 mm

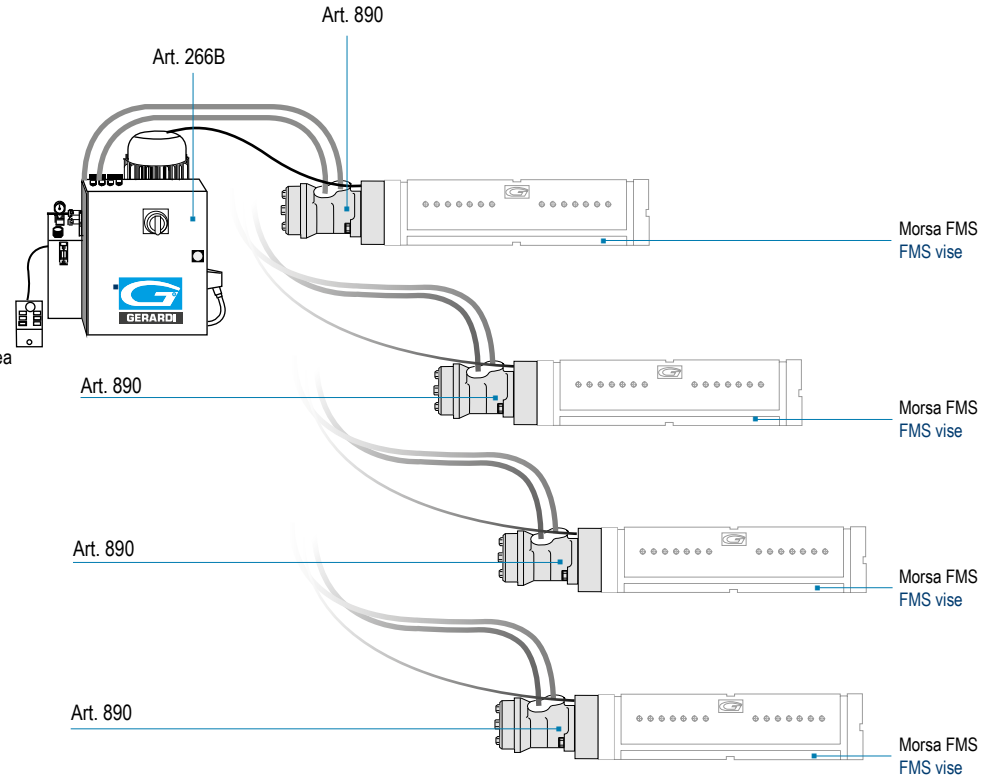
SERVOCOMANDI OLEODINAMICI PER MOTORI IDRAULICI
ELECTRO-HYDRAULIC POWER PACK FOR HYDRAULIC MOTORS

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
bar	130	100	100	100	120	120
l/min	20	40	80	80	80	80
Cod.	5.89.0K104	5.89.0K204	5.89.0K304	5.89.0K404	5.89.0K504	5.89.0K604

Art.890K/4

Art. 266B + 4 Art. 890

Kit per automazione morse FMS
Kit for FMS vises automation.



COMPOSIZIONE COMPLETA DI:
- N° 4 servocomandi Art. 890
- N° 1 centralina elettroidraulica Art. 266B/4
- Comando manuale elettrico da pulsantiera con chiusura ed apertura indipendente, singola o simultanea
- Regolazione forza di bloccaggio desiderata
- Fine corsa elettronico regolabile

COMPOSITION COMPLETE OF:
- N° 4 hydraulic servo unit Art. 890
- N° 1 electro-hydraulic power pack Art. 266B/4
- Electrically controlled by manual switch board
- Adjustable clamping force as required
- Adjustable elettronic proximity switch

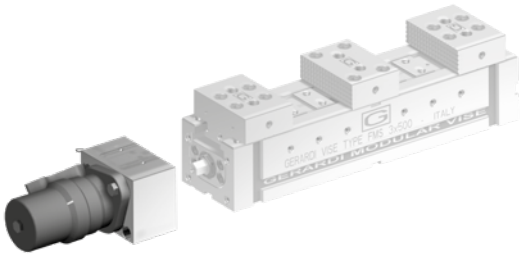
DATI TECNICI:
Velocità apertura-chiusura morsa da calcolarsi in base al diagramma idromotore (Vedi pag 5.65)
Per il diagramma forza di serraggio vedi pag. 5.72
Pressione massima di esercizio: 140 bar

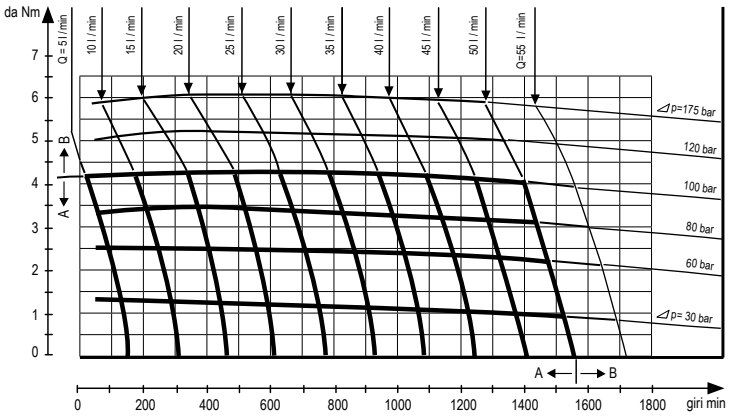
TECHNICAL DATA:
Opening and closing speed of vise to be calculated from hydraulic motor diagram at page 5.65
For clamping forces diagram see pag. 5.72
Max operating pressure: 140 bar

Tubi e cavi di collegamento elettrici ed idraulici con massima lunghezza 1600 mm / Hydraulic pipes and electrical cables with max lenght 1600 mm

GRAFICI MORSE FMS CON MOTORE IDRAULICO
DIAGRAMS OF FMS VISES WITH HYDRAULIC MOTORS

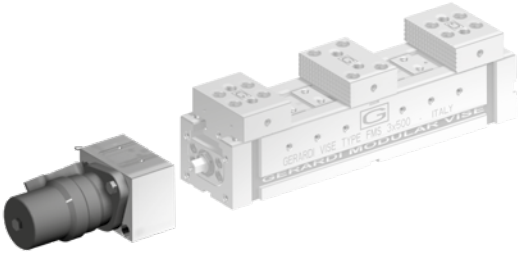
Art.890 (Art.890) Motore idraulico
(Art.890) Hydraulic motor

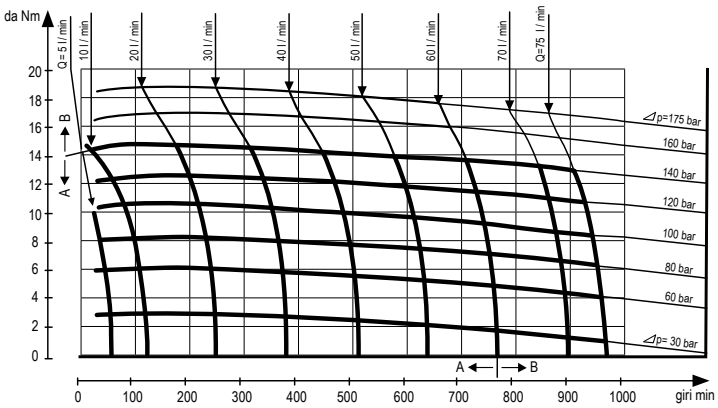




OMR 32
Morse FMS tipo 1 / Type 1 FMS vises

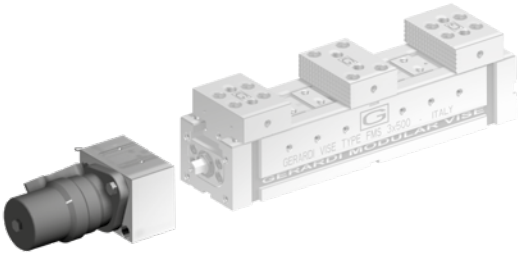
Art.890 (Art.890) Motore idraulico
(Art.890) Hydraulic motor

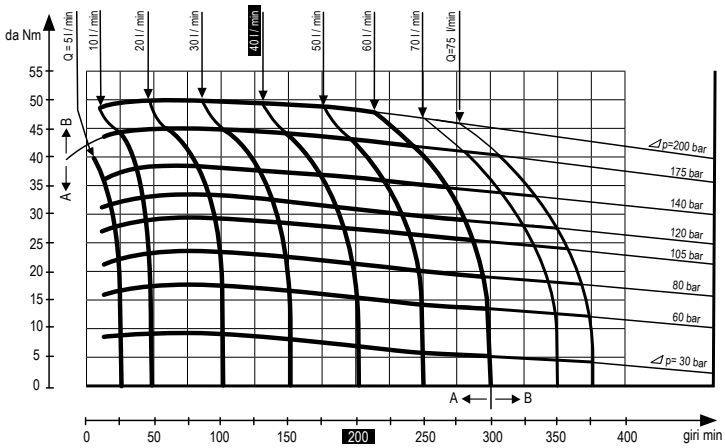




OMR 80
Morse FMS tipo 2 / Type 2 FMS vises

Art.890 (Art.890) Motore idraulico
(Art.890) Hydraulic motor





OMR 200
Morse FMS tipo 3 - 4 - 5 - 6 Type 3 - 4 - 5 - 6 FMS vises

VELOCITA' = Passo vite x giri/min (dati dalla portata di olio in l/min) - 25% circa per attriti e resistenze varie.
Esempio: Vite passo 2 mm; Giri 200/min (ipotizzando una portata olio di 40 l/min); V = 2 X 200 = 400 - 25% = 300 mm/min per una morsa.
Per più morse dividere la velocità ottenuta per il numero delle morse impiegate.

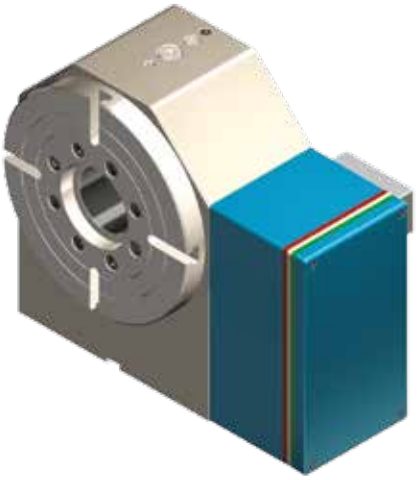
SPEED = Screw pitch x RPM (that you get from oil pump of 40 l/min) about - 25% for friction and other resistance.
Example: Screw pitch 2mm; RPM 200/min (taking in consideration oil pump of 40 l/min); V = 2 x 200 = 400 - 25% = 300 mm/min for one vise.
For more vises divide the speed obtained by the number of vises used.

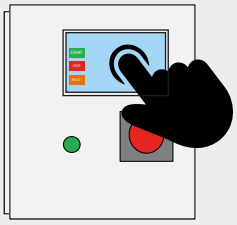
DIVISORE AUTOMATICO DPG 250
AUTOMATIC DIVIDING HEAD DPG 250

NEW!

Divisore automatico
Automatic dividing head

DPG 250





PROGRAMMAZIONE **TOUCH SCREEN**
FACILE ED INTUITIVA O TRAMITE COLLEGAMENTO DIRETTO AL CNC

EASY AND INTUITIVE **TOUCH SCREEN** PROGRAMMING OR THROUGH DIRECT CONNECTION TO THE CNC

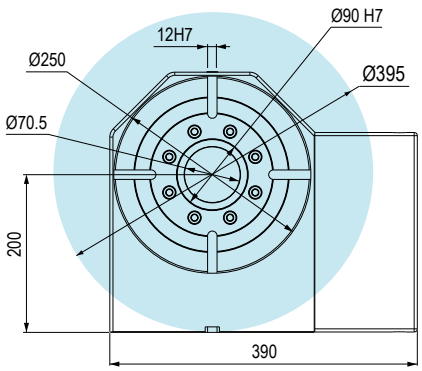
- Installazione semplice (alimentazione 220V)
- Corona in bronzo speciale
- Controsupporto semplice
- Vite senza fine in acciaio temprato e rettificato
- Vite e corona in bagno d'olio
- Cuscinetti a vite precaricati
- Cuscinetto anteriore a rulli incrociati sovradimensionato
- Recupero gioco con avvicinamento assiale
- Completa tenuta stagna ai liquidi con possibilità di pressurizzazione
- Possibilità di montare motori di tutte le marche
- Dimensioni esterne contenute
- Finestra di controlli liquidi e condensa
- Lavorazione in posizionamento a 360°

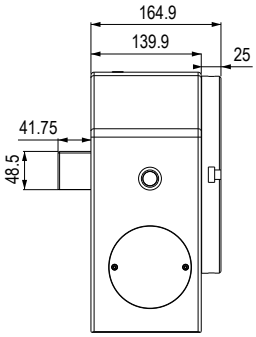
- Easy installation (220V)
- Special bronze crown
- Simple tailstock
- Worm screw in hardened ground steel
- Bath lubrication Screw and Crown
- Pre-loaded screw bearings
- Over-dimensioned crossed-roller front bearing
- Play recover with axial approach
- Watertight seal with possibility of pressurization
- Possibility to mount motors of all brands
- Reduced external dimensions
- Condensation and liquid control window
- 360° work positioning

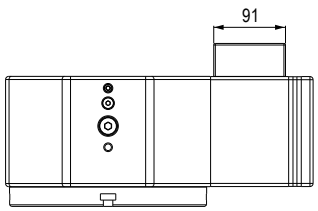
Dati tecnici
Technical Data

Diametro del divisore Dividing head diameter		250 mm
Diametro del foro passante Cleareance hole diameter		70,5 mm
Altezza punte Center height		200 mm
Dimensione della scanalatura a T T-Slot width		12 mm
Sistema di bloccaggio Clamping system		Idraulico Hydraulic
Forza frenante Clamping torque		3000 Nm
Motore Servo motor		3000 Max.g/min
Minimo incremento Minimum increment		0,002
Velocità di rotazione Rotation speed		33,3 Giri/min
Rapporti vite/corona Speed reduction ratio (screw/gear)		1/90
Rapporti vite/motore Speed reduction ratio (screw/motor)		1/180
Precisione Indexing accuracy		±10 Sec.
Ripetibilità Repeatability		4 Sec.
Max. carico di lavoro sul divisore Max. allowable work weight on the dividing head	Verticale Vertical	Kg.550
	Orizzontale Horizontal	Kg.1500
Max. carico di spinta applicabile sul divisore Max. allowable tool load on the dividing head		N 25000
		FxL Nm 1000
		FxL Nm 2200
Rapporti vite/corona Speed reduction ratio (screw/gear)	Verticale Vertical	10,5 Kg. m²
Coppia in lavoro Driving torque	Corona dentata Worm gear	698 Nm
Kg		110
Cod.		8.DP.G2500

DPG 250



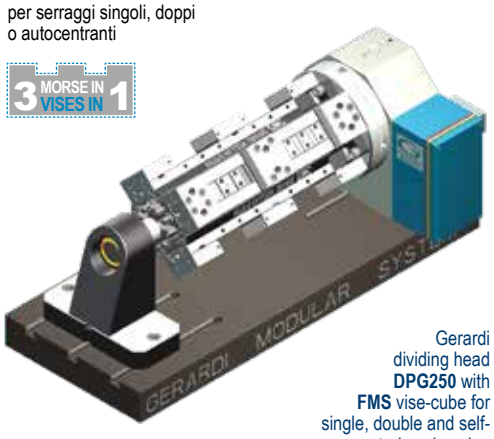




Tipo (grandezza) morsa / Vise type (size)		**1**		**2**				**3**				
	kN	**25 kN**		**25 kN**				**30 kN**				
	D	200	300	300	400	500	600	400	500	600	700	800
	G1	120		175				210				
	W	74		94				124				
	Cod.	5.DP.G25000	5.DP.G25010	5.DP.G25020	5.DP.G25030	5.DP.G25040	5.DP.G25050	5.DP.G25060	5.DP.G25070	5.DP.G25080	5.DP.G25090	5.DP.G25011

Divisore Gerardi **DPG250** con cubo-morsa **FMS** per serraggi singoli, doppi o autocentranti

3 MORSE IN VISES IN 1



Gerardi dividing head **DPG250** with **FMS** vise-cube for single, double and self-centering clamping

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

Art. 99A

Supporto
Support

Cod.	5.99.A2000

Art. 99B

Perno di centraggio orizzontale
Horizontal centering pin

Cod.	5.99.B1000	5.99.B2000	5.99.B3000

Art. 99H

Distanziale
Spacer

Cod.	5.99.H2000

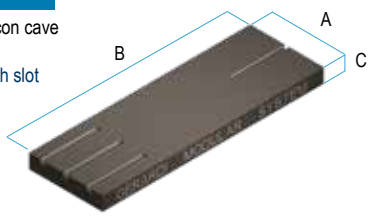
Art. 62
DPG 250

Piastra di interfaccia DPG 250 per FMS
DPG 250 connecting plate for FMS

Cod.	5.62.801A05	5.62.801A06	5.62.801A07

Art. 99S

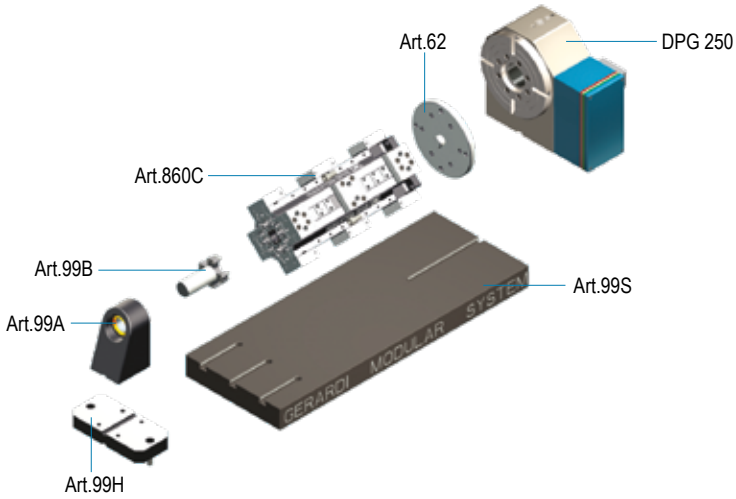
Piastra base con cave
Piani rettificati
Base plate with slot
Faces ground

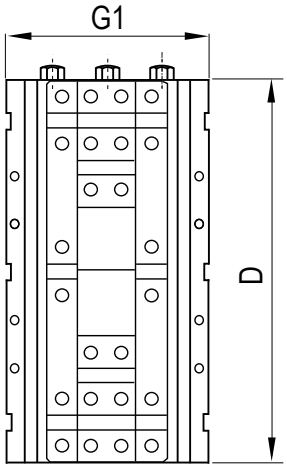


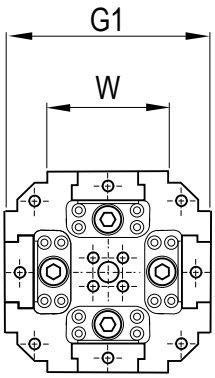
Dimensioni B mm Dimension B mm	A	C	Kg	Cod.
650	400	50	102	7.99.S065S
950	400	50	149	7.99.S095S
1250	400	50	195	7.99.S125S

Cave o fori calibrati su richiesta
Slot or calibrated holes on request

Disponibili quote "**B**" a step di 50mm - Available dimension "**B**" in steps of 50mm







DIVISORE MECCANICO DIVIGER 205
MECHANICAL DIVIDING HEAD DIVIGER 205

NEW!

Divisore automatico
Automatic dividing head

DIVIGER 205

Dati tecnici Technical Data	
Diametro del divisore Dividing head diameter	220 mm
Diametro del foro passante Cleareance hole diameter	85 mm
Altezza centrale Center height	200 mm
Dimensione della scanalatura a T T-Slot width	-
Sistema di bloccaggio Clamping system	Meccanico Mechanical
Minimo incremento Minimum increment	1°
Precisione Indexing accuracy	±10 Sec.
Coppia in lavoro Driving torque	3000 Nm
Kg	93
Cod.	7.66.73000

5

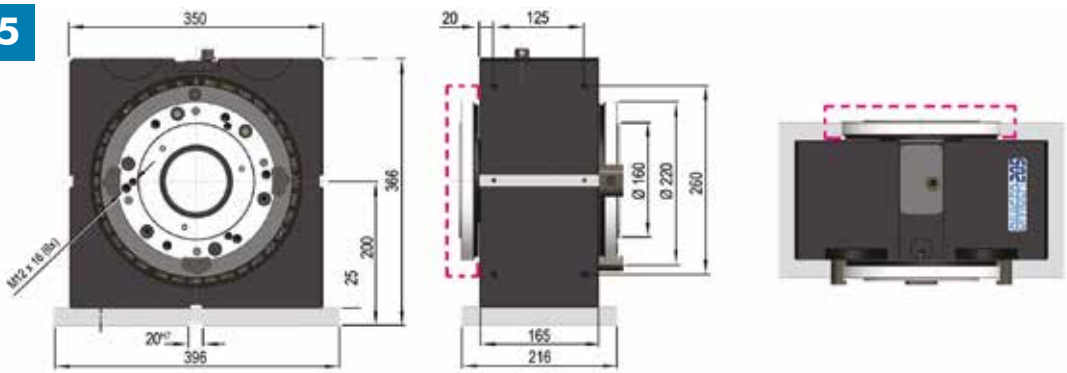
DIVISORE MECCANICO, SENZA CAVI O IDRAULICA, PERMACCHINE A CNC

MECHANICAL DIVIDING HEAD, WITHOUT ELECTRICAL CABLES OR HYDRAULIC, FOR CNC MILLING MACHINE

- Maggiore efficienza nella lavorazione su più lati
- Completamente autonomo dalla macchina
- Elevato momento torcente
- Divisione manuale o automatica tramite mandrino macchina
- 360 posizioni
- Serraggio simultaneo di due particolari grazie alla doppia flangia
- lavorazione su 5 facce senza contropunta
- Lavorazione a barra grazie al mandrino cavo
- Utilizzabile orizzontalmente o verticalmente
- Cambio tramite serraggio a cuneo

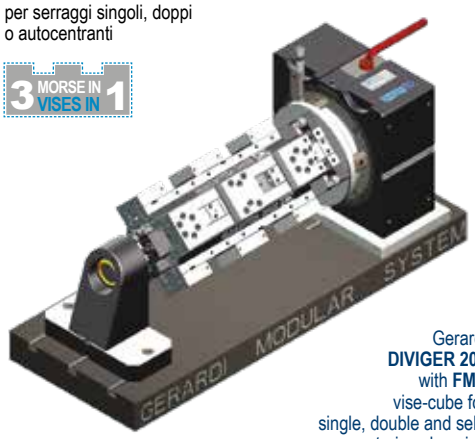
- Cost-effective on multiple-sides machining
- Machine independent
- High holding torque
- Dividing manually or automatically using the machine spindle
- 360 x 1° division
- Simultaneous clamping of 2 workpieces thanks to the dual flange
- 5 faces machining without counter-holder
- Bar machining due to hollow spindle
- To be used horizontaly or vertically
- Quick change through wedge clamping

DIVIGER 205



Divisore Gerardi **DIVIGER 205** con cubo-morsa **FMS** per serraggi singoli, doppi o autocentranti

3 MORSE IN VISES IN 1



Gerardi **DIVIGER 205** with **FMS** vise-cube for single, double and self-centering clamping

Tipo (grandezza) morsa / Vise (type) size	1		2				3				
kN	25 kN		25 kN				30 kN				
D	200	300	300	400	500	600	400	500	600	700	800
G1	120		175				210				
W	74		94				124				
Cod.	5.DI.V20500	5.DI.V20510	5.DI.V20520	5.DI.V20530	5.DI.V20540	5.DI.V20550	5.DI.V20560	5.DI.V20570	5.DI.V20580	5.DI.V20590	5.DI.V20511

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

Art. 99A

Supporto
Support

Cod.	5.99.A2000

Art. 99B

Perno di centraggio orizzontale
Horizontal centering pin

Cod.	5.99.B1000	5.99.B2000	5.99.B3000

Art. 99H

Distanziale
Spacer

Cod.	5.99.H2000

Art. 62

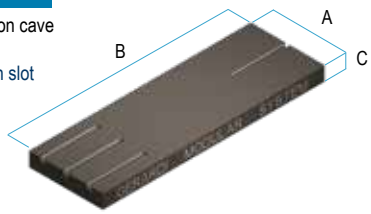
DIVIGER 205

Piastra di interfaccia DIVIGER 205 per FMS
DIVIGER 205 connecting plate for FMS

Cod.	5.62.801A05	5.62.801A06	5.62.801A07

Art. 99S

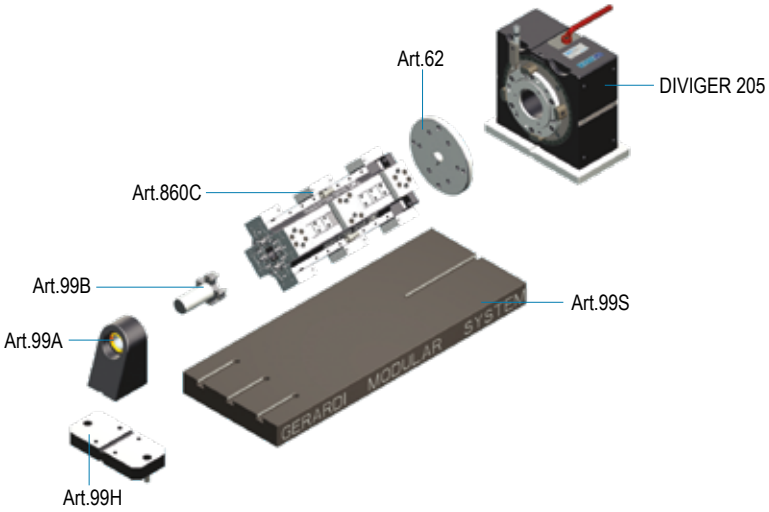
Piastra base con cave
Piani rettificati
Base plate with slot
Faces ground

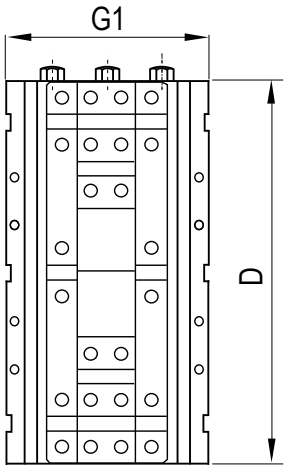


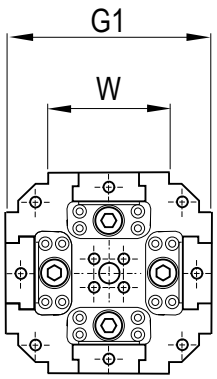
Dimensioni B mm Dimension B mm	A	C	Kg	Cod.
650	400	50	102	7.99.S065S
950	400	50	149	7.99.S095S
1250	400	50	195	7.99.S125S

Cave o fori calibrati su richiesta
Slot or calibrated holes on request

Disponibili quote "**B**" a step di 50mm - Available dimension "**B**" in steps of 50mm

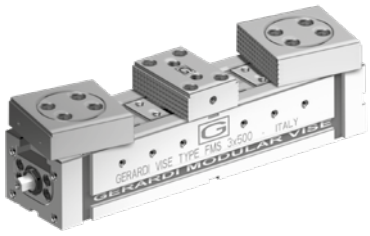






5

DIAGRAMMI CON FORZE DI SERRAGGIO
DIAGRAMS WITH CLAMPING FORCE



SERRAGGIO MECCANICO CON CHIAVE DINAMOMETRICA

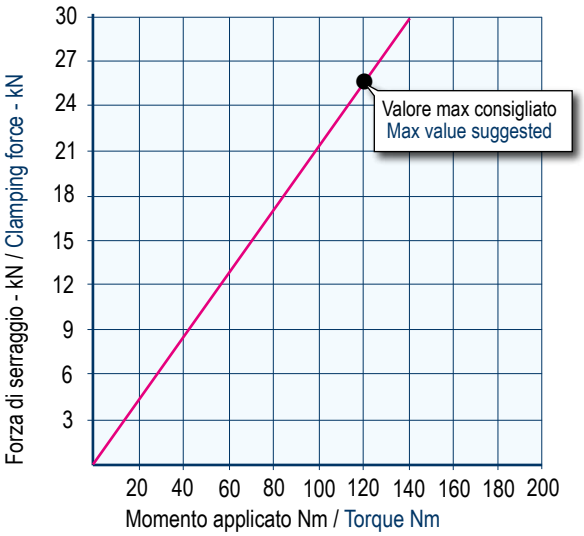
N.B. Alcuni fattori, come la lubrificazione, lo staffaggio, gli attriti ed altro, possono modificare i valori indicato fino al ± 10%. Per un corretto utilizzo non superare i valori indicati nel grafico

MECHANICAL CLAMPING WITH TORQUE WRENCH

Some factor as lubrification, type of clamping on the machine table, frictions and more can modify above values within a ±10% range. For optimum operation do not exceed chart values

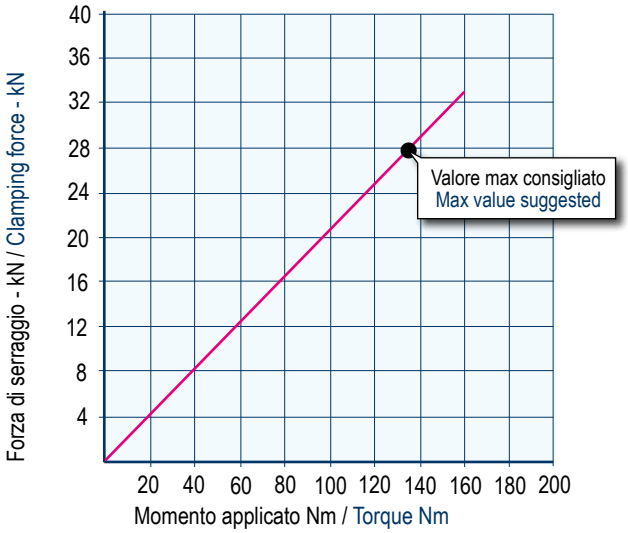
MORSE **FMS** TIPO 1
FMS VISES TYPE 1

VITE: TPF 18 / 20 mm PASSO: 2 mm
SCREW: TPF 18 / 20 mm PITCH: 2 mm



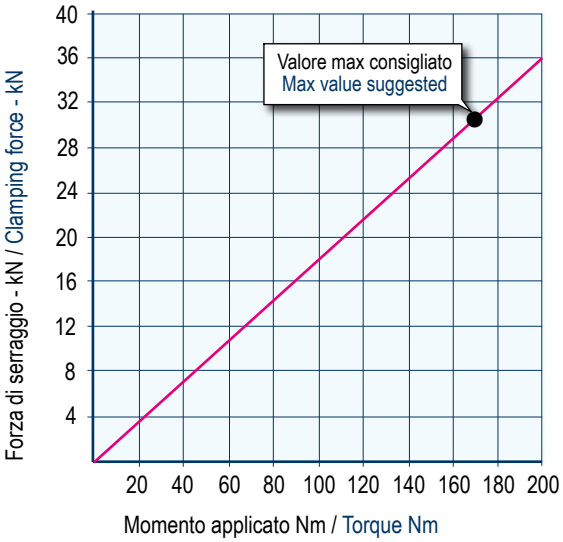
MORSE **FMS** TIPO 2
FMS VISES TYPE 2

VITE: TPF 18 / 24 mm PASSO: 2 mm
SCREW: TPF 18 / 24 mm PITCH: 2 mm



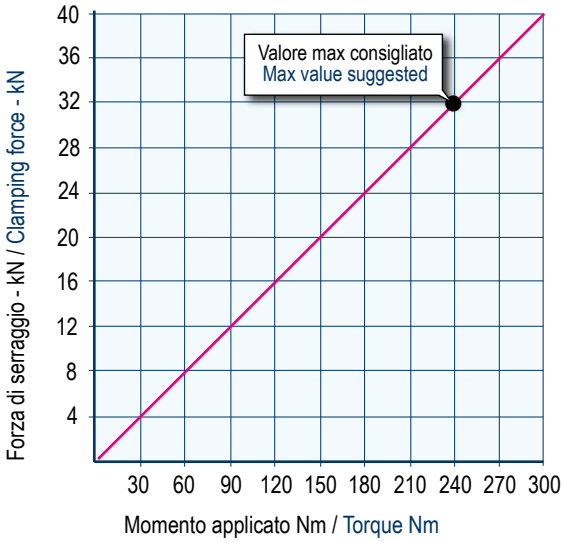
MORSE **FMS** TIPO 3-4
FMS VISES TYPE 3-4

VITE: TPF 24 / 30 mm PASSO: 2 mm
SCREW: TPF 24 / 30 mm PITCH: 2 mm



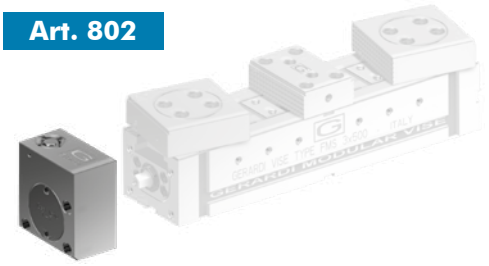
MORSE **FMS** TIPO 5-6
FMS VISES TYPE 5-6

VITE: TPF 30 / 36 mm PASSO: 3 mm
SCREW: TPF 30 / 36 mm PITCH: 3 mm



DIAGRAMMI CON FORZE DI SERRAGGIO
DIAGRAMS WITH CLAMPING FORCE

Art. 802



SERRAGGIO MECCANICO CON MOLTIPLICATORE DI POTENZA Art.802

N.B. Alcuni fattori, come la lubrificazione, lo staffaggio, gli attriti ed altro, possono modificare i valori indicatl fino al ±10%.
Per un corretto utilizzo non superare i valori indicati nel grafico.
UTILIZZARE SOLAMENTE CHIAVE DINAMOMETRICA

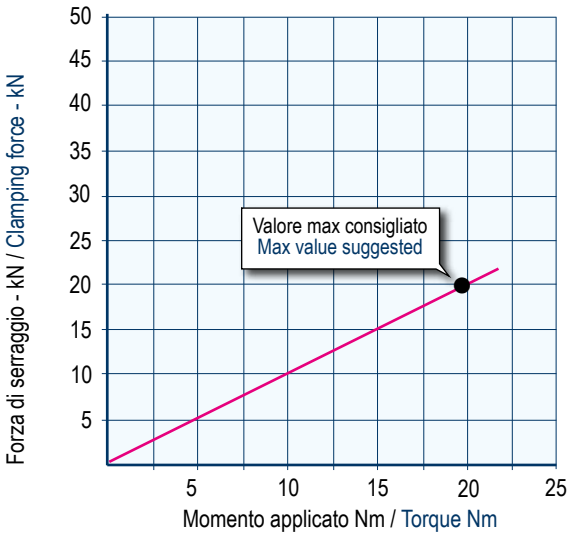
MECHANICAL CLAMPING WITH PRESSURE MULTIPLIER Art.802

Some factor as lubrification, type of clamping on the machine table, frictions and more can modify above values within a ± 10% range. For optimum operation do not exceed chart values
WE RECOMMEND TO USE ONLY TORQUE WRENCH

MORSE **FMS** TIPO 1
FMS VISES TYPE 1

VITE: TPF 18 / 20 mm PASSO: 2 mm
SCREW: TPF 18 / 20 mm PITCH: 2 mm
Moltiplicatore di potenza: Art. 802
Pressure multiplier: Art. 802
Rapporto di trasmissione: 1/9 / Gear ratio: 1/9

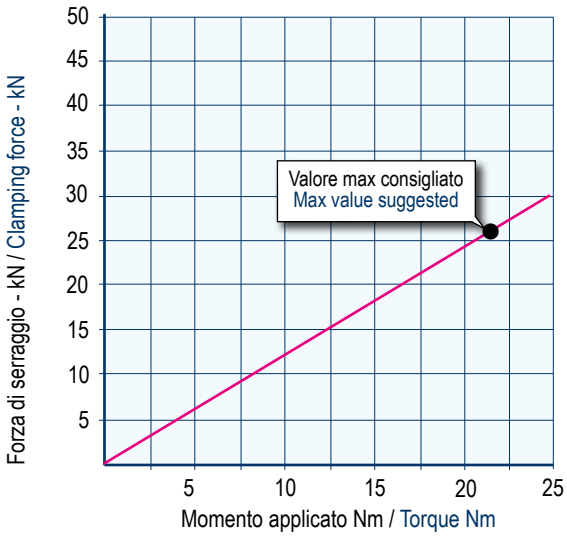
Type 1	
Cod.	5.80.21000



MORSE **FMS** TIPO 2
FMS VISES TYPE 2

VITE: TPF 18 / 24 mm PASSO: 2 mm
SCREW: TPF 18 / 24 mm PITCH: 2 mm
Moltiplicatore di potenza: Art. 802
Pressure multiplier: Art. 802
Rapporto di trasmissione: 1/7 / Gear ratio: 1/7

Type 2	
Cod.	5.80.22000

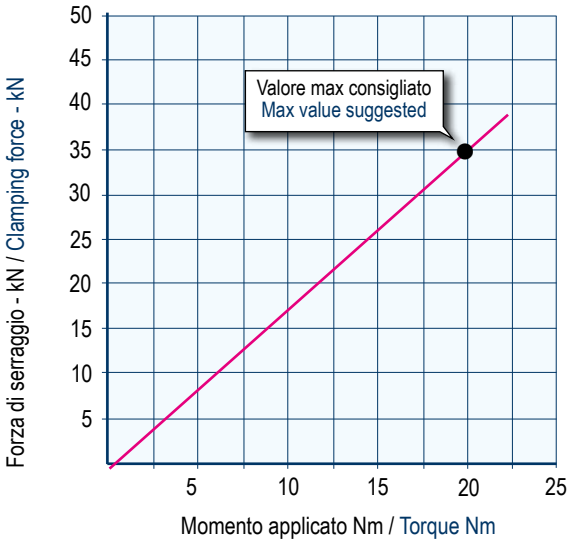


MORSE **FMS** TIPO 3-4
FMS VISES TYPE 3-4

VITE: TPF 24 / 30 mm PASSO: 2 mm
SCREW: TPF 24 / 30 mm PITCH: 2 mm
Moltiplicatore di potenza: Art. 802
Pressure multiplier: Art. 802
Rapporto di trasmissione: 1/7 / Gear ratio: 1/7

Type 3	
Cod.	5.80.23000

Type 4	
Cod.	5.80.24000

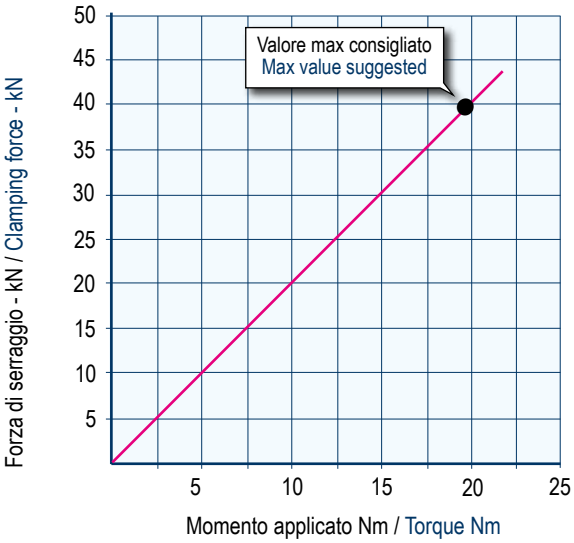


MORSE **FMS** TIPO 5-6
FMS VISES TYPE 5-6

VITE: TPF 30 / 36 mm PASSO: 3 mm
SCREW: TPF 30 / 36 mm PITCH: 3 mm
Moltiplicatore di potenza: Art. 802
Pressure multiplier: Art. 802
Rapporto di trasmissione: 1/7 / Gear ratio: 1/7

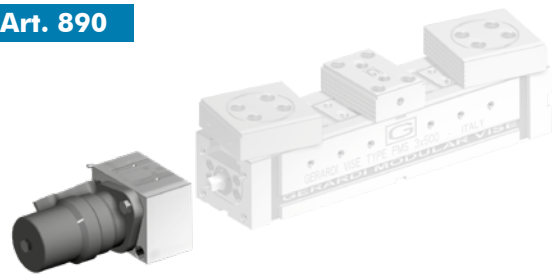
Type 5	
Cod.	5.80.25000

Type 6	
Cod.	5.80.26000



DIAGRAMMI CON FORZE DI SERRAGGIO
DIAGRAMS WITH CLAMPING FORCE

Art. 890



SERRAGGIO MECCANICO TRAMITE MOTORE IDRAULICO Art.890

N.B. Alcuni fattori, come la lubrificazione, lo staffaggio, gli attriti ed altro, possono modificare i valori indicati fino al ±10%.
Per un corretto utilizzo non superare i valori indicati nel grafico

ATTENZIONE! Azionamento idraulico ma serraggio meccanico (PIU' SICURO)

MECHANICAL CLAMPING THROUGH HYDRAULIC MOTOR Art.890

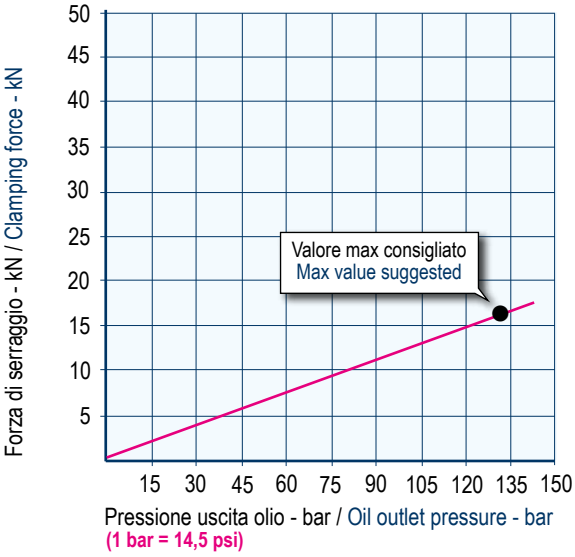
Some factor as lubrification, type of clamping on the machine table, frictions and more can modify above values within a ±10% range. For optimum operation do not exceed chart values

IMPORTANT! Hydraulic control, but mechanical clamping (SAFER)

5

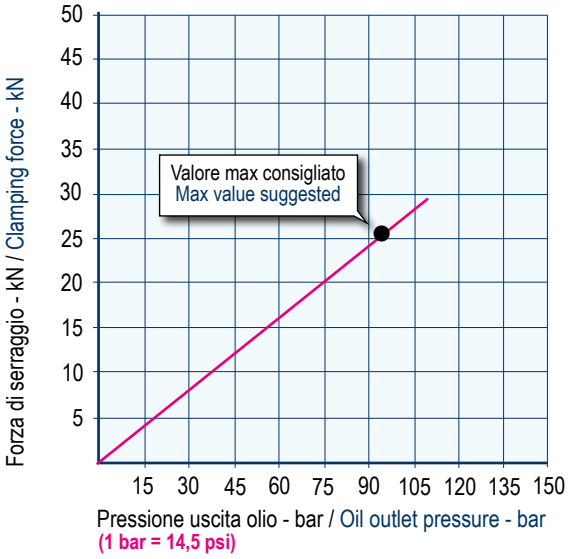
MORSE **FMS** TIPO / **FMS** VISES TYPE 1

VITE: TPF 18 / 20 mm PASSO: 2 mm
SCREW: TPF 18 / 20 mm PITCH: 2 mm
Motore idraulico tipo **OMM 32**
Hydraulic motor type **OMM 32**



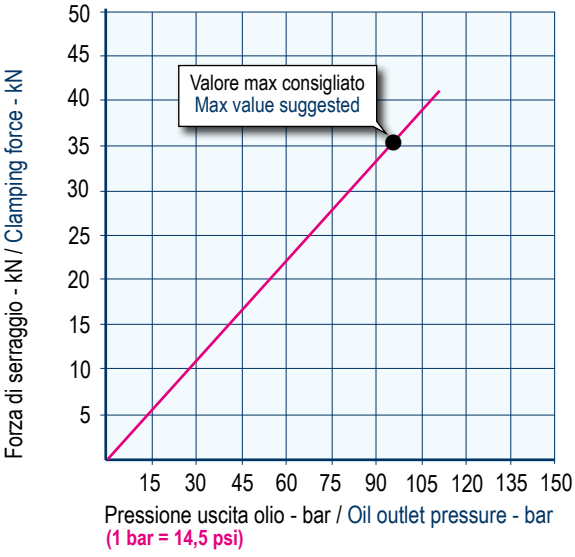
MORSE **FMS** TIPO / **FMS** VISES TYPE 2

VITE: TPF 18 / 24 mm PASSO: 2 mm
SCREW: TPF 18 / 24 mm PITCH: 2 mm
Motore idraulico tipo **OMP 80**
Hydraulic motor type **OMP 80**



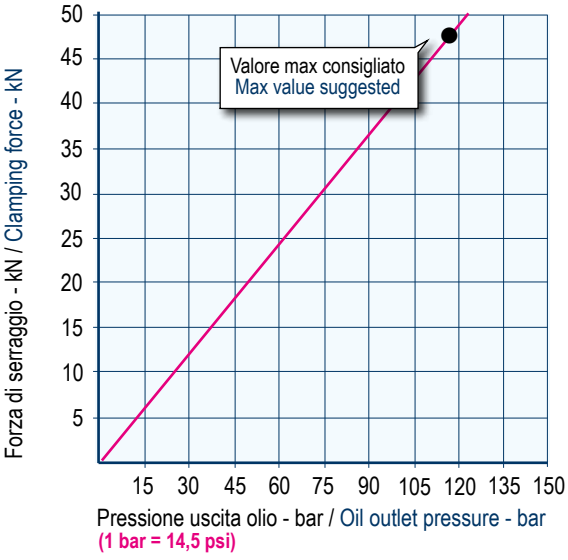
MORSE **FMS** TIPO / **FMS** VISES TYPE 3-4

VITE: TPF 24 / 30 mm PASSO: 2 mm
SCREW: TPF 24 / 30 mm PITCH: 2 mm
Motore idraulico tipo **OMR 200**
Hydraulic motor type **OMR 200**



MORSE **FMS** TIPO / **FMS** VISES TYPE 5-6

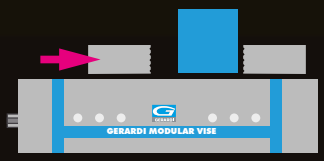
VITE: TPF 30 / 36 mm PASSO: 3 mm
SCREW: TPF 30 / 36 mm PITCH: 3 mm
Motore idraulico tipo **OMR 200**
Hydraulic motor type **OMR 200**

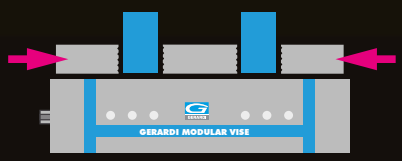


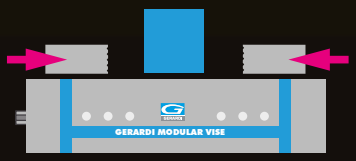
CONSIGLI PER L' UTILIZZO E LA MANUTENZIONE DELLE MORSE FMS

INSTRUCTIONS FOR THE USE AND MAINTENANCE OF FMS VISES

SERRAGGI SINGOLI	SERRAGGI DOPPI	AUTOCENTRANTE
SINGLE CLAMPING	DOUBLE CLAMPING	SELF-CENTERING







UTILIZZO E MANUTENZIONE DELLE MORSE FMS
USE AND MAINTENANCE OF FMS VISES

3 MORSE IN VISES IN 1

Morse Singole, doppie, autocentranti

Single, double, self-centering Vises

1

Fare riferimento al disegno esploso, che accompagna tutte le morse e che riporta tutti i particolari costituenti la morsa FMS, denominati con numero di articolo, e riferiti sempre al tipo di morsa all'atto dell'acquisto.

Refer to your explosion view drawing accompanying all our vises and which identifies each part with its own article number. When requesting service or spare parts always refer to the vise type number.

2

La morsa può essere smontata seguendo attentamente tutte le istruzioni ed operazioni qui sotto descritte. Si consiglia vivamente di marcare pezzi e posizioni di tutti i particolari e rimontarli esattamente nella medesima posizione in cui sono stati smontati.

By the carefully following procedure and instructions the vise can be dismantled. We suggest all parts and their positions be marked so they can readily be reassembled to their original state.

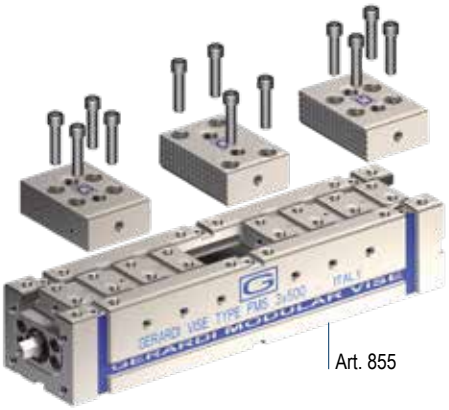
5

OPERAZIONE 1

Togliere tutte le ganasce dal modulo base **Art.855**

OPERATION 1

Remove all the jaws from the vise module **Art.855**

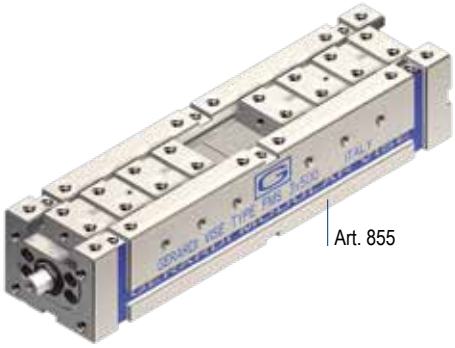


OPERAZIONE 2

Adesso il modulo base è completamente libero da ogni impedimento.
Pulire attentamente il modulo base con un diluente appropriato. (Gasolio ecc).

OPERATION 2

Now the vise body module is completely free.
Clean throughly with detergent oil or grease remover.

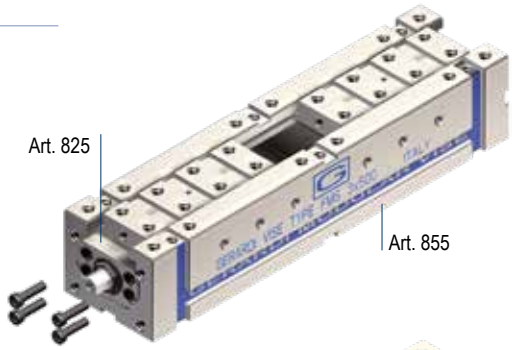


OPERAZIONE 3

Togliere le 4 viti di testa **Art. 801I** dalla piastra di contenimento **Art.825**

OPERATION 3

Unscrew and remove the 4 screws **Art. 801I** from the main screw holding plate **Art.825**

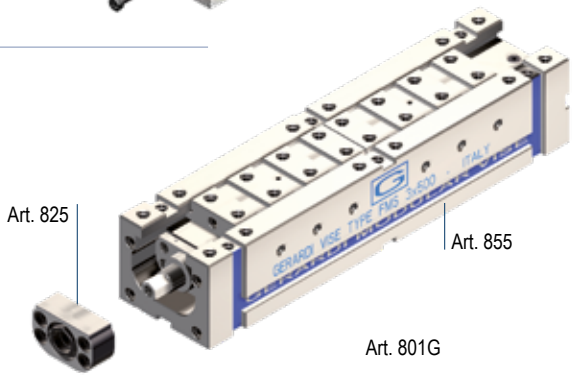


OPERAZIONE 4

Togliere la piastra di contenimento **Art.825**

OPERATION 4

Remove the main screw holding plate **Art.825**



UTILIZZO E MANUTENZIONE DELLE MORSE FMS

USE AND MAINTENANCE OF FMS VISES

Morse Singole, doppie, autocentranti

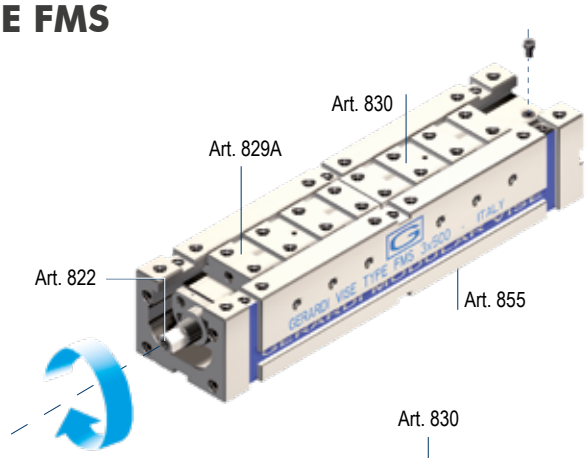
Single, double, self-centering Vises

OPERAZIONE 5

Girare la vite ***Art. 822*** in senso orario, affinchè si possa togliere la vite ***Art. 810G*** dai ripari.

OPERATION 5

Turn the main screw ***Art. 822*** clockwise in order to remove the screw ***Art. 810G*** from cover.

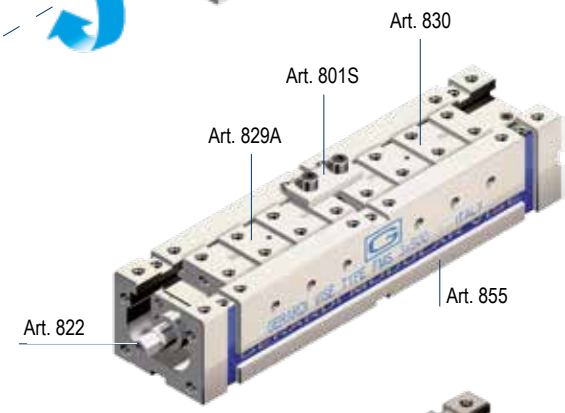


OPERAZIONE 6

Collegare le due slitte ***Art. 829A*** - ***Art. 830***, utilizzando la piastrina di collegamento in dotazione ***Art. 801S***, per non perdere la fase di posizionamento slitte.

OPERATION 6

Connect the 2 slides ***Art. 829A*** - ***Art. 830***, using the connecting plate in the STD equipment ***Art. 801S***, in order not to lose the slides reference on the main screw and also for safety reasons.

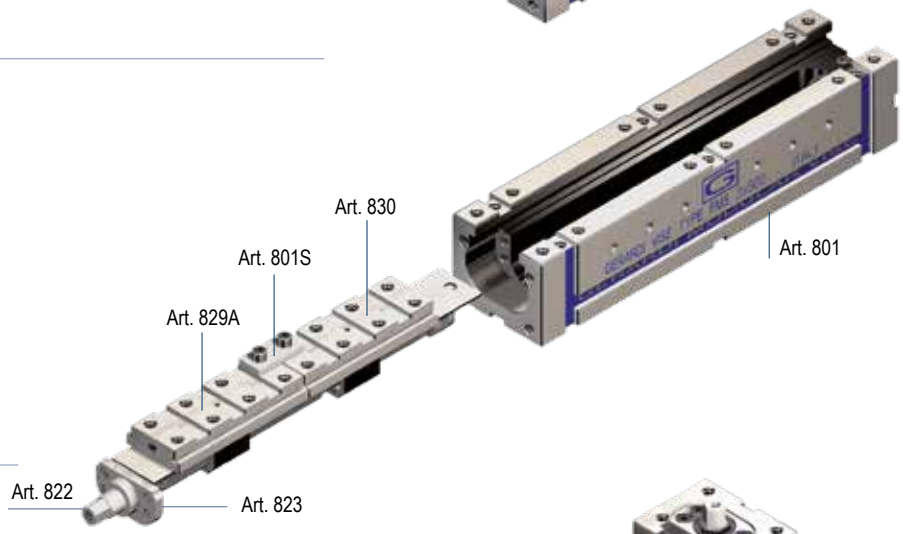


OPERAZIONE 7

Sfilare la vite ***Art. 822*** assieme con le due slitte e la piastra intermedia ***Art. 823***

OPERATION 7

Remove the main screw ***Art. 822*** together with the 2 slides and the intermediare plate ***Art. 823***

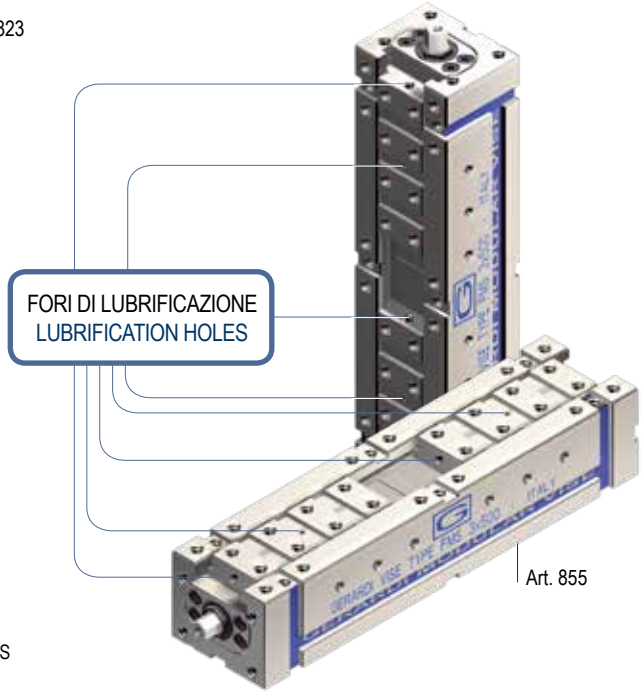


OPERAZIONE 8

Per rimontare la morsa, eseguire tutte le **8** operazioni in senso inverso senza forzare nel rimontaggio nessun particolare.
L'unica manutenzione richiesta (a parte la periodica pulizia interna ed esterna della morsa) è la lubrificazione settimanale con olio molto fluido negli appositi fori situati nelle slitte. Il foro da scegliere per la lubrificazione dipende dalla posizione della morsa.

OPERATION 8

To reassemble the vise perform the **8** previous operations reverse order without forcing any stage or part.
The only maintenance required (apart from periodic Internal and external vise cleaning) is weekly lubrication with low viscosity oil in the proper holes in the slides.
Which lubrication hole is chosen depends on the vise position.



La morsa sopra descritta è completamente a chiusura MECCANICA MANUALE.
I vari dispositivi, ossia i moltiplicatori di forza MANUALI, OLEODINAMICI, ELETTRICI ed OLEOPNEUMATICI, sono completamente autonomi e possono essere applicati o tolti dalle morse FMS senza modifica alcuna. La chiusura della morsa è sempre e comunque meccanica. (Vite/chiocciola)

This vise described above is for fully manual MECHANICAL CLAMPING.
The various accessories we offer, **MECHANICAL, HYDRAULIC, ELECTRIC** or **IDROPNEUMATIC** torque multipliers are indipendent units that can be added or removed without affecting the basic vise. Vise clamping is always mechanical through nut and screw.

FUNZIONAMENTO DELLA MORSA FMS
FMS VISE OPERATION

MORSA DOPPIA

Con la ghiera ***Art.825A*** aperta, allineata alla piastra di contenimento ***Art.825*** - ***Fig.1***, la morsa e' predisposta per un doppio serraggio con uno scarto dimensionale massimo fra i due pezzi da bloccare di 8mm.

DOUBLE STATION VISE

With the lockring ***Art.825A*** open, aligned to the main screw holding plate ***Art.825*** - ***Pic.1*** the vise configuration is for a double clamping with a max difference between workpieces of 8mm.

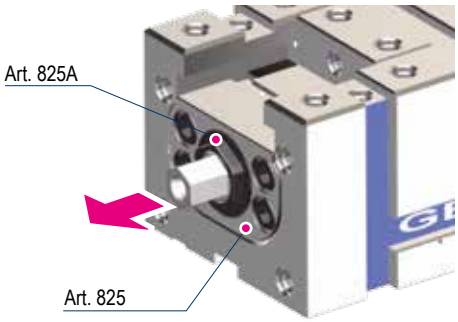


Fig. 1

MORSA AUTOCENTRANTE

Con la ghiera ***Art.825A*** chiusa, all'interno della piastra di contenimento ***Art. 825*** - ***Fig.2***, la morsa è predisposta per il bloccaggio autocentrante di un solo pezzo (sono possibili sia bloccaggi esterno-interno che interno-esterno)

ATTENZIONE: In questa situazione il centro pezzo rispetto al centro cava è disassato di 2 mm verso la chiave di serraggio.

SELF CENTERING VISE

With the lockring ***Art.825A*** closed, inside the main screw holding plate ***Art.825*** - ***Pic.2***, the vise configuration is for a self-centering clamping of one single piece (external to internal and internal o external clampings are possible)

ATTENTION: With this configuration the work-piece center with respect to the center slot is disaligned of 2 mm toward the clamping wrench

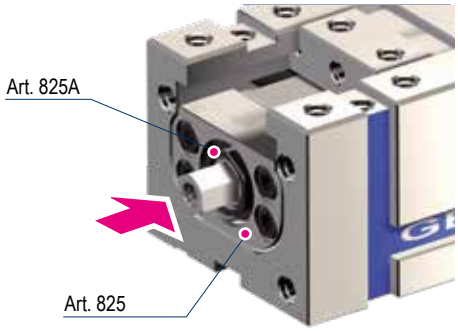


Fig. 2

MORSE SINGOLA

Sia con la ghiera ***Art.825A*** aperta che chiusa (punti 1 e 2) è possibile il serraggio di un unico pezzo con riferimento fisso.

SINGLE STATION VISE

With open and closed lockring ***Art.825A*** it is possible to clamp a single piece with a fixed reference point

COME TRASFORMARE LA MORSA FMS AUTOCENTRANTE IN UNA A BLOCCAGGIO SINGOLO o DOPPIO
RESETTING OPERATIONS TO TRANSFORM SELF-CENTERING FMS VISE TO DOUBLE or SINGLE CLAMPING

OPERAZIONE 1

Inserire la bussola esagonale ***Art.850H*** nella sede della ghiera di riferimento ***Art.825A***

OPERATION 1

Insert the hexagonal bushing ***Art.850H*** in the lockring ***Art.825A***

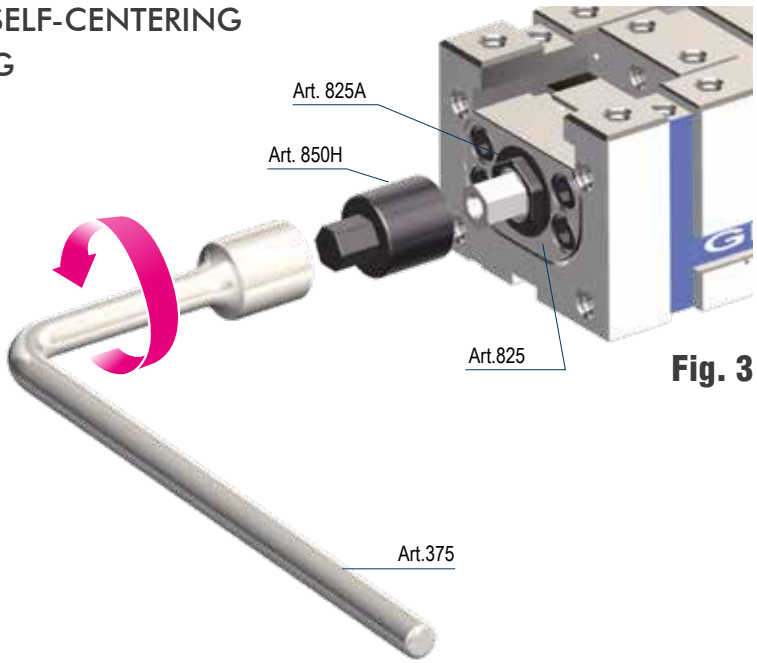


Fig. 3

OPERAZIONE 2

Inserire la chiave a pipa ***Art.375*** nella bussola esagonale ***Art.850H***

OPERATION 2

Put the box wrench ***Art.375*** inside the hexagonal bushing ***Art.850H***

OPERAZIONE 3

Girare la chiave a pipa in senso ***antiorario*** fino a portare la ghiera ***Art.825A*** - ***Fig 3*** a sporgere dalla piastra di contenimento ***Art.825***

OPERATION 3

Turn the box wrench ***anticlockwise*** to bring the lockring ***Art.825A*** - ***Pic.3*** open in line with main screw holding plate ***Art.825***

A questo punto la morsa FMS puo' serrare 2 pezzi contemporaneamente anche se le dimensioni tra loro sono diverse, con un margine di 8mm circa.
Può anche essere utilizzata per serraggi singoli, per il serraggio di un unico pezzo, spostando la ganascia fissa centrale (***Fig.4***) in una delle 2 cave laterali e naturalmente, rimuovendo una delle 2 ganasce mobili.

Per ottenere tutte le aperture possibili (data la lunghezza della base) può, in certe posizioni essere necessario l'utilizzo di ganasce speciali o spessori.

Now the FMS vise can clamp 2 work-pieces different dimensions (max difference 8mm). At the same time the vise can also be used as single station clamping by moving the central fix jaw (***Pic. 4***) in one of the 2 lateral positioning slots and of course by removing one movable jaw.

In order to reach all the possible openings (given the base lenght) it could be necessary, in some positions, the use of specials jaws or spacers.

Fig. 4

5

COME TRASFORMARE LA MORSA FMS DA BLOCCAGGIO DOPPIO AD AUTOCENTRANTE

RESETTING OPERATIONS TO TRANSFORM DOUBLE CLAMPING VISE TO SELF-CENTERING

OPERAZIONE 1

Inserire la bussola esagonale ***Art.850H*** nella sede della ghiera di riferimento ***Art.825A***

OPERATION 1

Insert the hexagonal bushing ***Art.850H*** in the lockring ***Art.825A***

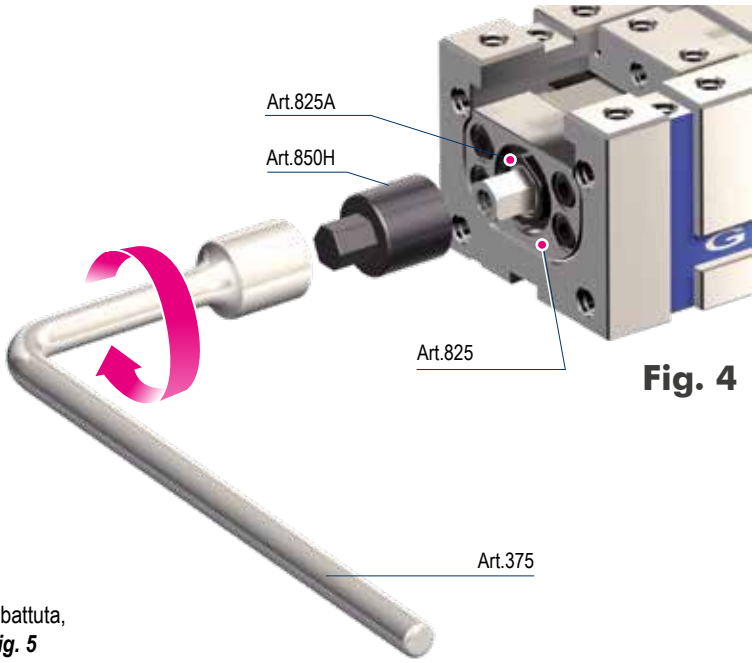


Fig. 4

OPERAZIONE 2

Inserire la chiave a pipa ***Art.375*** nella bussola esagonale ***Art.850H***

OPERATION 2

Put the box wrench ***Art.375*** inside the hexagonal bushing ***Art.850H***

OPERAZIONE 3

Girare la chiave a pipa ***Art.375*** in senso ***orario*** fino a portare la ghiera in battuta, ossia all'interno della piastra di contenimento (non forzare il serraggio). ***Fig. 5***

OPERATION 3

Turn the hexagonal wrench ***Art.375*** ***clockwise*** to reach with the lockring the bottom position, that inside the main screw holding plate (do not force the clamping). ***Pic.5***

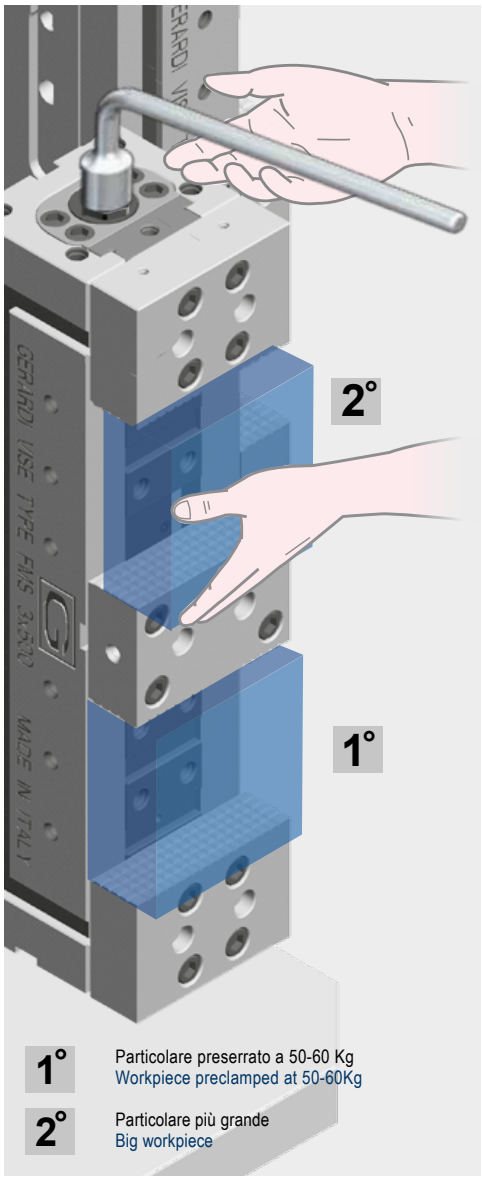
OPERAZIONE 4

A questo punto la morsa FMS è autocentrante, può quindi serrare 1 pezzo garantendo il riferimento centrale dello stesso.

OPERATION 4

Now the FMS vise is self-centering, so it can clamp 1 work-piece and guarantee its central reference point.

DISPOSITIVO TERZA MANO PER MORSE FMS DOPPIE
THIRD HAND ACCESSORY FOR DOUBLE FMS VISES



DISPOSITIVO TERZA MANO PER MORSE FMS DOPPIE

Il meccanismo "Terza mano" nella morsa in versione a doppia stazione, consente il carico e serraggio lieve del primo pezzo (dalla parte opposta alla chiave nella stazione inferiore della morsa), mentre nel frattempo viene caricato il secondo pezzo di dimensione maggiore (da cui la denominazione "Terza mano"). Tale dispositivo risulta particolarmente utile quando la morsa viene usata in posizione verticale. Con il dispositivo "Terza mano", i due particolari da lavorare possono essere di dimensioni diverse con uno scarto massimo fra loro di 2 mm.

Il meccanismo "Terza mano" standard ha una spinta di max 50 Kg.Volendo ottenere una spinta maggiore, basta sostituire le molle in dotazione con altre di maggior potenza (attenzione però a mantenere la stessa quota di altezza del pacchetto molle) oppure aggiungendo un altro distanziale di max. 3mm

N.B: sostituendo le molle o aggiungendo un distanziale extra bisogna tener presente che il maggior precarico comporterà lo stesso carico di spinta anche girando la vite Art.822 a vuoto.

Non volendo il meccanismo "Terza Mano", il tutto puo' essere semplicemente rimosso togliendo le molle con i relativi distanziali dalla loro sede naturale.

Attenzione!! Assicurarsi che Art.850N rimanga fissato nella morsa per proteggere l'eventuale entrata di trucioli.

THIRD HAND DEVICE FOR DOUBLE STATION FMS VISES

The "Third Hand" device in the double station vise configuration, allows the first workpiece loaded to be gripped/clamped lightly with a little pressure (on the opposite side of the wrench and then in the lower vise station), while the second workpiece (bigger than first) is being loaded (from here the "third Hand" denomination). Such device is useful especially with the vise vertically positioned.

With the "Third Hand" device the two workpiece can be up to 2 mm different in gripping width.

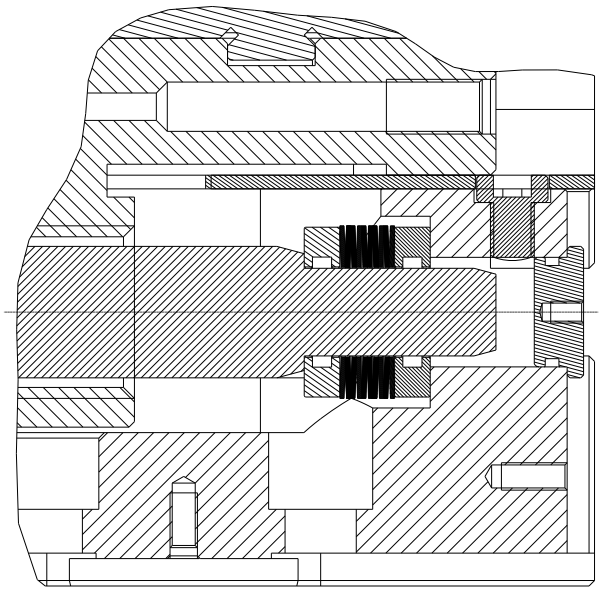
The standard "Third Hand" device has a max pressure of 50 Kg.

In order to reach a higher clamping power it is enough to preload by changing the standard springs with more powerful ones or by adding a pacer (max 3 mm). Be careful that remains the same spring and spacer packing height dimensions.

P.S: By changing springs or adding extra spacer remember that the higher preload will give the same resistance (given by the more powerful preload) even just turning the main screw Art.822 freely.

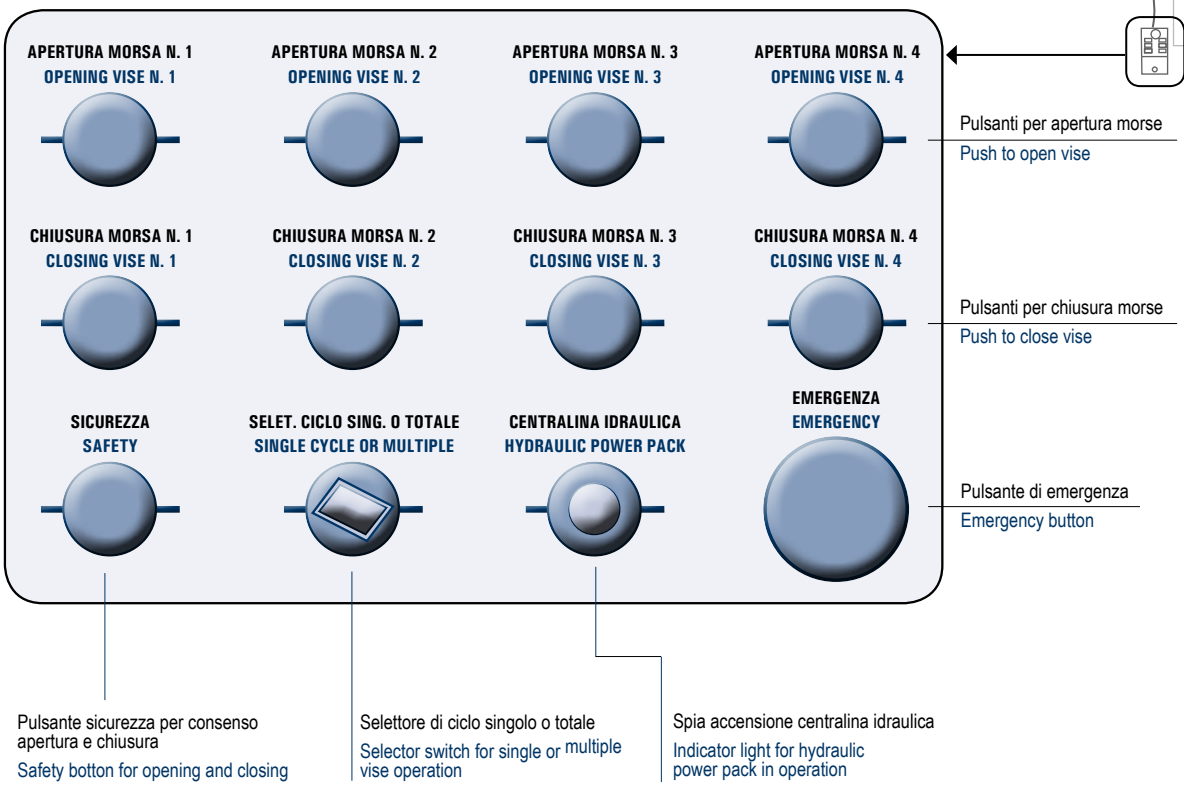
If the "Third Hand" device is not required, it could be simply removed by taking away the springs and their spacers from their standard position.

Attention!! *Make sure that the* **Art.850N** *remains fixed in the vise to provide protection from dirt getting inside the vise.*



Art.850P

FUNZIONAMENTO COMANDO CENTRALINE ELETTROIDRAULICHE
ELECTRO-HYDRAULIC POWER PACK UNIT INSTRUCTIONS



FUNZIONAMENTO

Per comandare l'apertura o la chiusura delle morse, e' necessario, dopo avere acceso la centralina olio, premere un pulsante per il movimento contemporaneamente al pulsante di "sicurezza".
Per la chiusura occorre tenere premuti i pulsanti fino a pezzo bloccato.
Dopodiché entra in funzione il dispositivo di finecorsa automatico che sblocca l'elettrovalvola. per l'apertura tenere premuto fino al finecorsa elettromeccanico.
Per comandare il movimento di ogni morsa singolarmente, girare il selettore (sing.-totale) sulla posizione "o" (singolo).
Per ottenere il movimento contemporaneo di tutte le morse, girare il selettore sulla posizione "i" (totale).

OPERATION - INSTRUCTION

To regulate the opening and closing of the vises it is necessary leaving turned on the main switch of the hydraulic power pack, to push the safety switch (button) at the same time as the open (or close) vise switch.

At the maximum opening of the vise the jaw movement limiting micro-switch will switch off jaw traverse.

To open or close the vises all together repeat the operation with the selector switch set to "multiple".

ATTENZIONE !

Accertarsi prima di comandare i movimenti, che la spia "centralina idraulica" sia accesa, e che nessuna persona sia in prossimita' delle morse, per evitare infortuni.

ATTENTION !

Before operating vises always make sure there are no person in the immediate vicinity.

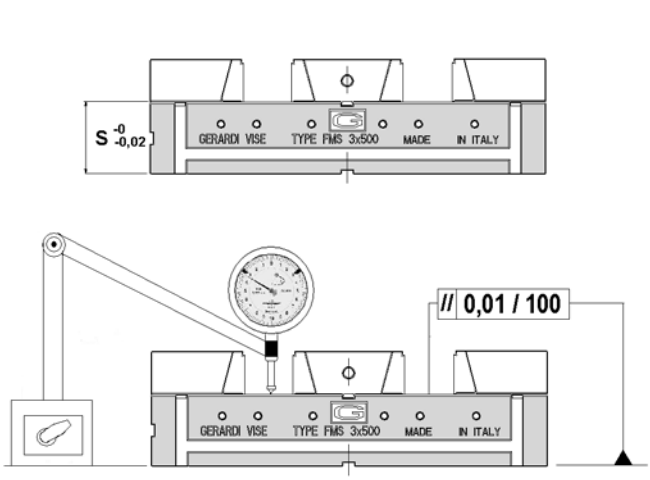
Tipo di olio raccomandato: **MOBIL VACUOLINE OIL 1405**
Cambiare filtro ogni **400** ore lavorative
Cambiare olio ogni **2000** ore lavorative
Lubrificazione vite e slitte morsa: **OLIO FLUIDO A BASSA VISCOSITA'**

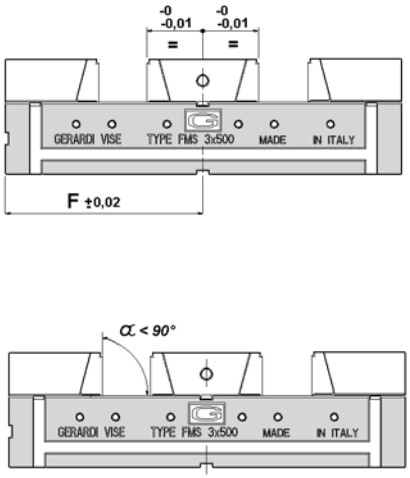
Type of oil reccomended: **MOBIL VACUOLINE OIL 1405**
Change filter every **400** operating hours
Change oil every **2000** operating tours
Lubrification of vise screw & slides: **WITH LOW VISCOSITY OIL**

ISTRUZIONI PER UN CORRETTO UTILIZZO
ISTRUCTIONS FOR A PROPER USE

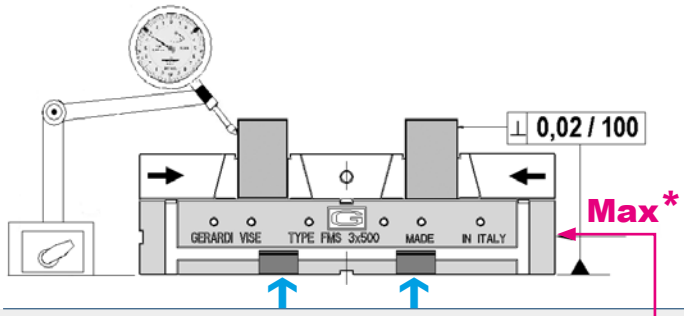
5

TOLLERANZE GEOMETRICHE / GEOMETRIC ACCURACIES

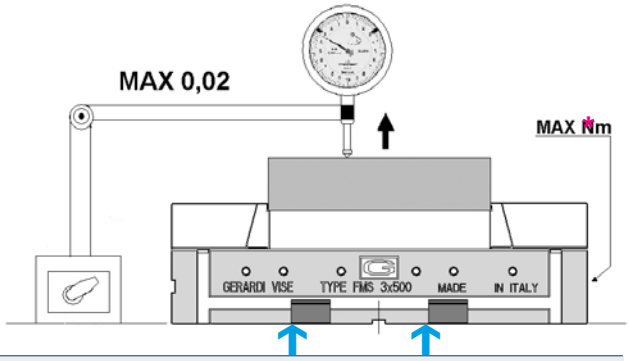




TOLLERANZE DINAMICHE / DINAMIC ACCURACIES



Morsa ancorata con 2 coppie di staffe Art.296
Vise clamped with n. 2 pairs of Art.296



Morsa ancorata con 2 coppie di staffe Art.296
Vise clamped with n. 2 pairs of Art.296

Art 865		* Coppia applicata - Torque Nm	Forza di serraggio - Clamping power
Morsa tipo 1	Vise type 1	120	2500 Kgf
Morsa tipo 2	Vise type 2	140	2500 Kgf
Morsa tipo 3	Vise type 3	180	3000 Kgf
Morsa tipo 4	Vise type 4	180	3000 Kgf
Morsa tipo 5	Vise type 5	240	3200 Kgf
Morsa tipo 6	Vise type 6	240	3200 Kgf

* Max coppia applicabile per non superare i valori consigliati

1 kgf . m = 9.806