

5

*Single, Double
or Self-centering!*

FMS

Morse e Cubi / 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

PRICE LIST €

SPECIAL PRICE €

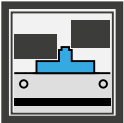
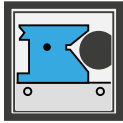
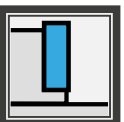
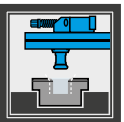
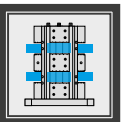
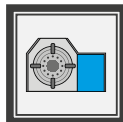
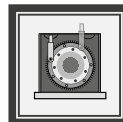
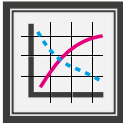
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SIMBOLOGIA DATI TECNICI

TECHNICAL DATA ICONS

GANASCE JAWS			 Piane Straights	 A gradino With step	 Oscillanti Floating	 Oscillanti con inserti regolabili Floating with inserts adjustable	 Prismatiche Prismatic
PIASTRE GANASCE JAW PLATES			 Discendente Pull down	 Piana Straight	 Cambio rapido manuale Quick manual change	 GRIP GRIP	 Inserti GRIP Inserti GRIP
POSSIBILITÀ POSSIBILITY				 Predisposizione Zero Point Zero Point Ready	 Cubi-morsa Vise tower	 Divisore Automatico Automatic dividing head	 Divisore Meccanico Mechanical dividing head
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

Morse e cubi morsa / Vises & vise-towers

FMS SERIES



Precisione / Accuracy
 $\pm 0,02\text{mm}$



Durezza / Hardened
HRC 58 $\pm$ 2

Un sistema modulare flessibile con centinaia di ganasce disponibili

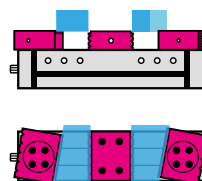
A Flexible modular system with hundreds of jaws available

ESTREMA VERSATILITÀ / EXTREME VERSATILITY

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

- 3 positions for the fixed jaw; • Outside to inside clamping and viceversa; • Vertically, horizontally and sideways 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 button board control (see page 12); • Space saving design, solid construction and maximum blocking ratio to total length; • Deflection reduced two times with respect to the STANDARD modular vises; • Very accurate repeatability of workpiece position; • Geometrical accuracy with tolerances within 0,02 mm; • Integral protection from chips and dirt through sliding protection; • Possibility to transform each single vise in a self-centering vise with possibility to block from outside to inside and vice versa and in a double vise through the simple substitution of the jaws on the universal vise body base.

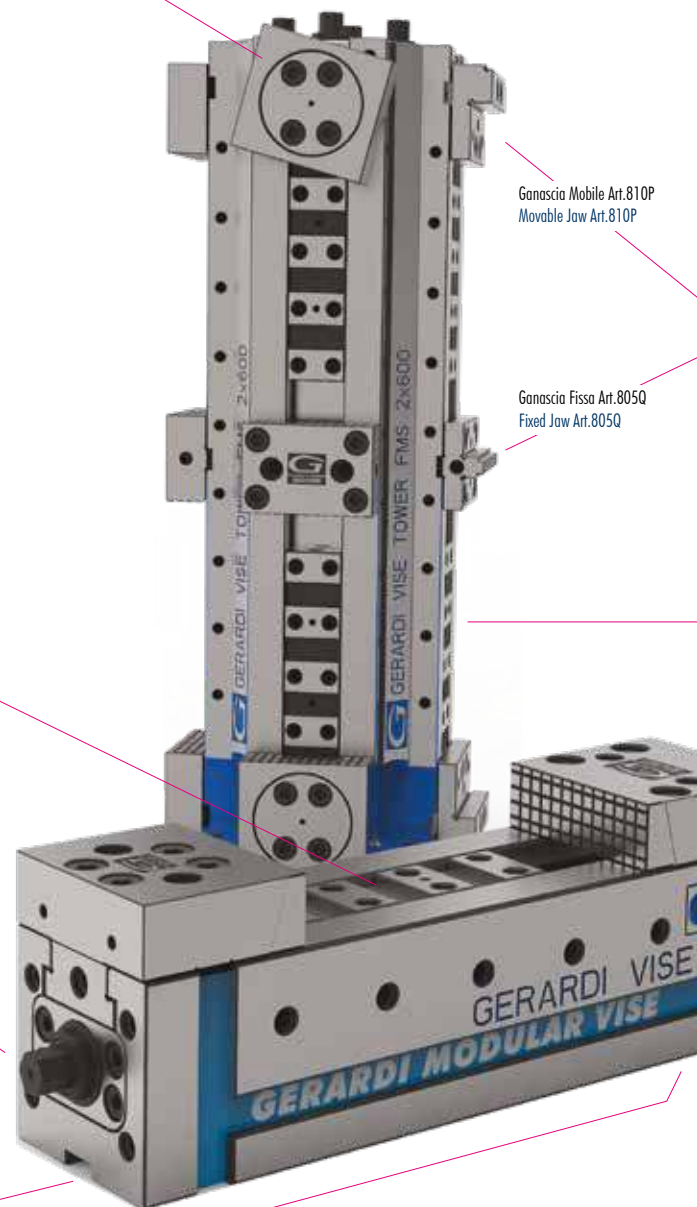
(APPLICATION EXAMPLES ON PAGE 5.76)



Ganasce Mobili Oscillanti

per serraggio di pezzi irregolari

*Floating Movable Jaws
for irregular workpieces*



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

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



Vite a doppio filetto e slitte guidate

*Double thread spindle
& guided slides*

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

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



Chavette di Posizionamento

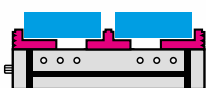
Positioning Keyways

Chavette longitudinali e trasversali sia sulla base per posizionamento orizzontale, che in testa per posizionamento verticale

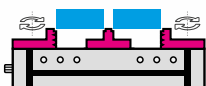
Longitudinal and cross keyways both on the base bottom surface for horizontal positioning and on the side for vertical positioning

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

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



Serraggio particolare su gradino grande
Workpiece clamping on the large step

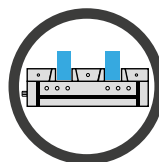


Serraggio particolare su gradino piccolo
Workpiece clamping on the small step



Riconfigurazione Rapidissima Quickest Vise Resetting

Ganasce con piastre discendenti a cambio rapido manuale
Pull down jaw plates with comb system (quick hand change)



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



3 Morse in Una 3 Vises in One

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

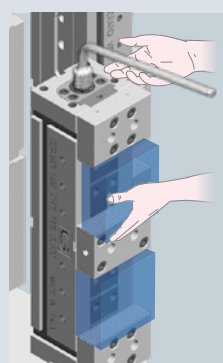
Possibility to transform each single vise in a self-centering vise with possibility to block from outside to inside and viceversa and in a double vise through the simple substitution of the jaws on the universal vise body base



Altissima Rigidità Highest Rigidity

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

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



Sistema a terza mano Third Hand service

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

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

Staffe di ancoraggio / Vise holding clamps



FMS

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

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

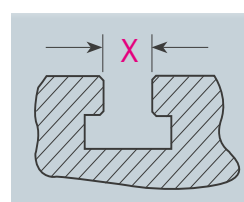
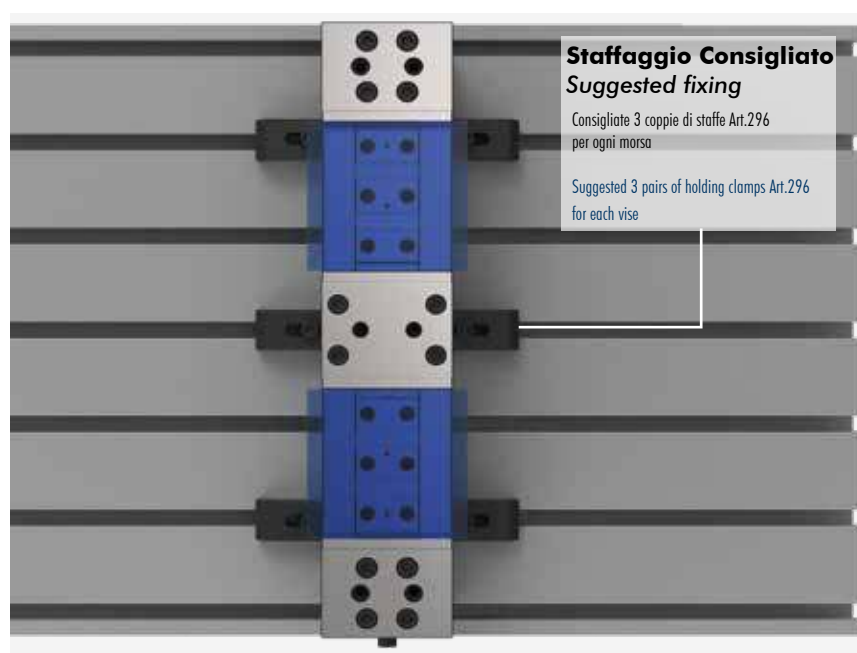


Esempio d'ordine per morsa tipo 3 su macchina con cave a T da 18mm: Art.296 T.3 X=18mm

Oppure con codice: 2.29.6300 X=18mm

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

Also with code: 2.29.6300 X=18mm

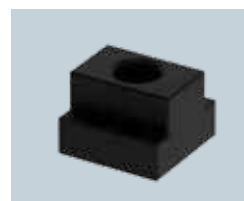


Cava a T

T Slot

Specificare sempre la cava della vostra macchina

Always specify the machine T-slot dimension

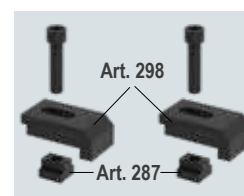


Art.287 (Pag.4.34)

Dadi a T - T Nuts

Per fissaggio morse alle cave a T della macchina

For vise clamping on the machine T-slots



Art.296

(Art.298 + Art.287)

Consigliate 3 coppie di staffe Art.296 per ogni morsa

Suggested 3 pairs of holding clamps Art.296 for each vise

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

* Scelta consigliata - Suggested choice

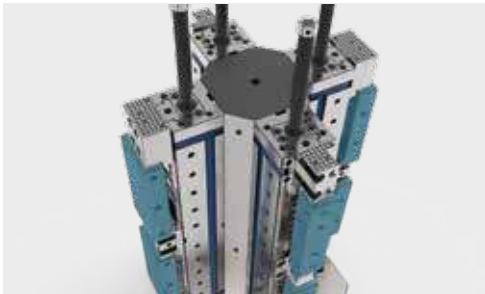
* Scelta NON consigliata - NO Suggested choice

Soluzioni personalizzate / Customized solutions

FMS

Soluzioni personalizzate a tutti i vostri problemi di serraggio

Customized solutions for all your clamping problems



Morse FMS automatizzate in verticale

FMS vises automated vertically mounted

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

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

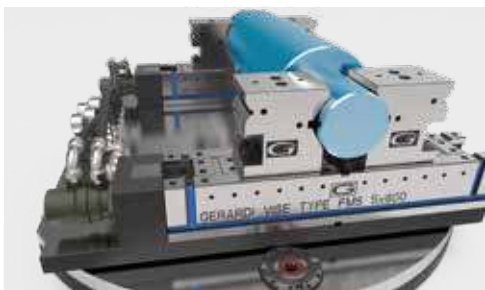


Morsa FMS con riduttore epicicloidale

FMS vise with epicyclic force reducer

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

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



Serraggio automatico di grandi particolari tondi

Round workpieces automatic clamping

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

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



Non solo per centri a 5 assi

Not only for 5th axis machines

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

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



Morse FMS in verticale con robot

FMS vises vertically mounted + robot

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

FMS vises vertically mounted on horizontal machining center.

Both vise clamping and workpieces turnover are operated through automated robotic system.

TRE MORSE IN UNA THREE VISES IN ONE



Acquista il modulo base universale. Una soluzione aperta per il lavoro di oggi pensando a quello di domani !
Buy the base body. A Versatile solution for present and future machining !

CORPO BASE Art.855

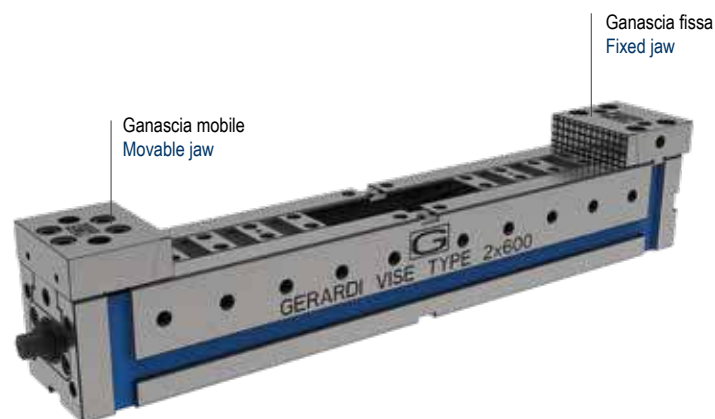
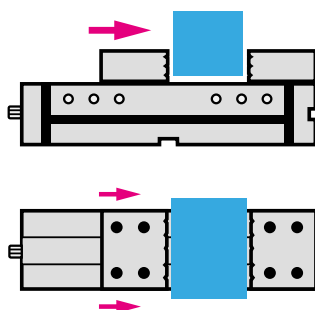
BASE BODY Art.855

Modulo base universale
CENTINAIA DI GANASCE DISPONIBILI !!

Universal vise body module
HUNDREDS OF JAWS AVAILABLE !!

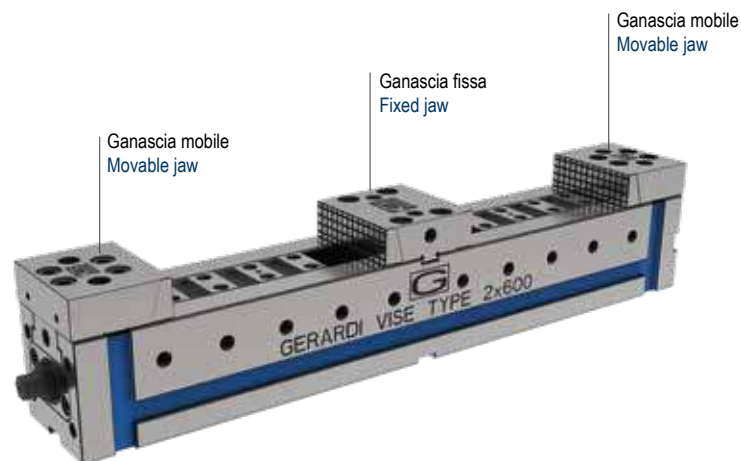
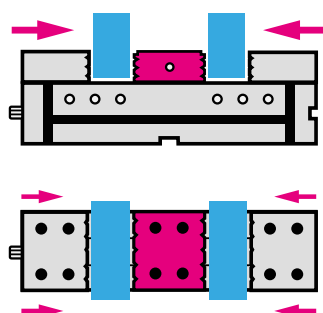
SERRAGGI SINGOLI

SINGLE CLAMPING



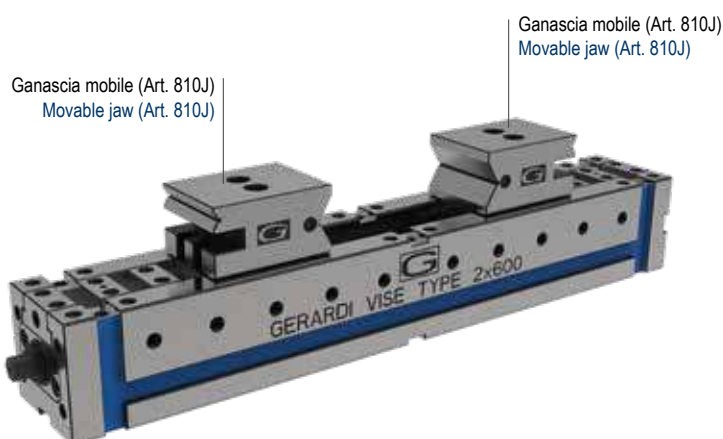
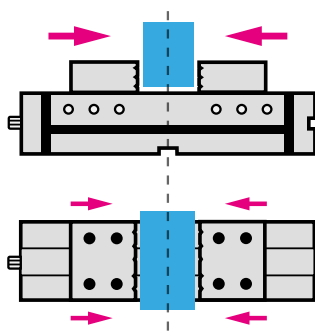
SERRAGGI DOPPI

DOUBLE CLAMPING

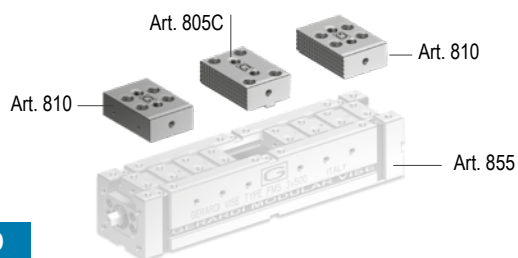


AUTOCENTRANTE

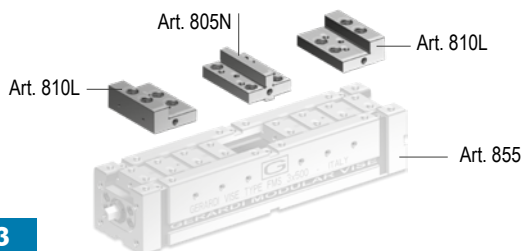
SELF-CENTERING



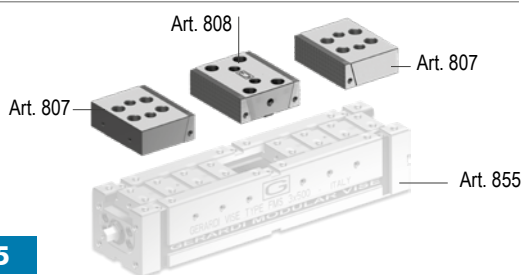
VERSIONI PER BLOCCAGGI DOPPI
DOUBLE CLAMPING CONFIGURATION



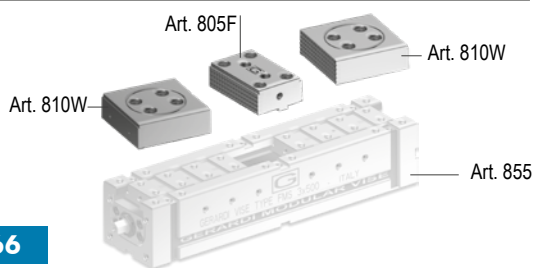
Art. 860



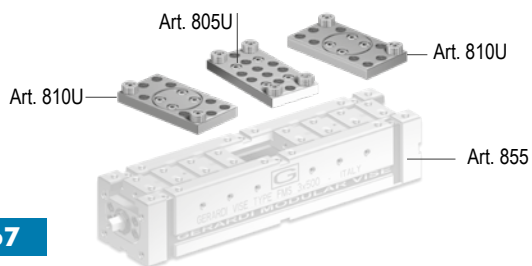
Art. 863



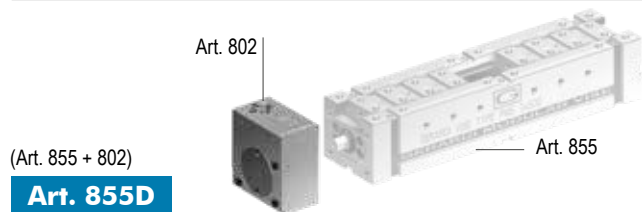
Art. 865



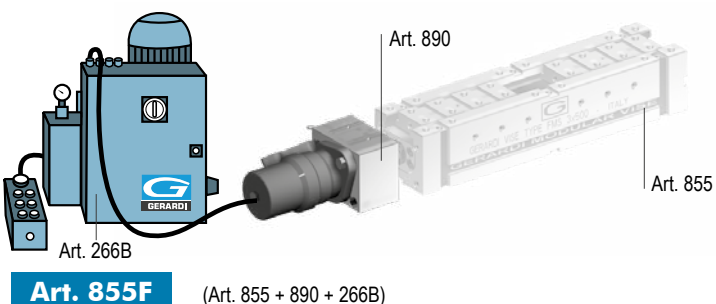
Art. 866



Art. 867

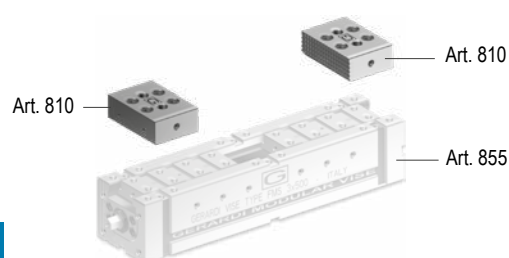


Art. 855D

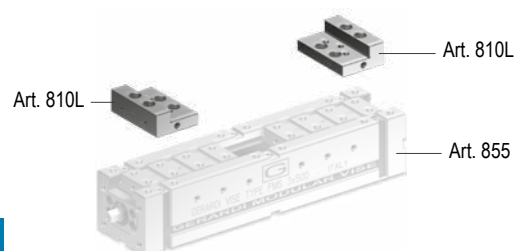


Art. 855F

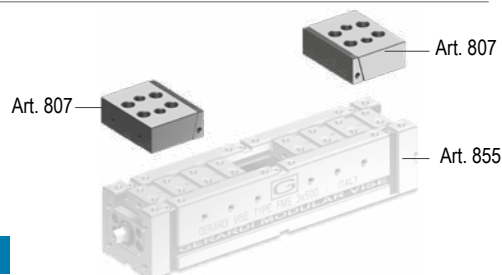
VERSIONI AUTOCENTRANTI
SELF-CENTERING TYPE



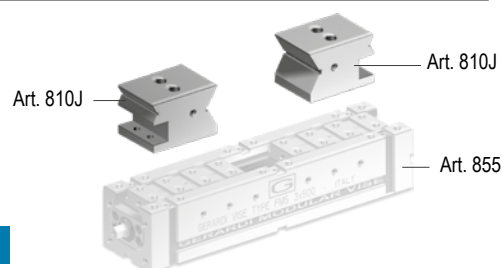
Art. 860



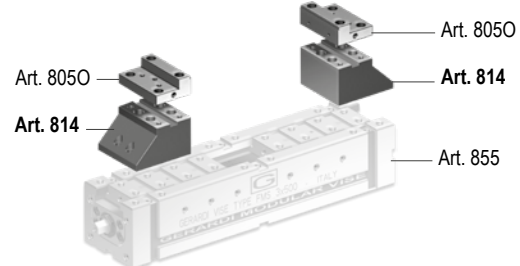
Art. 863



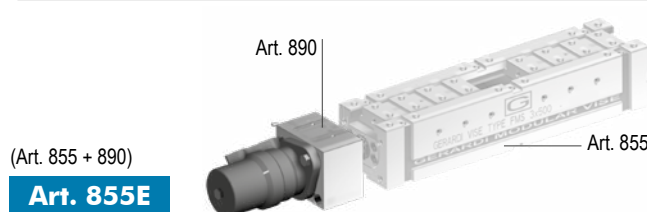
Art. 865



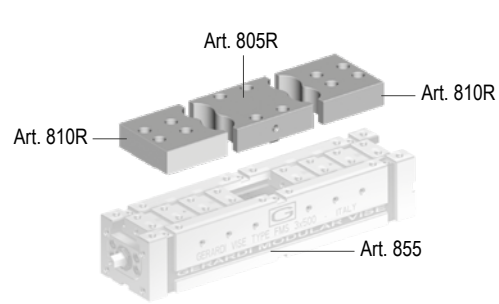
Art. 870



Art. 868

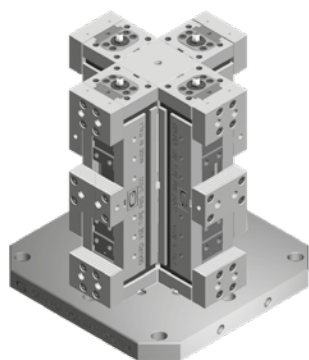


Art. 855E



CUBI DI MORSE MONTATI A CROCE O DORSO A DORSO

VICE TOWERS CROSS OR BACK TO BACK MOUNTED

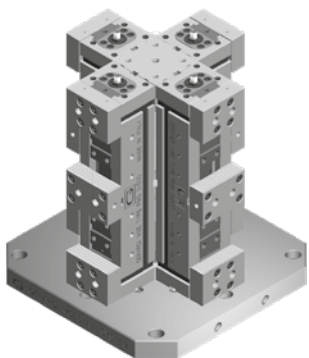


N° 4 MORSE FMS

montate a croce su piastra base (Art. 827A)
con distanziali (Art. 835)

N° 4 FMS VISES

cross-mounted on base plate (Art. 827A)
with spacers (Art. 835)

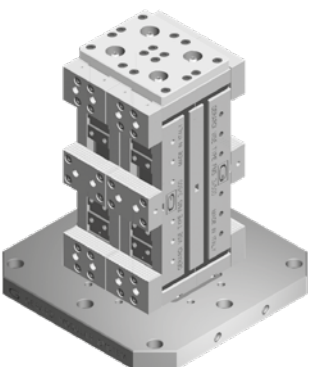


N° 4 MORSE FMS

montate a croce su piastra base (Art. 827A)
con supporto centrale (Art. 836)

N° 4 FMS VISES

cross-mounted on base plate (Art. 827A)
with center support (Art. 836)

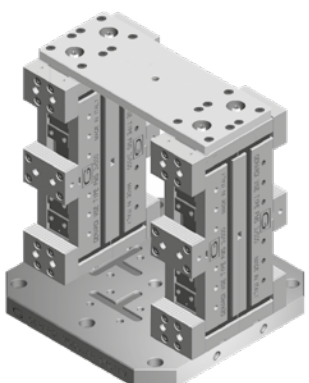


N° 4 MORSE FMS

montate dorso a dorso, fianco a fianco, su piastra base
(Art. 827) con piastra di collegamento (Art. 832)

N° 4 FMS VISES

cross-mounted back-to-back, side by side, on base
plate (Art. 827) with connecting plate (Art. 832)

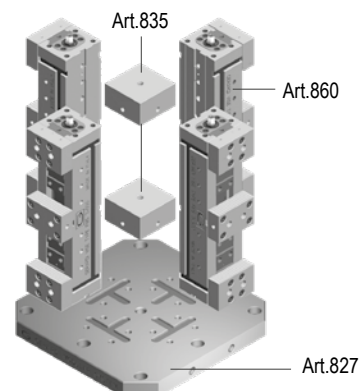


N° 4 MORSE FMS

montate dorso a dorso, su piastra base
(Art. 827A) con piastra di collegamento (Art. 832)

N° 4 FMS VISES

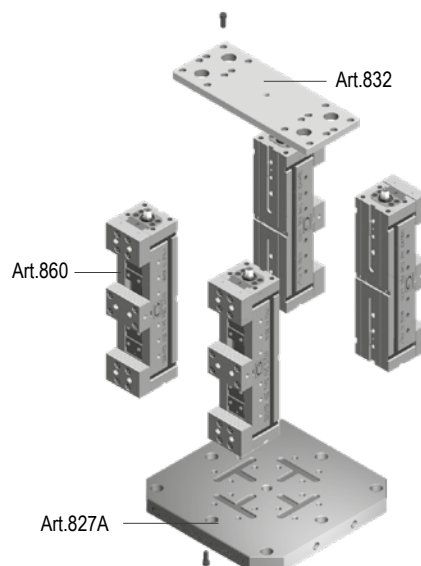
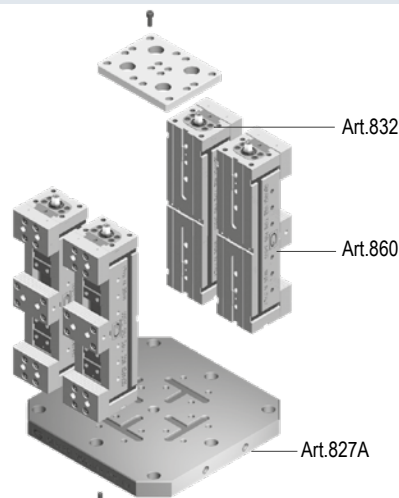
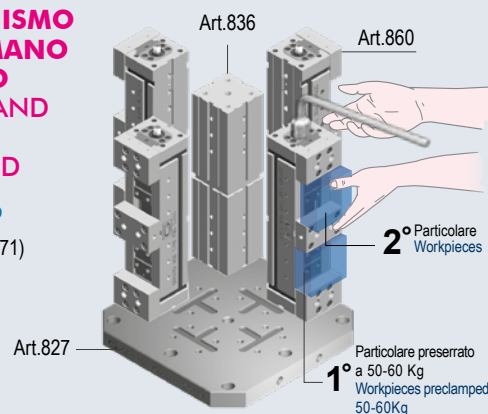
cross-mounted back-to-back, on base plate
(Art. 827A) with connecting plate (Art. 832)



MECCANISMO TERZA MANO INCLUSO THIRD HAND DEVICE INCLUDED

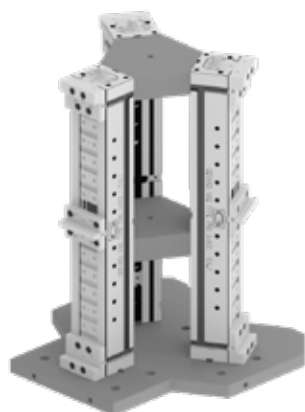
Art. 850P

(Pag - Page 5.71)



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

CUBI DI MORSE MONTATI VERTICALMENTE **WISE TOWERS VERTICALLY ASSEMBLED**

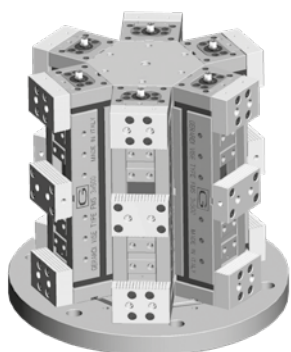
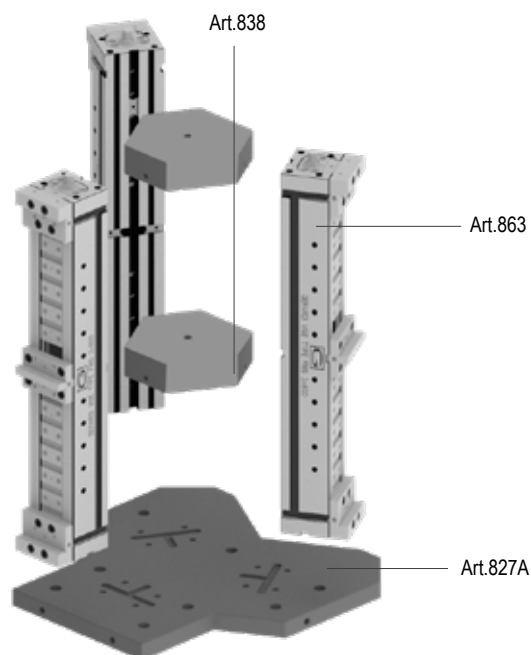


N° 3 morse FMS

montate verticalmente su piastra base a Y (827A)
 con supporto centrale (Art. 838)

N° 3 FMS vises

vises vertically mounted on Y base plate (827A)
 with exagon center support (Art. 838)

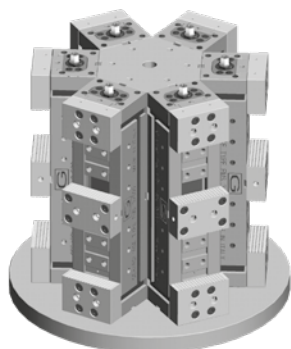
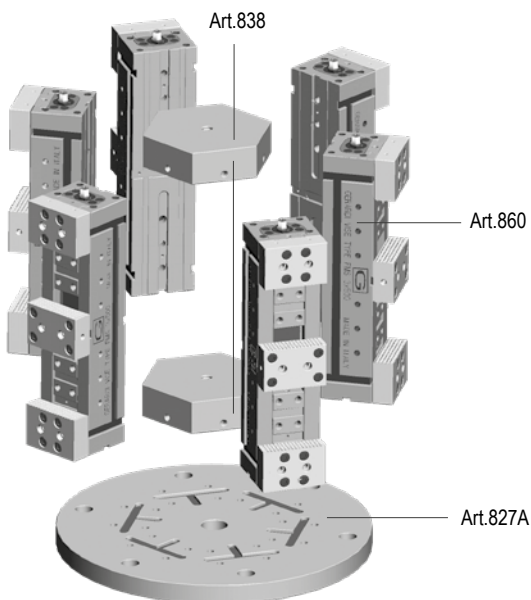


N° 6 morse FMS

montate verticalmente su piastra base (Art. 827A)
 con distanziali esagonali (Art. 838)

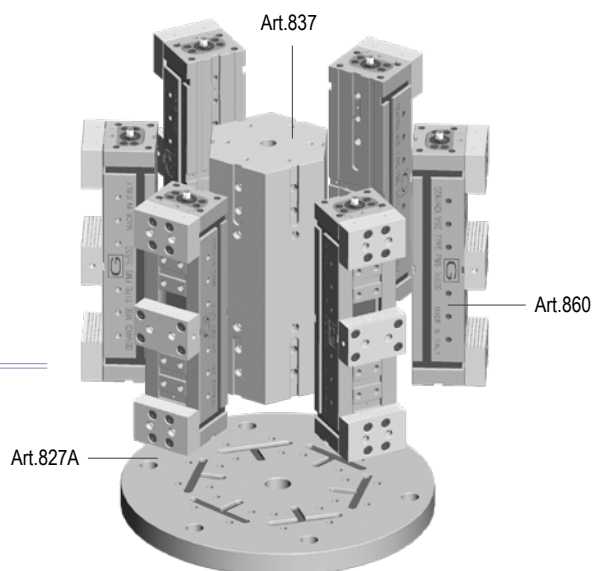
N° 6 FMS vises

vises vertically mounted on base plate (Art. 827A)
 with exagon spacer (Art. 838)



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

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



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

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
Art. 855 Modulo base universale CENTINAIA DI GANASCE DISPONIBILI !!  		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		
Universal vise body module										
HUNDREDS OF JAWS AVAILABLE !!										

Art. 855

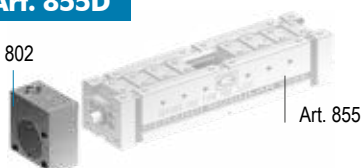
Modulo base universale

CENTINAIA DI GANASCE DISPONIBILI !!


 Universal vise body module
 HUNDREDS OF JAWS AVAILABLE !!

Art. 855D

Art. 802



Art. 855

(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

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

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

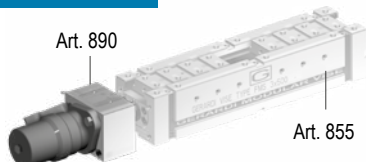
Cod. 5.80.21000 5.80.22000 5.80.23000

Art. 802



Art. 855E

Art. 890



Art. 855

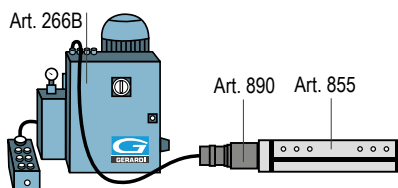
(Art. 855 + 890) Morsa + motore idraulico / Vise + hydraulic motor

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 elettroidraulica completa di motore, piastra, boccola e finecorsa

Art. 855F

Art. 266B



Art. 890 Art. 855

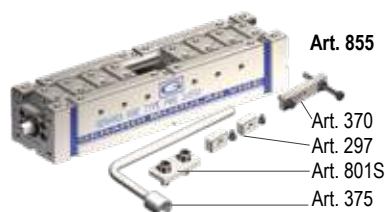
(Art. 855 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

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

Meccanica elettroidraulica completa di centralina idraulica apparecchiatura elettrica con pulsantiera

Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Art. 855

Art. 370

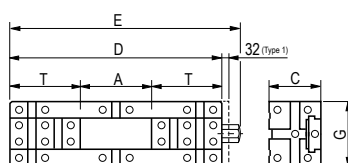
Art. 297

Art. 801S

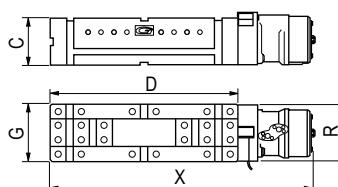
Art. 375

Standard equipment:

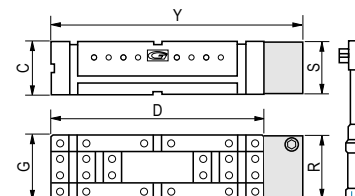
- 2 workstops Art. 370
- 1 pair of positioning key-nuts for 16 mm slot Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



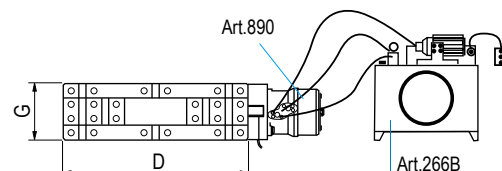
Art. 855



Art. 855E



Art. 855D

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


Art. 855F

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

Art. 855D

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

Cod.	5.85.5D360	5.85.5D370	5.85.5D380	5.85.5D450	5.85.5D460	5.85.5D470	5.85.5D480	5.85.5D560	5.85.5D570	5.85.5D580	5.85.5D680	5.85.5D690	5.85.5D610
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Art. 802

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

Cod.	5.80.23000	5.80.24000	5.80.25000	5.80.26000
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Art. 855E

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

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

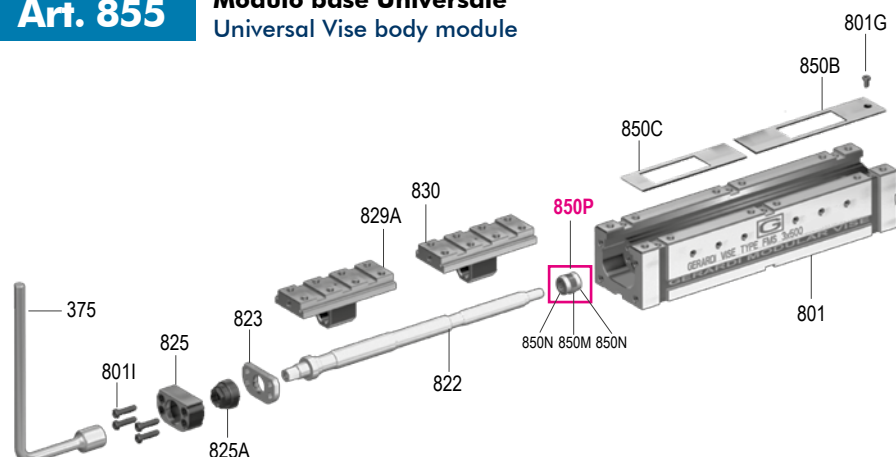
Mechanical with prepared hydraulic connection complete with motor plate, bushing and proximity switch

Art. 855F

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

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

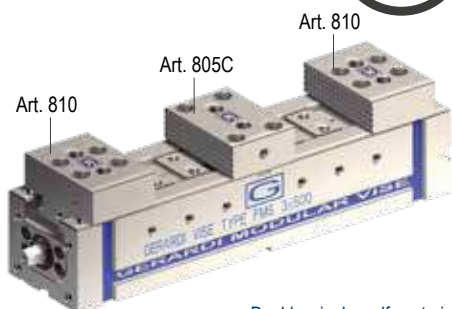
Mechanical with elettrohydraulic power-pack ready to work

Art. 855
Modulo base Universale
 Universal Vise body module


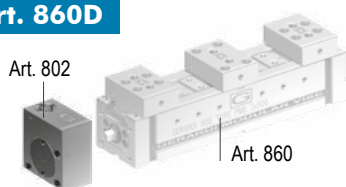
Art.	Pag.
375	4.35
801	5.50
801G	5.61
801I	5.61
822	5.53
823	5.59
825	5.59
825A	5.61
829A	5.52
830	5.52
850B	5.61

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

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
Art. 860 Morsa FMS doppia, singola, autocentrante con ganasce zigrinate 	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



Double, single, self-centering FMS vise with serrated jaws

Art. 860D


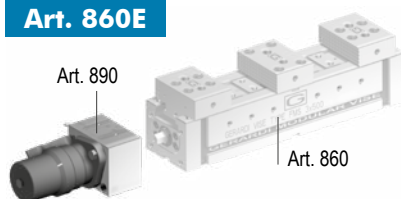
(Art. 860 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

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

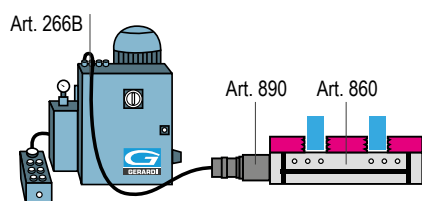

Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission

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

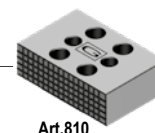
Art. 860F


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

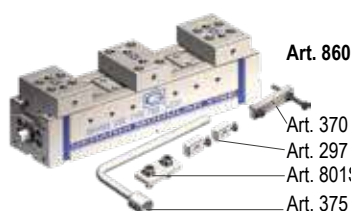
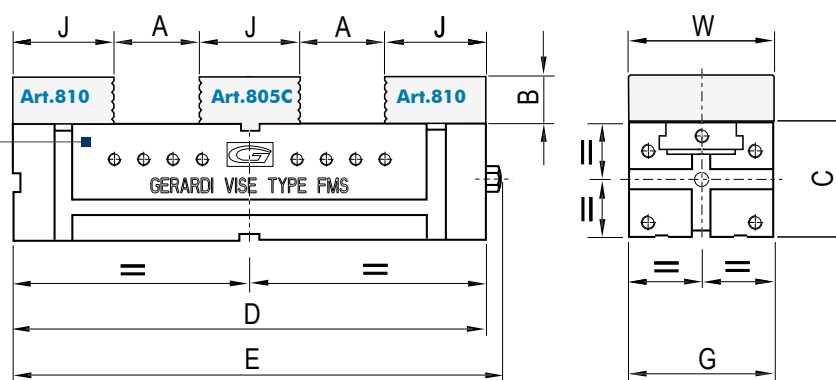
Cod.	5.86.0F120	5.86.0F130	5.86.0F230	5.86.0F240	5.86.0F250	5.86.0F260	5.86.0F340	5.86.0F350

Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S


 Lato zigrinato
Serrated side


Art.810


 Lato liscio
Smooth side

 Art. 855
Corpo base
Base body


Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts for 16 mm slot Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S

3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	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
B	40			50				60			60		
C	100			120				140			160		
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G	125			145				170			190		
J	84			98				108			108		
W	124			144				169			189		
kg	54	59	64	71	79	88	96	130	140	150	210	230	250
Cod.	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

Cod.	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
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Art. 802

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

Cod.	5.80.23000	5.80.24000	5.80.25000	5.80.26000
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Art. 860E

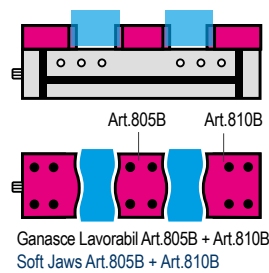
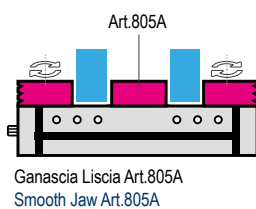
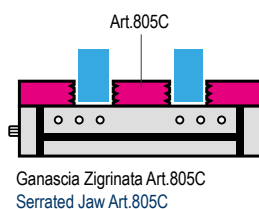
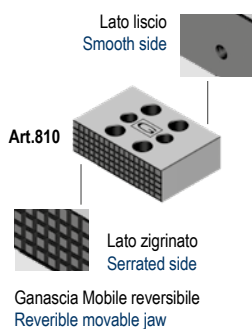
(Art. 860 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	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
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Art. 860F

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

Cod.	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
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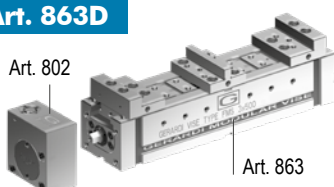
Art. 860
Esempi applicativi ganasce:
 Jaw application examples:


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
Art. 863	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

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

Art. 863D



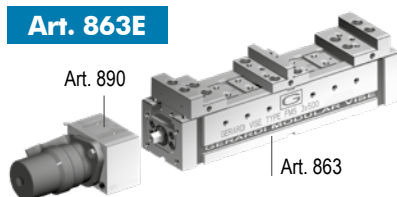
(Art. 863 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

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

Cod.	5.80.21000	5.80.22000	5.80.23000
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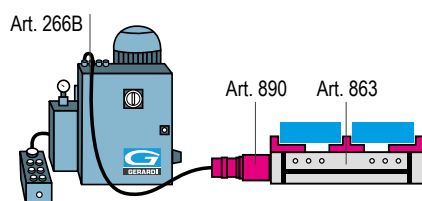
Art. 863E



(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
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Art. 863F

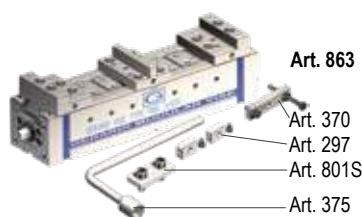


(Art. 863 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

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
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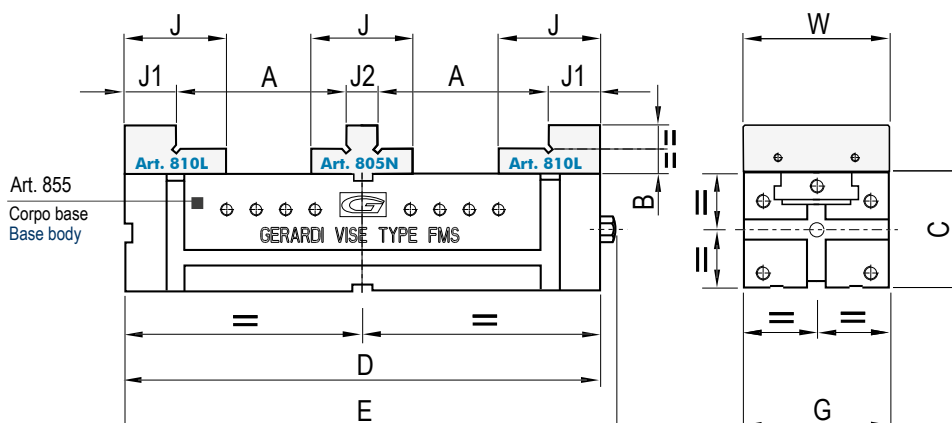
Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts for 16 mm slot Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	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
B	40			50				60			60		
C	100			120				140			160		
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G	125			145				170			190		
J	84			98				108			108		
J1	30			38				38			38		
J2	16			16				16			16		
W	124			144				169			189		
kg	50	55	60	68	76	85	93	124	134	144	200	220	240

Cod. 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

Cod. 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 rinvio angolare - Mechanical with torque multiplier with angular transmission

Cod. 5.80.23000 5.80.24000 5.80.25000 5.80.26000

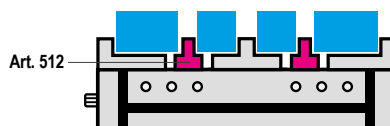
Art. 863E (Art. 863 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod. 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

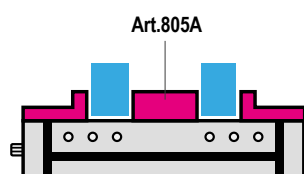
Art. 863F (Art. 863 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod. 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

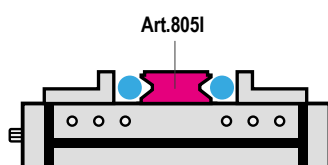
Art. 863 Esempi applicativi ganasce: Jaw application examples:



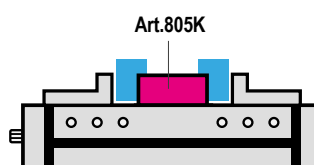
Serraggio simultaneo di 4 pezzi con ganasce intermedia
4 Workpieces simultaneous clamping with intermediate jaw



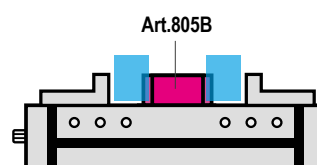
Ganasce lisce per fissaggio centrale
Smooth jaws for central fixed



Ganasce prismatica orizzontale per fissaggio centrale
Horizontal prismatic jaws for central fixed

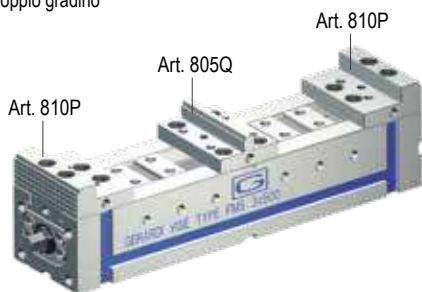


Ganasce prismatica verticale per fissaggio centrale
Vertical prismatic jaw for central fixed



Ganasce lavorabile per fissaggio centrale
Soft jaws for central fixed

Tipo (grandezza) morsa / Vise type (size)		1		2				3	
		kN	25 kN	25 kN				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 277
Art. 864		A1	2 x 84	2 x 134	2 x 118	2 x 168	2 x 218	2 x 268	2 x 312
NEW		B	25				30		40
		C	70				90		100
		D	232	332	300	400	500	600	400
		E	249	349	320	420	520	620	425
		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
		Cod.	5.86.41200	5.86.41300	5.86.42300	5.86.42400	5.86.42500	5.86.42600	5.86.43400


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

Art. 805F

 Ganasia 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

 Ganasia fissa con doppio
 gradino 3x5 ZIGRINATA
 Fixed jaw with double 3x5
 step SERRATED

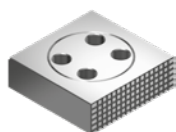

Cod. 5.80.5G100 5.80.5G200 5.80.5G300

Art. 810O

 Ganasia mobile con gradino
 piccolo e grande
 Movable jaw with small and large step


Cod. 5.81.0O100 5.81.0O200 5.81.0O300

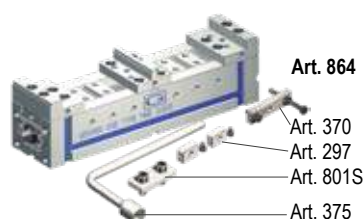
Art. 810X

 Ganasia 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

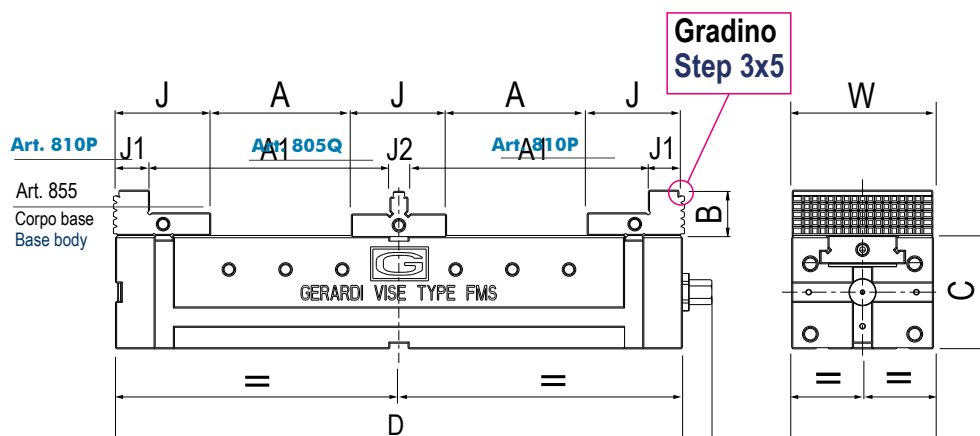
Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts for 16 mm slot Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	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
A1	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
B		40			50				60			60	
C		100			120				140			160	
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G		125			145				170			190	
J		84			98				108			108	
J1		30			38				38			38	
J2		16			16				16			16	
W		124			144				169			189	
kg	50	55	60	68	76	85	93	124	134	144	200	220	240
Cod.	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

Cod. 5.80.5F300 5.80.5F400 5.80.5F500 5.80.5F300

Art. 805G

Cod. 5.80.5G300 5.80.5G400 5.80.5G500 5.80.5G600

Art. 810O

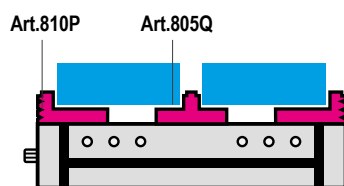
Cod. 5.81.0O300 5.81.0O400 5.81.0O500 5.81.0O600

Art. 810X

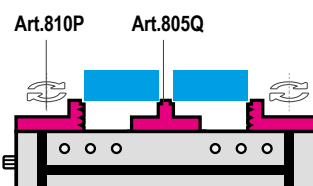
Cod. 5.81.0X300 5.81.0X400 5.81.0X500 5.81.0X600

Art. 864

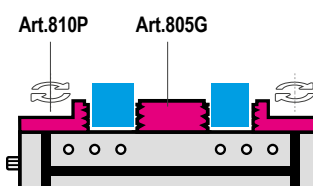
Esempi applicativi ganasce a doppio gradino:
Double step jaw application examples:



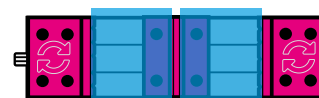
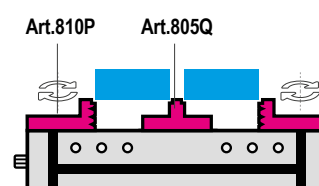
Utilizzo del gradino standard per alzare il particolare rispetto alla base
Use the main step for raising the workpiece



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°

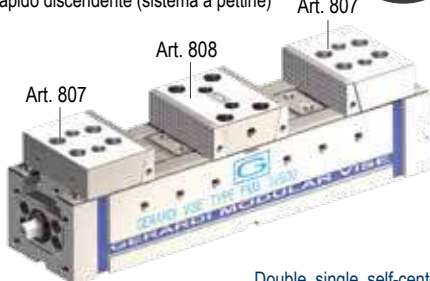


Per sfruttare il lato zigrinato delle ganasce mobili Art.810P sostituisci la ganascia fissa centrale con l'Art.805G
To exploit the serrated side of the movable jaws Art.810P change the fixed central jaw with Art.805G



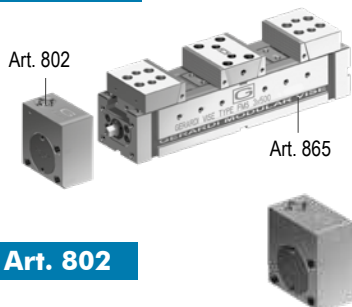
Tipo (grandezza) morsa / Vise type (size)		1	2				3	
		kN	25 kN	25 kN				30 kN
Apertura massima / Maximum opening		A	2 x 52	2 x 30	2 x 80	2 x 130	2 x 180	2 x 46 2 x 96
Art. 865		B	25	30				40
		C	70	90				100
		D	332	300	400	500	600	400 500
		E	349	320	420	520	620	425 525
		G	75	95				125
		J	63	76				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

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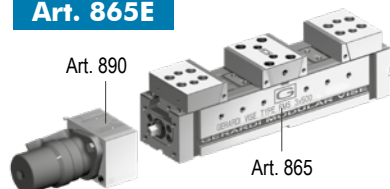
Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission

Cod.	5.80.21000	5.80.22000	5.80.23000
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Art. 802

Art. 865E

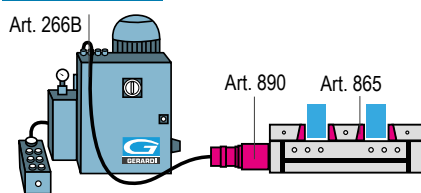
(Art. 865 + 890) Morsa + motore idraulico / Vise + hydraulic motor



Cod.	5.86.5E130	5.86.5E230	5.86.5E240	5.86.5E250	5.86.5E260	5.86.5E340	5.86.5E350
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Art. 865F

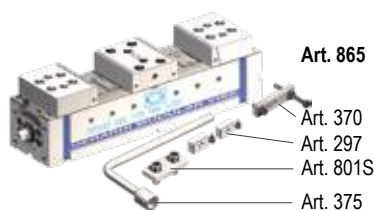
(Art. 865 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit



Cod.	5.86.5F130	5.86.5F230	5.86.5F240	5.86.5F250	5.86.5F260	5.86.5F340	5.86.5F350
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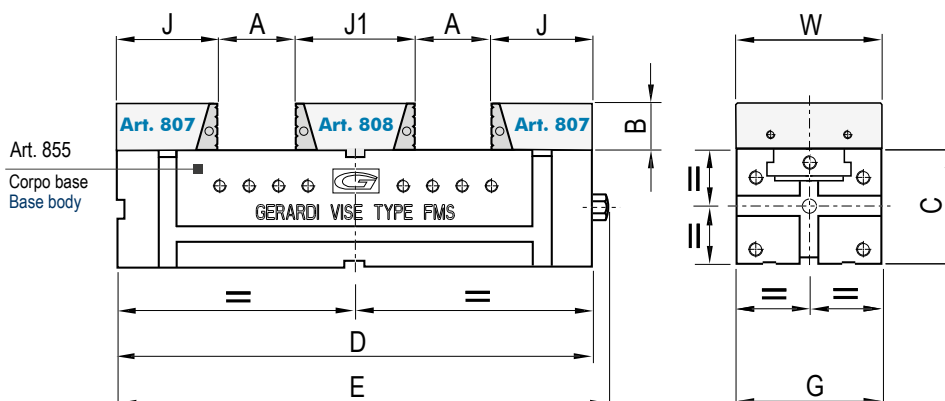
Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts for 16 mm slot Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	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
B	40			50				60			60		
C	100			120				140			160		
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G	125			145				170			190		
J	98			117				132			119		
J1	111			136				155			130		
W	124			144				169			189		
kg	54	59	64	74	82	91	99	134	144	154	215	235	255
Cod.	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

Cod.	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
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Art. 802

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

Cod.	5.80.23000	5.80.24000	5.80.25000	5.80.26000
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Art. 865E

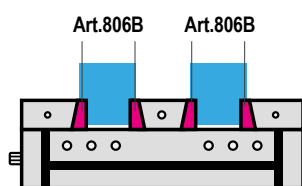
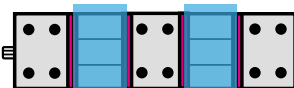
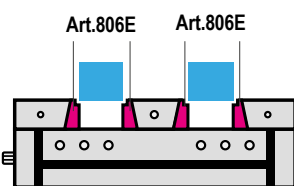
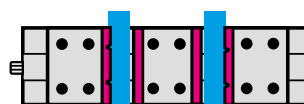
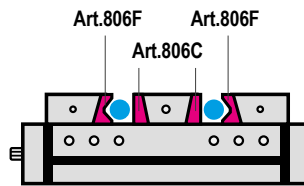
(Art. 865 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	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
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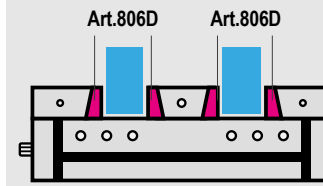
Art. 865F

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

Cod.	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 lavorabili Art.806B
 Soft machineable Jaw plates Art.806B

 Piastre ganasce a gradino Art.806E
 Step jaw plates Art.806E

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

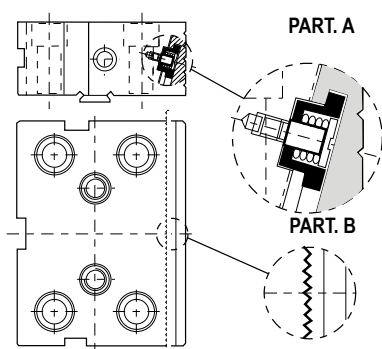
Configurazione standard / Standard configuration


 Piastre ganasce zigrinate Art.806D
 Serrated jaw plates Art.806D

CORPI GANASCE FMS & PIASTRE GANASCE INTERCAMBIABILI RAPIDE

FMS COMB JAW BODIES & QUICK INTERCHANGEABLE JAW PLATES

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

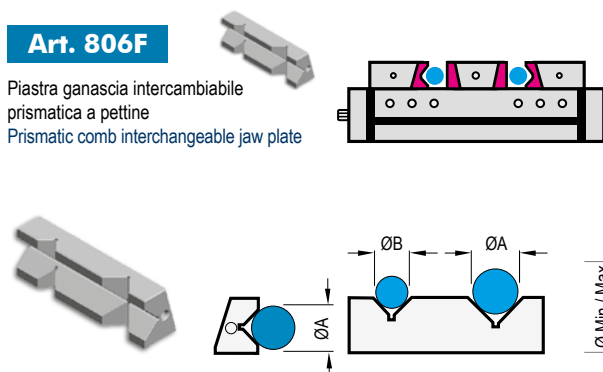


RAPIDA SOSTITUZIONE DELLE PIASTRE GANASCE DISCENDENTI SENZA BISOGNO DI ALCUN UTENSILE

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.

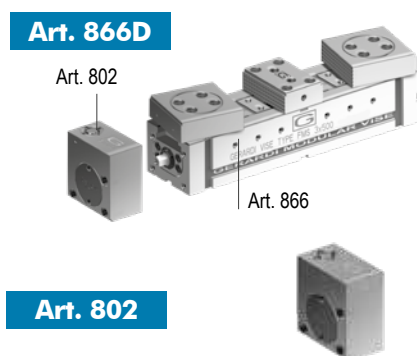
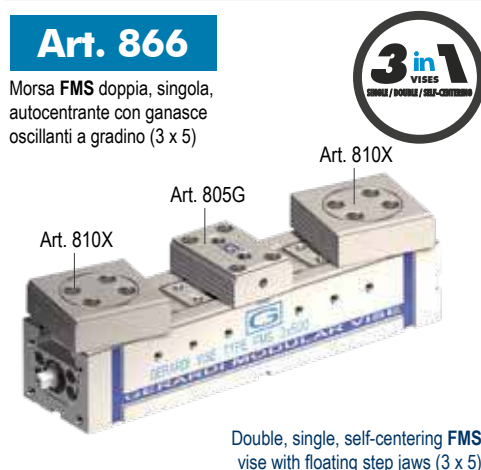
QUICK HAND CHANGE OF PULL-DOWN JAW PLATES - NO TOOLS NEEDED

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.



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 ganasce 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

Tipo (grandezza) morsa / Vise type (size)		1	2				3	
		kN	25 kN	25 kN				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
Art. 866		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

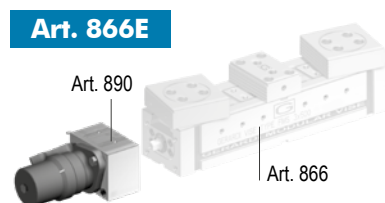


(Art. 866 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

Cod.	5.86.6D130	5.86.6D230	5.86.6D240	5.86.6D250	5.86.6D260	5.86.6D340	5.86.6D350
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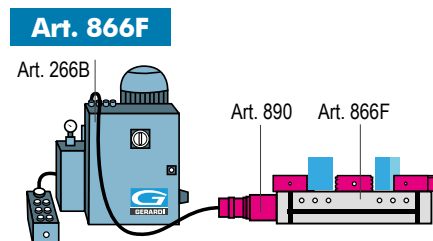
Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission

Cod.	5.80.21000	5.80.22000	5.80.23000
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(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
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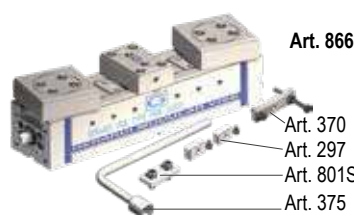


(Art. 866 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	5.86.6F130	5.86.6F230	5.86.6F240	5.86.6F250	5.86.6F260	5.86.6F340	5.86.6F350
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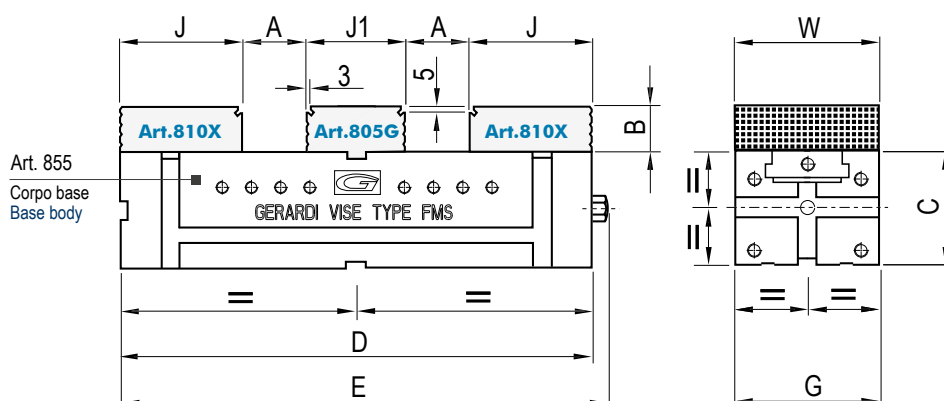
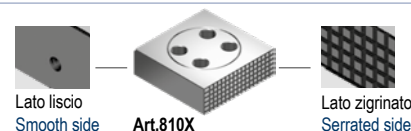
Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts for 16 mm slot Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	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
B	40			50				60			60		
C	100			120				140			160		
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G	125			145				170			190		
J	106			128				135			143		
J1	84			98				108			108		
W	124			144				169			189		
kg	54	59	64	74	82	91	99	134	144	154	215	235	255
Cod.	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

Cod.	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
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Art. 802

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

Cod.	5.80.23000	5.80.24000	5.80.25000	5.80.26000
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Art. 866E

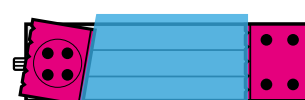
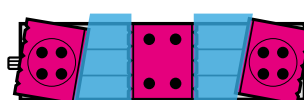
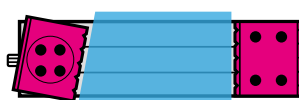
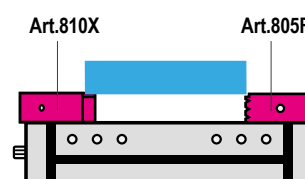
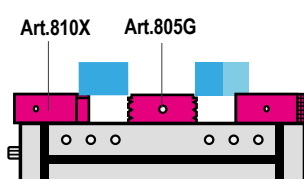
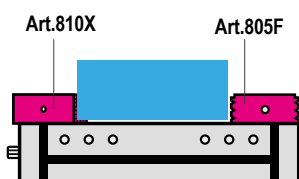
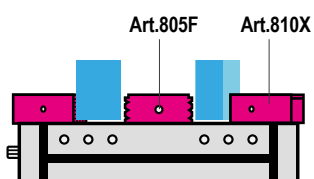
(Art. 866 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	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
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Art. 866F

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

Cod.	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
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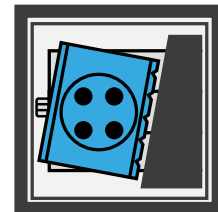
Art. 866
Esempi applicativi ganasce oscillanti:
Floating Jaws application examples:


Serraggio di particolari grezzi - Rough workpieces clamping

Serraggio di particolari sul gradino - Rough workpieces clamping on step

FUNZIONAMENTO DELLE GANASCE MOBILI OSCILLANTI

THE OPERATION OF MOVABLE JAWS



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

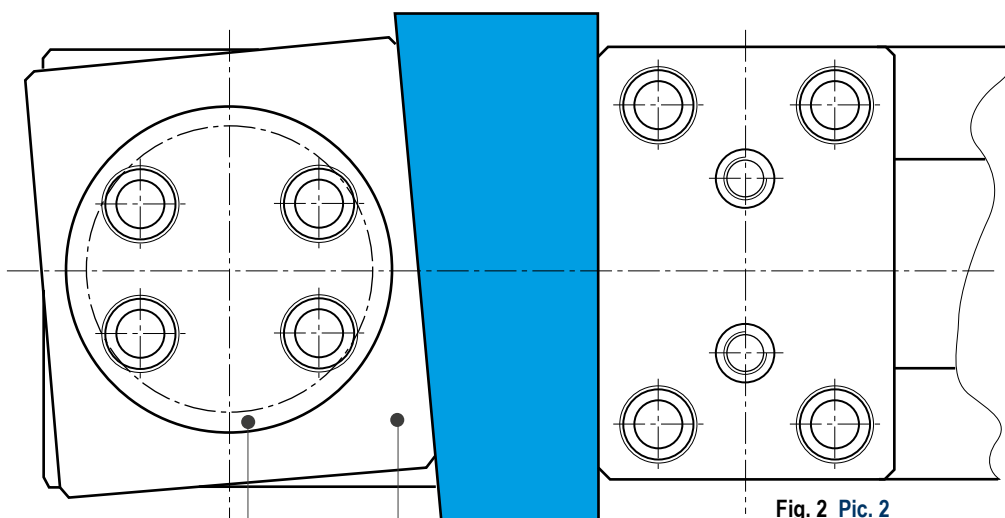
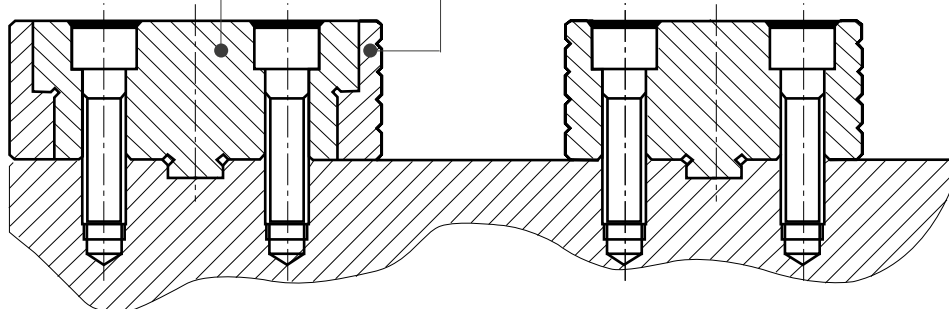


Fig. 2 Pic. 2

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)

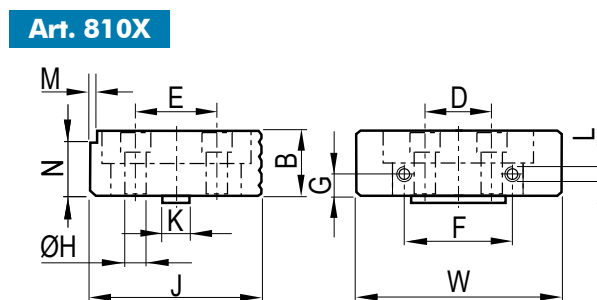
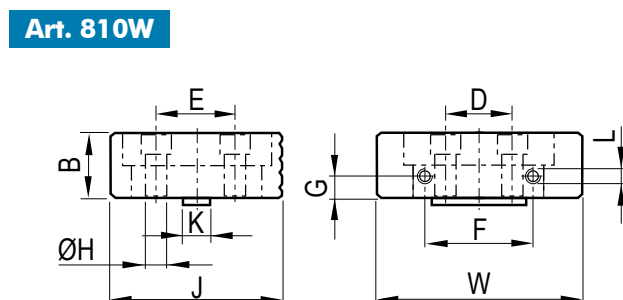
Le ganasce mobili oscillanti consentono il serraggio di pezzi di forma irregolare i cui lati non risultino paralleli (**Fig. 2**). Questo è reso possibile dall'albero a gradino (**Art. 810Z - Fig. 1**), posto al centro della ganascia, che pur permettendo la rotazione della ganascia, ne mantiene la precisione 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) / Type (size)	1	2	3	4	5	6
Art. 810W* Ganasce 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 	Cod. 5.81.0W200 	Cod. 5.81.0W300 	Cod. 5.81.0W400 	Cod. 5.81.0W500 	Cod. 5.81.0W600
* Set viti per fissaggio a richiesta - Set of fixing screws on request						
Art. 810X* Ganasce 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 	Cod. 5.81.0X200 	Cod. 5.81.0X300 	Cod. 5.81.0X400 	Cod. 5.81.0X500 	Cod. 5.81.0X600
* Set viti per fissaggio a richiesta - Set of fixing screws on request						
Art. 810Y* Ganasce 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 	Cod. 5.81.0Y200 	Cod. 5.81.0Y300 	Cod. 5.81.0Y400 	Cod. 5.81.0Y500 	Cod. 5.81.0Y600
* Set viti per fissaggio a richiesta - Set of fixing screws on request						
Art. 810Z Albero a gradino per ganasce mobili oscillanti Step block pin for floating movable jaw	Cod. 5.81.0Z100 	Cod. 5.81.0Z200 	Cod. 5.81.0Z300 	Cod. 5.81.0Z400 	Cod. 5.81.0Z500 	Cod. 5.81.0Z600
Art. 810WA Corpo ganasce mobile oscillante zigrinata da un lato Body floating movable jaw one side serrated	Cod. 5.81.0WA10 	Cod. 5.81.0WA20 	Cod. 5.81.0WA30 	Cod. 5.81.0WA40 	Cod. 5.81.0WA50 	Cod. 5.81.0WA60
Art. 810XA Corpo ganasce mobile oscillante con gradino 3x5 zigrinata da un lato Body floating movable jaw with 3x5 step one side serrated	Cod. 5.81.0XA10 	Cod. 5.81.0XA20 	Cod. 5.81.0XA30 	Cod. 5.81.0XA40 	Cod. 5.81.0XA50 	Cod. 5.81.0XA60
Art. 810YA Corpo ganasce mobile oscillante con gradino 3x5 Body floating movable jaw with 3x5 step	Cod. 5.81.0YA10 	Cod. 5.81.0YA20 	Cod. 5.81.0YA30 	Cod. 5.81.0YA40 	Cod. 5.81.0YA50 	Cod. 5.81.0YA60



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	-

3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A1	241	291	341	191	241	291	341	231	281	331	331	381	431
B	20			30				35			35		
C	100			120				140			160		
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G	125			145				170			190		
J1	70			80				100			100		
J2	35			40				40			40		
Ø	30 (H = 16)			30 (H = 16)				40 (H = 30)			40 (H = 30)		
W	170			220				250			300		
kg	50	55	60	68	76	85	93	124	134	144	200	220	240

Cod. 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

Cod. 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 rinvio angolare - Mechanical with torque multiplier with angular transmission

Cod. 5.80.23000 5.80.24000 5.80.25000 5.80.26000

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

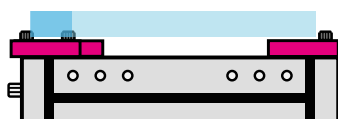
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Art. 867F (Art. 867 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

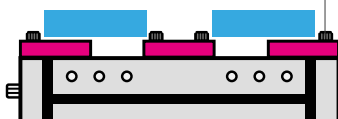
Cod. 5.86.7F360 5.86.7F370 5.86.7F380 5.86.7F450 5.86.7F460 5.86.7F470 5.86.7F480 5.86.7F560 5.86.7F570 5.86.7F580 5.86.7F680 5.86.7F690 5.86.7F610

Art. 867 Esempi applicativi ganasce oscillanti regolabili: Floating adjustable jaws application examples:

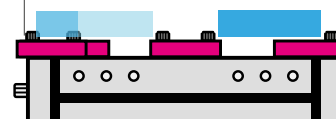
Inserti regolabili - adjustable jaw inserts



4 inserti - 4 jaw inserts



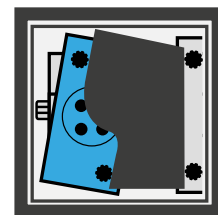
6 inserti - 6 jaw inserts



8 inserti - 8 jaw inserts

FUNZIONAMENTO DELLE GANASCE MOBILI OSCILLANTI CON INSERTI

HOW TO OPERATE FLOATING MOVABLE JAWS WITH INSERTS



Art. 810UA

Corpo ganascia mobile oscillante
Body floating movable jaw

Art. 810UZ

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

Art. 805UA

Corpo ganascia fissa con inserti
Body fixed jaw with inserts

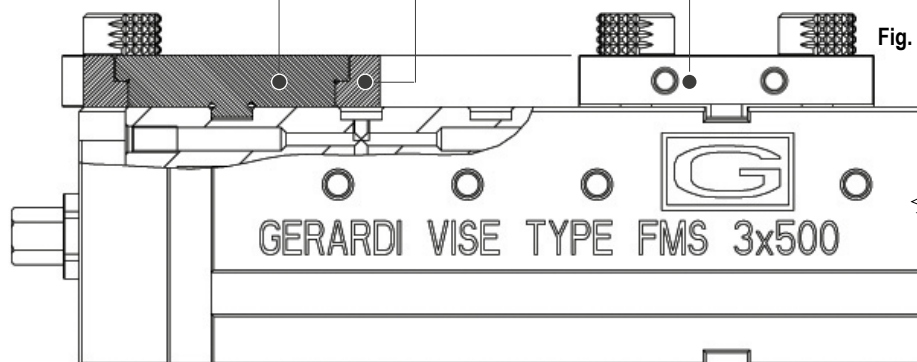
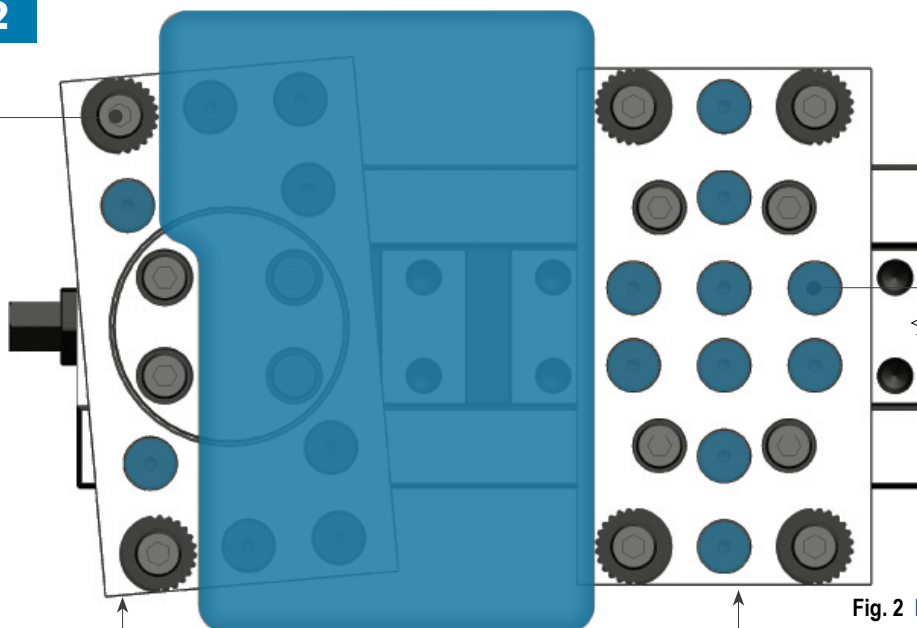


Fig. 1 Pic. 1

Art. 812



Art. 84U

Tappo in alluminio (EXTRA)
Aluminum cap (ETRA)

Art. 810U

Ganascia mobile oscillante con inserti
Floating movable jaw with inserts

Art. 805U

Ganascia fissa con inserti
Fixed jaw with inserts

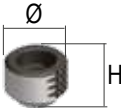
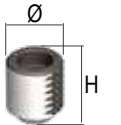
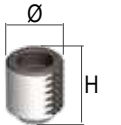
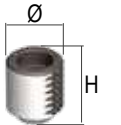
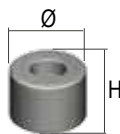
Fig. 2 Pic. 2

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.

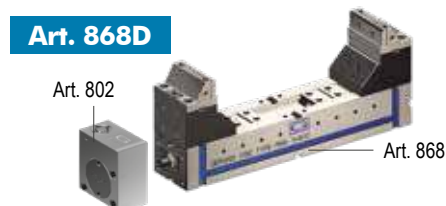
Floating movable jaws allow to clamp workpieces with irregular shapes whose sides are not parallels (Pic. 2). In fact thanks to the step block spindle (Art. 810UZ - Pic. 1), positioned in the centre of the jaw body, the jaw can float and guarantee at the same time maximum precision and no tilting of 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) / Type (size)		1	2	3	4	5	6
Art. 810U*		Cod. 5.81.0U100	5.81.0U200	5.81.0U300	5.81.0U400	5.81.0U500	5.81.0U600
Ganascia mobile regolabile oscillante con inserti Floating movable jaw with inserts							
		* Set viti per fissaggio a richiesta - Set of fixing screws on request					
Art. 810UA		Cod. 5.81.0UA10	5.81.0UA20	5.81.0UA30	5.81.0UA40	5.81.0UA50	5.81.0UA60
Corpo ganascia mobile oscillante Body floating movable jaw							
Art. 810UZ*		Cod. 5.81.0UZ10	5.81.0UZ20	5.81.0UZ30	5.81.0UZ40	5.81.0UZ50	5.81.0UZ60
Albero a gradino per ganasce mobili oscillanti Step block pin for floating movable jaw							
		* Set viti per fissaggio a richiesta - Set of fixing screws on request					
Art. 810Q*		Cod. 5.81.0Q100	5.81.0Q200	5.81.0Q300	5.81.0Q400	5.81.0Q500	5.81.0Q600
Ganascia mobile regolabile con inserti Movable jaw with inserts							
		* Set viti per fissaggio a richiesta - Set of fixing screws on request					
Art. 810QA		Cod. 5.81.0QA10	5.81.0QA20	5.81.0QA03	5.81.0QA40	5.81.0QA50	5.81.0QA60
Corpo ganascia regolabile mobile per inserti Body movable jaw for inserts							
Art. 805U*		Cod. 5.80.5U100	5.80.5U200	5.80.5U300	5.80.5U400	5.80.5U500	5.80.5U600
Ganascia fissa regolabile con inserti Fixed jaw with inserts							
		* Set viti per fissaggio a richiesta - Set of fixing screws on request					
Art. 805UA		Cod. 5.80.5UA10	5.80.5UA20	5.80.5UA30	5.80.5UA40	5.80.5UA50	5.80.5UA60
Corpo ganascia fissa regolabile per inserti Body fixed jaw per inserti							
Art. 812	 Inserto liscio e zigrinato Smooth and serrated insert	Ø	30			40	
Art. 812A	 Inserto liscio Smooth insert	H	16			30	
Art. 812C	 Inserto zigrinato Serrated insert	Cod.	5.81.21000			5.81.25000	
		Cod.	5.81.2A100			5.81.2A500	
		Cod.	5.81.2C100			5.81.2C500	
Art. 813	 Inserto liscio e zigrinato alto Smooth and serrated high insert	Ø	30			40	
Art. 813A	 Inserto liscio alto Smooth high insert	H	28			50	
Art. 813C	 Inserto zigrinato alto Serrated high insert	Cod.	5.81.31000			5.81.35000	
		Cod.	5.81.3A100			5.81.3A500	
		Cod.	5.81.3C100			5.81.3C500	
Art. 815	 Inserto liscio e zigrinato a gradino Pair of smooth and serrated step insert	H	16			30	
Art. 815A	 Inserto liscio a gradino Smooth step insert	Cod.	5.81.51000			5.81.55000	
Art. 815C	 Inserto zigrinato a gradino Serrated step insert	Cod.	5.81.5A100			5.81.5A500	
		Cod.	5.81.5C100			5.81.5C500	
Art. 812B	 Inserto in acciaio lavorabile Insert in machineable steel metal	Ø	40			60	
		H	40			60	
		Cod.	5.81.2B100			5.81.2B500	
Art. 84U	 Tappo in alluminio (EXTRA) Aluminum cap (ETRA)	Cod.	5.84.U1000			5.84.U5000	

Tipo (grandezza) morsa / Vise type (size)	kN	1 25 kN		2 25 kN				3 30 kN	
Art. 868									
Morsa FMS autocentrante (con opzione serraggi doppi o singoli) con ganasce alte									
Art.805V Art.814									
FMS self-centering vise (with double or single clamping option) with high jaws									
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. 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
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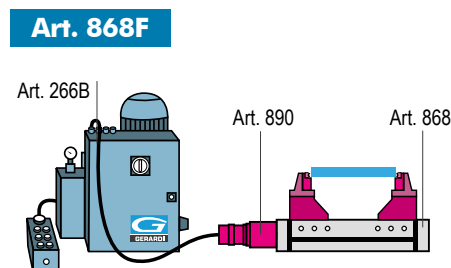
Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission

Cod.	5.80.21000	5.80.22000	5.80.23000
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(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
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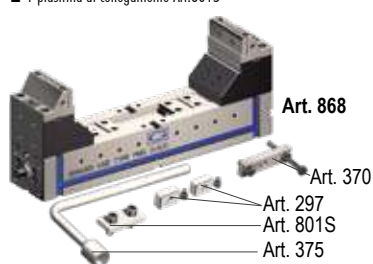


(Art. 868 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

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
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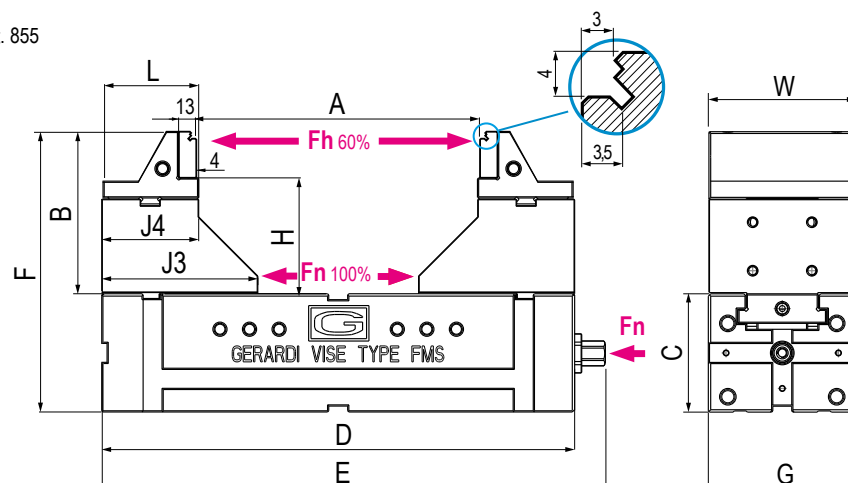
Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S


Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts for 16 mm slot Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S

Art. 855



3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	444	544	644	316	416	516	616	396	496	596	596	696	796
B		137				171			186			246	
C		100				120			140			160	
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
F		237				291			326			406	
G		125				145			170			190	
H		98				128			138			180	
L		84				97			107			107	
J3		132				154			169			189	
J4		82				96			106			106	
X		57				64			66			86	
W		124				144			169			189	
kg		-				-			-			-	

Cod. 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

Cod. 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 rinvio angolare - Mechanical with torque multiplier with angular transmission

Cod. 5.80.23000 5.80.24000 5.80.25000 5.80.26000

Art. 868E

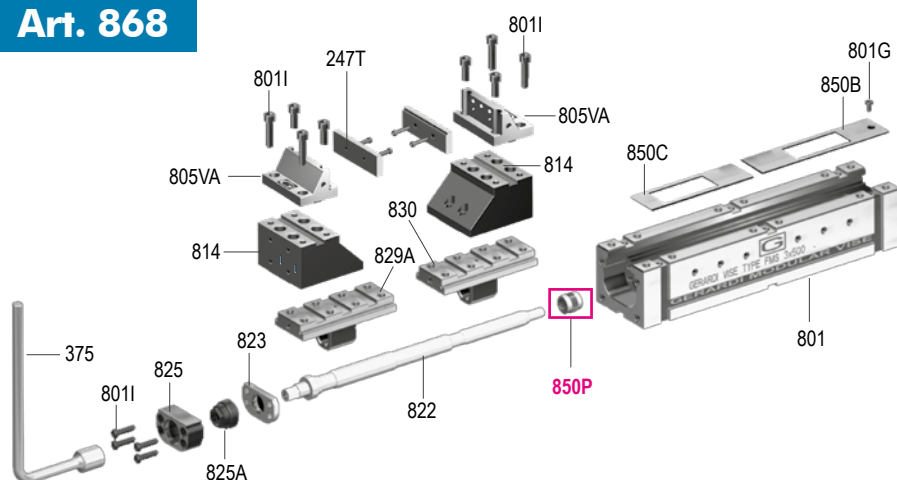
(Art. 868 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Cod. 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

Cod. 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

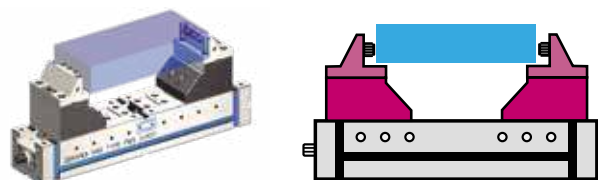
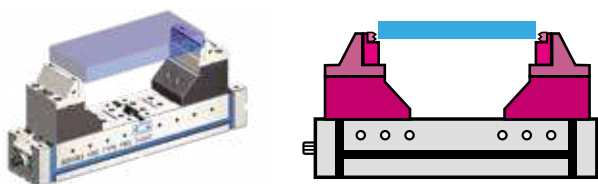
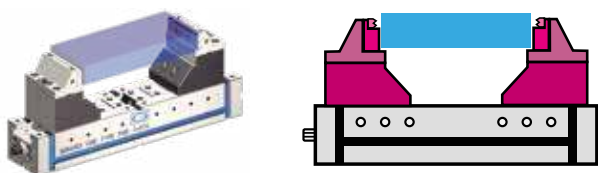
Art. 868


Art.	Pag.	Art.	Pag.
375	4.35	850B	5.61
801	5.50	850C	5.61
801G	5.61	850P	5.72
801I	5.61	814	5.56
810J	5.56	805VA	5.35
822	5.53	247T	5.35
823	5.59	-	-
825	5.59	-	-
825A	5.61	-	-
829A	5.52	-	-
830	5.52	-	-

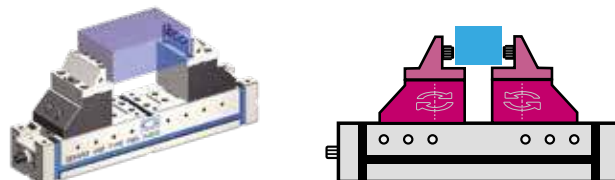
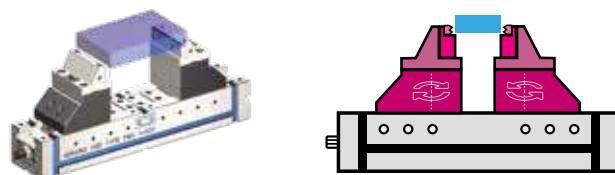
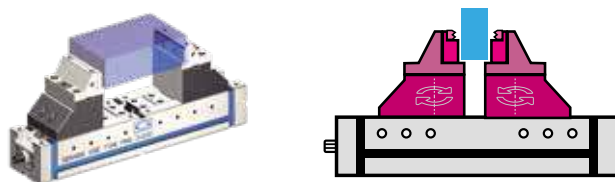
POSSIBILI COMBINAZIONI DELLA MORSA Art.868

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



Art. 868

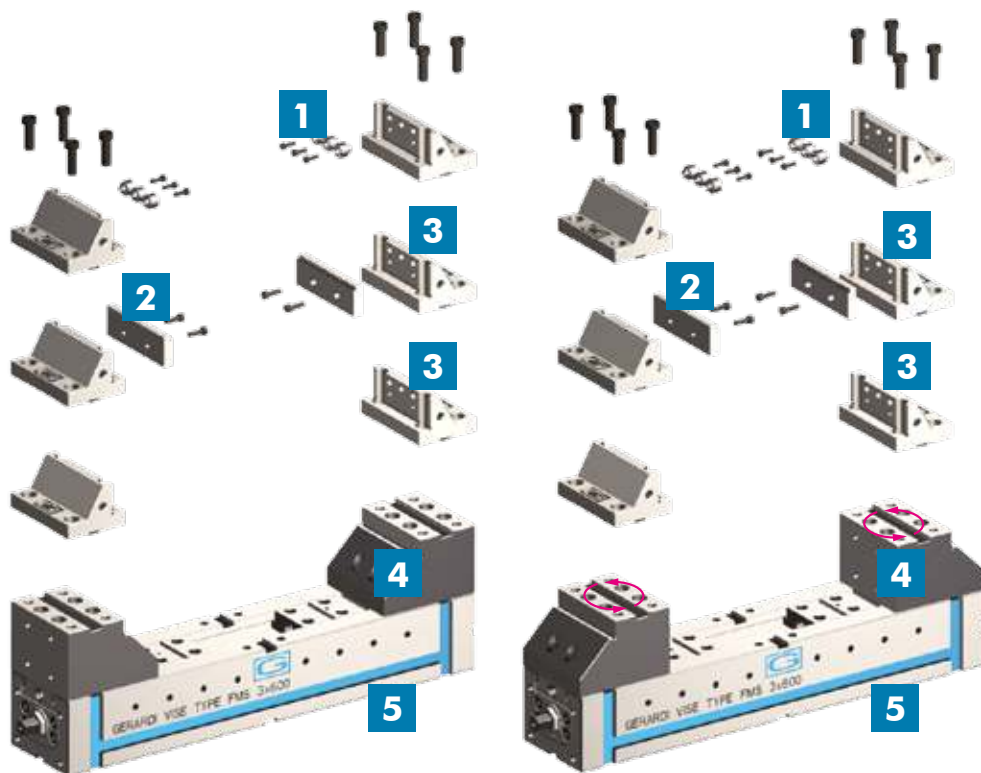
1 Art.90
PUNTALE TEMPRATO GRIP
HARDENED GRIP POINT

2 Art.247T
PIASTRINA PIANA GRIP
STRAIGHT JAW PLATE GRIP

3 Art.805VA
CORPO GANASCIA
JAW PLATE BODY

4 Art.814
BASE PER GANASCE FISSE
BASE FOR FIXED JAWS

5 Art.855
CORPO BASE CUBO
CUBE BASE BODY



Possibilità di utilizzo di qualsiasi ganascia fissa FMS anziché 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) / Type (size)

1

2

3

4

5

6

Art. 805V*

Ganascia per piastrelle e punte
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)

Piastra 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

Per qualsiasi piastra piana speciale, raddoppiare il prezzo
For special I taylor made straight jaw plate double the price

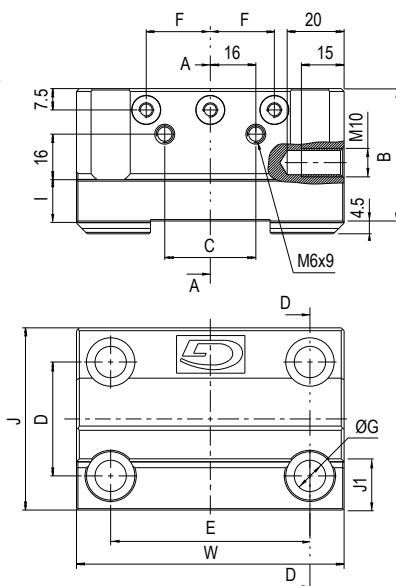
PIASTRE GANASCE "GRIP" JAW PLATES

MINOR SUPERFICIE DI CONTATTO + PRESSIONE DI SERRAGGIO

LESS SURFACE CONTACT + CLAMPING PRESSURE

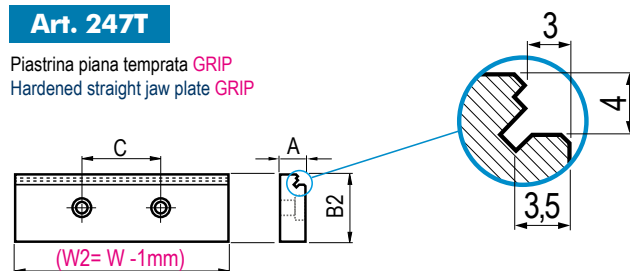
Art. 805VA

Corpo Ganascia
Jaw for plates and points



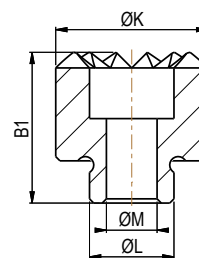
Art. 247T

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	76	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		-

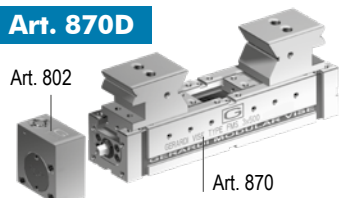
Tipo (grandezza) morsa / Vise type (size)		1		2				3	
		kN	25 kN	25 kN				30 kN	
Apertura minima - massima / minimum - maximum Aperture	A	10 / 25	10 / 25	20 / 50	20 / 50	20 / 50	20 / 50	40 / 100	40 / 100
Apertura minima - massima / minimum - maximum Aperture	A1	10 / 15	10 / 15	10 / 25	10 / 25	10 / 25	10 / 25	25 / 50	25 / 50
Art. 870 Morsa FMS autocentrante (opzione doppia o singola) con ganasce prismatiche	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



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



Art. 870D



Art. 802



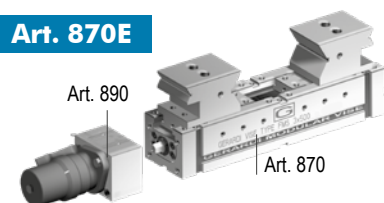
(Art. 870 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

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

Cod.	5.80.21000	5.80.22000	5.80.23000
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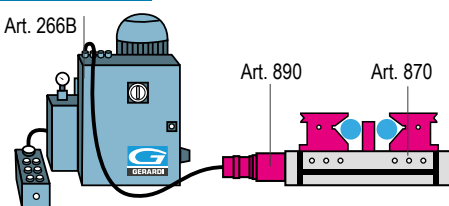
Art. 870E



(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
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Art. 870F

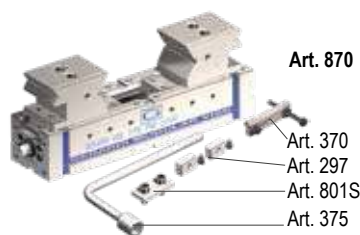


(Art. 870 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

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
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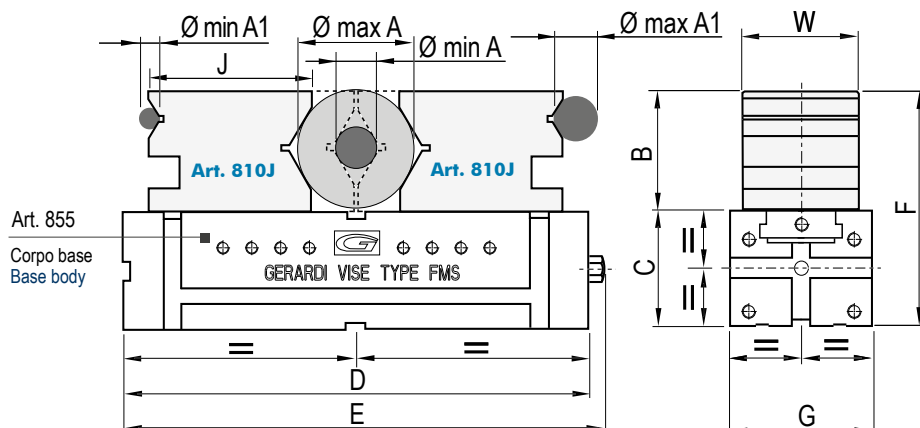
Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 chiave a pipa Art. 375
- 1 piastrina di collegamento Art.801S



Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts for 16 mm slot Art. 297
- 1 box wrench Art. 375
- 1 connecting plate Art.801S



3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	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
A1	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
B	90			132				171	191	226	250	275	300
C	100			120				140			160		
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
F	190			252				311	331	366	410	435	460
G	125			145				170			190		
J	132			156				176			174		
W	100			132				140			160		
kg	57	62	67	74	82	91	99	135	145	155	225	245	265

Cod. 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

Cod. 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 rinvio angolare - Mechanical with torque multiplier with angular transmission

Cod. 5.80.23000 5.80.24000 5.80.25000 5.80.26000

Art. 870E

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

Cod. 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

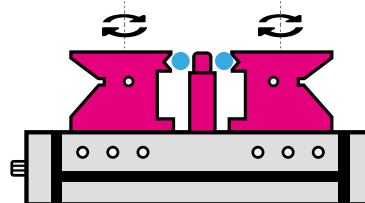
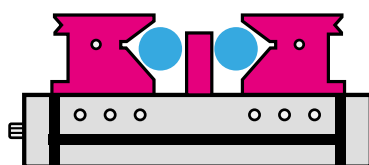
(Art. 870 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod. 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

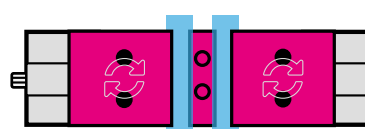
Art. 870

Esempi applicativi ganasce prismatiche:
Prismatic jaws application examples:

Ganascie ruotate di 180° - Jaws rotated 180°


Art. 870A

Pag.5.54 Page. 5.54



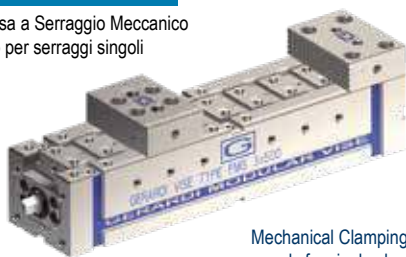
Per il serraggio di 2 particolari tondi contemporaneamente per mezzo della ganascia intermedia alta Art.870A
For clamping 2 round workpieces simultaneously by intermediate high jaw Art.870A

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

Tipo (grandezza) morsa / Vise type (size)		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

Art. 800

Morsa a Serraggio Meccanico
solo per serraggi singoli



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

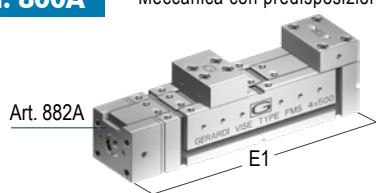
SPECIFICA SOLO PER SERRAGGI SINGOLI

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**



Art. 882A

E1

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

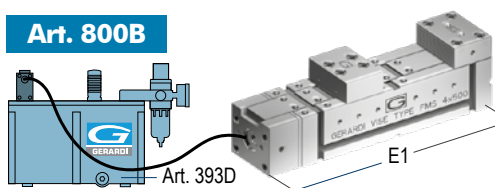
Connettore Idraulico - Hydraulic Connexion

Art. 882A



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

Art. 800B



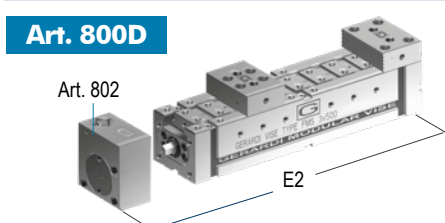
Art. 393D

E1

(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. 802

E2

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

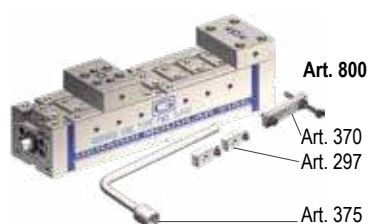
E2	277	377	360	460	560	660	470	570
Nm	Max 20		Max 25				Max 20	
Cod.	5.80.0D120	5.80.0D130	5.80.0D230	5.80.0D240	5.80.0D250	5.80.0D260	5.80.0D340	5.80.0D350

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

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

Dotazione standard:

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



Art. 800

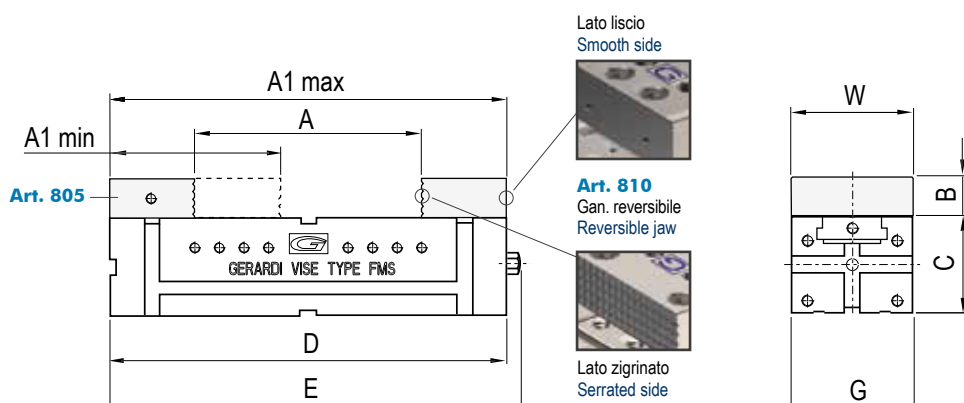
Art. 370

Art. 297

Art. 375

Standard equipment:

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



3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	430	530	630	300	400	500	600	380	480	580	580	680	780
A1	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
B		40				50				60			60
C		100				120				140			160
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G		125				145				170			190
W		124				144				169			189
kg	50	55	60	66	72	80	88	115	125	135	170	190	210

Cod. 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

E1	685	785	885	585	685	785	885	-	-	-	-	-	-
Cod.	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

E1	685	785	885	585	685	785	885	-	-	-	-	-	-
Cod.	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

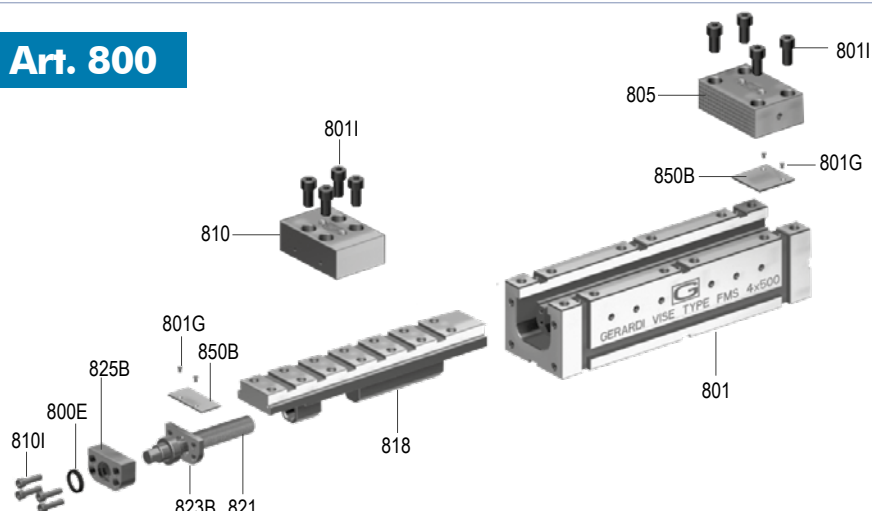
Art. 800D (Art. 800 + 802) Morsa + moltiplicatore di coppia / Vise + torque multiplier

E2	670	770	870	570	670	770	870	685	785	885	-	-	-
Nm	Max 20			Max 20			Max 20			Max 20			
Cod.	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 rinvio angolare - Mechanical with torque multiplier with angular transmission

Cod. 5.80.23000 5.80.24000 5.80.25000 5.80.26000

Art. 800



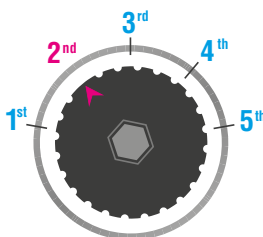
Art.	Pag.	Art.	Pag.
800E	5.61	-	-
801	5.50	-	-
801G	5.61	-	-
801I	5.61	-	-
805	5.54	-	-
810	5.56	-	-
818	5.52	-	-
821	5.53	-	-
823B	5.59	-	-
825B	5.59	-	-
850B	5.61	-	-

Tipo (grandezza) morsa / Vise type (size)		1		2				3	
		kN						30 kN	
Apertura massima / Maximum opening		A	-	-	-	-	-	232	332
Art. 900 Morsa a Serraggio Meccanico con Limitatore di Forza solo per serraggi singoli 		B	-	-	-	-	-	40	
		C	-	-	-	-	-	100	
		D	-	-	-	-	-	510	610
		E	-	-	-	-	-	400	500
		G	-	-	-	-	-	125	
		W	-	-	-	-	-	124	
		kg	-	-	-	-	-	-	44
Cod.		-	-	-	-	-	-	5.90.03400	5.90.03500
€		ATTUALMENTE NON DISPONIBILI - CURRENTLY NOT AVAILABLE							

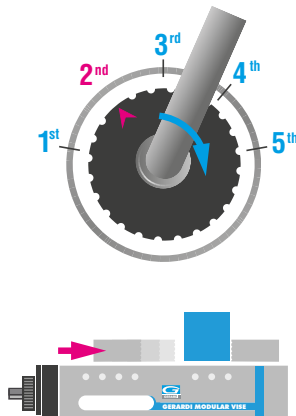
Questa morsa, pur essendo parte del programma FMS, non è predisposta per serraggi doppi o autocentranti

Art. 900Y Modulo per serraggio idraulico Module for hydraulic clamping 	Cod.	-	-	5.90.0Y300
€	ATTUALMENTE NON DISPONIBILI - CURRENTLY NOT AVAILABLE			

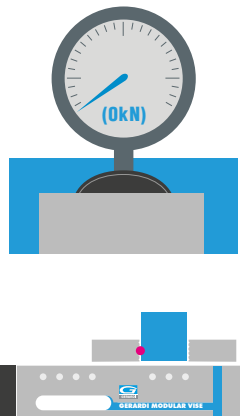
5 FUNZIONAMENTO LIMITATORE DI FORZA - HOW TO USE THE LIMITING DEVICE



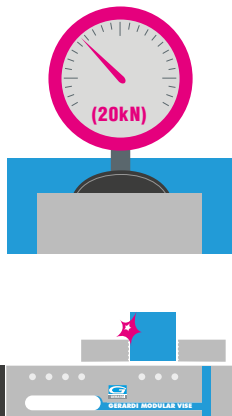
1 Scegliere forza di serraggio tramite ghiera limitatore di forza.
Presetting of the clamping force through the clamping limiter



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



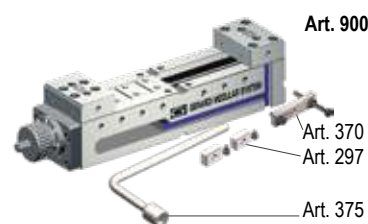
3 Contatto ganaschia-particolare e sblocco frizione limitatore di forza.
First contact jaw-workpiece and clamping limiter friction release



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

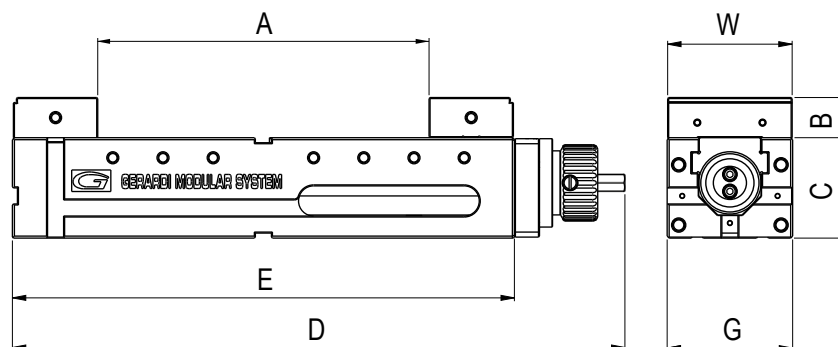
Dotazione standard:

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



Standard equipment:

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



	3 30 kN			4 30 kN				5 32 kN			6		
A	432	532	632	304	404	505	605	384	484	584	-	-	-
B		40			50				60			-	
C		100			120				140			-	
D	710	810	910	610	710	810	910	710	810	910	-	-	-
E	600	700	800	500	600	700	800	600	700	800	-	-	-
G		125			145				170			-	
W		124			144				169			-	
kg	-	-	-	57	-	-	-	99	-	-	-	-	-
Cod.	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	-	-	-
											ATTUALMENTE NON DISPONIBILI CURRENTLY NOT AVAILABLE		

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

Art. 900Y

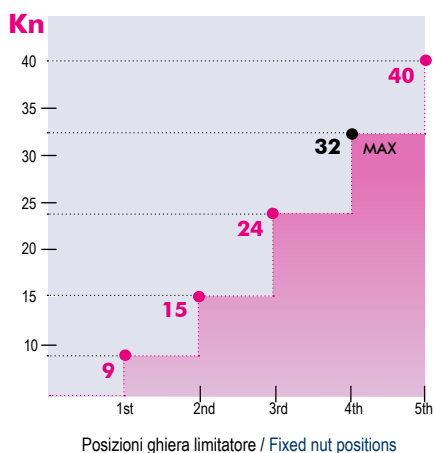
Cod.	5.90.0Y300	5.90.0Y300	5.90.0Y300	-
				ATTUALMENTE NON DISPONIBILI CURRENTLY NOT AVAILABLE

Diagrammi forze di serraggio - Diagrams with clamping force

Morse tipo Vises type

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

3

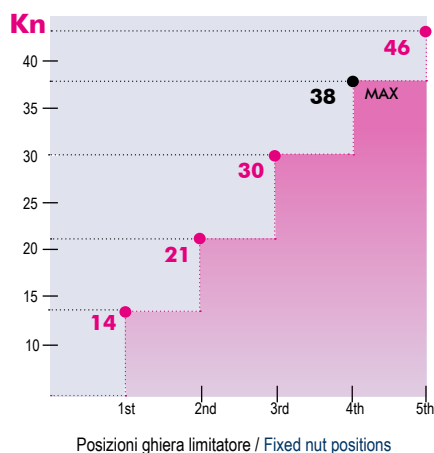


Posizioni ghiera limitatore / Fixed nut positions

Morse tipo Vises type

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

4

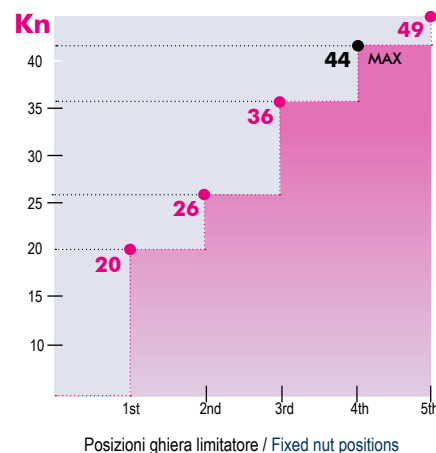


Posizioni ghiera limitatore / Fixed nut positions

Morse tipo Vises type

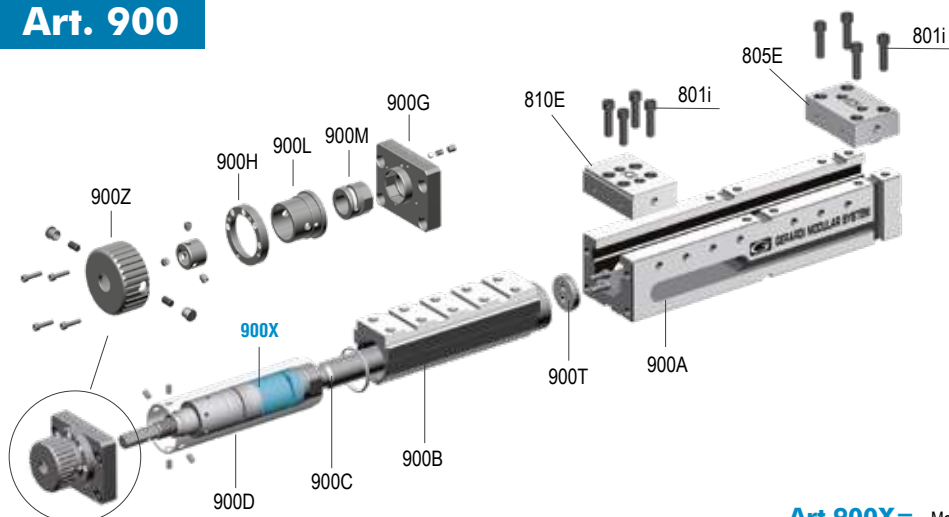
VITE: Ø 24 mm / Ø 30 mm PASSO: 2 mm
SCREW: Ø 24 mm / Ø 30 mm PITCH: 2 mm
Chiave dinamometrica / Torque wrench

5



Posizioni ghiera limitatore / Fixed nut positions

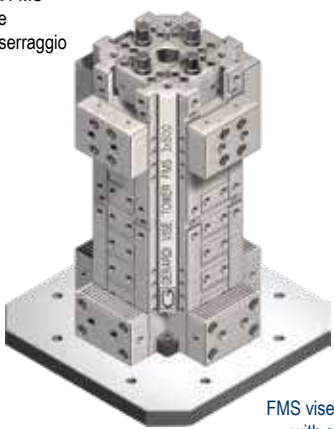
Art. 900


NEW

Art.	Pag.
900Y	40
810E	57
805E	55



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

Tipo (grandezza) morsa / Vise type (size)		1 25 kN		2 25 kN				3 30 kN	
		kN							
Apertura massima / Max. opening		A	85	185	170	270	370	470	230 330
Art. 800C Cubo-morsa FMS con ganasce piane per il serraggio di 4 pezzi 	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						210	
	L	300		350				400	
	M	33		33				38	
	W	74		94				124	
	kg	30	45	53	70	88	106	90	112

FMS vise tower
with straight
jaws for 4
clamping stations

SPECIFICA SOLO PER SERRAGGI SINGOLI

SPECIFIC FOR SINGLE CLAMPING ONLY

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

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

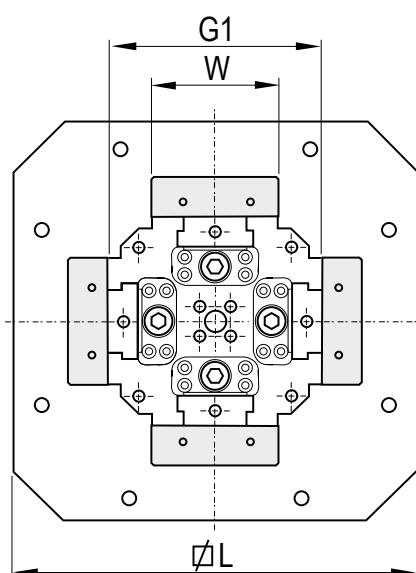
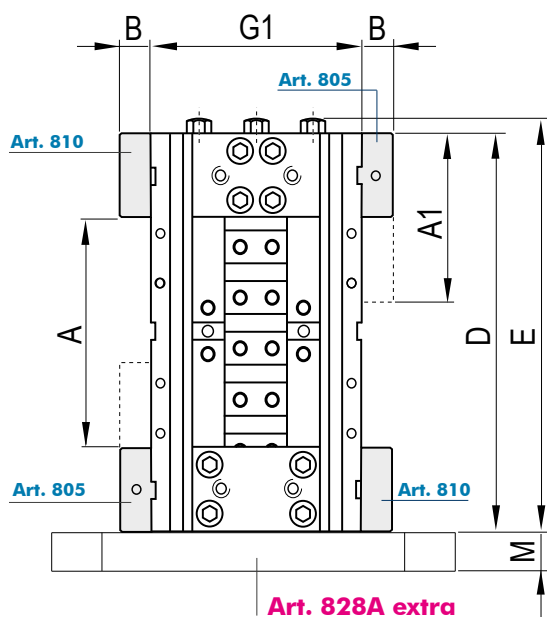
Art. 800G

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

**NEW
2021**

Cod. 5.80.0G120 5.80.0G130 5.80.0G230 5.80.0G240 5.80.0G250 5.80.0G260 5.80.0G340 5.80.0G350

**GANASCE REVERSIBILI
REVERSIBLE JAWS**

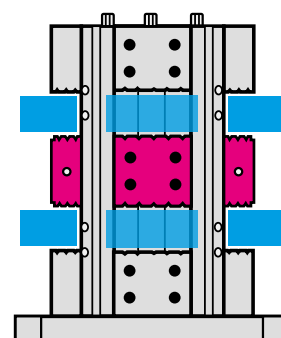


Dotazione standard per Art. 800C

- 1 chiave a pipa Art. 375
- 4 arresti laterali Art. 370
- 2 coppie di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 goliere 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 positioning key-nuts for 16 mm slot Art. 297
- 1 lifting hook Art. 848
- Wooden box packaging



3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	430	530	630	300	400	500	600	380	480	580	480	580	680
A1	170			509				630			810		
B	40			50				60			60		
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G1	210			245				280			290		
L	400			450				500			550		
M	38			38				38			38		
W	124			144				169			189		
kg	135	157	180	180	210	252	288	260	303	340	500	562	625

Cod.	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

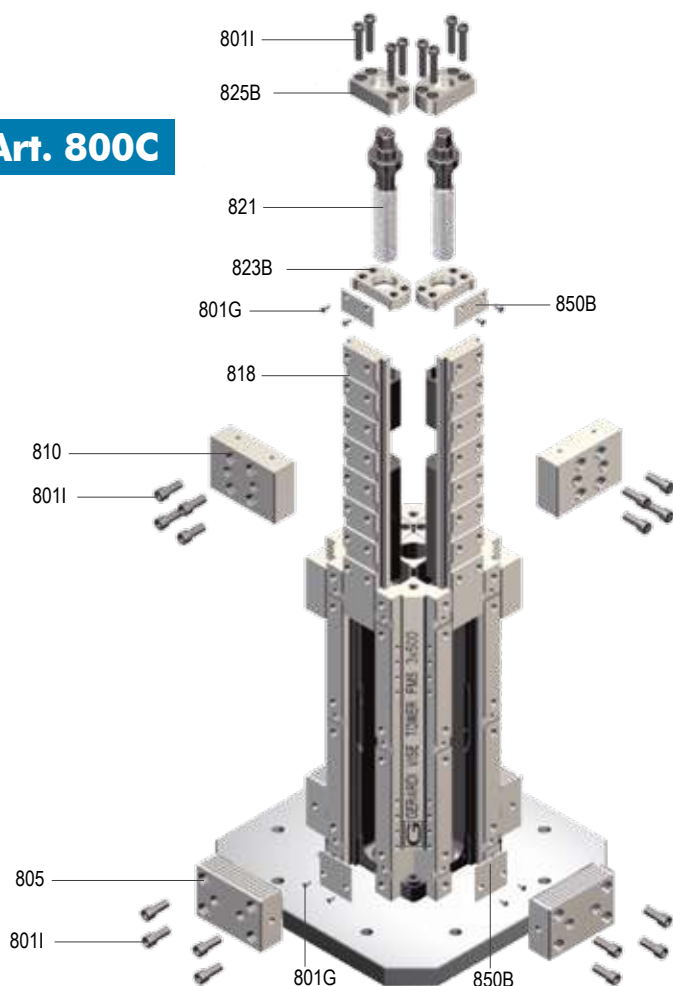
This type of vise even if it is part of the FMS series is not suitable for double or self-centering clamping

Cod.	5.80.0G360	5.80.0G370	5.80.0G380	5.80.0G450	5.80.0G460	5.80.0G470	5.80.0G480	5.80.0G560	5.80.0G570	5.80.0G580	5.80.0G680	5.80.0G690	5.80.0G610

Art. 800C

GANASCE REVERSIBILI REVERSIBLE JAWS

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	5.52	-	-
821	5.53	-	-
823B	5.59	-	-
825B	5.59	-	-
850B	5.61	-	-
-	-	-	-
-	-	-	-
-	-	-	-

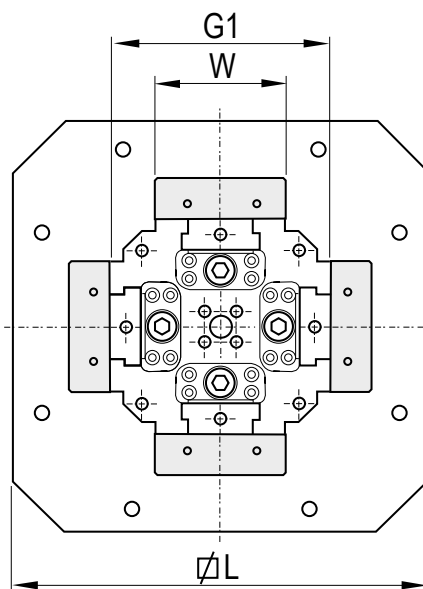
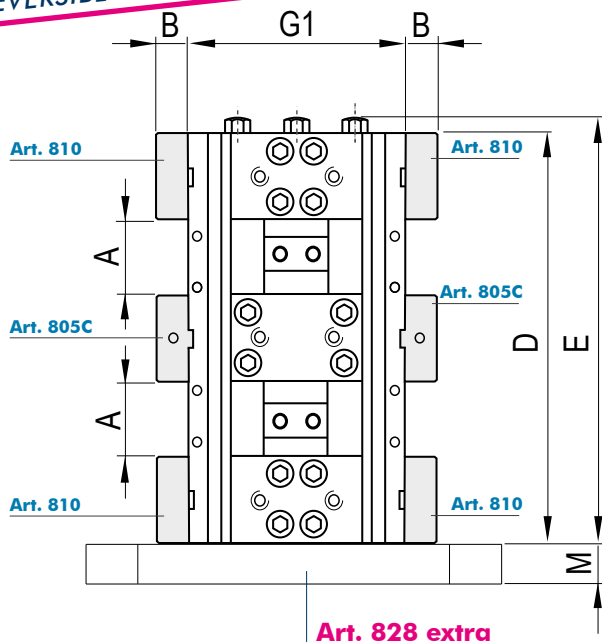
Tipo (grandezza) morsa / Vise type (size)		1		2				3		
		kN	25 kN	25 kN				30 kN		
Apertura massima / Max. opening		A	2 x 16	2 x 66	2 x 54	2 x 104	2 x 154	2 x 204	2 x 74	2 x 124
Art. 860C		B	25		30				40	
 Cubo-morsa FMS doppio per il serraggio di 8 pezzi		D	200	300	300	400	500	600	400	500
		E	232	332	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
Double FMS vise tower for 8 clamping stations										



Double FMS vise tower for 8 clamping stations

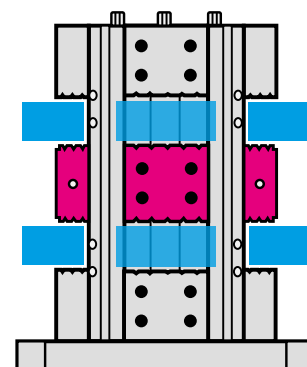
Art. 855C		Cod.	5.85.5C120	5.85.5C130	5.85.5C230	5.85.5C240	5.85.5C250	5.85.5C260	5.85.5C340	5.85.5C350
Modulo base cubo morsa FMS doppia (senza ganasce) FMS Double vise tower base (without jaws)										

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 per cava da 16 mm Art. 297
 - 1 goliere 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 positioning key-nuts for 16 mm slot Art. 297
 - 1 lifting hook Art. 848
 - Wooden box packaging
 - Third hand device



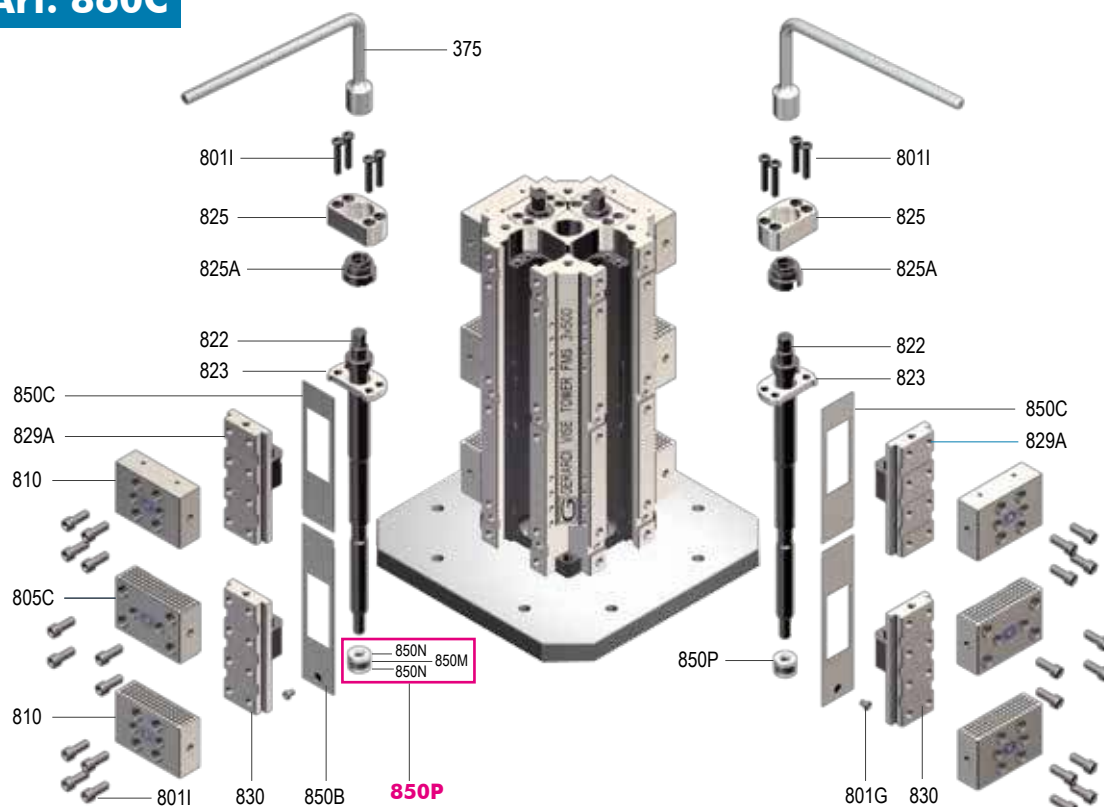
3 30 kN				4 30 kN				5 32 kN			6 32 kN		
A	2 x 174	2 x 224	2 x 274	2 x 103	2 x 153	2 x 203	2 x 253	2 x 138	2 x 188	2 x 238	2 x 238	2 x 288	2 x 338
B	40			50				60			60		
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G1	210			245				280			290		
L	400			450				500			550		
M	38			38				38			38		
W	124			144				169			189		
kg	135	157	180	180	210	252	288	260	303	340	500	562	625

Cod. 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

Cod. 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	4.35
801G	5.61
801I	5.61
805C	5.54
810	5.56
822	5.53
823	5.59
825	5.59
825A	5.61
829A	5.52
830	5.52
850B	5.61
850C	5.61
850P	5.61
-	-
-	-
-	-

Tipo (grandezza) morsa / Vise type (size)	kN	1		2				3	
		25 kN		25 kN				30 kN	
		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
ganasse a gradino
per il serraggio
di 8 pezzi



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

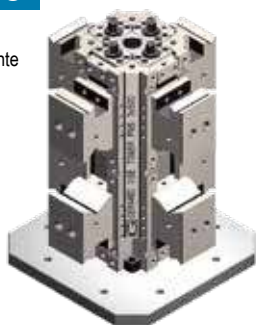
Cod.	5.86.3C120	5.86.3C130	5.86.3C230	5.86.3C240	5.86.3C250	5.86.3C260	5.86.3C340	5.86.3C350

Ø Apertura Minima / Massima
Ø Minimum - Max Opening

A	10 / 25	10 / 50	25 / 100
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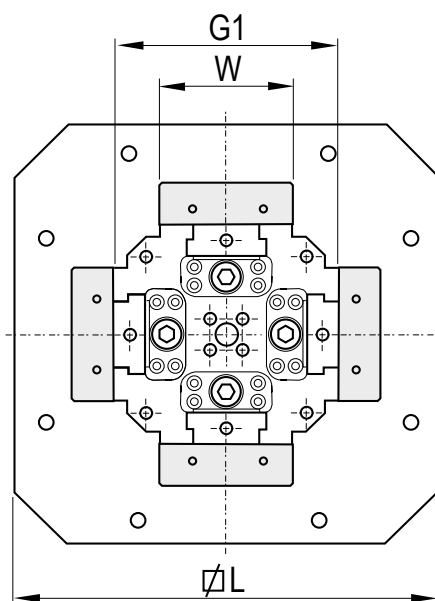
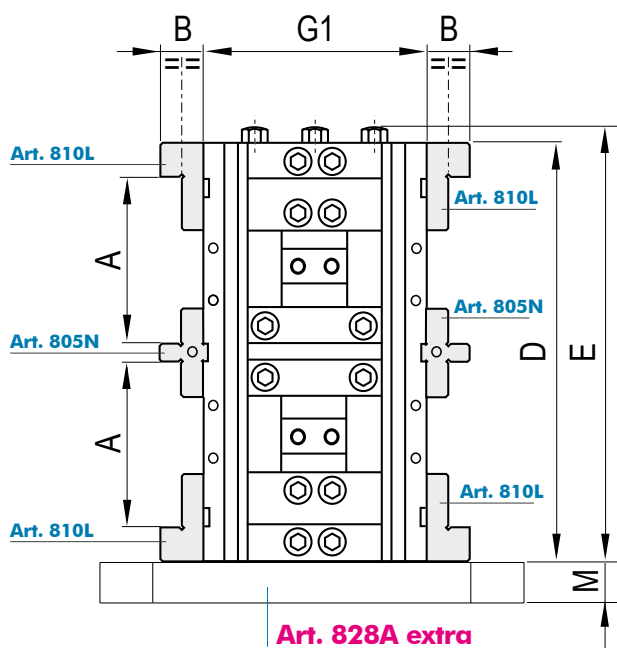
Art. 870C

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

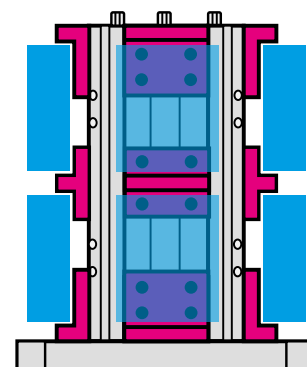


Dotazione standard per Art. 860C

- 1 chiave a pipa Art. 375
- 4 arresti laterali Art. 370
- 2 coppie di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 goliare di sollevamento Art. 848
- Imballo in cassa di legno
- Meccanismo 3a mano

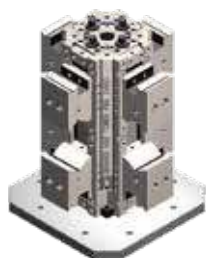
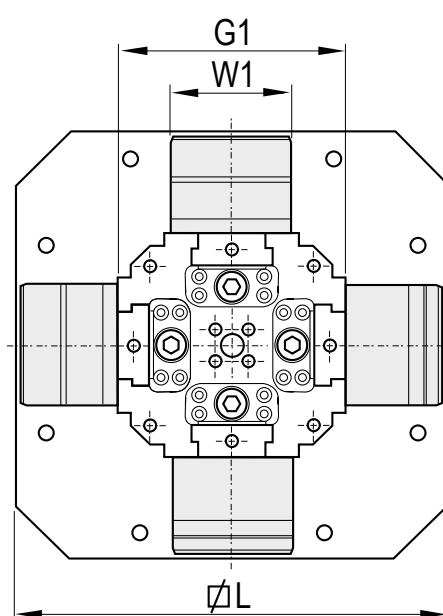
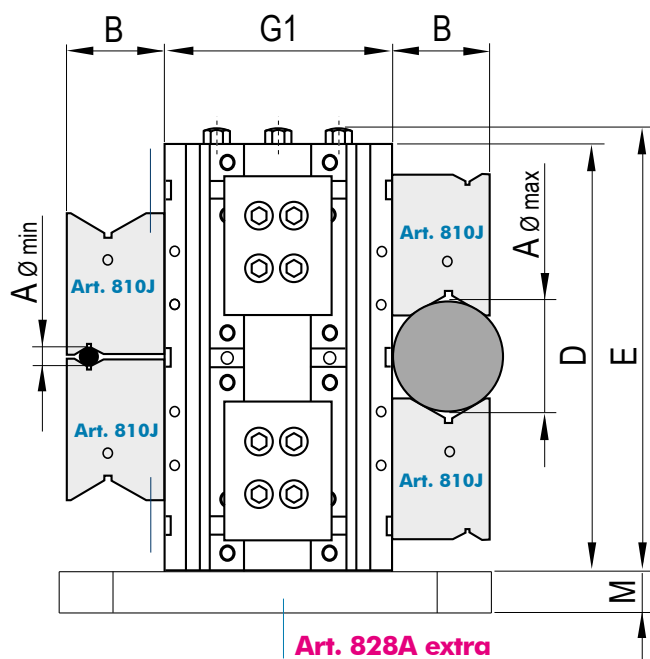
Standard equipment for Art. 860C

- 1 box wrench Art. 375
- 4 workstops Art. 370
- 2 pair of positioning key-nuts for 16 mm slot 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		
A	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
Cod.	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

A	25 / 100			30 / 150				35 / 200			40 / 300		
Cod.	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
D	600	700	800	500	600	700	800	600	700	800	800	900	1000
E	625	725	825	525	625	725	825	625	725	825	825	925	1025
G1	210			245				280			290		
L	400			450				500			550		
M	38			38				38			38		
W	124			144				169			189		
W1	100			132				140			160		
kg	177	206	236	242	290	339	388	328	383	437	656	738	820

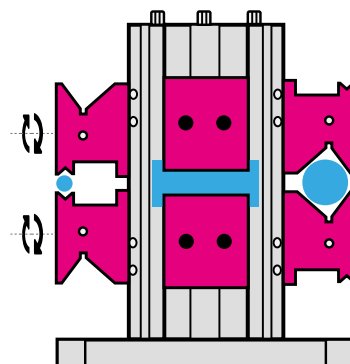


Dotazione standard per
Art. 863C e Art. 870C:

- 1 chiave a pipa Art. 375
- 4 arresti laterali Art. 370
- 2 coppie di tasselli di posizionamento per cava da 16 mm Art. 297
- 1 goliare 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 positioning key-nuts for 16 mm slot Art. 297
- 1 lifting hook Art. 848
- Packaging wooden box
- Third hand device



COMPONENTI PER CUBO FMS

SPARE PARTS FOR FMS CUBE

Art. 855C

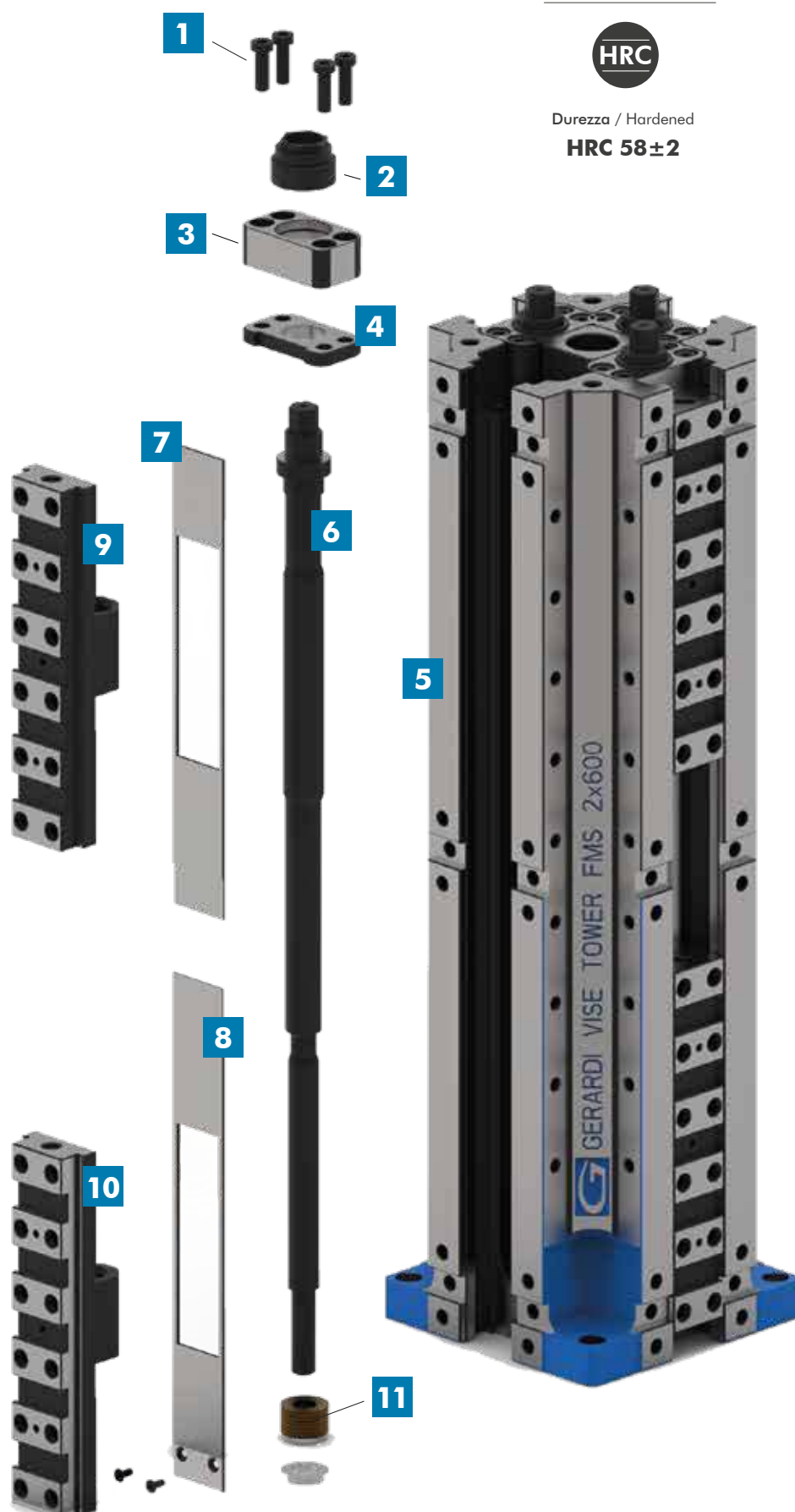


Precisione / Accuracy
±0,02mm



Durezza / Hardened
HRC 58±2

- 1** Art.8011
VITI PER GANASCE
SCREWS FOR JAWS
- 2** Art.825A
GHIERA
NUT
- 3** Art.825B
PIASTRA DI CONTENIMENTO
SCREW HOLDING PLATE
- 4** Art.823
PIASTRA INTERMEDIA
MIDDLE PLATE
- 5** Art.804
CORPO BASE CUBO
CUBE BASE BODY
- 6** Art.822
VITE DI BLOCCAGGIO
MAIN SCREW
- 7** Art.850C
RIPARO
PROTECTION
- 8** Art.850B
RIPARO LATO VITE
PROTECTION SIDE SCREW
- 9** Art.830
SLITTA FILETTO DESTRO
SLIDE WITH RIGHT THREAD
- 10** Art.829A
SLITTA FILETTO SINISTRO
SLIDE WITH LEFT THREAD
- 11** Art.850P
DISPOSITIVO TERZA MANO
THIRD HAND DEVICE



Tipo (grandezza) Type (size)	1		2				3				4				5			6			
Larghezza base / Base lenght	200	300	300	400	500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000

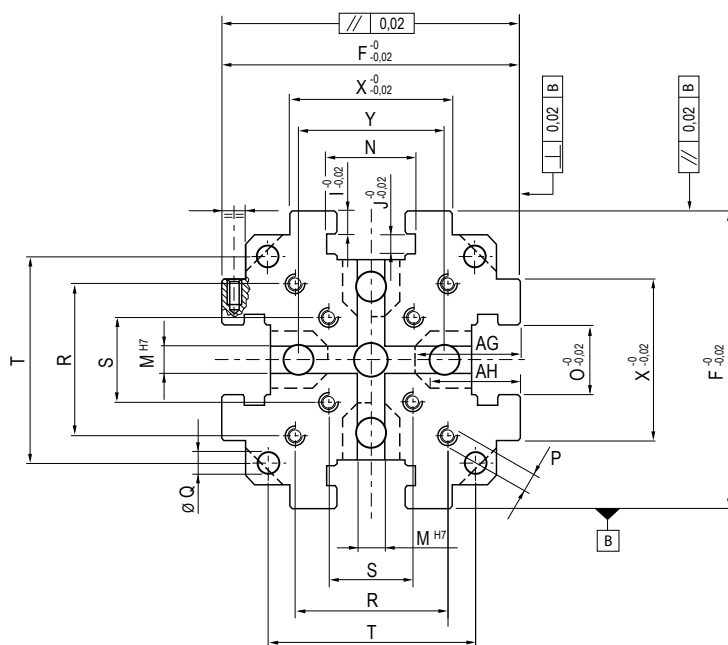
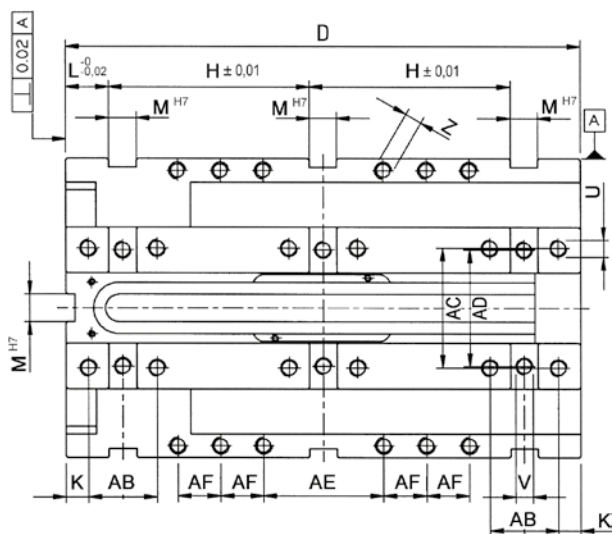
Art. 804

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

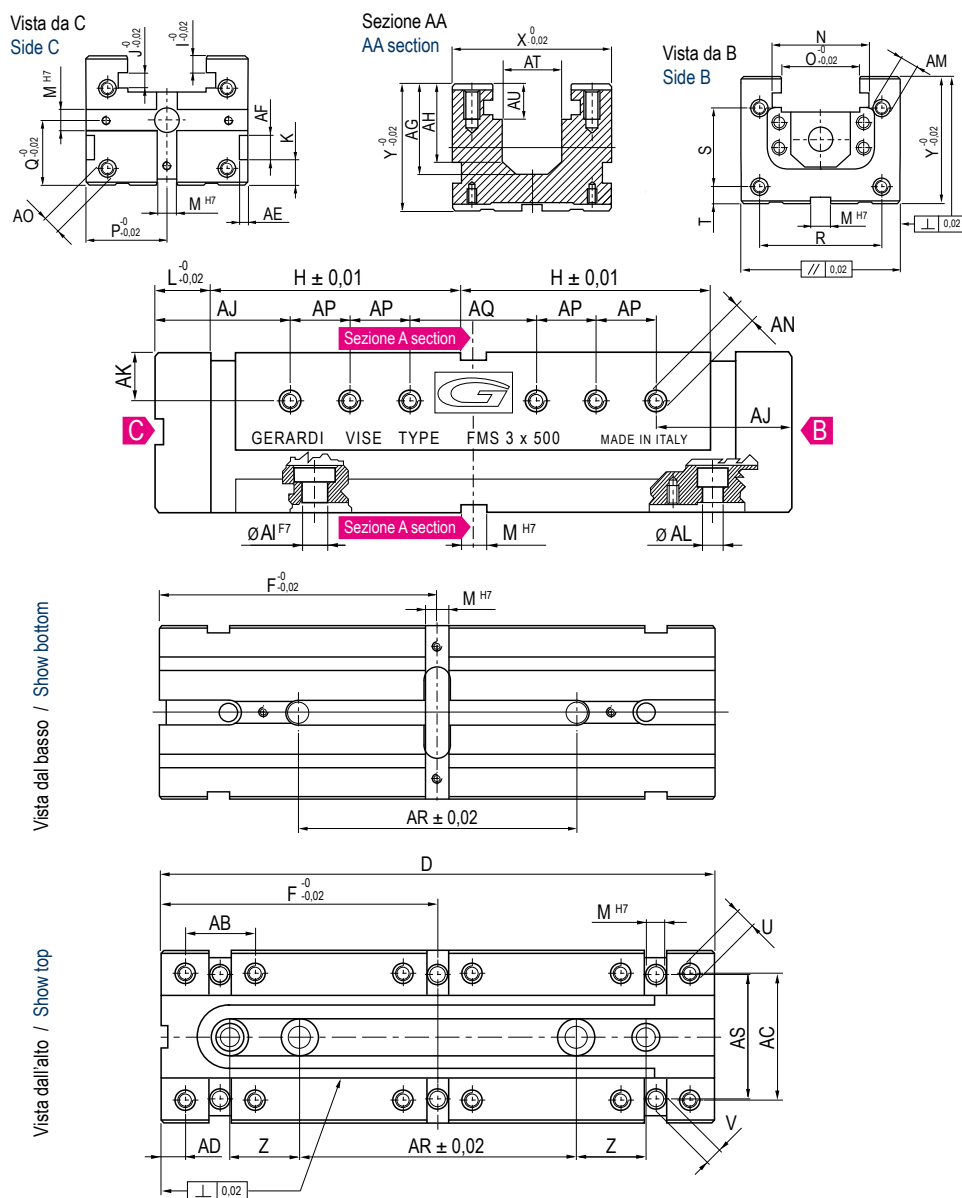
Cod.	5.80.41200	5.80.41300	5.80.42300	5.80.42400	5.80.42500	5.80.42600	5.80.43400	5.80.43500	5.80.43600	5.80.43700	5.80.43800	5.80.44500	5.80.44600	5.80.44700	5.80.44800	5.80.45600	5.80.45700	5.80.45800	5.80.46800	5.80.46900	5.80.46100
------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------



D	200	300	300	400	300	400	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000
F	140			175					210				245				280			290	
H	71	121	117	167	217	267	157	207	257	307	357	200	250	300	350	245	295	345	345	395	445
I	10			13					13				20				20			20	
J	10			12					12				18				18			18	
K	13			13					13				20				20			20	
L	21			25					35				42				47			47	
M	16			16					16				16				16			16	
N	45			53					76				86				96			110	
O	35			41					61				71				81			94	
P	M10			M12					M12				M16				M16			M20	
Q	11			13					13				13				17			17	
R	-			100					120				150				150			150	
S	-			40					40				40				50			50	
T	-			120					16				16				16			210	
U	M8			M10					M12				M16				M16			M20	
V	M8			M10					M12				M12				M12			M12	
Z	M10			M10					M10				M10				M10			M10	
X	75			95					125				145				170			190	
Y	70			85					110				125				140			130	
AB	32			40					50				60				68			68	
AC	56			70					92				108				126			144	
AD	56			68					92				106				126			144	
AE	50	70		70					100				100				100			125	
AF	10	25		50					50				50				50			50	
AG	49			62					62				80				95			105	
AH	41			53					72				70				82			95	



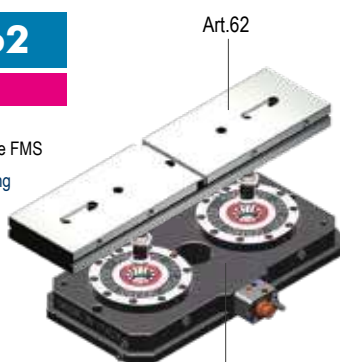
Tipo (grandezza) morsa / Vise type (size)
Art. 801

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


	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	
AM	n°0 M10	n°2 M10	n°2 M10	n°2 M10
AN	n°8 M10	n°12 M10	n°12 M10	n°16 M10
AO	20	25	50	50
AP	50	70	70	70
AQ	100	200	200	200
AR	56	68		
AS	28	34		
AT	23	28		

PIASTRE D'INTERFACCIA ZERO POINT
Tipo (grandezza) / Type (size)
Art. 62
FMS

 Piastra di interfaccia
 Zero Point per morse FMS

 Zero Point connecting
 plate for FMS vises


Art.81P

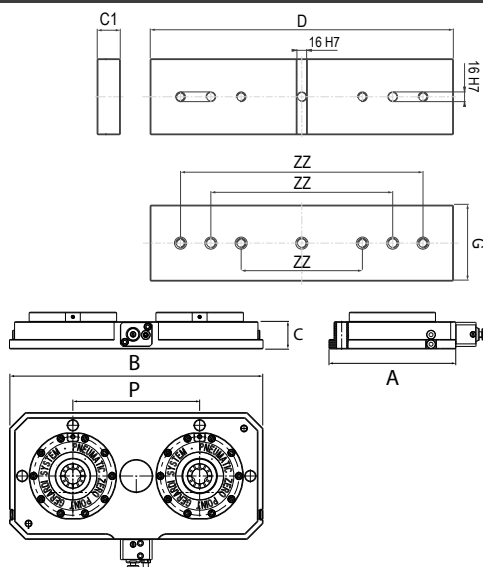
Tiranti e viti INCLUSI

Pull Studs and screws INCLUDED

Art. 81P

 Piastra Zero Point in acciaio con montaggio incassato
 Zero Point steel plate built-in mounting

NEW 2021



	1		2	
D	232	332	300	400
G	75		95	
C1	38		38	
ZZ	200 / 300		200 / 300 / 400	
kg	5	7	11	13,4
Cod.	5.62.12000	5.62.13000	5.62.23000	5.62.24000
A	200		200	
B	400		400	
C	43		43	
Art. 665	Tipo / Type T.2		Tipo / Type T.2	
P	200		200	
kg	29		29	
Cod.	9.81.P2040S2		9.81.P2040S2	

	2		3					4				5			6		
kg	23	27	26	31	39	46	52	47	56	65	75	71	82	94	140	156	174
Cod.	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
D	500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000
F	250	300	200	250	300	350	400	250	300	350	400	300	350	400	400	450	500
H	217	267	157	207	257	307	357	200	250	300	350	245	295	345	345	395	445
I	13				13				20				20			20	
J	12				12				18				18			18	
K	20				20				20				26			26	
L	25				35				42				47			47	
M	16				16				16				16			16	
N	53				76				86				96			110	
O	41				61				71				82			94	
P	47,5				62,5				72,5				85			95	
Q	45				50				60				70			80	
R	70				92				108				126			144	
S	48				62				72				92			100	
T	22				13				16				18			20	
U	M10				M12				M16				M16			M20	
V	M10				M12				M12				M12			M12	
Z	50				50				50				50			50	
X	95				125				145				170			190	
Y	90				100				120				140			160	
AB	40				50				60				68			68	
AC	70				92				108				126			144	
AD	13				18				20				21			20	
AE	6				6				10				10			10	
AF	16				16				16				16			16	
AG	62				72				80				95			105	
AH	53				62				70				82			95	
AI	Ø 16 x 2				Ø 16 x 2				Ø 16 x 2				Ø 16 x 2			Ø 16 x 2	
AJ	65				100				100				100			125	
AK	27				32				40				48			58	
AL	Ø 13				Ø 13				Ø 13				Ø 17			Ø 17	
AM	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
AN	M10				M12				M12				M16			M20	
AO	M10				M10M				M10				M10				
AP	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
AQ	50				50				50				50			50	
AR	200				200				200			400	400	600	400	400	400
AS	68				92				106				126			144	
AT	34				44				44				52			49	
AU	28				28				41				41			41	

ZERO POINT CONNECTING PLATES

	2		3					4				5			6		
D	500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000
G	95				125				145				170			190	
C1	38				38				38				38			38	
ZZ	200 / 300 / 400				200 / 300 / 400				200 / 300 / 400				200 / 300 / 400			200 / 300 / 400	
kg	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
Cod.	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
A	200		200	200	200		200	200	200		200	200	200		200	200	
B	600		400	500	600		800	500	600		800	600	800		800		1000
C	43			43					43				43			53	
Art. 665	Tipo / Type T.2			Tipo / Type T.2				Tipo / Type T.2				Tipo / Type T.2			Tipo / Type T.3		
P	300		200	250	200x2		300x2	250	200x2		300x2	200x2	300x2		300x2		400x2
kg	42		29	41	42		59	41	42		59	42	59		68,5		81,5
Cod.	9.81.P2060S2		9.81.P2040S2	9.81.P2060S2	9.81.P2060S3		9.81.P2080S3	9.81.P2060S2	9.81.P2060S3		9.81.P2080S3	9.81.P2060S3	9.81.P2080S3		9.81.P32080S3		9.81.P320100S3

Tipo (grandezza) Type (size)	1		2				3					4				5			6			
Larghezza base / Base lenght	200	300	300	400	500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000	

Art. 818

Slitta integrale lunga
Solid long slide



Cod.	5.81. 81200	5.81. 81300	5.81. 82300	5.81. 82400	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
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A	18		24						30			30			36			36			
A1	18		18						24			24			30			30			
A2	24		24						30			30			36			36			
B	35		45						50			60			70			80			
C	170	264	256	356	456	556	346	446	546	646	746	435	535	635	735	525	625	725	725	825	925
D	M8		M10						M12					M16			M16			M20	
E	72	116	102	142	182	222	132	182	232	282	332	156	216	276	336	174	242	310	242	310	378
F	48,5		61,5						71			80			95			106			
G	15	18		23					33			40			45			45			
H	2	3	2	3	4	5	2	3	4	5	6	2	3	4	5	2	3	4	2	3	4
I	10		13						13			20			20			20			
J	10		12						12			18			18			18			
K	-	-	5	7	9				5			5			6			9			
L	44		51						74			84			95			108			
M	16		16						16			16			16			16			
N	20		23						33			40			45			45			
O	35		41						61			71			82			94			
S	26	32	40						50			60			68			68			
T	20		25						38			44			44			54			
V	27		33						43			43			51			48			
W	10	16	24						34			44			52			52			

Art. 829A

Slitta con filetto destro
Slide with right thread



Cod.	5.82. 9A120	5.82. 9A130	5.82. 9A230	5.82. 9A240	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
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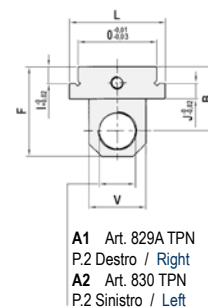
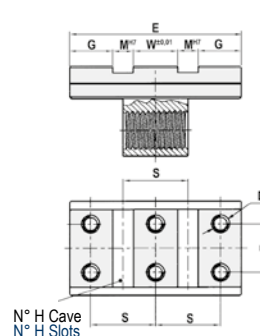
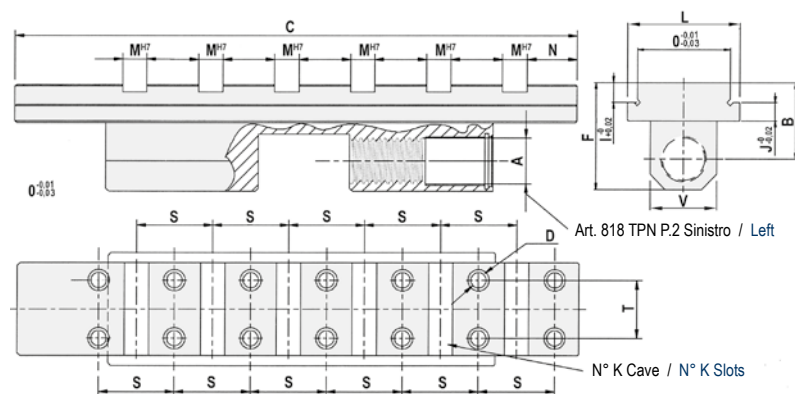
Art. 830

Slitta con filetto sinistro
Slide with left thread



Cod.	5.83. 01200	5.83. 01300	5.83. 02300	5.83. 02400	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
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Tipo (grandezza) Type (size)	1		2				3					4				5			6		
Larghezza base / Base lenght	200	300	300	400	500	600	400	500	600	700	800	500	600	700	800	600	700	800	800	900	1000

Art. 821

Cod. 5.82.11300 5.82.12600 5.82.14800 5.82.14800 5.82.16100 5.82.16100

Vite di bloccaggio con filetto
sinistro
Main screw left thread



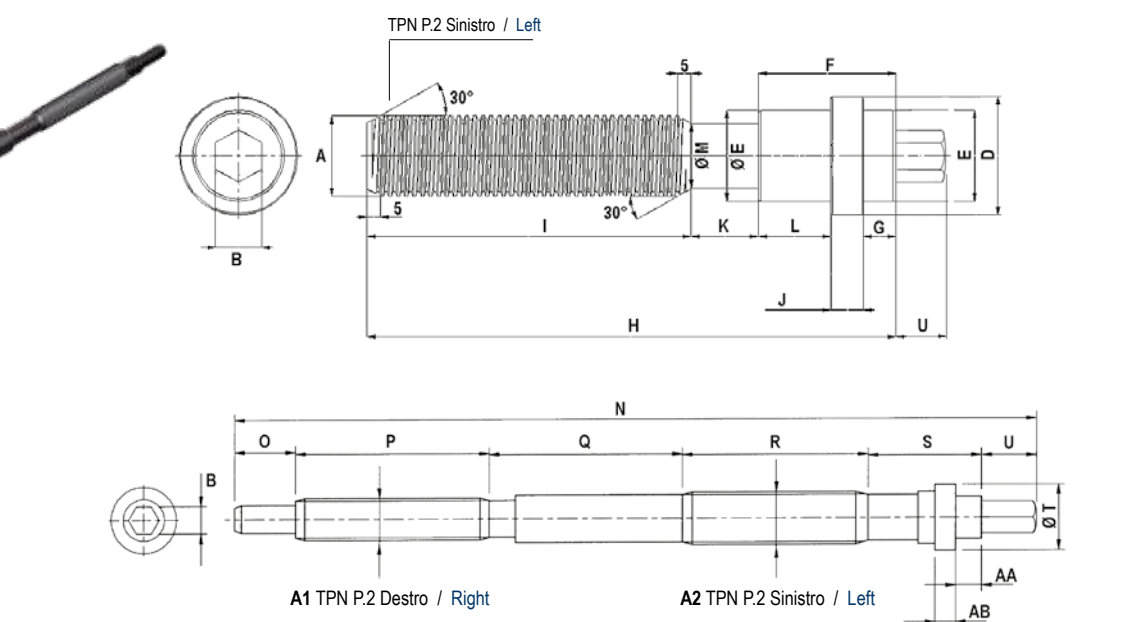
A	18		24				30					30				36			36		
A1	18		18				24					24				30			30		
A2	20		24				30					30				36			36		
B	16		16				19					19				19			19		
C	-		-				-					-				-			-		
D	35		35				45					45				48			48		
E	20		25				30					30				30			30		
F	82		33				42					42				115			115		
G	13		12				16					16				15			15		
H	152		135				136					186				225			225		
I	65		90				118					118				135			135		
J	14		12				15					15				20			20		
K	5		12				26					26				55			55		
L	55		9				11					11				80			80		
M	14		19				24					24				30			30		
N	242	333	308	399	500	600	414	499	599	699	822	499	599	699	797	610	700	790	790	881	961
O	12	17	25	32	52	52	25	35	54	87	121	35	54	87	121	47	71	101	101	81	100
P	65	84	84	98	116	151	123	123	140	124	118	123	140	124	118	176	158	140	140	205	187
Q	32	66	66	106	134	164	82	132	160	226	282	132	160	226	282	124	192	256	256	245	308
R	68	85	75	94	116	136	118	118	140	124	118	118	140	124	118	176	158	140	140	205	187
S	44	6	38	49	62	77	41	66	80	113	136	66	80	113	136	62	96	128	128	120	154
T	32		32				38					38				45			45		
U	21		15		20		25					25				25			25		
AA	10		10				15					15				22			22		
AB	10		10				12					12				15			15		

Art. 822

Cod. 5.82.21200 5.82.21300 5.82.22300 5.82.22400 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

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

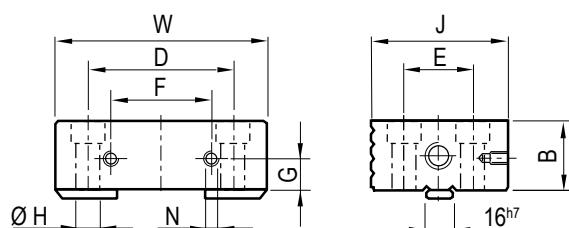
Viti con esagono maschio
o femmina a seconda
delle dimensioni
Screw available with external
or internal hexagon



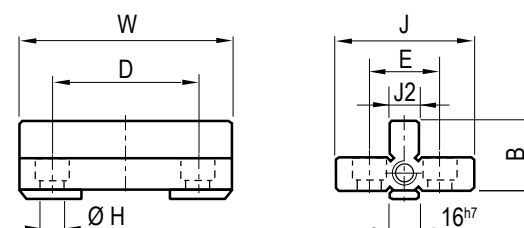
GANASCE FISSE PER MORSE FMS FIXED JAWS FOR FMS VISES

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
Art. 805* Ganasia 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
Art. 805A* Ganasia fissa liscia Smooth fixed jaw	Cod. 5.80.5A100	5.80.5A200	5.80.5A300	5.80.5A400	5.80.5A500	5.80.5A600
Art. 805B* Ganasia fissa dolce Soft fixed jaw	Cod. 5.80.5B100	5.80.5B200	5.80.5B300	5.80.5B400	5.80.5B500	5.80.5B600
Art. 805C* Ganasia 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
Art. 870A* Ganasia 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

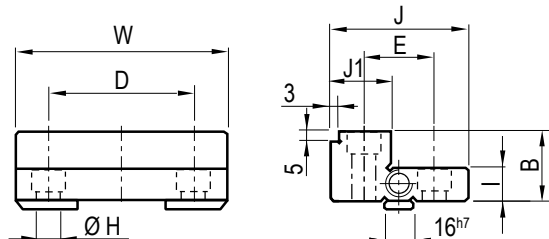
Art. 805 (Montata su Art. 860)
(Assembled on Art. 860)



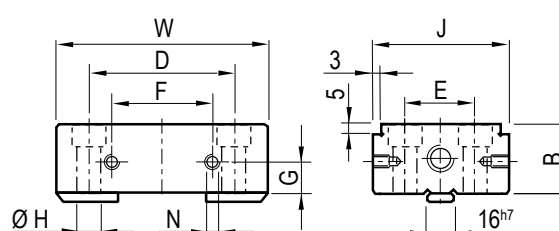
Art. 805N (Montata su Art. 863)
(Assembled on Art. 863)



Art. 805O Ganasia 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	-

* Set viti per fissaggio a richiesta - Fixing screws set on request

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

Richiedere scheda tecnica - Technical data sheet on request

* Set viti per fissaggio a richiesta - Set of fixing screws on request

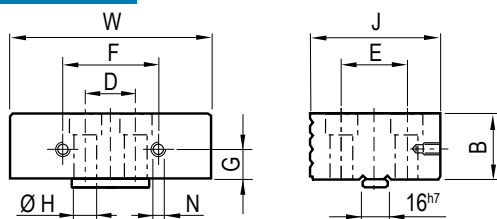
GANASCE MOBILI PER MORSE FMS

MOVABLE JAWS FOR FMS VISES

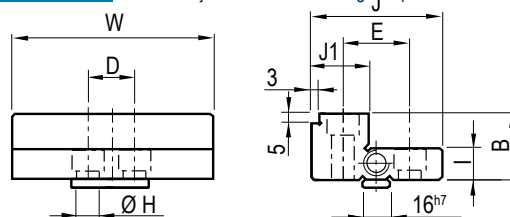
Tipo (grandezza) / Type (size)	1	2	3	4	5	6
Art. 810* Ganasce mobile zigrinata da un lato Movable jaw one side serrated	Cod. 5.81.01000	5.81.02000	5.81.03000	5.81.04000	5.81.05000	5.81.06000
Art. 810A* Ganasce mobile liscia Smooth movable jaw	Cod. 5.81.0A100	5.81.0A200	5.81.0A300	5.81.0A400	5.81.0A500	5.81.0A600
Art. 810B* Ganasce 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* Ganasce 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	5.81.46000

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

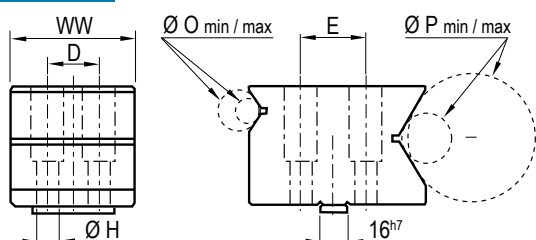
Art. 810 (Montata su Art. 860) / (Assembled on Art. 860)



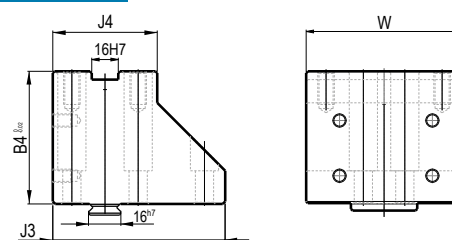
Art. 8100 Ganasce mobile con gradino piccolo e grande Movable jaw with small and large step



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	-

* Set viti per fissaggio a richiesta - Fixing screws set on request

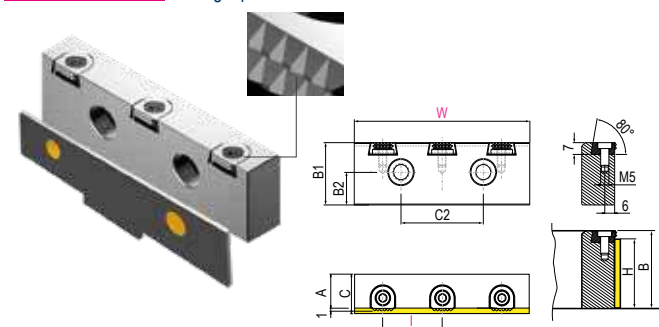
Tipo (grandezza) / Type (size)		1	2	3	4	5	6	
Art. 810E*		Cod.	5.81.0E100	5.81.0E200	5.81.0E300	5.81.0E400	5.81.0E500	5.81.0E600
Ganascia mobile con gradino 3x5 liscia Movable jaw with 3x5 step smooth								
Art. 810J*		Cod.	5.81.0J100	5.81.0J200	5.81.0J300	5.81.0J400	5.81.0J500	5.81.0J600
Ganascia mobile prismatica per tondi liscia Prismatic movable jaw for round parts smooth								
Art. 810K*		Cod.	5.81.0K100	5.81.0K200	5.81.0K300	5.81.0K400	5.81.0K500	5.81.0K600
Ganascia mobile prismatica per tondi zigrinata Prismatic movable jaw for round parts serrated								
Art. 810L*		Cod.	5.81.0L100	5.81.0L200	5.81.0L300	5.81.0L400	5.81.0L500	5.81.0L600
Ganascia mobile con gradino Step movable jaw								
Art. 810M*		Cod.	5.81.0M100	5.81.0M200	5.81.0M300	5.81.0M400	5.81.0M500	5.81.0M600
Ganascia mobile con gradino zigrinata da un lato Step movable jaw one side serrated								
Art. 810O*		Cod.	5.81.0O100	5.81.0O200	5.81.0O300	5.81.0O400	5.81.0O500	5.81.0O600
Ganascia mobile con gradino piccolo e grande Movable jaw with small and large step								
Art. 810P*		Cod.	5.81.0P100	5.81.0P200	5.81.0P300	5.81.0P400	5.81.0P500	5.81.0P600
Ganascia mobile con gradino piccolo e grande zigrin. da un lato Movable jaw with small and large step one side serrated								
Art. 810R*		Cod.	5.81.0R100	5.81.0R200	5.81.0R300	5.81.0R400	5.81.0R500	5.81.0R600
Ganascia mobile in alluminio Movable jaw aluminium								
Art. 810T*		Cod.	5.81.0T100	5.81.0T200	5.81.0T300	5.81.0T400	5.81.0T500	5.81.0T600
Ganascia mobile GRIP per forti serraggi GRIP movable jaw for strongest clamping								
Art. 810DT		Cod.	5.81.0DT10	5.81.0DT20	5.81.0DT30	5.81.0DT40	5.81.0DT50	5.81.0DT60
Ganascia mobile a coda di rondine Dove tail movable jaw								
Art. 810V*		Cod.	5.81.0V100	5.81.0V200	5.81.0V300	5.81.0V400	5.81.0V500	5.81.0V600
Ganascia mobile con segmenti oscillanti Movable jaw with floating inserts								
Art. 512*		Cod.	5.51.21000	5.51.22000	5.51.23000	5.51.24000	5.51.25000	5.51.26000
Ganascia intermedia Intermediate Jaw								
512A								
512B								
313A								
810P 512 805Q 512 810P								
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		

* Set viti per fissaggio a richiesta - Set of fixing screws on request

PIASTRE GANASCE PIANE CON INSERTI GRIP

STRAIGHT INSERT GRIP JAW PLATES

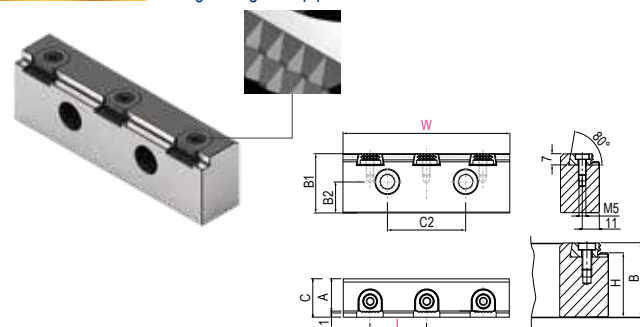
**NEW
2021**
Art. 547G

 Piastra Piana con inserti GRIP
 Straight plate with 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	74	94	124	144	169	189
I	26	33	23,5	29,5	23	27
C	22,7	22,7	22,7	22,7	22,7	22,7
C2	40	50	65	65	65	100
B	25	30	40	50	60	60
B1	25	30	40	50	60	60
B2	10	10	15	20	25	25
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

Art. 547K

 Piastra Piana a gradino integrale con inserti GRIP
 Straight integral step plate with GRIP inserts


Tipe Type	1	2	3	4	5	6
W	74	94	124	144	169	189
I	26	33	23,5	29,5	23	27
C	25	25	25	25	25	25
C2	40	50	65	65	65	10
B	25	30	40	50	60	60
B1	25	30	40	50	60	60
B2	10	10	15	20	25	25
A	20	20	20	20	20	20
H	20	25	35	45	55	55
Cod.	5.54.7K100	5.54.7K200	5.54.7K300	5.54.7K400	5.54.7K500	5.54.7K600

INSERTI GRIP PER MORSE FMS

INSERT GRIP JAW PLATES FOR FMS VISES

Art. 220 G01

 Per materiali di durezza normale
 For standard workpieces hardness clamping

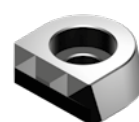

Cod. 4.22.01000 / G01

Art. 220 G02

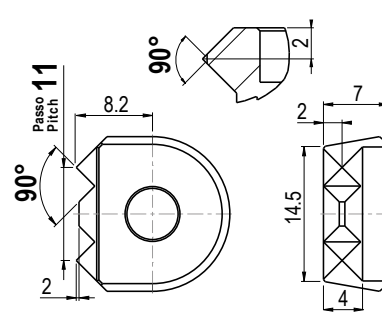
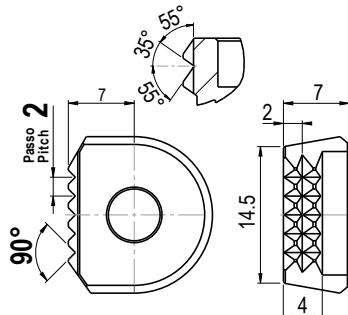
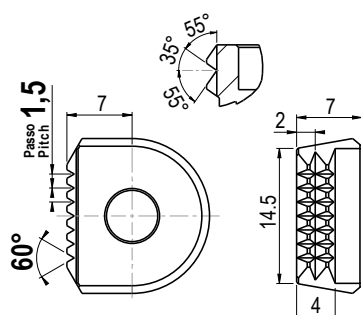
 Per materiali di notevole durezza.
 For hardened workpieces clamping


Cod. 4.22.01000 / G02

Art. 220 G11

 Per materiali teneri
 For soft material clamping


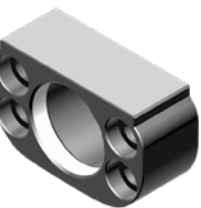
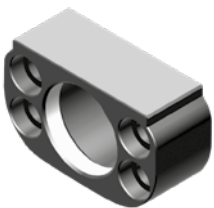
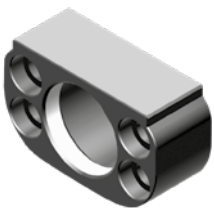
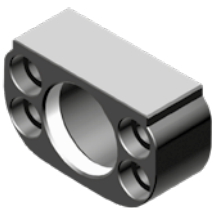
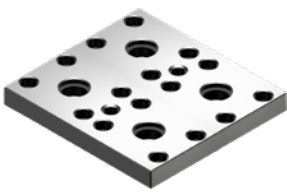
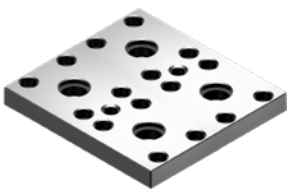
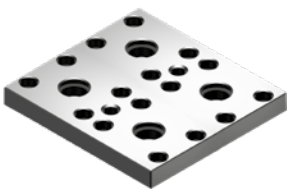
Cod. 4.22.01000 / G11



Tipo / Type	1	2	3	4	5	6
 Art.547G - Art.547K	 3 pcs each	 3 pcs each	 5 pcs each	 5 pcs each	 7 pcs each	 7 pcs each
Viti a testa bassa M5 x 10mm Low head screws M5 x 10mm	 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

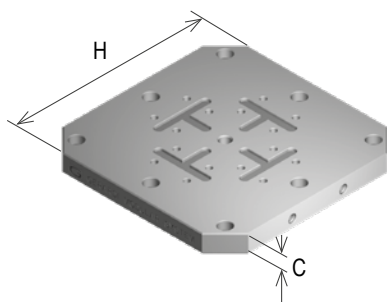
Tipo (grandezza) / Type (size)		1	2	3	4	5	6
Art. 823 Piastra intermedia per Art. 855 Middle plate for Art. 855		Cod. 5.82.31000	5.82.32000	5.82.33000	5.82.34000	5.82.35000	5.82.36000
Art. 823B Piastra intermedia per Art. 800 Middle plate for Art. 800		Cod. 5.82.3B100	5.82.3B200	5.82.3B300	5.82.3B400	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 vertically 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 vertically 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

Tipo (grandezza) / Type (size)
Art. 827A

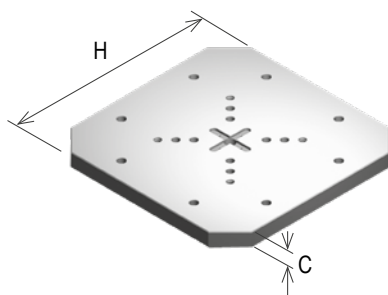
Piastra base personalizzata per una o più morse
 Bussola di centraggio
 Art. 852 compresa
 Tailor made head plate for one or more vises
 Centering bushing Art. 852 included



H	300	350	400	450	500	630	800
C	33	33	38	38	38	38	38
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. 828A

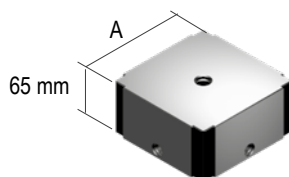
Piastra base personalizzata per cubo morse
 bussola di centraggio
 Art. 852 compresa
 Tailor made head plate for vise tower
 Centering bushing Art. 852 included



H	300	350	400	450	500	630	800
C	33	33	38	38	38	38	38
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

Tipo (grandezza) / Type (size)
Art. 835

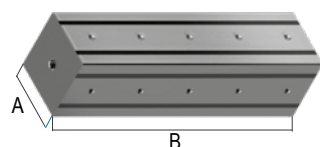
Distanziale quadrato per 4 morse FMS
 Square spacer for 4 FMS vises



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

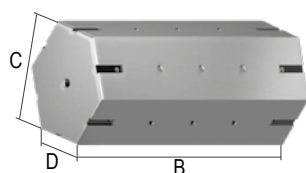
Supporto quadrato per 4 morse FMS
 Square support for 4 FMS vises



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

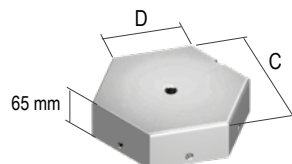
Supporto esagonale per 6 morse FMS
 Exagon support for 6 FMS vises



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
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Art. 853

Centraccio 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	12 / 22	14 / 24	19 / 30	19 / 30	27 / 40	27 / 40					
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 slitta morsa Slides vise connecting plate		Cod.	5.80.1S100	5.80.1S200	5.80.1S300	5.80.1S400	5.80.1S500	5.80.1S600					
Dimensioni / Dimension		CH	B	CH	B	CH	B	CH	B	CH	B	CH	B
Art.375 Chiave a pipa Box wrench		16	250	16	250	19	250	19	250	19	250	19	250
		Cod.	4.37.516250	4.37.516250	4.37.519250	4.37.519250	4.37.519250	4.37.519250	4.37.519250	4.37.519250	4.37.519250	4.37.519250	4.37.519250

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

SERVOCOMANDI OLEODINAMICI PER MOTORI IDRAULICI

ELECTRO-HYDRAULIC POWER PACK FOR HYDRAULIC MOTORS

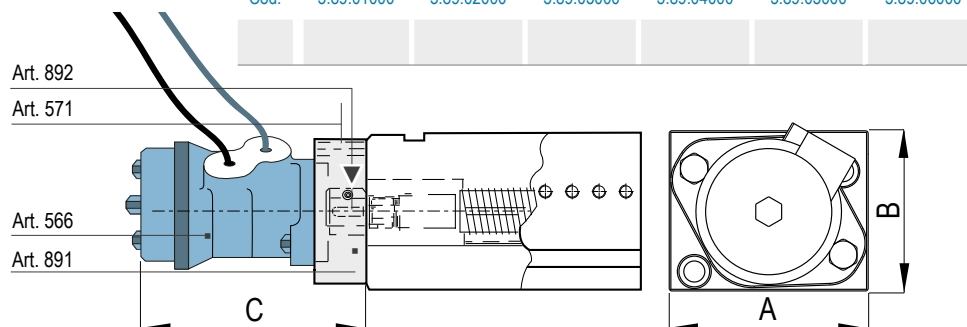
Tipo (grandezza) / Type (size)	1	2	3	4	5	6
Art. 566 Motore idraulico / Hydraulic motor	OMM32	OMP80	OMR200	OMR200	OMR200	OMR200

bar 140

Art.890

Art. 566 + Art. 571 + Art. 891 + Art. 892

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



Art. 891

Piastra attacco motore idraulico / Hydraulic motor mounting plate

Art. 892

Boccola di trascinamento vite motore / Drive bushing screw-motor

Art. 566

Motore Idraulico / Hydraulic motor

Art. 571

Fine corsa elettronico / Electronic proximity switch

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
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Art.890K/1

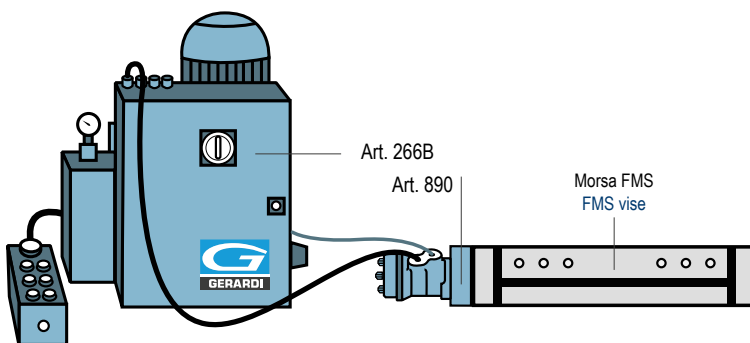
Passo vite / screw pitch mm

Art. 266B + Art. 890

Kit per automazione morse FMS
 Kit for FMS vises automation.

DATI TECNICI:
 IDROMOTORE: Art.566
 Motore elettrico Kw 5.5
 Portata Min. 40 litri al minuto
 Velocità apertura-chiusura morse da calcolarsi in base al diagramma idromotore (vedi pag. 5.65)
 Per il diagramma forza di serraggio vedi pag. 5.74
 Pressione massima di esercizio: 140 bar

TECHNICAL DATA:
 HYDRAULIC MOTOR Art.566
 Electric motor kW 5,5
 Oil pumps: 40l/min
 Opening and closing speed of vise to be calculated from hydraulic motor diagram at page 5.65
 For clamping forces diagram see pag. 5.75
 Max operating pressure: 140 bar



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
- 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
- Adjustable clamping force as required
- Adjustable electronic proximity switch

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

SERVOCOMANDI OLEODINAMICI PER MOTORI IDRAULICI

ELECTRO-HYDRAULIC POWER PACK FOR HYDRAULIC MOTORS

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
Art.890K/2						
Passo vite / screw pitch mm	2	2	2	2	3	3
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

Art. 266B + 2 Art. 890

Kit per automazione morse FMS
Kit for FMS vises automation.

DATI TECNICI:

IDROMOTORE: Art.566

Motore elettrico Kw 5.5

Portata Min. 40 litri al minuto

Velocità apertura-chiusura morsa da calcolarsi in base al diagramma idromotore (vedi pag. 5.65)

Per il diagramma forza di serraggio vedi pag. 5.74

Pressione massima di esercizio: 140 bar

TECHNICAL DATA:

HYDRAULIC MOTOR Art.566

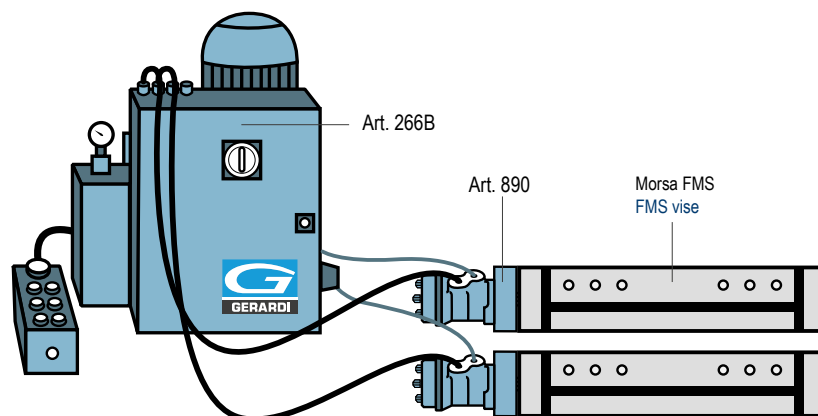
Electric motor kW 5,5

Oil pumps: 40l/min

Opening and closing speed of vise to be calculated from hydraulic motor diagram at page 5.65

For clamping forces diagram see pag. 5.75

Max operating pressure: 140 bar



COMPOSIZIONE COMPLETA DI:

- N° 2 servocomandi Art. 89
- N° 1 centralina elettroidraulica Art. 266B/1
- 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 units Art. 890
- N° 1 electro-hydraulic power pack Art. 266B/1
- Electrically controlled by manual switch board
- Adjustable clamping force as required
- Adjustable electronic proximity switch

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

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
Art.890K/3						
Passo vite / screw pitch mm	2	2	2	2	3	3
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

Art. 266B + 3 Art. 890

Kit per automazione morse FMS
Kit for FMS vises automation.

DATI TECNICI:

IDROMOTORE: Art.566

Motore elettrico Kw 5.5

Portata Min. 40 litri al minuto

Velocità apertura-chiusura morsa da calcolarsi in base al diagramma idromotore (vedi pag. 5.65)

Per il diagramma forza di serraggio vedi pag. 5.74

Pressione massima di esercizio: 140 bar

TECHNICAL DATA:

HYDRAULIC MOTOR Art.566

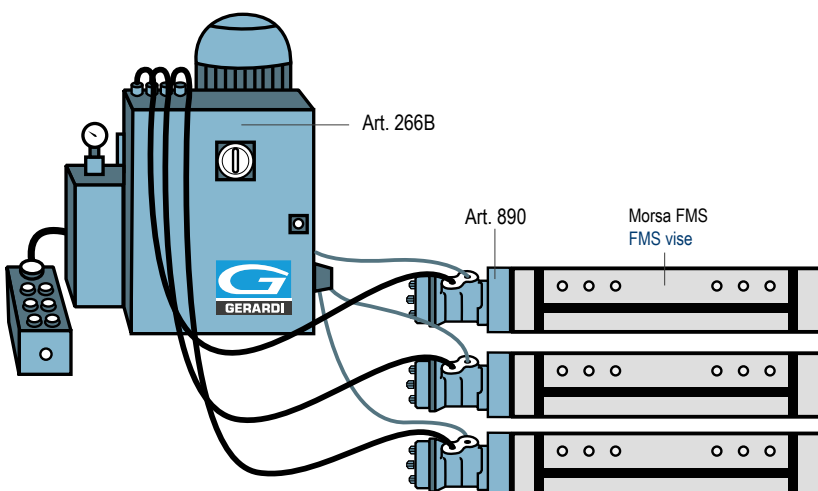
Electric motor kW 5,5

Oil pumps: 40l/min

Opening and closing speed of vise to be calculated from hydraulic motor diagram at page 5.65

For clamping forces diagram see pag. 5.75

Max operating pressure: 140 bar



COMPOSIZIONE COMPLETA DI:

- N° 3 servocomandi Art. 89
- N° 1 centralina elettroidraulica Art. 266B/1
- 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 units Art. 890
- N° 1 electro-hydraulic power pack Art. 266B/1
- Electrically controlled by manual switch board
- Adjustable clamping force as required
- Adjustable electronic proximity switch

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
Passo vite / screw pitch mm	2	2	2	2	3	3
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

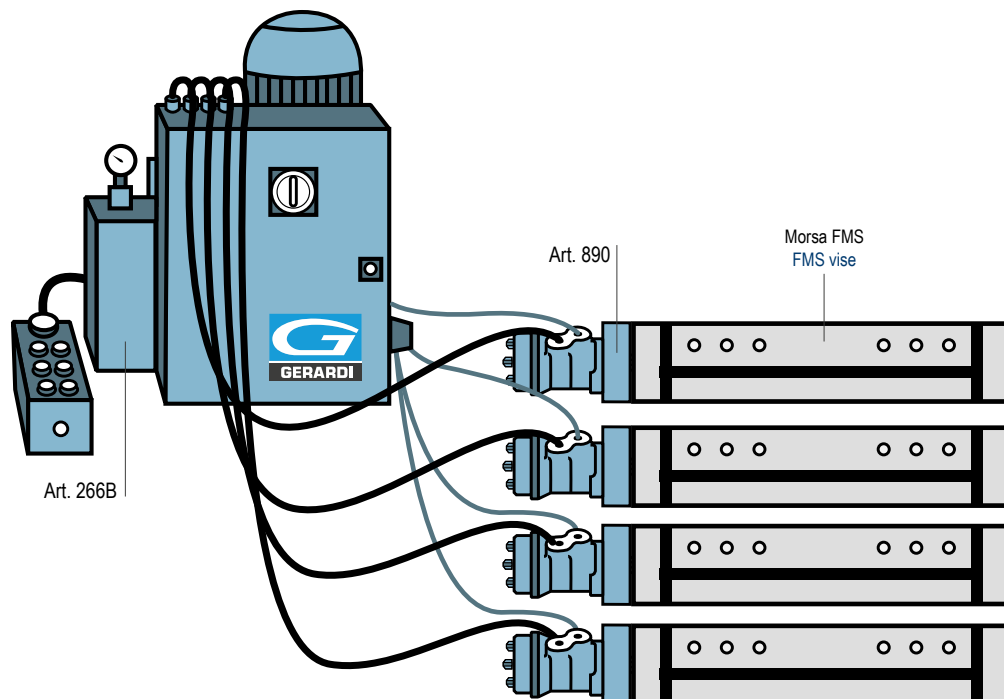
Kit per automazione morse FMS
 Kit for FMS vises automation.

DATI TECNICI:

IDROMOTORE: Art.566
 Motore elettrico Kw 5.5
 Portata Min. 40 litri al minuto
 Velocità apertura-chiusura morse da calcolarsi in base al diagramma idromotore (vedi pag. 5.65)
 Per il diagramma forza di serraggio vedi pag. 5.74
 Pressione massima di esercizio: 140 bar

TECHNICAL DATA:

HYDRAULIC MOTOR Art.566
 Electric motor kW 5,5
 Oil pumps: 40l/min
 Opening and closing speed of vise to be calculated from hydraulic motor diagram at page 5.65
 For clamping forces diagram see pag. 5.75
 Max operating pressure: 140 bar



COMPOSIZIONE COMPLETA DI:

- N° 3 servocomandi Art. 89
- N° 1 centralina elettroidraulica Art. 266B/1
- 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 units Art. 890
- N° 1 electro-hydraulic power pack Art. 266B/1
- Electrically controlled by manual switch board
- Adjustable clamping force as required
- Adjustable electronic proximity switch

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

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



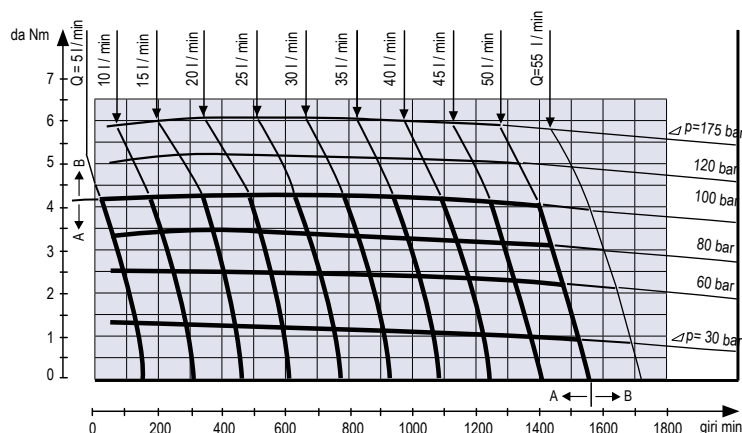
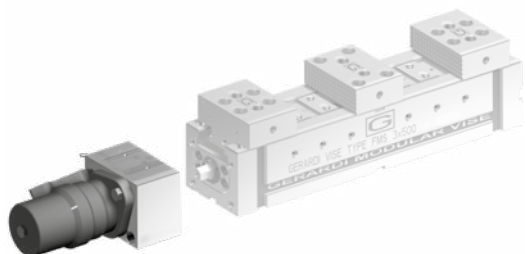
Tubi e cavi di collegamento elettrici ed idraulici con massima lunghezza 1600 mm / Hydraulic pipes and electrical cables with max length 1600 mm

DIAGRAMMI COPPIE MOTORI IDRAULICI

HYDRAULIC MOTOR TORQUE DIAGRAMS

Art.890

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

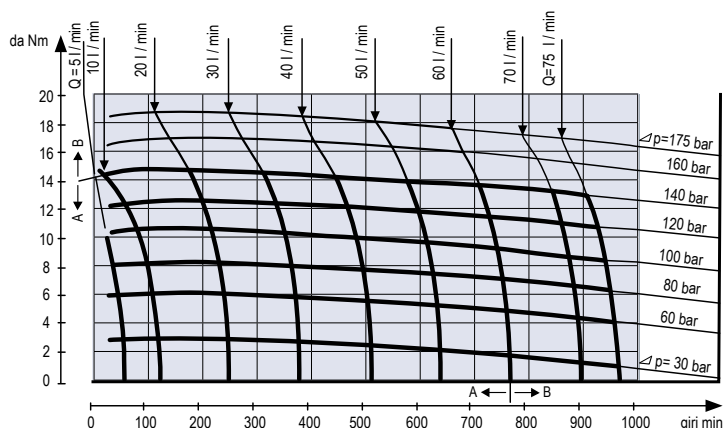
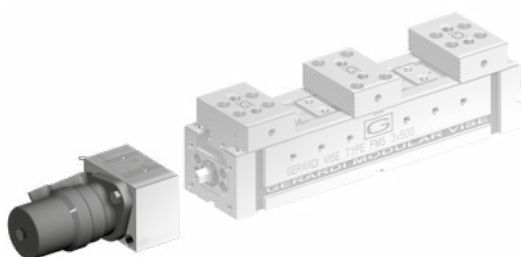


OMR 32

Morse FMS tipo 1 / Type 1 FMS vises

Art.890

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

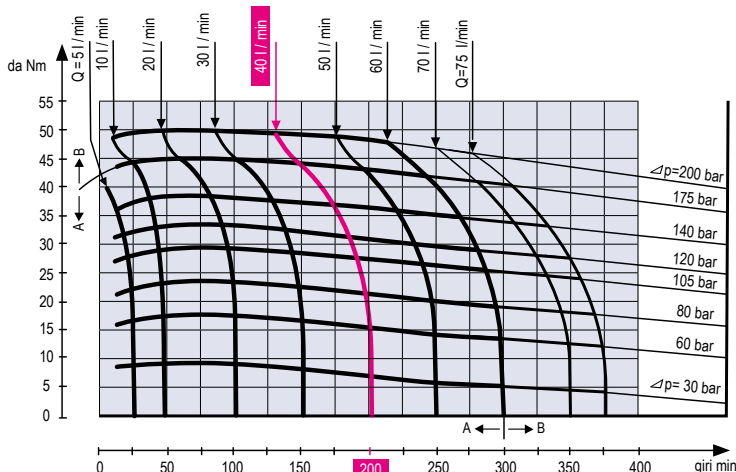
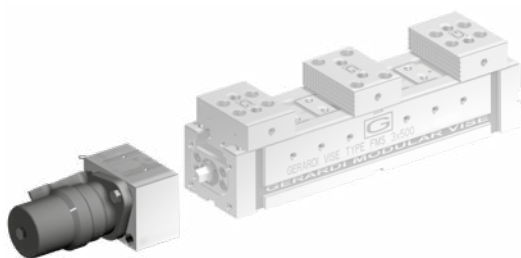


OMR 80

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**); $V = 2 \times 200 = 400 - 25\% = 300 \text{ mm/min}$ 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**); $V = 2 \times 200 = 400 - 25\% = 300 \text{ mm/min}$ for one vise.

For more vises divide the speed obtained by the number of vises used.

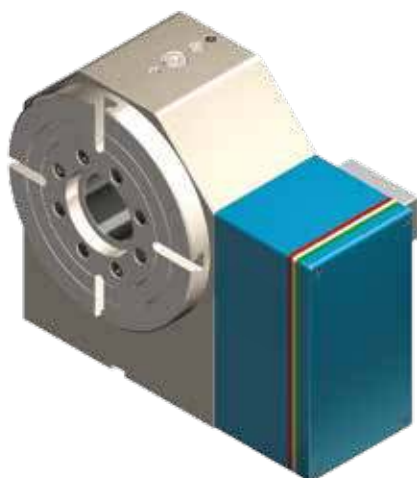
DIVISORE AUTOMATICO DPG 250

AUTOMATIC DIVIDING HEAD DPG 250

Divisore automatico
Automatic dividing head

Dati tecnici
Technical Data

DPG 250



Diametro del divisore Dividing head diameter	250 mm
Diametro del foro passante Clearance hole diameter	70,5 mm
Altezza punta Center height	200 mm
Dimensione della scanalatura a T T-Slot width	12 mm
Sistema di bloccaggio Clamping system	IIdraulico 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 Orizzontale Horizontal Kg.550 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

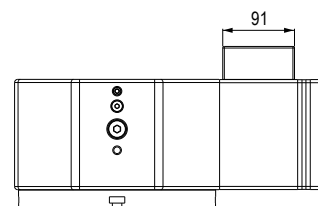
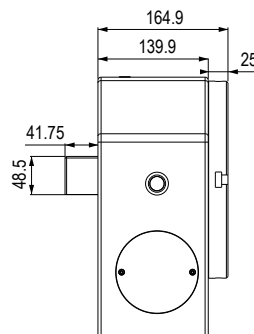
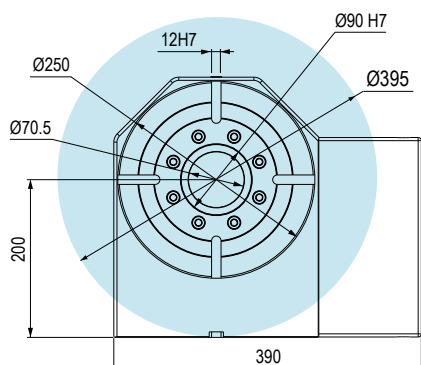
PROGRAMMAZIONE TOUCH SCREEN
FACILE ED INTUITIVA O TRAMITE COLLEGAMENTO DIRETTO AL CNC

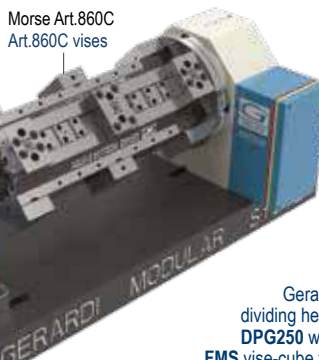
EASY AND INTUITIVE TOUCH SCREEN
PROGRAMMING OR THROUGH DIRECT CONNECTION TO THE CNC

- 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

DPG 250

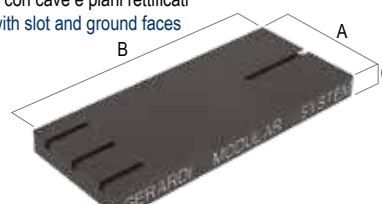


Tipo (grandezza) / Type (size)	kN	1		2				3				
		25 kN		25 kN				30 kN				
Divisore Gerardi DPG250 con cubo-morsa FMS per serraggi singoli, doppi o autocentranti	D	200	300	300	400	500	600	400	500	600	700	800
  Morse Art.860C Art.860C vises Gerardi dividing head DPG250 with FMS vise-cube for single, double and self- centering clamping	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

Nel caso si disponga di un proprio divisore, il prezzo dell'attrezzatura potrebbe subire variazioni
 In case you already have a divider, the price may be revised

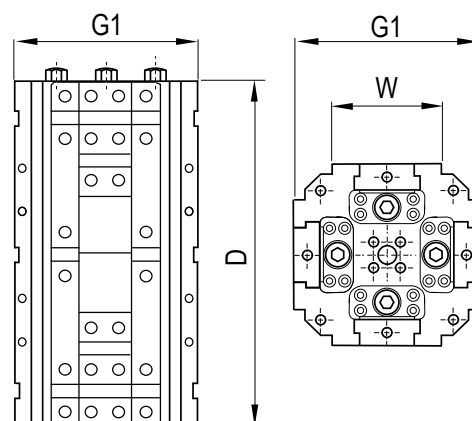
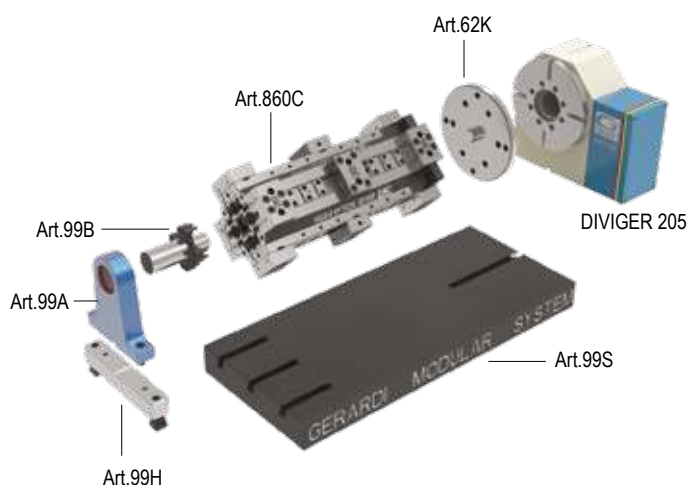
UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

Art. 99A Supporto Support		Cod.	5.99.A1000									
Art. 99B Perno di centraggio completo di sistema d'allineamento Horizontal centering pin with alignment system		Cod.	5.99.B1000	5.99.B2000				5.99.B3000				
Art. 99H Distanziale per supporto Spacer support		Cod.	5.99.H1000									
Art. 62K DIVIGER 205 Piastra di interfaccia per cubo FMS completa di sistema d'allineamento Connecting plate with alignment system for FMS		Cod.	5.62.K801A5	5.62.K801A6				5.62.K801A7				

Art. 99S Piastra base con cave e piani rettificati Base plate with slot and ground faces		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

Divisore automatico
Automatic dividing head

Dati tecnici
Technical Data

DIVIGER 205



Diametro del divisore
Dividing head diameter 220 mm

Diametro del foro passante
Clearance 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



DIVISORE MECCANICO, SENZA CAVI O IDRAULICA,
PERMACCHINE A CNC

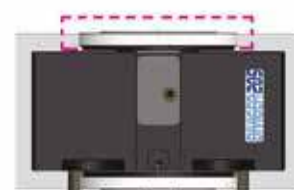
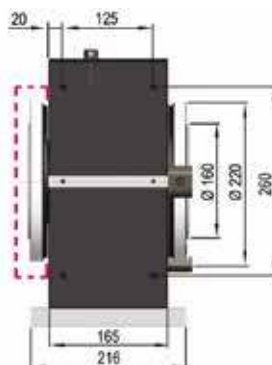
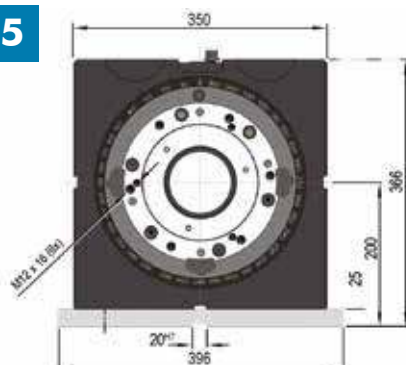
MECHANICAL DIVIDING HEAD, WITHOUT ELECTRICAL CABLES
OR HYDRAULIC, FOR CNC MILLING MACHINE

- 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 horizontally or vertically
- Quick change through wedge clamping



DIVIGER 205

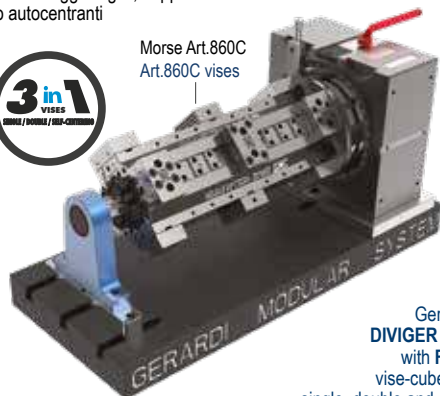


Tipo (grandezza) / Type (size)

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



Morse Art.860C
 Art.860C vises



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

kN	1		2				3				
	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.D1.V20500	5.D1.V20510	5.D1.V20520	5.D1.V20530	5.D1.V20540	5.D1.V20550	5.D1.V20560	5.D1.V20570	5.D1.V20580	5.D1.V20590	5.D1.V20511

Nel caso si disponga di un proprio divisore, il prezzo dell'attrezzatura potrebbe subire variazioni
 In case you already have a diviger, the price could be modified

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !
Art. 99A

Supporto
 Support



Cod. 5.99.A1000

Art. 99B

Perno di centraggio completo
 di sistema d'allineamento
 Horizontal centering pin with alignment system



Cod. 5.99.B1000 5.99.B2000 5.99.B3000

Art. 99H

Distanziale per supporto
 Spacer support



Cod. 5.99.H1000

Art. 62K
DIVIGER 205

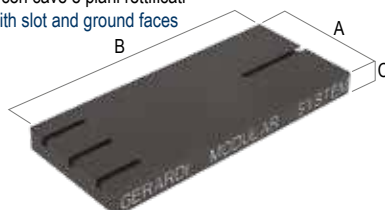
Piastra di interfaccia per cubo FMS
 completa di sistema d'allineamento
 Connecting plate with alignment system for FMS



Cod. 5.62.K801A5 5.62.K801A6 5.62.K801A7

Art. 99S

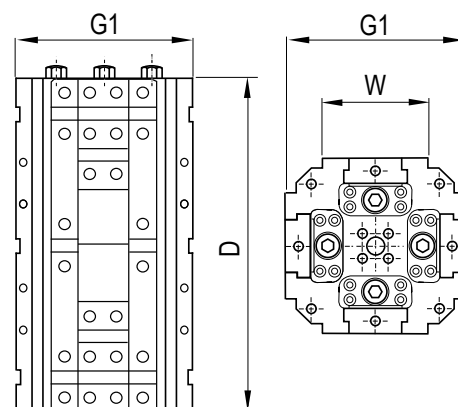
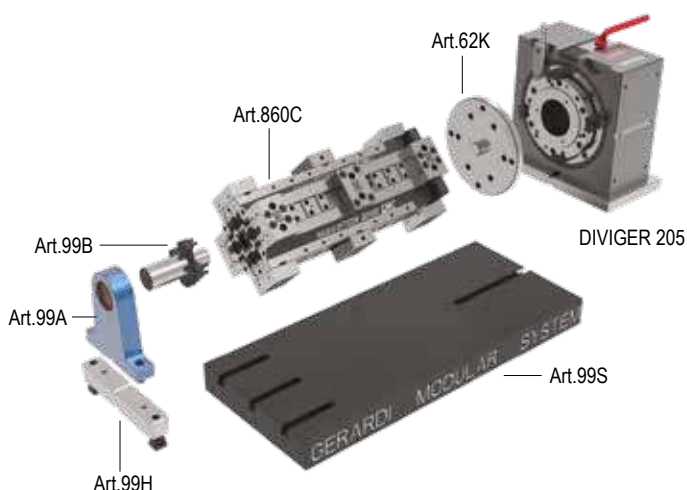
Piastra base con cave e piani rettificati
 Base plate with slot and ground faces



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	

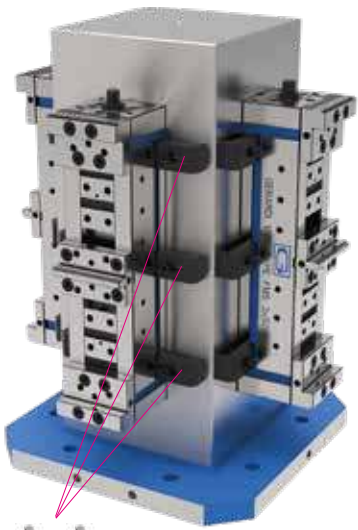
Cave o fori calibrati su richiesta - Slot or calibrated holes on request

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



PREDISPOSIZIONE e MONTAGGIO MORSE su CUBI LAVORATI

TOMBSTONES SET-UP and VISES MOUNTING on MACHINED TOMBSTONES

Cubo lavorato Art.57C Machined cube Art.57C	Tipo di morsa Vise type	Predisposizione e montaggio* Set-up & Mounting*	Cubo con morse Cube with vises
Cod. 8.53.C00081 Dim. A=250 / B=400 / H=660 	Art.864 Tipo 3x500  n°morse Vises n° x 4	Per morsa / each vise  Importo per lavorazioni necessarie per predisporre ogni faccia del cubo e montaggio più allineamento di ogni morsa. Amount needed for the set-up of each side and mounting + alignment of each vise on it.	 Art.296

* Predisposizione facce cubo, montaggio ed allineamento morse incluso di viti, chiavette, staffe e quant'altro necessario.
 Faces set-up, vises mounting including screws, keyways, holding clamps and all the necessary equipment.

Certificato di collaudo
 Certificate test

PREDISPOSIZIONE e MONTAGGIO MORSE su CUBO a RETICOLO

TOMBSTONES SET-UP and VISES MOUNTING on 2 GRID TOMBSTONES

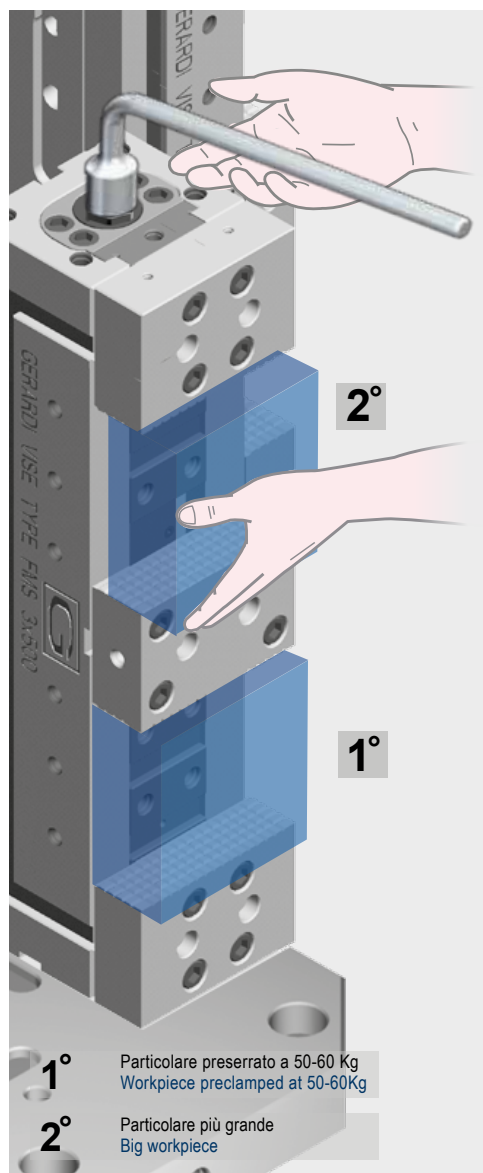
Cubo a reticolo Art.53F Grid tombstone Art.53F	Tipo di morsa Vise type	Montaggio e allineamento* Mounting & alignment*	Cubo con morse Cube with vises
Cod. 8.53.F00081 Dim. A=250 / B=400 / H=660 	Art.864 Tipo 3x500  n°morse Vises n° x 4	Per morsa / each vise  Importo per montaggio ed allineamento di ogni morsa. Amount need for each vise mounting and alignment.	Art.750 Tipo 3  Art.83

* Montaggio e allineamento morse incluso di viti, chiavette, staffe e quant'altro necessario.
 Vises mounting and alignment includes screws, keyways, holding clamps and all the necessary equipment.

Certificato di collaudo
 Certificate test

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 può 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.

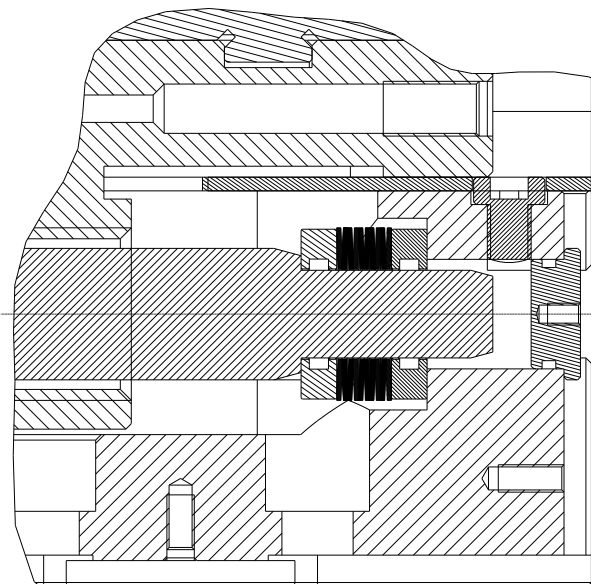
The standard "Third Hand" device has a max pressure of 50 Kg.

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 spacer (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



Diagrammi di serraggio / Clamping diagrams

FMS

Diagrammi di serraggio meccanico con chiave dinamometrica

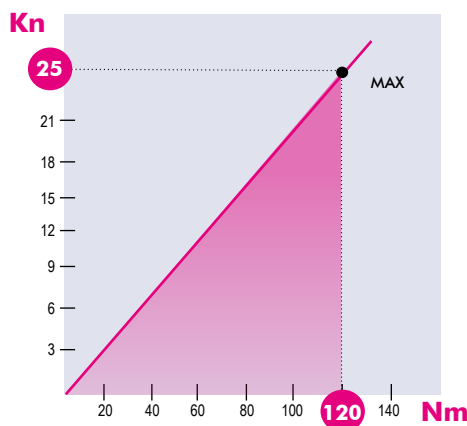
Mechanical clamping diagrams with torque wrench

Art. 357

Morse tipo Vises type

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

1

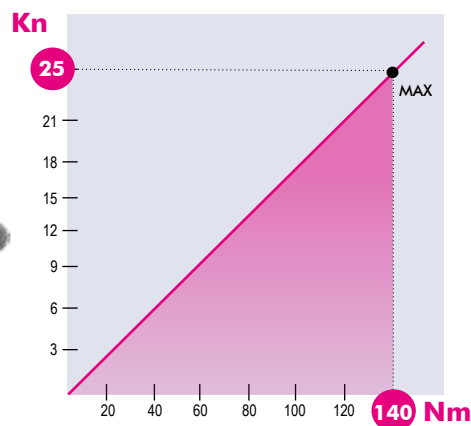


Art. 357

Morse tipo Vises type

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

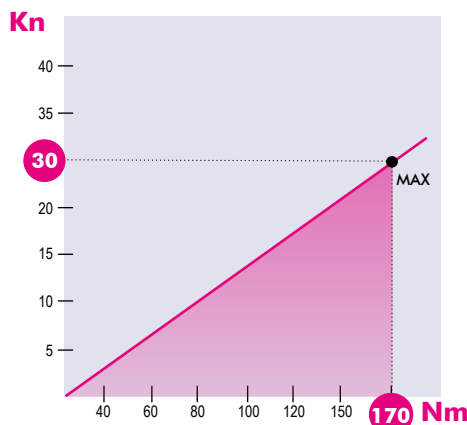
2



Morse tipo Vises type

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

3-4

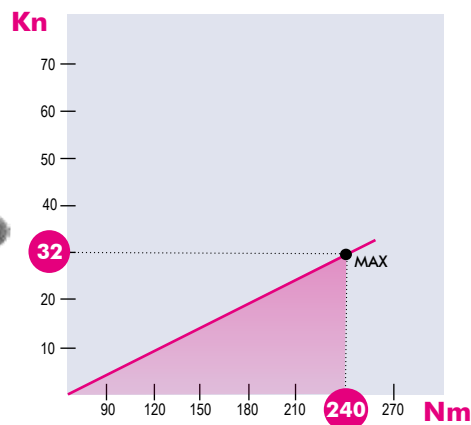


Art. 357

Morse tipo Vises type

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

5-6



NB: Alcuni fattori, come la lubrificazione, lo staffaggio, gli attriti ed altro, possono modificare i valori indicati fino a $\pm 10\%$. Per un corretto utilizzo non superare i valori indicati nel grafico
Some factor as lubrication, clamping on the machine table, frictions and more can modify above values within a $\pm 10\%$ range. For optimum operation do not exceed chart values.

Diagrammi serraggio / Clamping diagrams

FMS

Diagrammi di serraggio meccanico con moltiplicatore di potenza

Mechanical clamping diagrams with pressure multiplier

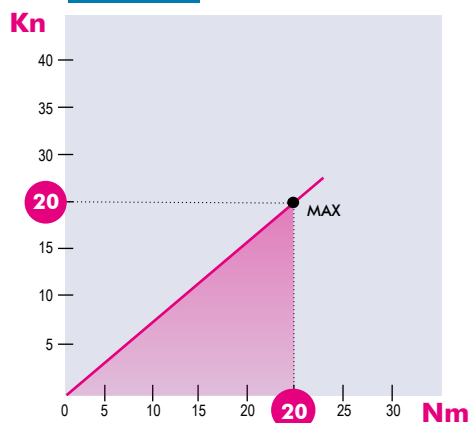
Art. 802

Morse tipo Vises type

1

VITE: TPF 18 / 20 mm PASSO: 2 mm
 SCREW: TPF 18 / 20 mm PITCH: 2 mm
 Rapporto trasmissione: 1/9
 Gear ratio: 1/9

Type 1 Cod. 5.80.21000



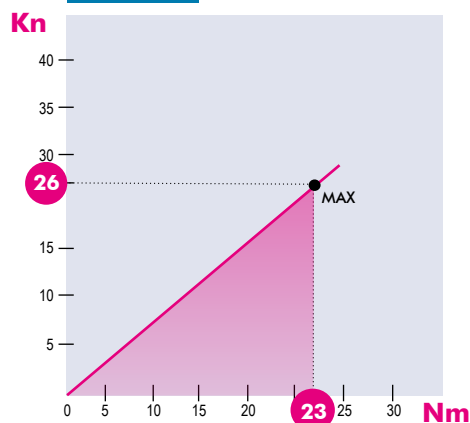
Art. 802

Morse tipo Vises type

2

VITE: TPF 18 / 24 mm PASSO: 2 mm
 SCREW: TPF 18 / 24 mm PITCH: 2 mm
 Rapporto trasmissione: 1/7
 Gear ratio: 1/7

Type 2 Cod. 5.80.22000



5

Morse tipo Vises type

3-4

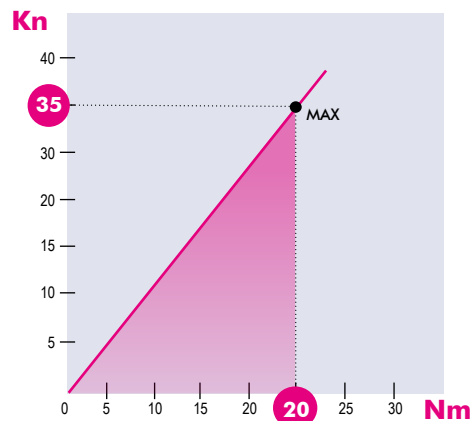
VITE: TPF 24 / 30 mm PASSO: 2 mm
 SCREW: TPF 24 / 30 mm PITCH: 2 mm
 Rapporto trasmissione: 1/7
 Gear ratio: 1/7

Type 3

Cod. 5.80.23000

Type 4

Cod. 5.80.24000



Art. 802

Morse tipo Vises type

5-6

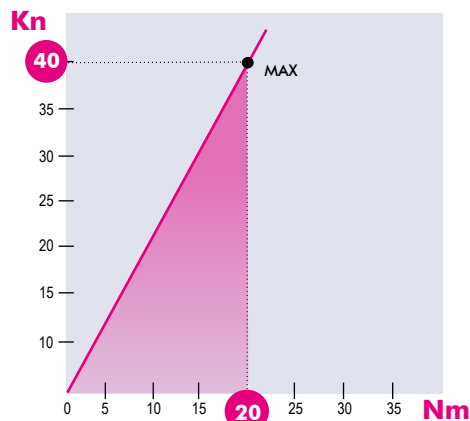
VITE: TPF 30 / 36 mm PASSO: 3 mm
 SCREW: TPF 30 / 36 mm PITCH: 3 mm
 Rapporto trasmissione: 1/7
 Gear ratio: 1/7

Type 5

Cod. 5.80.25000

Type 6

Cod. 5.80.26000



Diagrammi serraggio / Clamping diagrams

FMS

Diagrammi di serraggio meccanico tramite motore idraulico

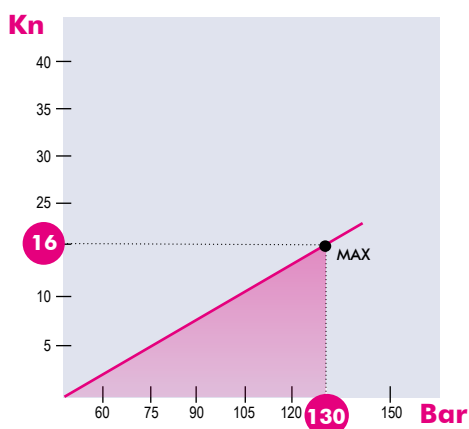
Mechanical clamping diagrams through hydraulic motor

Art. 890

Morse tipo 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**

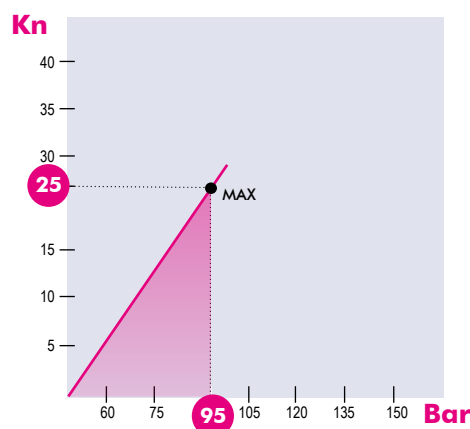


Art. 890

Morse tipo Vises type

2

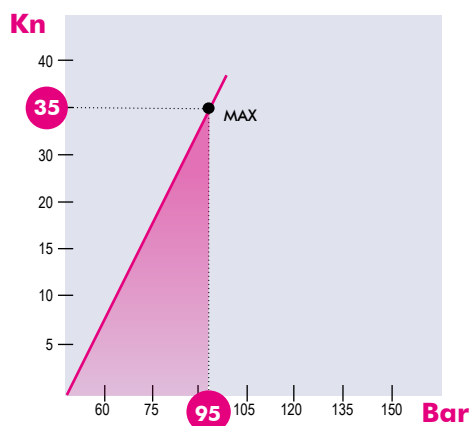
VITE: TPF 18 / 24 mm PASSO: 2 mm
 SCREW: TPF 18 / 24 mm PITCH: 2 mm
 Motore idraulico tipo **OMP 80**
 Hydraulic motor type **OMP 80**



Morse tipo 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**

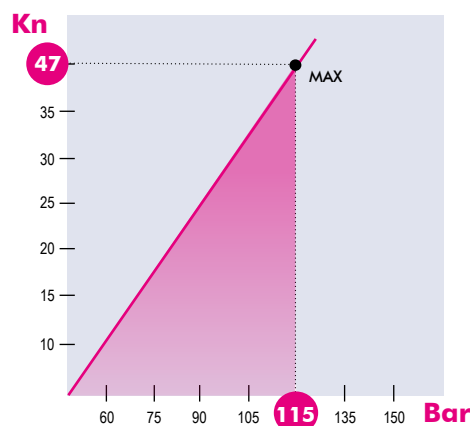


Art. 890

Morse tipo 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**



ATTENZIONE! Azionamento idraulico ma serraggio meccanico (PIU' SICURO) - IMPORTANT! Hydraulic control, but mechanical clamping (SAFER)

NB: Alcuni fattori, come la lubrificazione, lo staffaggio, gli attriti ed altro, possono modificare i valori indicati fino a $\pm 10\%$. Per un corretto utilizzo non superare i valori indicati nel grafico
 Some factor as lubrication, clamping on the machine table, frictions and more can modify above values within a $\pm 10\%$ range. For optimum operation do not exceed chart values.

ISTRUZIONI PER UN CORRETTO UTILIZZO

ISTRUCTIONS FOR A PROPER USE



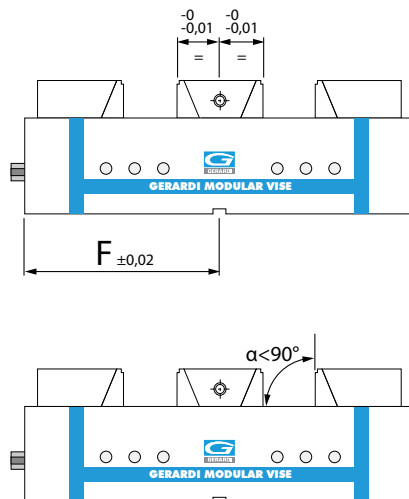
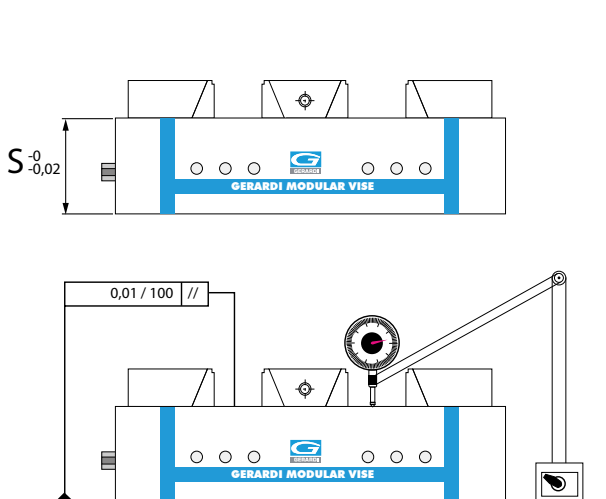
Libretto Istruzioni / Instruction Book

Scansiona il QR code e scarica
le istruzioni complete

Scan the QR code to download
the complete instructions

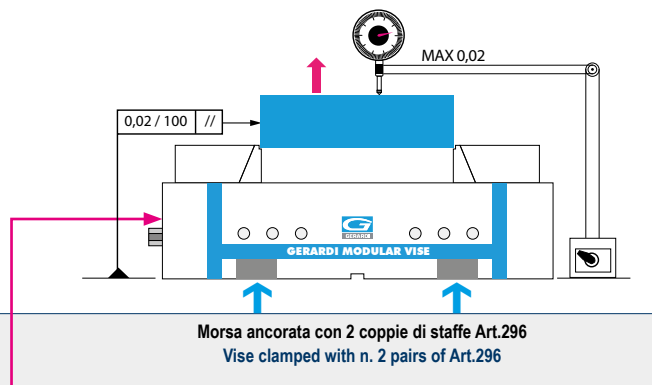
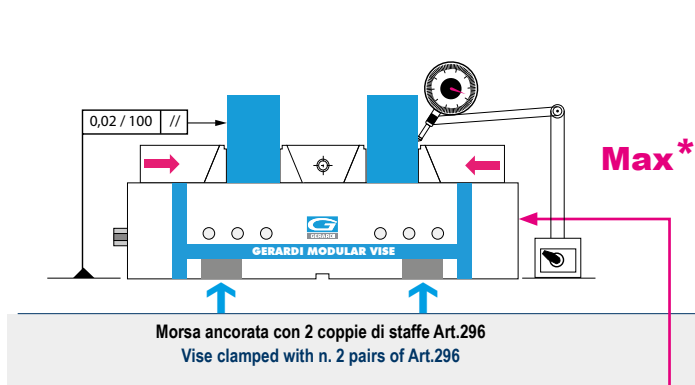
TOLLERANZE GEOMETRICHE

GEOMETRIC ACCURACIES



TOLLERANZE DINAMICHE

DINAMIC ACCURACIES

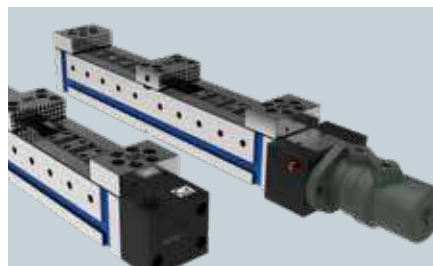


Art 865		* Coppia applicata - Torque Nm	Forza di serraggio - Clamping power
Morsa tipo 1	Vise type 1	120	2500 Kgf
Morsa tipo 2	Vise type 2	140	2500 Kgf
Morsa tipo 3	Vise type 3	180	3000 Kgf
Morsa tipo 4	Vise type 4	180	3000 Kgf
Morsa tipo 5	Vise type 5	240	3200 Kgf
Morsa tipo 6	Vise type 6	240	3200 Kgf

* Max coppia applicabile per non superare i valori consigliati

1 kgf . m = 9.806

ESTREMA VERSATILITY EXTREME VERSATILITY

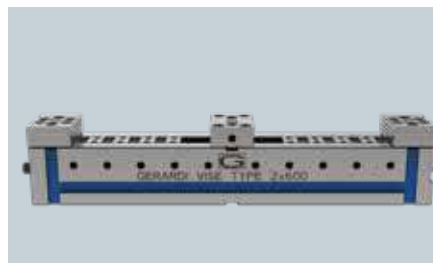


Sistema di serraggio meccanico, idraulico, pneumatico elettrico o con moltiplicatore di potenza, tramite comando manuale, a pedale o mediante pulsante elettrico (vedi pag. 12)

Mechanic, hydraulic or pneumatic or electrical clamping system or with pressure multiplier, through manual, pedal or push button control (see page 12)



3 posizioni per la ganasce fissa
3 positions for the fixed jaw

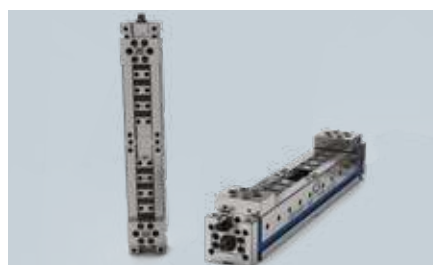


Costruzione solida e compatta e massima apertura rispetto alla sua lunghezza

Space saving design, solid construction and maximum blocking ratio to total length

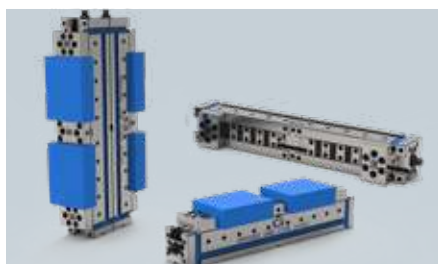


Serraggio dall'esterno all'interno e viceversa
Outside to inside clamping and viceversa

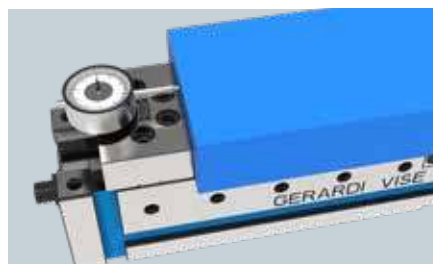


Precisioni geometriche con tolleranze entro 0,02mm

Geometrical accuracy with tolerances within 0,02 mm



Posizionamento verticale-orizzontale laterale grazie alle chiavette longitudinali e trasversali sia sulla base che in testa
Vertically, horizontally and sideways vise positioning by the

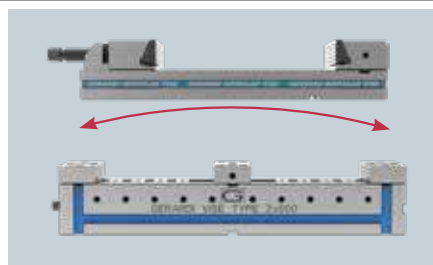


Accurata ripetibilità di posizionamento dei particolari da lavorare

Very accurate repetibility of workpieces position



Collegamento: fianco a fianco, dorso a dorso
Side by side, back to back vise positioning

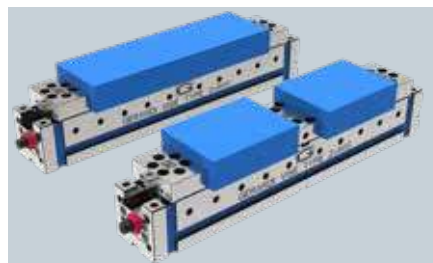


Flessioni ridotte di due volte rispetto alle morse modulari STANDARD

Bending reduced two times with respect to the STANDARD modular vises

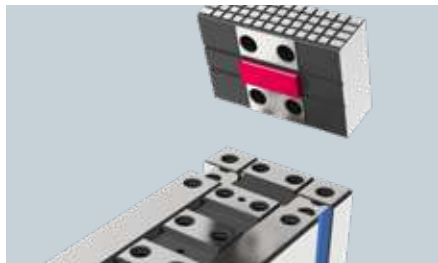


Possibilità illimitata per ganasce speciali
Unlimited range of special jaws

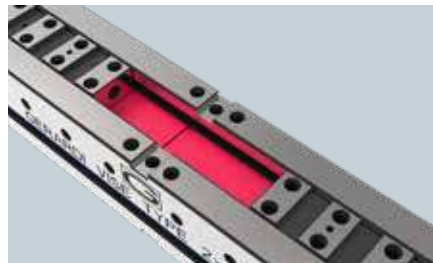


Trasformazione da autocentrante a doppia tramite la sostituzione delle ganasce sul corpo base universale e tramite la ghiera di regolazione.

Transform each single vise in a self-centering with possibility to block from outside to inside and vice versa and in a double vise through the substitution of the jaws on the universal vise body base and by the setting nut.



Sostituzione semplice e precisa delle ganasce
Simple and precise exchange of jaws



Protezione integrale dalla penetrazione di corpi estranei tramite piastre scorrevoli

Integral protection from chips and dirty through sliding protections