

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)



Art. 983

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

All'interno - Inside:

	Art. 808B		Art.297 16718
	Art. 806C		Art.850H
	Art.806D		Art.270 T1 Sid
	Art.806E		Art.375 CH12
	Art.806F		
	Art.298		

Cod. 0,96.30000

SIMBOLOGIA DATI TECNICI
TECHNICAL DATA ICONS

Morse e cubi morsa / Vises & vise-towers

FMS SERIES

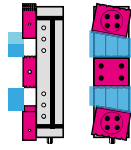
Un sistema modulare flessibile con centinaia di ganasce disponibili
A Flexible modular system with hundreds of jaws available



Precisione / Accuracy
±0,02mm



Durezza / Hardened
HRC 58±2



Ganasce Mobili Oscillanti
Floating Movable Jaws
for irregular workpieces

ESTREMA VERSATILITÀ / EXTREME VERSATILITY

- 3 posizioni per la ganasce fissa; • Serraggio dall'esterno all'interno e viceversa;
- Posizionamento verticale-orizzontale-laterale; • Collegamento lineo a fianco, dorso o dritto;
- Possibilità di allungare 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 moltiplicazione di potenza, tramite comando manuale, a pedale o mediante pulsante;
- Elemento di prolunga per pezzi fuori misura; • Sistema di serraggio meccanico, idraulico, pneumatico elettrico (vedi pag. 12); • Costruzione solida e compatta e massima apertura rispetto alla sua lunghezza;
- Flessioni praticamente ridotte di due volte rispetto alle precedenti morsa modulari standard; • Accurata riproducibilità di posizionamento del pezzo da lavorare; • Precisioni geometriche con tolleranze entro 0,02 mm; • Protezione integrale della penetrazione di corpi estranei tramite piastre sovrastate; • Possibilità di trasformazione di ogni morsa singola in morsa autocentrate e in morsa doppia tramite la semplice sostituzione delle ganasce sul corpo base universale. (ESEMPLI APPLICATIVI A PAGINA 576).

- 3 positions for the fixed jaw; • Outside to inside clamping and viceversa; • Vertically, horizontally and sideways 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; • Mechanical, 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, self construction and maximum blocking ratio to total length; • Deflection reduced two times with respect to the STANDARD modular blockings; • 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 576)

Vite a doppio filetto e slitte guidate & guided slides

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

Completely protected main spindle with left and right threaded 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 ferro per posizionamento verticale. Longitudinal and cross keyways both on the base bottom surface for horizontal positioning and on the side for vertical positioning



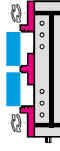
Nata espressamente per i centri di lavoro, la gamma FMS permette ottimizzazioni di serraggio con riferimenti precisi in spazi contenuti, usure inesistenti e rigidità impensabile (spessore della base raddoppiato), possibilità di bloccare più pezzi contemporaneamente con l'ausilio di sistemi meccanici, 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 morsa consiste nella possibilità di trasformare ogni morsa singola (cioè adibita al serraggio di un singolo pezzo) in una morsa autocentrante con bloccaggio concenrico 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 riproducibilità 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

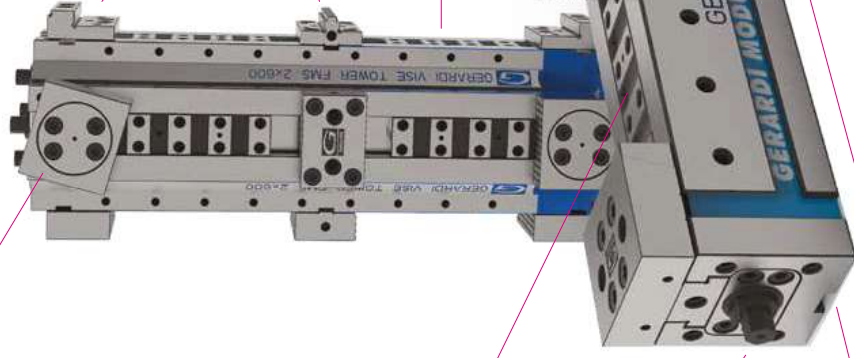


Serraggio particolare su gradino piccolo
Workpiece clamping on the small step



Ganasce Mobile At 0,10P
Movable Jaw At 0,10P

Ganasce Fissa At 0,05P
Fixed Jaw At 0,05P



3 Morse in Una 3 Vises in One

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

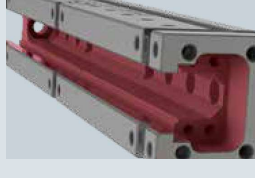
Possibility to transform each single vise in a self-centering vise with possibility to block from outside to inside and viceversa and in a double vise through the simple substitution of the jaws on the universal vise body base



Altissima Rigidità Highest Rigidity

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

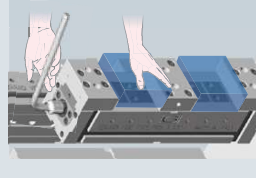
Higher vise base in order to guarantee a better rigidity. Bending reduced two times with respect to the Standard modular vises. Available solid vise towers.



Sistema a terza mano Third Hand service

Consente il carico e serraggio lineo del primo pezzo mentre le forchettone 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.



Riconfigurazione Rapidissima Quickest Vise Resetting

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



Staffe di ancoraggio / Vise holding clamps

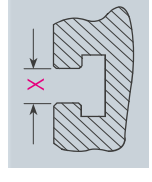
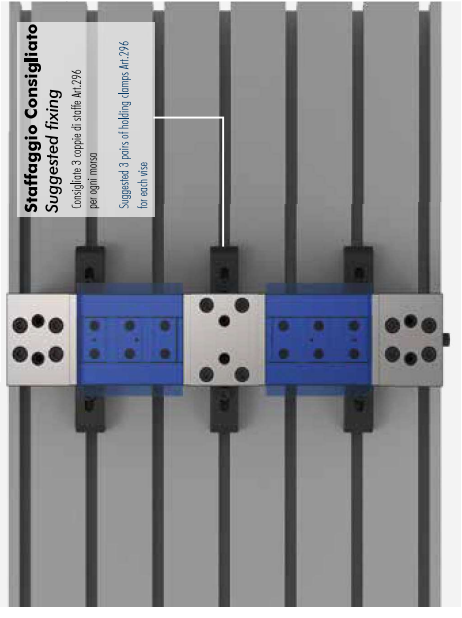
NEW 2021

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 I.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 I.3 X=18mm
Also with code: 2.29.6300 X=18mm



Cava a T
T Slot
Specificare sempre la sua
della vostra macchina
always specify the
machine's T-slot dimension



Art.287 (Pag.4.34)

Dadi a T - T Nuts
Per fissaggio morsa alle
cave T della macchina
For vise clamping on the
machine's T-slots



Art.296
(Art.298 + Art.287)
Configurate 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		2 - 3		4 - 5 - 6			
	M8	M10	M12 *	M16	M12	M16	M12 *	M16
Cava a T slot X T-slots Ref. N°	12 14 16 18	12* 14 16 18	20 22 24 26 28 30 32 34 36 38 40	16 18 20 22 24 26 28 30 32 34 36 38 40	16 18 20 22 24 26 28 30 32 34 36 38 40	16 18 20 22 24 26 28 30 32 34 36 38 40	16 18 20 22 24 26 28 30 32 34 36 38 40	16 18 20 22 24 26 28 30 32 34 36 38 40
Filato vite Screw thread	A 50	50	50	76	76	86	86	86
	B 24	24	24	30	30	40	40	40
	C 6	6	6	6	6	10	10	10
	Ø D 8,5	11	13	17	13	17	13	17
	E 10	10	10	10	13	13	15	15
	Ø F 14	-	-	-	-	-	-	-
	G/G1 14	16/15	17,5/13	19/9	17/22	16/15	26/27	26/27
	H 34	34	34	34	42	42	50	50
	I 8	10	10	10	-	-	-	-
	J 4	4	4	4	10	10	10	10
T ±0.1	15	15	15	15	20	20	26	26
Cod.	2.29.61000 / M8	2.29.61000 / M10	2.29.61000 / M12	2.29.61000 / M16	2.29.63000 / M12	2.29.63000 / M16	2.29.65000 / M12	2.29.65000 / M16

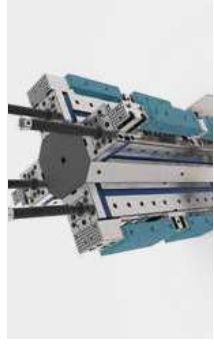
* Scelta consigliata - Suggested choice

* Scelta NON consigliata - NO Suggested choice

Soluzioni personalizzate / Customized solutions

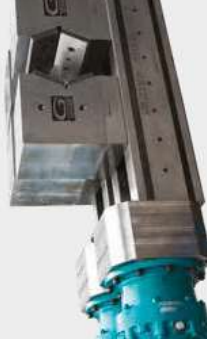
FMS

Soluzioni personalizzate a tutti i vostri problemi di serraggio
Customized solutions for all your clamping problems



Morse FMS automatizzate in verticale
FMS vises automated vertically mounted

Gestione automatica di morsa 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 morsa 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 morsa 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 !

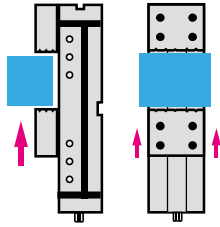
CORPO BASE Art.855

BASE BODY Art.855

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

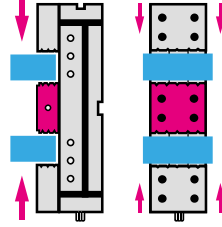
SERRAGGI SINGOLI

SINGLE CLAMPING



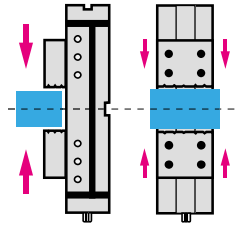
SERRAGGI DOPPI

DOUBLE CLAMPING

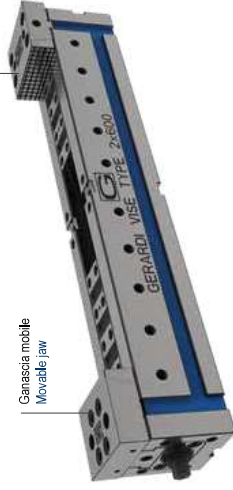


AUTOCENTRANTE

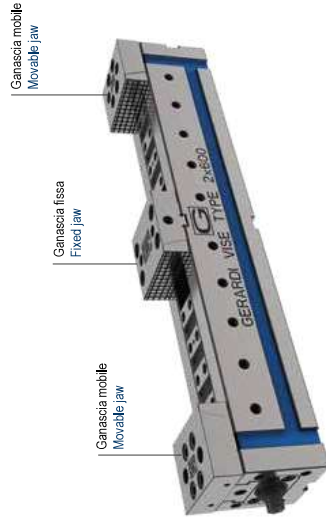
SELF-CENTERING



Ganascia fissa
Fixed jaw



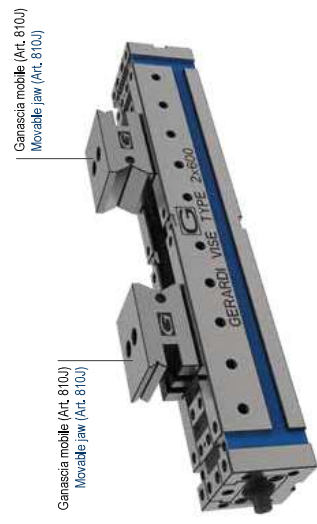
Ganascia mobile
Movable jaw



Ganascia fissa
Fixed jaw

Ganascia mobile
Movable jaw

Ganascia mobile
Movable jaw

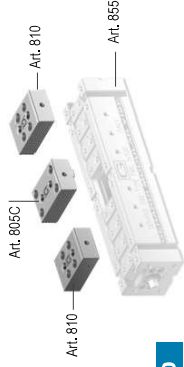


Ganascia mobile (Art. 810U)
Movable jaw (Art. 810U)

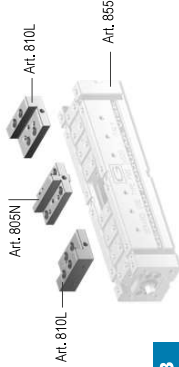
Ganascia mobile (Art. 810U)
Movable jaw (Art. 810U)

VERSIONI PER SERRAGGI DOPPI

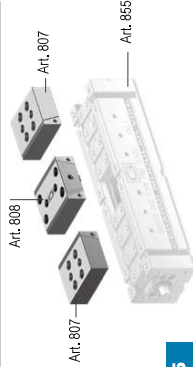
DOUBLE CLAMPING CONFIGURATION



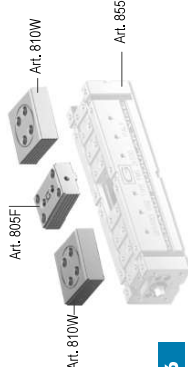
Art. 860



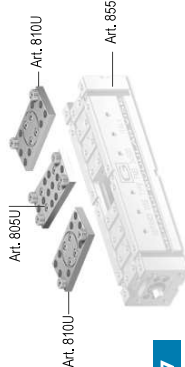
Art. 863



Art. 865



Art. 866



Art. 867



(Art. 855 + 802)

Art. 855D



(Art. 855 + 890 + 266B)

Art. 855F

VERSIONI AUTOCENTRANTI

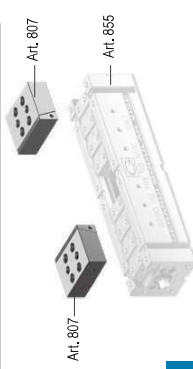
SELF-CENTERING TYPE



Art. 860



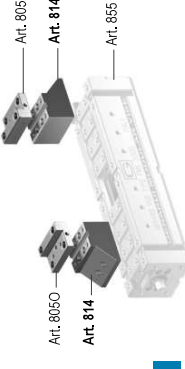
Art. 863



Art. 865



Art. 870

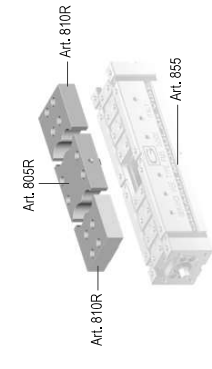


Art. 868



(Art. 855 + 890)

Art. 855E

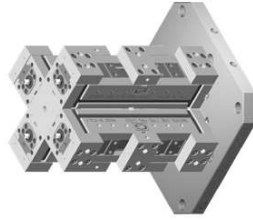


Art. 805R

Art. 810R

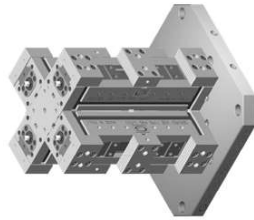
Art. 855

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



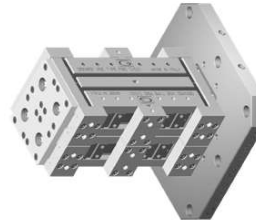
N° 4 MORSE FMS
montate a croce su piastra base (Art. 827A)
con distanziali (Art. 835)

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



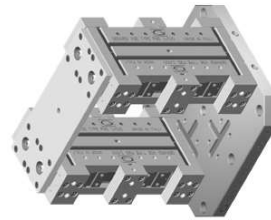
N° 4 MORSE FMS
montate a croce su piastra base (Art. 827A)
con supporto centrale (Art. 836)

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



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

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

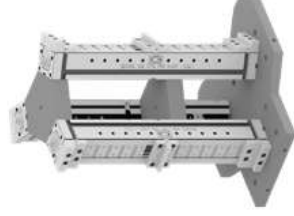


N° 4 MORSE FMS
montate dorso a dorso, su piastra base
(Art. 827A) con piastra di collegamento (Art. 832)

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

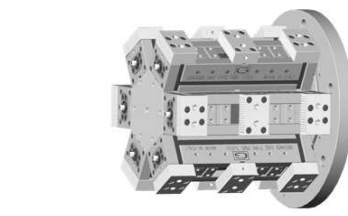
Montaggio ed allineamento morse con distanziali, supporto centrale o piastra di collegamento
Vise and alignment mounted with spacers, center support or connecting plate

CUBI DI MORSE MONTATI VERTICALMENTE VISE TOWERS VERTICALLY ASSEMBLED



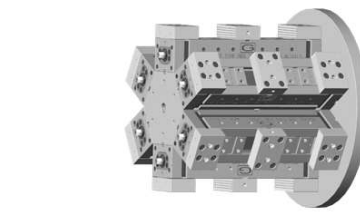
N° 3 morse FMS
montate verticalmente su piastra base a Y (827)
con supporto centrale (Art. 838)

N° 3 FMS VISES
vises vertically mounted on Y base plate (827A)
with hexagon 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 hexagon 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 hexagon
center support (Art. 837)

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

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


Art. 855

 Modulo base universale
CENTINAIA DI GANASCE DISPONIBILI!!

 Universal vise body module
HUNDREDS OF JAWS AVAILABLE!!
Art. 855D

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



Coef.	5.85.5D120	5.85.5D130	5.85.5D230	5.85.5D240	5.85.5D250	5.85.5D340	5.85.5D350
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 Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission
 Chiave dinamometrica Art.357 (Inclusa) - Torque wrench Art.357 (Included)
 Coef. 5.80.21000

Art. 802

 Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission
 Coef. 5.80.23000

Art. 855E

(Art. 855 + 800) Morrsa + motore idraulico / Vise + hydraulic motor

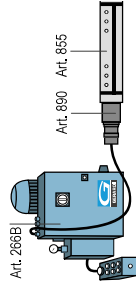


Coef.	5.85.5E120	5.85.5E130	5.85.5E230	5.85.5E240	5.85.5E250	5.85.5E340	5.85.5E350
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Meccanica con predisposizione elettroidraulica completa di motore, piastrina, boccia e filecosira

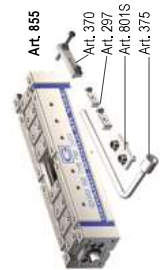
Art. 855F

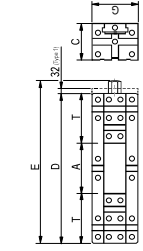
(Art. 855 + 800 + 266B) Morrsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

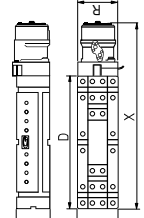
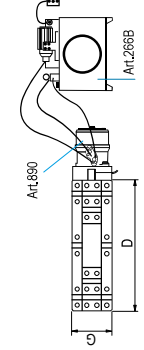


Coef.	5.85.5F120	5.85.5F130	5.85.5F230	5.85.5F240	5.85.5F250	5.85.5F340	5.85.5F350
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Meccanica elettroidraulica completa di centralina idraulica apparecchiatura elettrica con pulsantiera

 Dotazione standard:
 ■ 2 anelli filareti Art. 370
 ■ coppia di tasselli di posizionamento per cavo da 16 mm Art. 377
 ■ chiave a pila Art. 375

Art. 855

 Art. 370
 Art. 297
 Art. 801S
 Art. 375

Art. 855D

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

Art. 855E


3 30 kN		4 30 kN		5 32 kN		6 32 kN	
A	136	136	168	148	128	252	244
C	100					140	160
D	600	700	500	700	800	600	800
E	625	725	825	725	825	725	825
G	125		145			170	190
R	124		144			169	189
S	99		119			139	159
T	232	282	332	276	336	174	242
Y	670	770	870	770	870	-	-
X	837	1037	1037	837	1037	837	1037
kg	50	55	60	66	72	80	88
Coef.	5.85.53800	5.85.53700	5.85.53800	5.85.54500	5.85.54700	5.85.55600	5.85.55800
						5.85.55700	5.85.55900
						5.85.56100	5.85.56100

Art. 855D

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

Coef.	5.85.5D380	5.85.5D370	5.85.5D380	5.85.5D450	5.85.5D470	5.85.5D480	5.85.5D580	5.85.5D590	5.85.5D610
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Art. 802

 Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission
 Coef. 5.80.23000

Art. 855E

(Art. 855 + 800) Morrsa + motore idraulico / Vise + hydraulic motor

Coef.	5.85.5E380	5.85.5E370	5.85.5E380	5.85.5E450	5.85.5E470	5.85.5E480	5.85.5E580	5.85.5E590	5.85.5E610
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Meccanica con predisposizione elettroidraulica completa di motore, piastrina, boccia e filecosira

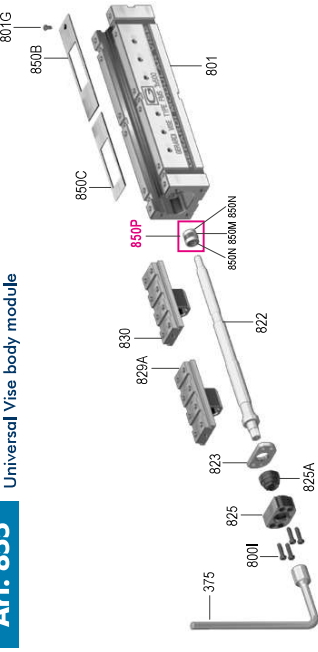
Art. 855F

(Art. 855 + 800 + 266B) Morrsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Coef.	5.85.5F380	5.85.5F370	5.85.5F380	5.85.5F450	5.85.5F470	5.85.5F480	5.85.5F580	5.85.5F590	5.85.5F610
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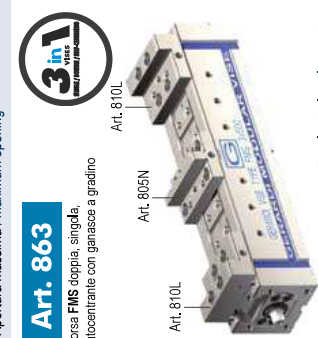
Meccanica elettroidraulica completa di centralina idraulica apparecchiatura elettrica con pulsantiera

Art. 855

 Modulo base universale
 Universal vise body module

Art. 855

Art.	Pag.	Art.	Pag.
375	4.35	850C	5.61
800I	5.61	850P	5.72
801G	5.61	-	-
801I	5.61	-	-
822	5.63	-	-
823	5.59	-	-
825	5.59	-	-
825A	5.61	-	-
829A	5.52	-	-
830	5.52	-	-
850B	5.61	-	-

Art. 863
Morsa FMS doppia, singola, auto-centrante con ganasce a gradino



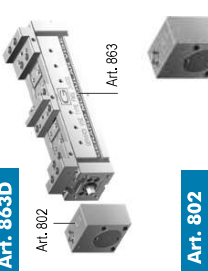
Apertura massima / Maximum opening

	1	2	3
	25 kN	25 kN	30 kN
A	2 x 60	2 x 118	2 x 212
B	25	30	40
C	70	90	100
D	232	300	400
E	249	320	425
G	75	95	125
J	56	64	84
J1	22	24	30
J2	16	16	16
W	74	94	124
kg	8	11	15

Art. 810L
Art. 805N

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

Art. 863D
Morsa + moltiplicatore di coppia / Vise + torque multiplier

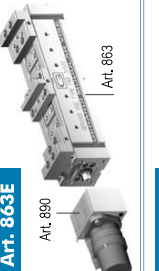


	1	2	3
	25 kN	25 kN	30 kN
A	2 x 60	2 x 118	2 x 212
B	25	30	40
C	70	90	100
D	232	300	400
E	249	320	425
G	75	95	125
J	56	64	84
J1	22	24	30
J2	16	16	16
W	74	94	124
kg	8	11	15

Art. 802

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

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

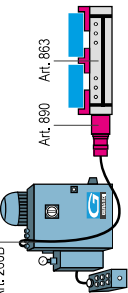


	1	2	3
	25 kN	25 kN	30 kN
A	2 x 60	2 x 118	2 x 212
B	25	30	40
C	70	90	100
D	232	300	400
E	249	320	425
G	75	95	125
J	56	64	84
J1	22	24	30
J2	16	16	16
W	74	94	124
kg	8	11	15

Art. 890

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

Art. 863F
Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

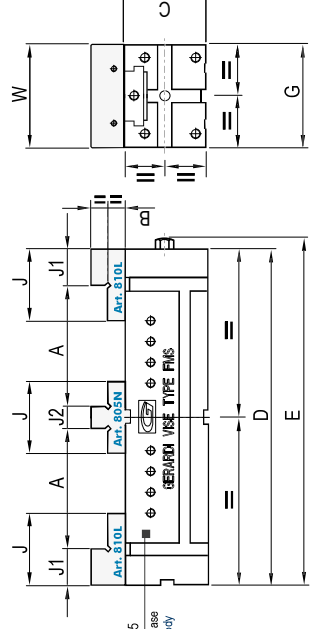


	1	2	3
	25 kN	25 kN	30 kN
A	2 x 60	2 x 118	2 x 212
B	25	30	40
C	70	90	100
D	232	300	400
E	249	320	425
G	75	95	125
J	56	64	84
J1	22	24	30
J2	16	16	16
W	74	94	124
kg	8	11	15

Art. 266B

Standard equipment:

- 2 anelli laterali Art. 370
- 2 viti di bloccaggio per il corpo base Art. 371
- 2 viti di bloccaggio per il corpo base Art. 372
- 1 chiave a pila Art. 375



Art. 855
Corpo base
Base body

Art. 863
Art. 370
Art. 297
Art. 801S
Art. 375

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

	3	4	5	6
	30 kN	30 kN	32 kN	32 kN
A	2 x 262	2 x 312	2 x 362	2 x 412
B	40	50	60	60
C	100	120	140	160
D	600	700	800	900
E	625	725	825	925
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	60

Art. 863D

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

	3	4	5	6
	30 kN	30 kN	32 kN	32 kN
A	2 x 262	2 x 312	2 x 362	2 x 412
B	40	50	60	60
C	100	120	140	160
D	600	700	800	900
E	625	725	825	925
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	60

Art. 863E

Morsa + motore idraulico / Vise + hydraulic motor

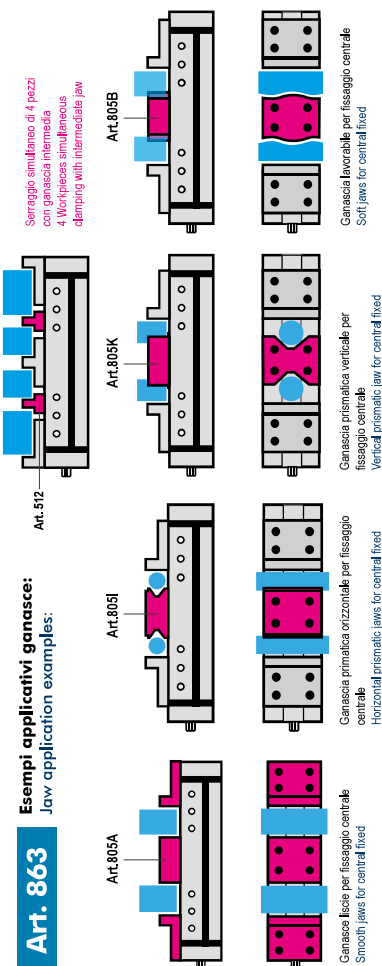
	3	4	5	6
	30 kN	30 kN	32 kN	32 kN
A	2 x 262	2 x 312	2 x 362	2 x 412
B	40	50	60	60
C	100	120	140	160
D	600	700	800	900
E	625	725	825	925
G	125	145	170	190
J	84	98	108	108
J1	30	38	38	38
J2	16	16	16	16
W	124	144	169	189
kg	50	55	60	60

Art. 863F

Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

	3	4	5	6
	30 kN	30 kN	32 kN	32 kN
A	2 x 262	2 x 312	2 x 362	2 x 412
B	40	50	60	60
C	100	120	140	160
D	600	700	800	900
E	625	725	825	925
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	60

Art. 863
Esempi applicativi ganasce:
Jaw application examples:



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

Art. 512

Art. 805A

Art. 805I

Art. 805K

Art. 805B

Ganasce lisce per fissaggio centrale
Smooth jaws for central fixed

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

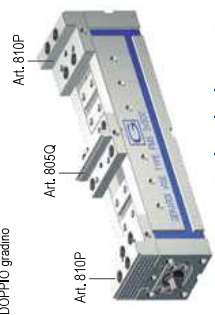
Ganasce prismatica verticale per fissaggio centrale
Vertical prismatic jaws for central fixed

Ganasce lavorabile per fissaggio centrale
Soft jaws for central fixed

Tipo (grandezza) movsa / Vise type (size)

Art. 864
Morsa FMS doppia, singola, autocentrante con ganasce a DOPPIO gradino

NEW



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

Art. 805F
Ganasce fissa con doppio gradino 3x5 LISCA step SMOOTH



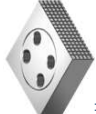
Art. 805G
Ganasce fissa con doppio gradino 3x5 ZIGRINATA Fixed jaw with double 3x5 step SERRATED



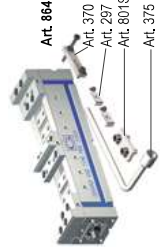
Art. 810O
Ganasce mobile con gradino piccolo e grande Movable jaw with small and large step



Art. 810X
Ganasce mobile oscillante con gradino 3x5 zigmata da un lato con allero a gradino (Art. 810Z) Floating movable jaw with 3x5 step one side serrated with step block pin (Art. 810Z)



Dimensioni standard:
 ■ 2 crassi fileati Art. 370
 ■ coppia di tasselli di posizionamento per una da 16 mm Art. 297
 ■ chiodo a pila Art. 375



Standard equipment:
 ■ 2 workstop Art. 370
 ■ 1 pair of positioning keys for 16 mm Art. 297
 ■ 1 box wrench Art. 375

	1 25 kN		2 25 kN		3 30 kN	
A	2 x 32	2 x 82	2 x 54	2 x 104	2 x 204	2 x 127
A1	2 x 84	2 x 134	2 x 118	2 x 168	2 x 218	2 x 212
B	25		30			40
C	70		90			100
D	232	332	300	400	600	500
E	249	349	320	420	620	525
G	75		95			125
J	56		64			84
J1	24		24			30
J2	16		16			16
W	74		94			124
kg	8	11	20	27	33	40
	40	45				

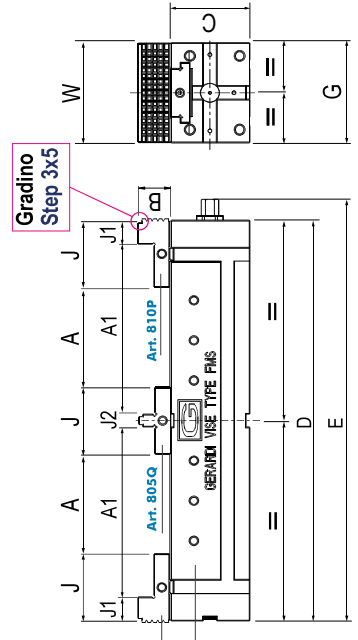
Cod.	5,86.41200	5,86.42300	5,86.42400	5,86.42500	5,86.42600	5,86.43400	5,86.43500
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Cod.	5,80.5F100	5,80.5F200	5,80.5F300
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Cod.	5,80.5G100	5,80.5G200	5,80.5G300
------	------------	------------	------------

Cod.	5,81.0O100	5,81.0O200	5,81.0O300
------	------------	------------	------------

Cod.	5,81.0X100	5,81.0X200	5,81.0X300
------	------------	------------	------------



	3 30 kN		4 30 kN		5 32 kN		6 32 kN	
A	2 x 177	2 x 227	2 x 103	2 x 153	2 x 138	2 x 188	2 x 238	2 x 338
A1	2 x 262	2 x 312	2 x 204	2 x 254	2 x 254	2 x 304	2 x 354	2 x 454
B	40		50		60		60	60
C	100		120		140		160	160
D	600	700	800	600	700	800	800	1000
E	625	725	825	625	725	825	825	1025
G	125		145		170		190	190
J	84		98		108		108	108
J1	30		38		38		38	38
J2	16		16		16		16	16
W	124		144		169		189	189
kg	50	55	60	68	76	85	93	124
	134	144	144	144	144	144	144	200
	200	220	220	240	240	240	240	240

Cod.	5,86.43600	5,86.43700	5,86.43800	5,86.44500	5,86.44600	5,86.44700	5,86.44800	5,86.45500	5,86.45700	5,86.45800	5,86.46800	5,86.46900	5,86.46100
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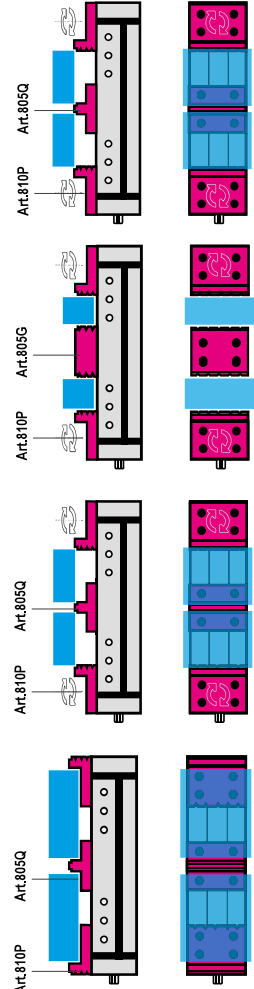
Art. 805F
Cod. 5,80.5F300 5,80.5F400 5,80.5F500 5,80.5F300

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 strutturare il lato zigrinato delle ganasce mobili Art. 810P sostituisce la ganasce fissa centrale con Art. 805G
 To exhibit the serrated side of the movable jaws Art. 810P change the fixed central jaw with Art. 805G



		3 30 kN		4 30 kN		5 32 kN		6 32 kN	
A	2 x 146	2 x 196	2 x 246	2 x 115	2 x 165	2 x 90	2 x 140	2 x 216	2 x 316
B	40	40	50	60	60	60	60	60	60
C	100	100	120	140	140	140	140	160	160
D	600	700	800	500	600	700	800	800	900
E	625	725	825	525	625	725	825	825	925
G	125	125	145	145	145	170	170	190	190
J	98	98	117	117	117	132	132	119	119
J1	111	111	136	136	136	155	155	130	130
W	124	124	144	144	144	169	169	189	189
kg	54	59	64	74	82	91	99	154	215
	215	235	255	215	235	255	215	235	255
Coil.	5,86.53600	5,86.53700	5,86.53800	5,86.54500	5,86.54600	5,86.54700	5,86.54800	5,86.55600	5,86.56800
	5,86.50980	5,86.51080	5,86.51180	5,86.51980	5,86.52080	5,86.52180	5,86.52280	5,86.53080	5,86.53980

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

Coil.	5,86.50360	5,86.50370	5,86.50380	5,86.50460	5,86.50470	5,86.50480	5,86.50560	5,86.50680	5,86.50980
	5,86.50980	5,86.51080	5,86.51180	5,86.51980	5,86.52080	5,86.52180	5,86.52280	5,86.53080	5,86.53980

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

Coil.	5,80.23000	5,80.24000	5,80.25000
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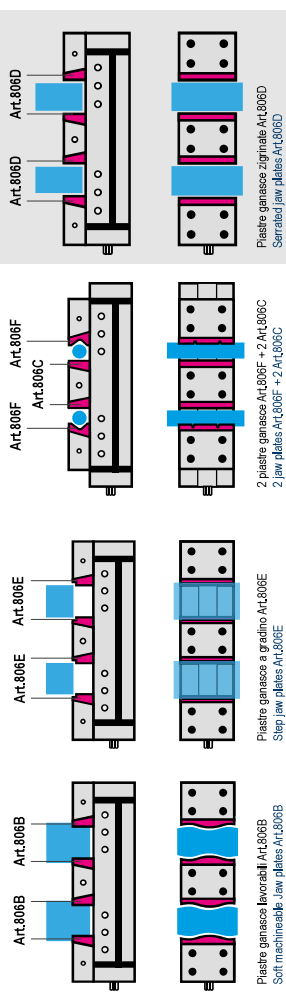
Art. 865E (Art. 865 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Coil.	5,86.5E360	5,86.5E370	5,86.5E380	5,86.5E450	5,86.5E460	5,86.5E470	5,86.5E480	5,86.5E570	5,86.5E580	5,86.5E590	5,86.5E610
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Art. 865F (Art. 865 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Coil.	5,86.5F360	5,86.5F370	5,86.5F380	5,86.5F450	5,86.5F460	5,86.5F470	5,86.5F480	5,86.5F570	5,86.5F580	5,86.5F590	5,86.5F610
-------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------

Art. 865 Esempi applicativi piastre ganasse: Jaw plates application examples:



		1 25 kN		2 25 kN		3 30 kN	
A	2 x 52	2 x 30	2 x 80	2 x 130	2 x 180	2 x 46	2 x 96
B	25	30	30	40	40	40	40
C	70	90	90	100	100	100	100
D	332	300	400	500	600	400	500
E	349	320	420	520	620	425	525
G	75	96	96	125	125	125	125
J	63	76	76	98	98	98	98
J1	70	88	88	111	111	111	111
W	74	94	94	124	124	124	124
kg	12	23	30	36	43	46	51
	46	51	51	51	51	51	51
Coil.	5,86.51300	5,86.52300	5,86.52400	5,86.52500	5,86.52600	5,86.53400	5,86.53500
	5,86.50980	5,86.51080	5,86.51180	5,86.51980	5,86.52080	5,86.52880	5,86.53180

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

Coil.	5,86.5D130	5,86.5D230	5,86.5D240	5,86.5D250	5,86.5D280	5,86.5D340	5,86.5D350
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Art. 802 Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission

Coil.	5,80.21000	5,80.22000	5,80.23000
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Art. 865E (Art. 865 + 890) Morsa + motore idraulico / Vise + hydraulic motor

Coil.	5,86.5E130	5,86.5E230	5,86.5E240	5,86.5E250	5,86.5E280	5,86.5E340	5,86.5E350
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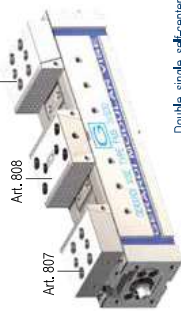
Art. 865F (Art. 865 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Coil.	5,86.5F130	5,86.5F230	5,86.5F240	5,86.5F250	5,86.5F280	5,86.5F340	5,86.5F350
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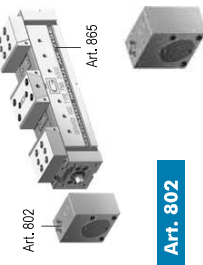
Art. 865

Morsa FMS doppia, singola, autocentrante con ganasse a cambio rapido discendente (sistema a pettine) Art. 807

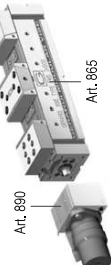


Double, single, self-centering FMS vise with quick change pull down jaws (comb system)

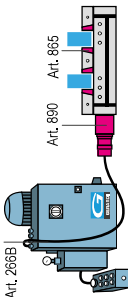
Art. 802



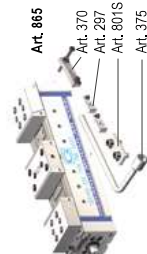
Art. 865E



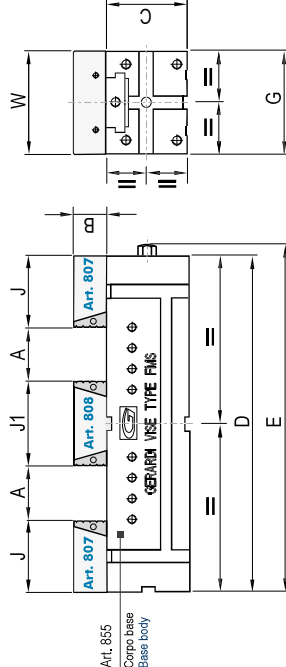
Art. 266B



Distribuzione standard:
 ■ 2 anelli fissi Art. 370
 ■ Cilindro di fissaggio di posizionamento per uno dei 16 mm Art. 377
 ■ Cilindro a spina Art. 375



Standard equipment:
 ■ 2 workstop Art. 370
 ■ part of positioning key-ins for 16 mm Art. 377
 ■ 1 box wrench Art. 375



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
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Art. 806*
Ganasca fissa con piastra zigninata intercambiabile rapida
Fixed jaw with quick interchangeable serrated jaw plate

Cod.	5.80.61000	5.80.62000	5.80.63000	5.80.64000	5.80.65000	5.80.66000
------	------------	------------	------------	------------	------------	------------

* Viti per fissaggio a richiesta Fixing screws on request

Art. 807*
Ganasca mobile con piastra zigninata intercambiabile rapida
Movable jaw with quick interchangeable serrated jaw plate

Cod.	5.80.71000	5.80.72000	5.80.73000	5.80.74000	5.80.75000	5.80.76000
------	------------	------------	------------	------------	------------	------------

* Viti per fissaggio a richiesta Fixing screws on request

Art. 808*
Ganasca fissa doppia con piastra zigninata intercambiabile rapida
Double fixed jaw with quick interchangeable serrated jaw plate

Cod.	5.80.81000	5.80.82000	5.80.83000	5.80.84000	5.80.85000	5.80.86000
------	------------	------------	------------	------------	------------	------------

* Viti per fissaggio a richiesta Fixing screws on request

Art. 806A
Corpo ganasca fissa per piastra ganasca intercambiabile rapida
Fixed jaw body for quick interchangeable jaw plate

Cod.	5.80.6A100	5.80.6A200	5.80.6A300	5.80.6A400	5.80.6A500	5.80.6A600
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Art. 807A
Corpo ganasca mobile per piastra ganasca intercambiabile rapida
Movable jaw body for quick interchangeable jaw plate

Cod.	5.80.7A100	5.80.7A200	5.80.7A300	5.80.7A400	5.80.7A500	5.80.7A600
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Art. 808A
Corpo ganasca fissa doppia per piastra ganasca intercambiabile rapida
Double fixed jaw body for quick interchangeable jaw plate

Cod.	5.80.8A100	5.80.8A200	5.80.8A300	5.80.8A400	5.80.8A500	5.80.8A600
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Art. 808B
Corpo ganasca fissa doppia ridotte per piastra ganasca intercambiabile rapida
Double fixed jaw body narrow for quick interchangeable jaw plate

Cod.	5.80.8B100	5.80.8B200	5.80.8B300	5.80.8B400	5.80.8B500	5.80.8B600
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RAPIDA SOSTITUZIONE DELLE PIASTRE GANASCE DISCENDENTI SENZA BISOGNO DI ALCUN UTENSILE

Il nuovo sistema con piastra ganasca intercambiabile, conferisce alla morsa FMS un ulteriore aumento di flessibilità dato dalla rapidità di sostituzione delle piastrine ganasce e dalla precisione di riposizionamento.

La rapidità di sostituzione delle piastrine ganasce è resa possibile dal nuovo sistema con perno a molla (PART.A), mentre le righe prismatiche (PART.B) effettuate con molle sagomata sui piani di appoggio rendono possibile un riposizionamento di elevata precisione. La vasta gamma di piastrine ganasce intercambiabili va a soddisfare le più svariate esigenze di lavorazione.

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

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

Art. 806F
Piastra ganasca intercambiabile prismatica a pettine
Prismatic comb interchangeable jaw plate

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

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

Piastra ganasca 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

PIASTRE GANASCE INTERCAMBIABILI RAPIDE
QUICK INTERCHANGEABLE JAW PLATES

Tipo (grandezza) / Type (size)	1	2	3	4	5	6
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Art. 806B
Piastra ganasca lavorabile a pettine
Soft comb jaw plate

Cod.	5.80.6B100	5.80.6B200	5.80.6B300	5.80.6B400	5.80.6B500	5.80.6B600
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Art. 806C
Piastra ganasca liscia a pettine
Smooth comb jaw plate

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

Art. 806D
Piastra ganasca zigninata a pettine
Serrated comb jaw plate

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

Art. 806E
Piastra ganasca a gradino a pettine
Step comb jaw plate

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

Art. 806SLE
Piastra ganasca scaricata a pettine
Discharged step comb jaw plate

Cod.	5.80.6SLE1	5.80.6SLE2	5.80.6SLE3	5.80.6SLE4	5.80.6SLE5	5.80.6SLE6
------	------------	------------	------------	------------	------------	------------

Art. 806SLD
Piastra ganasca scaricata a pettine
Discharged comb jaw plate

Cod.	5.80.6SLD1	5.80.6SLD2	5.80.6SLD3	5.80.6SLD4	5.80.6SLD5	5.80.6SLD6
------	------------	------------	------------	------------	------------	------------

Art. 806G
Piastra ganasca a gradino a pettine con inserti GRIP
Comb step jaw plate with GRIP inserts

Cod.	5.80.6G100	5.80.6G200	5.80.6G300	5.80.6G400	5.80.6G500	5.80.6G600
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Art. 806H
Piastra ganasca bombata a pettine
Round comb jaw plate

Cod.	5.80.6H100	5.80.6H200	5.80.6H300	5.80.6H400	5.80.6H500	5.80.6H600
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Art. 806M
Piastra ganasca a pettine per angolo di 30° o 45°
30° o 45° angle comb jaw plate

Cod.	5.80.6M100	5.80.6M200	5.80.6M300	5.80.6M400	5.80.6M500	5.80.6M600
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KIT RISPARMIO - SAVING KIT

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

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

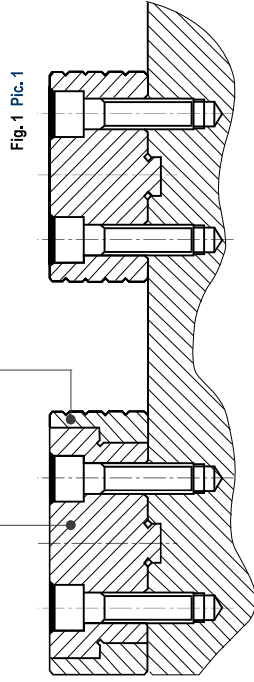


Fig. 1 Pic. 1

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)

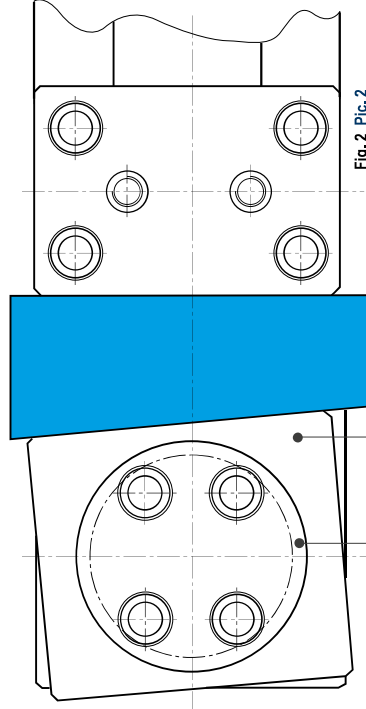


Fig. 2 Pic. 2

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 parallel (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 lifting of the parts while being worked. The safety of the workholding is guaranteed.

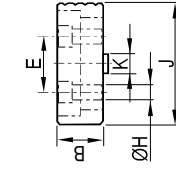
GANASCE MOBILI OSCILLANTI

FLOATING MOVABLE JAWS

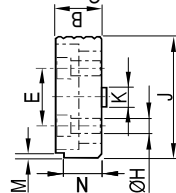
Tipo (grandezza) / Type (size)

	1	2	3	4	5	6
Art. 810W* 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) * Set viti per fissaggio a richiesta - Set of fixing screws on request						
Cod.	5,81,0W100	5,81,0W200	5,81,0W300	5,81,0W400	5,81,0W500	5,81,0W600
Art. 810X* Ganascia mobile oscillante con gradino 3x5 zigrinata da un lato con albero a gradino (Art. 810Z) Floating movable jaw with 3x5 step one side serrated with step block pin (Art. 810Z) * Set viti per fissaggio a richiesta - Set of fixing screws on request						
Cod.	5,81,0X100	5,81,0X200	5,81,0X300	5,81,0X400	5,81,0X500	5,81,0X600
Art. 810Y* Ganascia mobile oscillante con gradino 3x5 zigrinata da un lato con albero a gradino (Art. 810Z) Floating movable jaw with 3x5 step one side serrated with step block pin (Art. 810Z) * Set viti per fissaggio a richiesta - Set of fixing screws on request						
Cod.	5,81,0Y100	5,81,0Y200	5,81,0Y300	5,81,0Y400	5,81,0Y500	5,81,0Y600
Art. 810Z Albero a gradino per ganasce mobili oscillanti Step block pin for floating movable jaw						
Cod.	5,81,0Z100	5,81,0Z200	5,81,0Z300	5,81,0Z400	5,81,0Z500	5,81,0Z600
Art. 810WA Corpo ganascia mobile oscillante Body floating movable jaw one side serrated						
Cod.	5,81,0WA10	5,81,0WA20	5,81,0WA30	5,81,0WA40	5,81,0WA50	5,81,0WA60
Art. 810XA Corpo ganascia mobile oscillante con gradino 3x5 zigrinata da un lato Body floating movable jaw with 3x5 step one side serrated						
Cod.	5,81,0XA10	5,81,0XA20	5,81,0XA30	5,81,0XA40	5,81,0XA50	5,81,0XA60
Art. 810YA Corpo ganascia mobile oscillante con gradino 3x5 zigrinata da un lato Body floating movable jaw with 3x5 step one side serrated						
Cod.	5,81,0YA10	5,81,0YA20	5,81,0YA30	5,81,0YA40	5,81,0YA50	5,81,0YA60

Art. 810W



Art. 810X



Tipo (grandezza) / morse / Vise (type) size

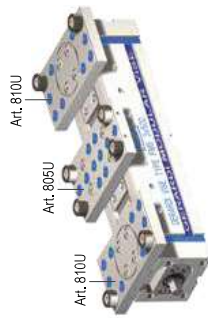
mm	1	2	3	4	5	6	Tolleranze / Tolerance
B	25	30	40	50	60	60	-0,02
D	20	25	38	48	44	54	-
E	32	40	50	60	68	68	-
F	40	50	65	85	100	100	-
G	10	15	20	25	25	25	-
H	9	11	13	17	17	22	-
L	M5						-
K							H7
M	5						±0,01
N	3						± 0,02
J	72	84	108	128	135	143	-0,02
W	74	94	124	144	169	189	-

Tipo (grandezza) morosa / Vise type (size)



Art. 867

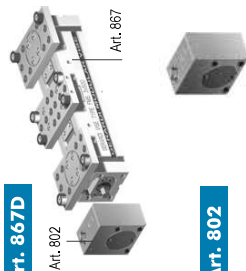
Morsa FMS doppia, singola, auto-centrante con ganasce oscillanti con inserti regolabili



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

Art. 867D

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

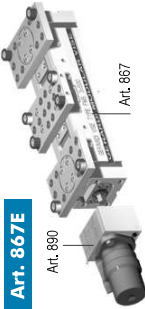


Art. 802



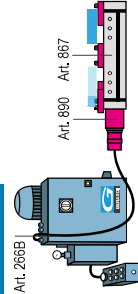
Art. 867E

(Art. 867 + 800) Morsa + motore idraulico / Vise + hydraulic motor

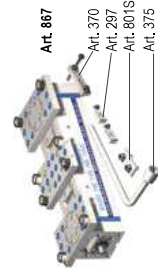


Art. 867F

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



Dotazione standard:
 ■ 2 anelli laterali Art. 370
 ■ coppia di fascelli di posizionamento per cavo da 16 mm Art. 371
 ■ chiave a pila Art. 375



Standard equipment:
 ■ 2 worksets Art. 370
 ■ pair of positioning keys for 16 mm dia Art. 371
 ■ box wrench Art. 375

	1 25 kN	2 25 kN	3 30 kN
A1	91	141	191
B	20	20	20
C	70	90	100
D	332	300	400
E	349	320	420
G	75	95	125
J1	50	50	70
J2	25	25	35
Ø	30 (H = 16)	30 (H = 16)	30 (H = 16)
W	100	120	170
kg	11	20	27
	40	40	45
Cod.	5,86,7J130	5,86,7J200 5,86,7J240 5,86,7J250 5,86,7J260 5,86,7J300	5,86,7J340 5,86,7J350

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

Cod.	5,86,7D130	5,86,7D230 5,86,7D240 5,86,7D250 5,86,7D260 5,86,7D340 5,86,7D350
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Moltiplicatore di coppia con rinvio angolare - Mechanical with torque multiplier with angular transmission

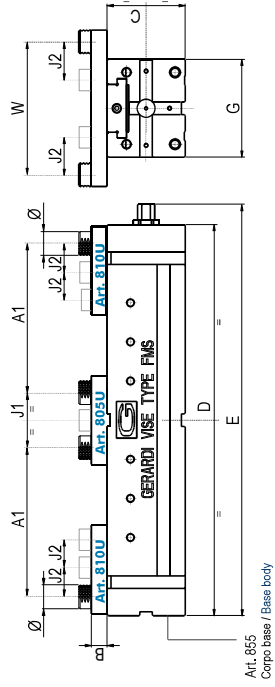
Cod.	5,80,21000	5,80,22000	5,80,23000
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(Art. 867 + 800) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	5,86,7E130	5,86,7E230 5,86,7E240 5,86,7E250 5,86,7E260 5,86,7E340 5,86,7E350
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(Art. 867 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	5,86,7F130	5,86,7F230 5,86,7F240 5,86,7F250 5,86,7F260 5,86,7F340 5,86,7F350
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Art. 855
Corpo base / Base body

	3 30 kN	4 30 kN	5 32 kN	6 32 kN
A1	291	341	191	241
B	20	30	231	331
C	100	120	35	160
D	600	700	800	800
E	625	725	825	825
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	240	220	240
Cod.	5,86,7J390 5,86,7J370 5,86,7J380 5,86,7J450 5,86,7J460 5,86,7J470 5,86,7J480 5,86,7J500 5,86,7J570 5,86,7J580 5,86,7J680 5,86,7J690 5,86,7J610			

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

Cod.	5,86,7D390 5,86,7D370 5,86,7D380 5,86,7D450 5,86,7D460 5,86,7D470 5,86,7D480 5,86,7D500 5,86,7D570 5,86,7D580 5,86,7D680 5,86,7D690 5,86,7D610
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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
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Art. 867E (Art. 867 + 800) Morsa + motore idraulico / Vise + hydraulic motor

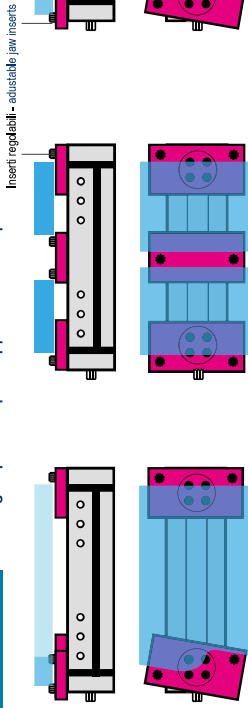
Cod.	5,86,7E390 5,86,7E370 5,86,7E380 5,86,7E450 5,86,7E460 5,86,7E470 5,86,7E480 5,86,7E500 5,86,7E570 5,86,7E580 5,86,7E680 5,86,7E690 5,86,7E610
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Art. 867F (Art. 867 + 890 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	5,86,7F390 5,86,7F370 5,86,7F380 5,86,7F450 5,86,7F460 5,86,7F470 5,86,7F480 5,86,7F500 5,86,7F570 5,86,7F580 5,86,7F680 5,86,7F690 5,86,7F610
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Art. 867

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

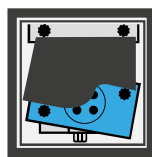


4 inserti - 4 jaw inserts

6 inserti - 6 jaw inserts

8 inserti - 8 jaw inserts

FUNZIONAMENTO DELLE GANASCE MOBILI OSCILLANTI CON INSERTI HOW TO OPERATE FLOATING MOVABLE JAWS WITH INSERTS



Art. 810UA

Corpo ganascia mobile oscillante
Body floating movable jaw

Art. 805UA

Corpo ganascia fissa con inserti
Body fixed jaw with inserts

Art. 810UZ

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

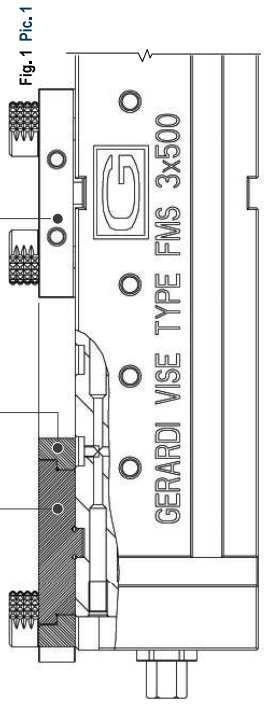


Fig. 1 Pic. 1

Art. 812

Ganascia mobile oscillante con inserti
Floating movable jaw with inserts

Art. 84U

Tappo in alluminio (EXTRA)
Aluminum cap (EXTRA)

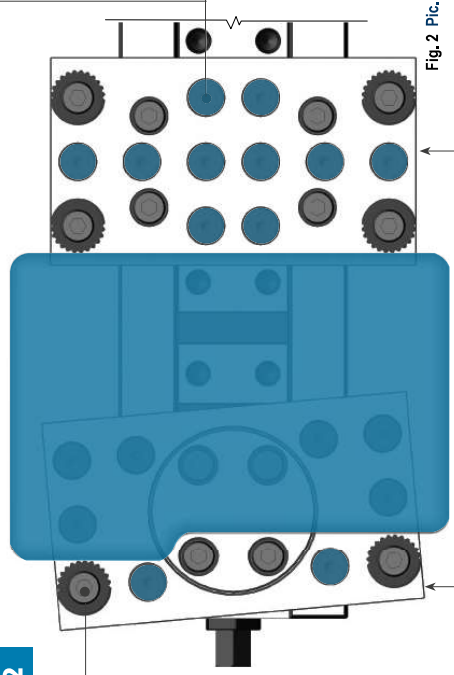


Fig. 2 Pic. 2

Art. 810U

Ganascia mobile oscillante con inserti
Floating movable jaw with inserts

Art. 805U

Ganascia fissa con inserti
Fixed jaw with inserts

Le ganascce mobili oscillanti consentono il serraggio di pezzi di forma irregolare. Locali non risultano paralleli (Fig. 2). Questo è reso possibile dall'albero a gradino (Art. 810UZ - Pic. 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 ganascce mobili oscillanti della morsa FMS.

Le ganascce mobili oscillanti consentono il serraggio di pezzi di forma irregolare. Locali non risultano paralleli (Fig. 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 lifting 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.

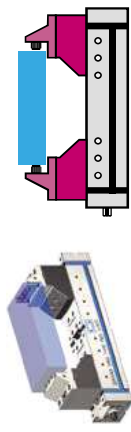
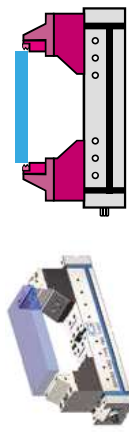
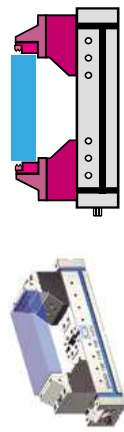
GANASCE FISSE & MOBILI FMS FMS FIXED AND MOVABLE JAWS

Tipo (grandezza) / Type (size)

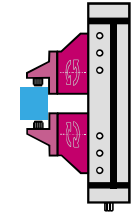
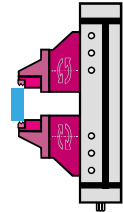
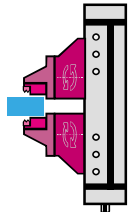
	1	2	3	4	5	6
Art. 810U* Ganascia mobile regolabile oscillante con inserti Floating movable jaw with inserts * Set viti per fissaggio a richiesta - Set of fixing screws on request	Cod. 5.81.0U100	5.81.0U200	5.81.0U300	5.81.0U400	5.81.0U500	5.81.0U600
Art. 810UA Corpo ganascia mobile oscillante Body floating movable jaw	Cod. 5.81.0UA10	5.81.0UA20	5.81.0UA30	5.81.0UA40	5.81.0UA50	5.81.0UA60
Art. 810UZ* Albero a gradino per ganascce mobili oscillanti Step block pin for floating movable jaw * Set viti per fissaggio a richiesta - Set of fixing screws on request	Cod. 5.81.0UZ10	5.81.0UZ20	5.81.0UZ30	5.81.0UZ40	5.81.0UZ50	5.81.0UZ60
Art. 810Q* Ganascia mobile regolabile con inserti Movable jaw with inserts	Cod. 5.81.0Q100	5.81.0Q200	5.81.0Q300	5.81.0Q400	5.81.0Q500	5.81.0Q600
Art. 810QA Corpo ganascia regolabile mobile per inserti Body movable jaw for inserts	Cod. 5.81.0QA10	5.81.0QA20	5.81.0QA30	5.81.0QA40	5.81.0QA50	5.81.0QA60
Art. 805U* Ganascia fissa regolabile con inserti Fixed jaw with inserts	Cod. 5.80.5U100	5.80.5U200	5.80.5U300	5.80.5U400	5.80.5U500	5.80.5U600
Art. 805UA Corpo ganascia fissa regolabile per inserti Body fixed jaw per inserti	Cod. 5.80.5UA10	5.80.5UA20	5.80.5UA30	5.80.5UA40	5.80.5UA50	5.80.5UA60
Art. 812 Inserto liscio e zigrinato Smooth and serrated insert	Ø	30	40			
	H	16	30			
Art. 812A Inserto liscio Smooth insert	Cod.	5.81.21000	5.81.25000			
	Cod.	5.81.2A100	5.81.2A500			
	Cod.	5.81.2C100	5.81.2C500			
Art. 812C Inserto zigrinato Serrated insert	Ø	30	40			
	H	28	50			
	Cod.	5.81.31000	5.81.35000			
	Cod.	5.81.3A100	5.81.3A500			
	Cod.	5.81.3C100	5.81.3C500			
Art. 813 Inserto liscio e zigrinato alto Smooth and serrated high insert	Ø	30	40			
	H	16	30			
Art. 813A Inserto liscio alto Smooth high insert	Cod.	5.81.131000	5.81.150000			
	Cod.	5.81.13A100	5.81.15A500			
Art. 813C Inserto zigrinato alto Serrated high insert	Ø	30	40			
	H	16	30			
Art. 815 Inserto liscio e zigrinato a gradino Pair of smooth and serrated step insert	Cod.	5.81.151000	5.81.150000			
	Cod.	5.81.15A100	5.81.15A500			
Art. 815A Inserto liscio a gradino Smooth step insert	Ø	40	60			
	H	40	80			
Art. 815C Inserto zigrinato a gradino Serrated step insert	Cod.	5.81.12B100	5.81.12B500			
Art. 812B Inserto in acciaio lavorabile Insert in machinable steel metal	Ø	40	60			
	H	40	80			
Art. 84U Tappo in alluminio (EXTRA) Aluminum cap (EXTRA)	Cod.	5.84.U1000	5.84.U5000			

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

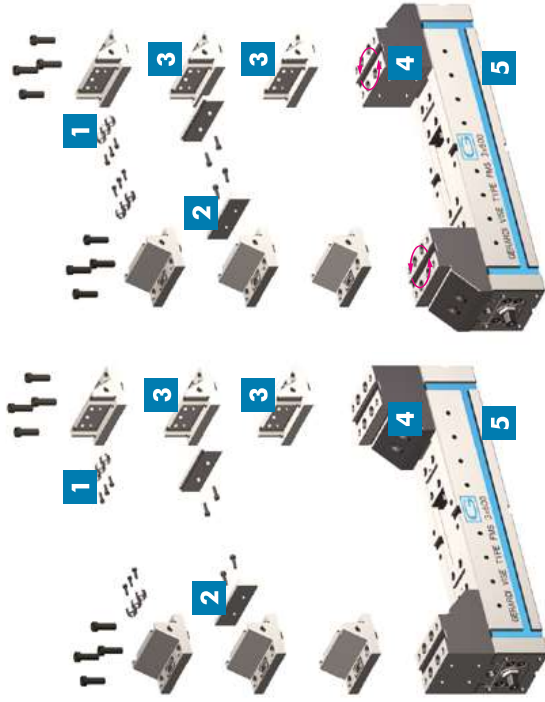


Orientamento base mobile Art.814 per chiusura ganasce a zero
Movable base Art.814 oriented in order to close jaws completely



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 GANASCHE FISSE
BASE FOR FIXED JAWS
- 5** Art.855
CORPO BASE CUBO
CUBE BASE BODY



Possibilità di utilizzo di qualsiasi ganasce fissa FMS anziché del corpo ganasce 805V. Possibilità di due posizioni per ciascuna ganasce fissa e per base ganasce mobile Art.814
Possibility to use each FMS fixed jaw instead of jaw body Art.805V. Possibility of two positions for each fixed jaw and for movable base jaw Art.814

GANASCHE & PIASTRE GANASCHE PER Art.868 JAWS & JAW PLATES FOR Art.868

Tipo (grandezza) / Type (size)

6

Art. 805V*

Ganascia per piastrelle e puntali
Jaw for plates and points



Cod.	5,80,5V100	5,80,5V200	5,80,5V300	5,80,5V400	5,80,5V500	5,80,5V600
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* Viti per fissaggio a richiesta Fixing screws on request

Art. 90

Puntale temprato GRIP
Hardened GRIP Insert



Cod.	5,90,10000				
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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
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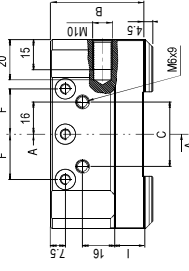
Per qualsiasi piastra piana speciale, raddoppiare il prezzo
For special Taylor made straight jaw plate double the price



**PIASTRE GANASCHE "GRIP" JAW PLATES
MINOR SUPERFICIE DI CONTATTO + PRESSIONE DI SERRAGGIO
LESS SURFACE CONTACT + CLAMPING PRESSURE**

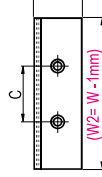
Art. 805VA

Corpo Ganasce
Jaw for plates and points



Art. 247T

Piastrina piana temprata GRIP
Hardened straight jaw plate GRIP



Art.90

PUNTALE TEMPRATO GRIP
HARDENED GRIP POINT



Art.247T

PIASTRINA PIANA GRIP
STRAIGHT JAW PLATE GRIP



Art.805VA

CORPO GANASCIA
JAW PLATE BODY



Art.814

BASE PER GANASCHE FISSE
BASE FOR FIXED JAWS



Art.855

CORPO BASE CUBO
CUBE BASE BODY



mm	1	2	3	4	5	6
W	74	94	124	144	169	189
A	12	12	13	13	18	18
B	39,5	47	57	61	66	86
B2	24,5	32	39	43	48	56
C	25	32	50	50	76	68
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	20
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) morsea / Vise type (size)

	1 25 kN	2 25 kN	3 30 kN
A	10 / 25	20 / 50	40 / 100
A1	10 / 15	10 / 25	25 / 50
B	34	55	90
C	70	90	100
D	232	300	400
E	249	349	425
F	104	145	190
G	75	95	125
J	48	102	132
W	50	75	100
kg	9	23	47
Cod.	5.87.01200	5.87.02300	5.87.03400

Art. 870

Morsa FMS autocentrante (opzione doppia o singola) con ganasce prismatiche



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

Art. 870D

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

Cod.	5.87.0D120	5.87.0D230	5.87.0D240	5.87.0D250	5.87.0D260	5.87.0D340	5.87.0D350
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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
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Art. 870E

(Art. 870 + 880) 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	5.87.0E350
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Art. 870F

(Art. 870 + 880 + 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	5.87.0F350
------	------------	------------	------------	------------	------------	------------	------------

Art. 870D

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

Cod.	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	5.87.0D610
------	------------	------------	------------	------------	------------	------------	------------	------------	------------	------------

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
------	------------	------------	------------

Art. 870E

(Art. 870 + 880) Morsa + motore idraulico / Vise + hydraulic motor

Cod.	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	5.87.0E610
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Art. 870F

(Art. 870 + 880 + 266B) Morsa + motore idraulico + centralina / Vise + hydraulic motor + power unit

Cod.	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	5.87.0F610
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Art. 870

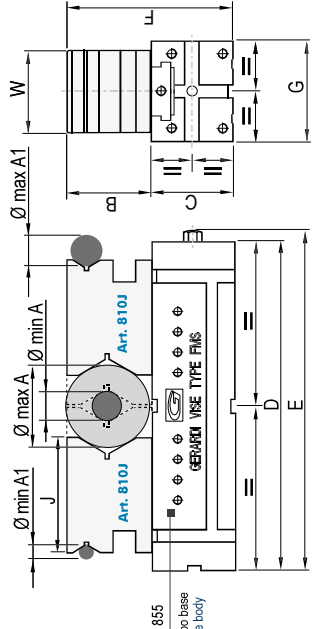
Dimensioni standard:

- 2 anelli laterali Art. 370
- 2 workshop Art. 370
- coppia di tasselli di posizionamento per carico da 16 tmm Art. 377
- chiave a pipa Art. 375

Art. 870

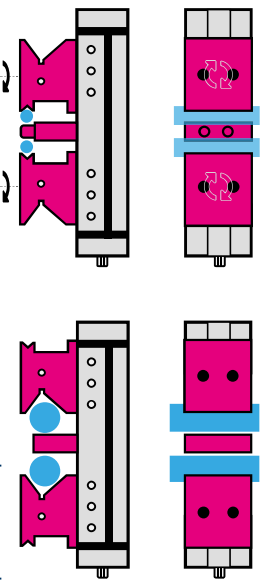
Standard equipment:

- 2 workshop Art. 370
- 2 parti di positioning keys-mm for 16 tmm Art. 377
- 1 box wrench Art. 375



Art. 870

Esempi applicativi ganasce prismatiche: Prismatic jaws application examples:



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

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

Tipo (grandezza) morosa / Vise type (size)

	1	2	3
	25 kN	25 kN	30 kN
A	85	185	170
A1	115/200	115/300	130/400
B	25	30	40
C	70	90	100
D	232	300	400
E	249	349	420
G	75	95	125
W	74	94	124
kg	7	10	18
	25	32	39
	40	40	45

Apertura massima / Maximum opening
 Minima apertura interno-esterno / Minimum opening inside-outside

Art. 800
 Morsa a Serraggio Meccanico solo per serraggi singoli



Mechanical Clamping vise only for single clamping

Art. 800Z
 Corpo morosa Vise body

Art. 800A
 Meccanica con predisposizione idraulica solo per serraggi singoli / Mechanical with prepared hydraulic connection only for single clamping



Art. 862A
 Connettore Idraulico - Hydraulic Conexion

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

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



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

	277	377	360	460	560	660	470	570
Nm	Max 20	Max 25	Max 25	Max 25	Max 25	Max 25	Max 20	Max 20
Coef.	5,80,00120	5,80,00130	5,80,00230	5,80,00240	5,80,00250	5,80,00280	5,80,00340	5,80,00350



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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

Tipo (grandezza) morosa / Vise type (size)

	1	2	3
	25 kN	25 kN	30 kN
A	85	185	170
A1	115/200	115/300	130/400
B	25	30	40
C	70	90	100
D	232	300	400
E	249	349	420
G	75	95	125
W	74	94	124
kg	7	10	18
	25	32	39
	40	40	45

Apertura massima / Maximum opening
 Minima apertura interno-esterno / Minimum opening inside-outside

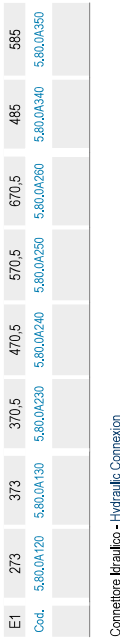
Art. 800
 Morsa a Serraggio Meccanico solo per serraggi singoli



Mechanical Clamping vise only for single clamping

Art. 800Z
 Corpo morosa Vise body

Art. 800A
 Meccanica con predisposizione idraulica solo per serraggi singoli / Mechanical with prepared hydraulic connection only for single clamping



Art. 862A
 Connettore Idraulico - Hydraulic Conexion

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

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



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

	277	377	360	460	560	660	470	570
Nm	Max 20	Max 25	Max 25	Max 25	Max 25	Max 25	Max 20	Max 20
Coef.	5,80,00120	5,80,00130	5,80,00230	5,80,00240	5,80,00250	5,80,00280	5,80,00340	5,80,00350



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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

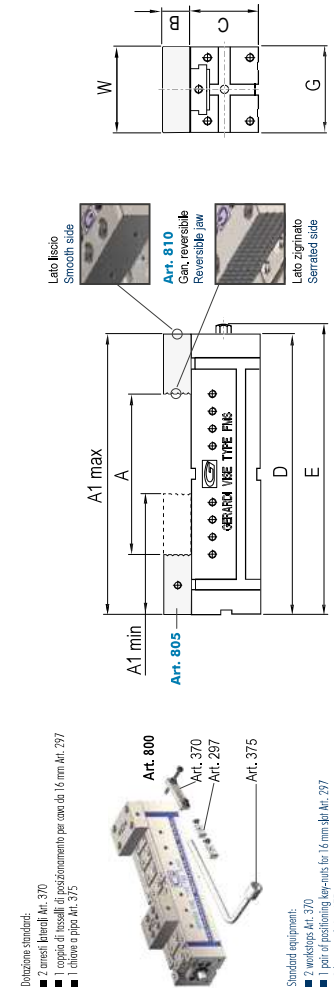
	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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

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

	670	770	870	770	870	685	785	885
Nm	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20	Max 20
Coef.	5,80,00360	5,80,00370	5,80,00380	5,80,00460	5,80,00470	5,80,00480	5,80,00560	5,80,00610

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



- Dotazione standard:
- 2 cerniere lateral Art. 370
 - 1 coppia di tasselli di posizionamento per cavo da 16 mm Art. 297
 - 1 cinghia e pippa Art. 375
- Standard equipment:
- 2 worktops Art. 370
 - 1 pair of positioning keys-ins for 16 mm dia Art. 297
 - 1 box wrench Art. 375

Tipo (grandezza) morosa / Vise type (size)

	1	2	3
Apertura massima / Maximum opening	-	-	332
Art. 900	-	-	40
Morsa a Seraggio Meccanico con Limitatore di Forza solo per serraggi singoli	-	-	100
	-	-	610
	-	-	500
	-	-	125
	-	-	124
kg	-	-	44

NEW



Mechanical Clamping vise with Limiting Device only for single clamping

SPECIFICA SOLO PER SERRAGGI SINGOLI
SPECIFIC FOR SINGLE CLAMPING ONLY

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

Art. 900Y

Modulo per serraggio idraulico
 Module for hydraulic clamping



5,90,07300

	3	4	5	6
	30 kN	30 kN	32 kN	-
A	432	632	304	404
B	40	50	384	484
C	100	120	60	-
D	710	810	610	710
E	600	700	800	910
G	125	145	170	-
W	124	144	169	-
kg	-	57	99	-

5,90,03600 5,90,03700 5,90,03800 5,90,04500 5,90,04600 5,90,04700 5,90,04800 5,90,05600 5,90,05700 5,90,05800

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

Art. 900Y

5,90,07300	5,90,07300	5,90,07300	-
------------	------------	------------	---

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

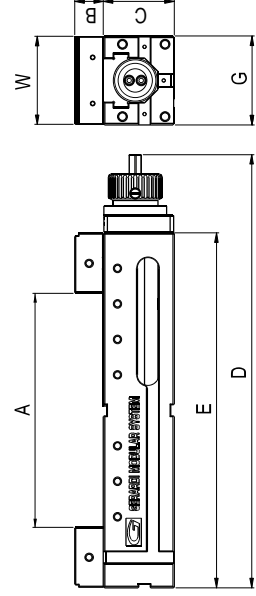
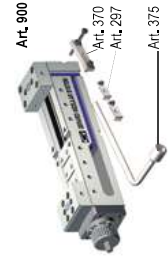
2 Rapido avvicinamento ganaschia mobile al pezzo da serrare. Quick approach of the jaw to the workpiece

3 Contatto ganaschia-particolare e slancio frizione limitatore di forza. First contact law-workpiece and damping limiter friction release

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

Dotazione standard:

- 2 anelli laterali Art. 370
- 2 coppie di tasselli di posizionamento per cavo da 16 mm Art. 377
- 1 chiave a pino Art. 375



- Standard equipment:
- 2 worktops Art. 370
 - 1 pair of positioning key-nuts for 16 mm dia Art. 377
 - 1 box wrench Art. 375

Diagrammi forze di serraggio - Diagrams with clamping force

3

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

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

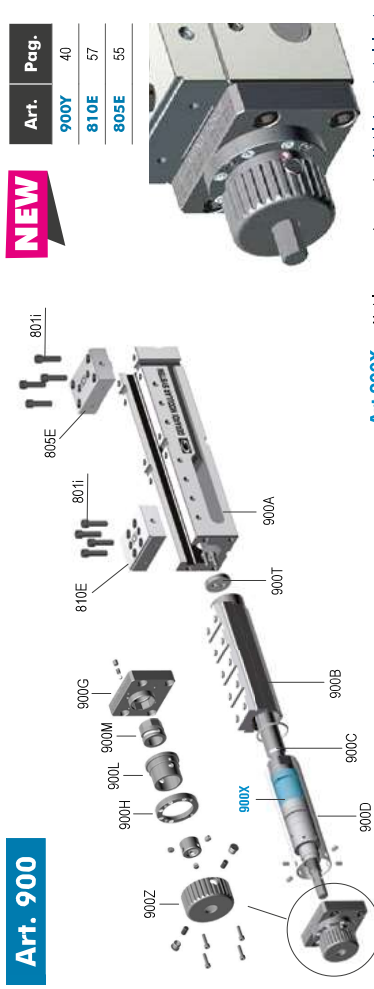
5

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

Posizioni ghiera limitatore / Fixed nut positions

Art. 900

NEW



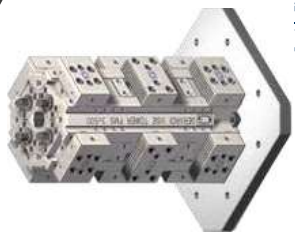
Art.	Pag.
900Y	40
810E	57
805E	55

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

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


Art. 860C

Cubo-morsa FMS doppio per il serraggio di 8 pezzi

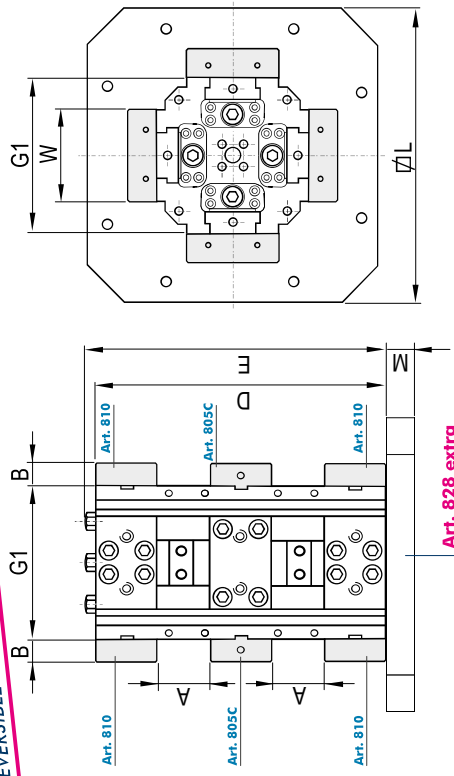


Double FMS vise lower for 8 clamping stations

Art. 855C

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

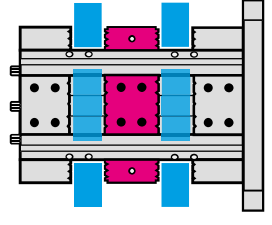
Cod.	5.86.0C120	5.86.0C130	5.86.0C230	5.86.0C240	5.86.0C250	5.86.0C260	5.86.0C340	5.86.0C350
Cod.	5.86.5C120	5.86.5C130	5.86.5C230	5.86.5C240	5.86.5C250	5.86.5C260	5.86.5C340	5.86.5C350

GANASCE REVERSIBILI REVERSIBLE JAWS

Art. 828 extra

- Dotazione standard per Art. 860C
- 1 libbra a vite Art. 375
 - 4 ganasce Art. 370
 - 2 coppie di tasselli di posizionamento per una da 16 mm Art. 297
 - gabbina di sollevamento Art. 848
 - imballaggio in legno
 - Microcassa in legno

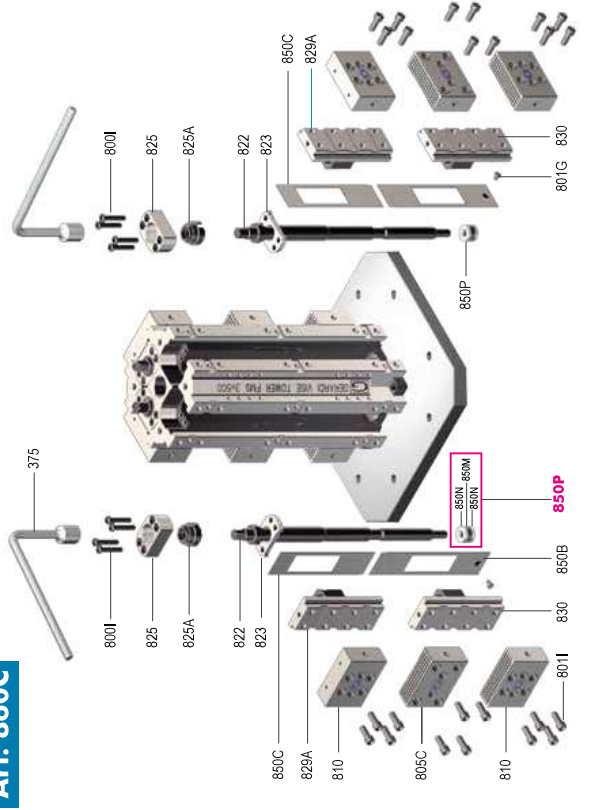


- Standard equipment for Art. 860C
- 1 box wrench Art. 375
 - 4 worksets Art. 370
 - 2 pair of positioning key-nuts for 16 mm dia Art. 297
 - Wooden box packaging
 - Wood hand device
 - Microcassa in legno



3 30 kN		4 30 kN		5 32 kN		6 32 kN	
A	2 x 174	2 x 274	2 x 103	2 x 203	2 x 138	2 x 238	2 x 338
B	40	50	60	60	60	60	60
D	600	700	800	800	800	800	800
E	625	725	825	825	825	825	825
G1	210	245	280	280	280	280	280
L	400	450	500	500	500	500	500
M	38	38	38	38	38	38	38
W	124	144	169	169	169	169	169
kg	135	157	180	210	252	288	340
	180	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	5.86.0C590	5.86.0C680	5.86.0C690	5.86.0C610
Cod.	5.86.5C360	5.86.5C370	5.86.5C380	5.86.5C450	5.86.5C460	5.86.5C470	5.86.5C480	5.86.5C560	5.86.5C570	5.86.5C580	5.86.5C590	5.86.5C680	5.86.5C690	5.86.5C610

GANASCE REVERSIBILI REVERSIBLE JAWS
Art. 860C


Art.	Pag.
375	4.35
800L	5.61
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)

	1	2	3
	25 kN	25 kN	30 kN
Apertura massima Max. opening	2 x 60	2 x 118	2 x 218
	2 x 168	2 x 288	2 x 454

Art. 863C

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



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

Art. 870C

Cubo morsa
FMS autocentrante
con ganascia
prismatiche



Self-centering FMS vise
tower with prismatic jaws

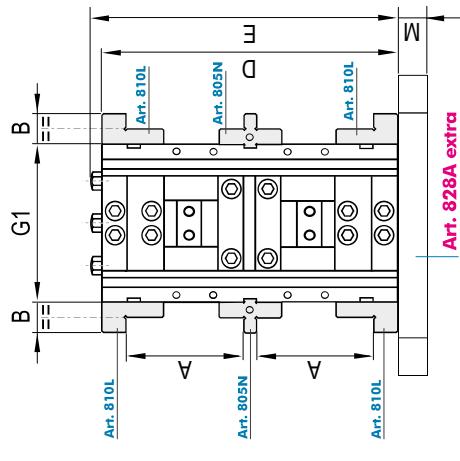
	10 / 25	10 / 50	25 / 100
Apertura Minimo / Massima Minimum - Max. Opening	25 / 100	30 / 150	35 / 200

	25 / 100	30 / 150	35 / 200	40 / 300
Coef.	5,87,0C120	5,87,0C230	5,87,0C340	5,87,0C570
D	200	300	400	600
E	232	332	420	625
G1	120	175	210	290
L	300	360	400	550
M	33	33	38	38
W	74	94	124	189
W1	60	75	100	160
kg	42	63	88	140

	3	4	5	6
	30 kN	30 kN	32 kN	32 kN
Apertura massima Max. opening	2 x 312	2 x 362	2 x 304	2 x 404
	2 x 282	2 x 204	2 x 254	2 x 354

	25 / 100	30 / 150	35 / 200	40 / 300
Coef.	5,86,3C380	5,86,3C470	5,86,3C570	5,86,3C680
D	600	700	800	1000
E	625	725	825	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	328

	25 / 100	30 / 150	35 / 200	40 / 300
Coef.	5,87,0C360	5,87,0C460	5,87,0C560	5,87,0C680
D	600	700	800	1000
E	625	725	825	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	328

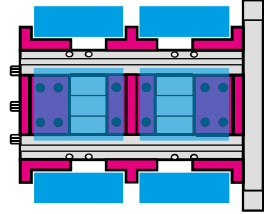


Art. 828A extra



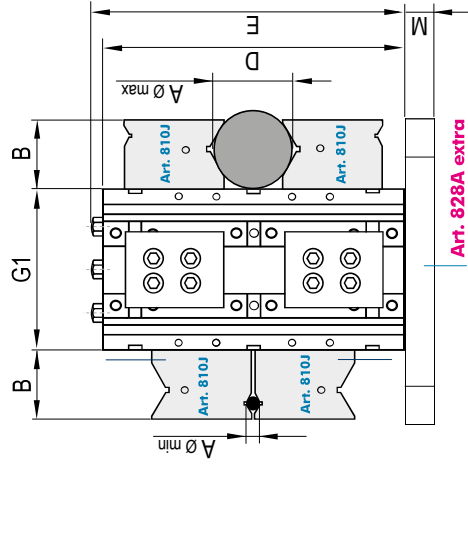
- Dotazione standard per Art. 860C
- 1 chiave a pipe Art. 375
 - 4 anelli laterali Art. 370
 - 2 coppie di tasselli di posizionamento per cava da 16 mm Art. 297
 - gabbina di sollevamento Art. 848
 - imballaggio in cassa di legno
 - Meccanismo 30 mano

- Standard equipment for Art. 860C
- 1 box wrench Art. 375
 - 4 workspgs Art. 370
 - 2 pair of positioning key-nuts for 16mm Art. 297
 - Wooden box packaging
 - Third hand device
 - Meccanism 30 mano

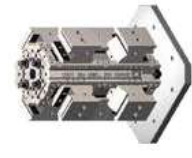


- Dotazione standard per Art. 860C
- 1 chiave a pipe Art. 375
 - 4 anelli laterali Art. 370
 - 2 coppie di tasselli di posizionamento per cava da 16 mm Art. 297
 - gabbina di sollevamento Art. 848
 - imballaggio in cassa di legno
 - Meccanismo 30 mano

- Standard equipment for Art. 860C
- 1 box wrench Art. 375
 - 4 workspgs Art. 370
 - 2 pair of positioning key-nuts for 16 mm Art. 297
 - Packaging wooden box
 - Third hand device
 - Meccanism 30 mano

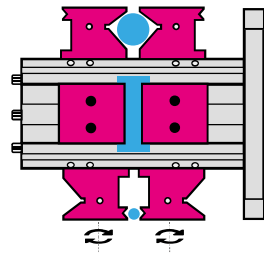
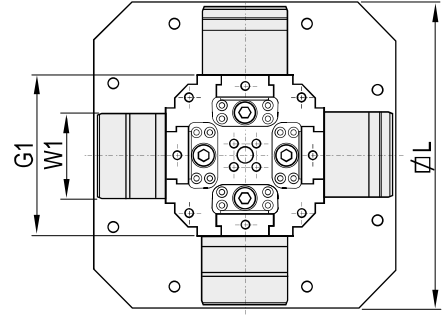


Art. 828A extra



- Dotazione standard per Art. 860C e Art. 870C
- 1 chiave a pipe Art. 375
 - 4 anelli laterali Art. 370
 - 2 coppie di tasselli di posizionamento per cava da 16 mm Art. 297
 - gabbina di sollevamento Art. 848
 - imballaggio in cassetta di legno
 - Meccanismo 30 mano

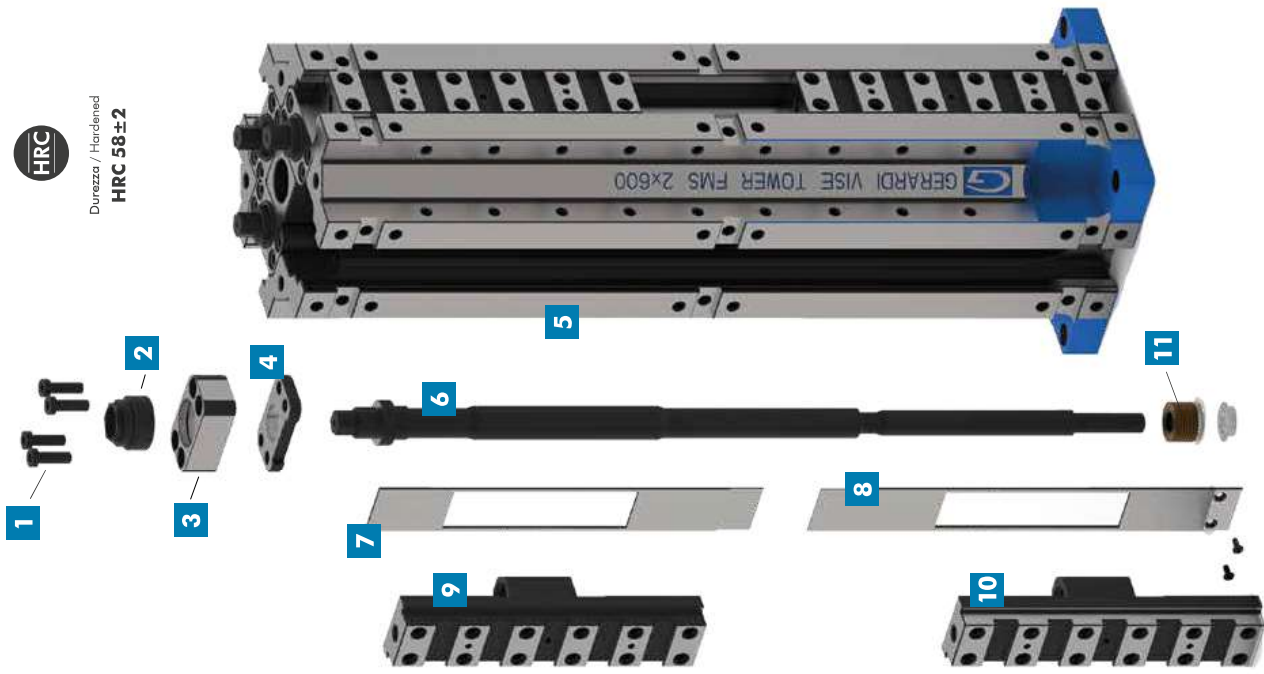
- Standard equipment for Art. 860C and Art. 870C
- 1 box wrench Art. 375
 - 4 workspgs Art. 370
 - 2 pair of positioning key-nuts for 16 mm Art. 297
 - Packaging wooden box
 - Third hand device
 - Meccanism 30 mano



COMPONENTI PER CUBO FMS SPARE PARTS FOR FMS CUBE

Art. 855C

- 1** Art.800I
VITI PER GANASCHE
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



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



Durezza / Hardened
HRC 58±2

Tipo (grandezza) Type (size)

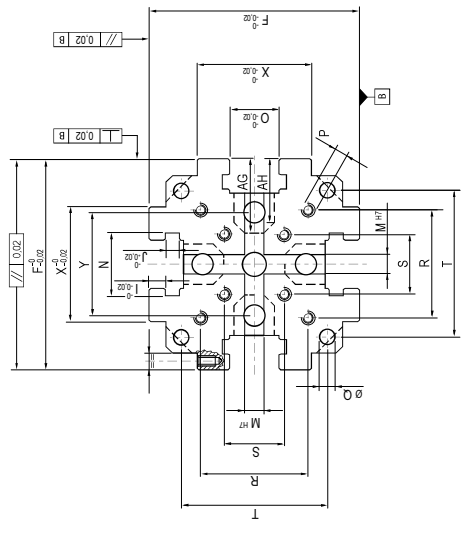
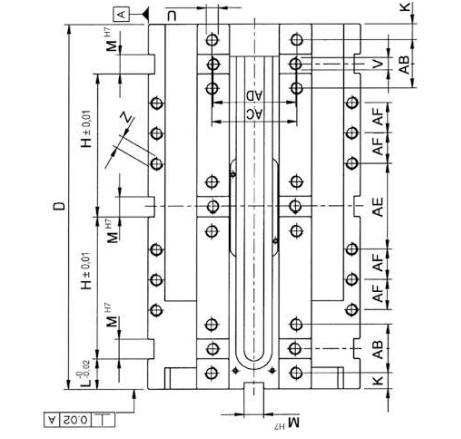
Larghezza base / Base length

Art. 804

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



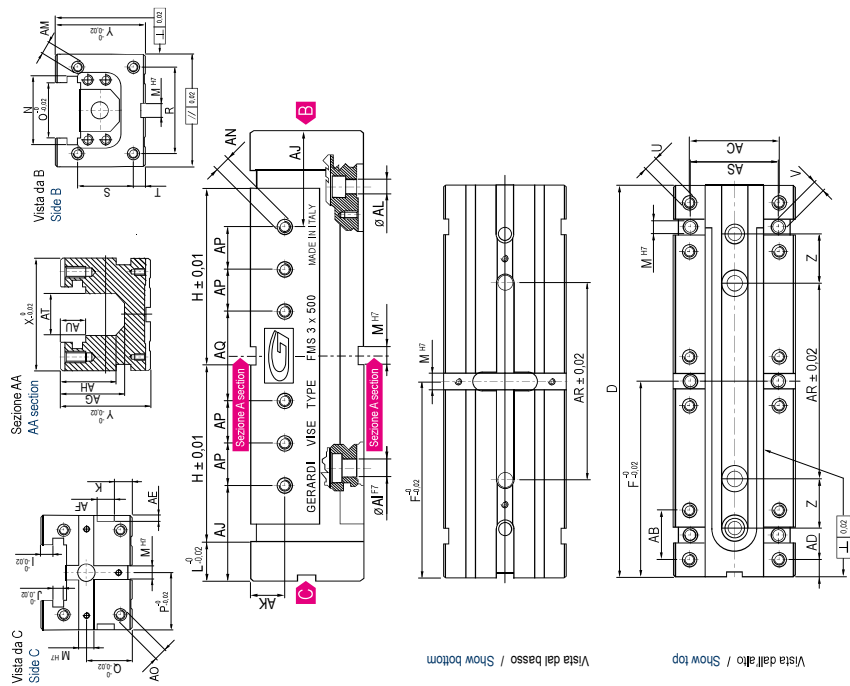
	1	2	3	4	5	6					
200	300	300	400	500	600	600	700	800	800	900	1000
5,80, 5,80, 41200	5,80, 5,80, 42300	5,80, 5,80, 42400	5,80, 5,80, 42500	5,80, 5,80, 42600	5,80, 5,80, 43600	5,80, 5,80, 43700	5,80, 5,80, 43800	5,80, 5,80, 44700	5,80, 5,80, 44800	5,80, 5,80, 45700	5,80, 5,80, 46900
140	175	210	245	280	280	280	280	280	280	280	280
71	121	167	217	267	357	357	357	357	357	357	357
10	13	13	13	13	13	13	13	13	13	13	13
13	13	13	13	13	13	13	13	13	13	13	13
16	16	16	16	16	16	16	16	16	16	16	16
45	53	76	76	76	76	76	76	76	76	76	76
35	41	61	71	81	81	81	81	81	81	81	81
M10	M12	M12	M16	M16	M16	M16	M16	M16	M16	M16	M20
11	13	13	13	13	13	13	13	13	13	13	13
-	100	120	150	150	150	150	150	150	150	150	150
-	40	40	40	40	40	40	40	40	40	40	40
-	120	16	16	16	16	16	16	16	16	16	16
M8	M10	M10	M10	M12	M12	M12	M12	M12	M12	M12	M20
M8	M10	M10	M10	M10	M10	M10	M10	M10	M10	M10	M10
75	95	125	145	170	170	170	170	170	170	170	170
70	85	110	125	140	140	140	140	140	140	140	140
32	40	50	60	68	68	68	68	68	68	68	68
96	70	92	108	126	126	126	126	126	126	126	144
56	68	92	106	126	126	126	126	126	126	126	144
50	70	100	100	100	100	100	100	100	100	100	125
10	25	50	50	50	50	50	50	50	50	50	50
49	62	62	62	62	62	62	62	62	62	62	62
41	53	72	70	70	70	70	70	70	70	70	70



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
Cod.	5,80, 11200	5,80, 12300
D	200	300
F	100	150
H	71	121
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	30	48
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	M10	M10
AN	M10	M10
AO	M10	M10
AP	25	50
AQ	50	70
AR	100	200
AS	66	68
AT	28	34
AU	23	28

	2	3	4	5	6
kg	23	26	31	39	46
Cod.	5,80, 12500	5,80, 13400	5,80, 13500	5,80, 13700	5,80, 13800
D	500	600	700	800	800
F	250	300	350	400	400
H	217	267	207	307	357
I	13	13	13	20	20
J	12	18	18	18	18
K	20	20	20	26	26
L	25	35	42	47	47
M	16	16	16	16	16
N	53	66	76	86	86
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	20	13	16	20	20
U	M10	M12	M16	M16	M20
V	M10	M12	M12	M12	M12
Z	50	50	50	50	50
X	145	125	145	170	190
Y	120	100	120	140	160
AB	40	50	60	68	88
AC	70	92	108	126	144
AD	13	18	20	20	20
AE	6	6	10	10	10
AF	16	16	16	16	16
AG	72	80	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	M10	M12	M12	M16	M20
AN	M10	M10M	M10	M10	M10
AO	M10	M12	M16	M16	M16
AQ	50	50	50	50	50
AR	200	200	200	200	200
AS	68	92	106	126	144
AT	34	44	44	52	49
AU	28	28	41	41	41

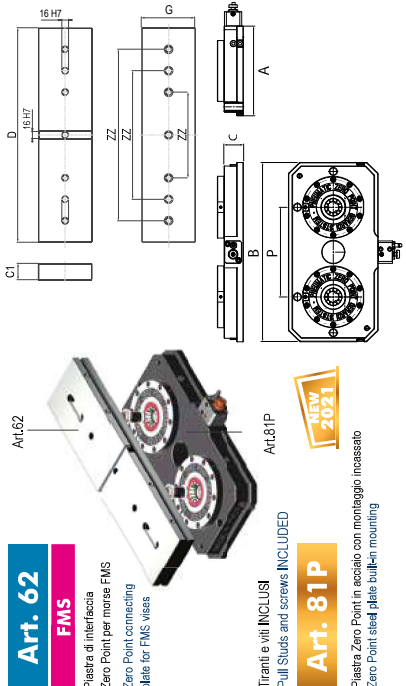
PIASTRE D'INTERFACCIA ZERO POINT

Tipo (grandezza) / Type (size)

Art. 62

FMS

Piastre di interfaccia
Zero Point per morsa FMS
Zero Point connecting
plates for FMS vises



Tipo (grandezza) / Type (size)

Art. 62

FMS

Piastre di interfaccia
Zero Point per morsa FMS
Zero Point connecting
plates for FMS vises

	2	3	4	5	6
D	500	600	700	800	800
G	95	125	145	170	180
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	13,9	17,8	21,5	28,5
Cod.	5,62.25000	5,62.35000	5,62.35000	5,62.35000	5,62.35000
A	200	200	200	200	200
B	600	400	500	600	800
C	43	43	43	43	43
ArtL	665	665	665	665	665
P	300	200	250	300x2	300x2
kg	42	29	41	42	59
Cod.	9,81.P204052	9,81.P204052	9,81.P204053	9,81.P204053	9,81.P204053

Tipo (grandezza) Type (size)		1	2	3	4	5	6			
Larghezza base / Base length		200	300	400	500	600	700	800	900	1000
Cod.		5.82.11300	5.82.12000	5.82.14800	5.82.14800	5.82.16100	5.82.16100	5.82.16100	5.82.16100	5.82.16100

Art. 821

Vite di bloccaggio con filetto sinistro
Main screw left thread



A	18	24	30	30	30	36	36
A1	18	18	24	24	24	30	30
A2	20	24	30	30	30	36	36
B	16	16	19	19	19	19	19
C	-	-	-	-	-	-	-
D	35	35	45	45	45	48	48
E	20	20	30	30	30	30	30
F	82	33	42	42	42	115	115
G	13	12	16	16	16	15	15
H	152	135	136	186	186	225	225
I	65	90	118	118	118	135	135
J	14	12	15	15	15	20	20
K	5	12	26	26	26	55	55
L	55	9	11	11	11	80	80
M	14	19	24	24	24	30	30
N	242	333	308	389	500	600	414
O	12	17	25	32	52	54	87
P	65	84	88	98	116	151	123
Q	32	66	106	134	164	82	132
R	68	85	75	94	116	136	118
S	44	6	38	49	62	77	41
T	32	32	33	38	38	38	38
U	21	15	20	25	25	25	25
AA	10	10	10	15	15	22	22
AB	10	10	12	12	12	15	15

Art. 822

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

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



A	18	24	30	30	30	36	36
A1	18	18	24	24	24	30	30
A2	24	24	30	30	30	36	36
B	35	45	50	60	60	70	80
C	170	264	256	356	466	556	346
D	M8	M10	M12	M16	M16	M16	M20
E	72	116	102	142	182	222	132
F	48.5	61.5	71	80	80	95	106
G	15	18	23	33	40	45	45
H	2	3	4	5	6	2	3
I	10	13	13	13	20	20	20
J	10	12	12	18	18	18	18
K	-	5	7	9	5	6	9
L	44	51	74	84	84	95	108
M	16	16	16	16	16	16	16
N	20	23	33	40	40	45	45
O	35	41	61	71	71	82	94
S	26	32	40	50	60	68	68
T	20	25	38	38	44	44	54
V	27	33	43	43	43	51	48
W	10	16	24	34	44	52	52

Art. 829A

Slitta con filetto destro
Slide with right thread



Art. 830

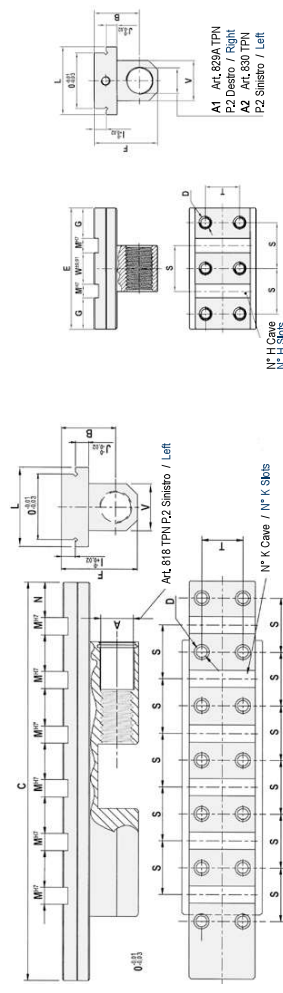
Slitta con filetto sinistro
Slide with left thread



U	5.82	5.82	5.82	5.82	5.82	5.82	5.82	5.82	5.82	5.82
AA	9A1200	9A1300	9A2300	9A2400	9A2500	9A2600	9A3400	9A3500	9A3600	9A3700
AB	9A4800	9A4900	9A5600	9A5700	9A5800	9A6800	9A6900	9A7000	9A7100	9A7200

A1	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
A2	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
P1	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
P2	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83

A1	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
A2	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
P1	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
P2	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83



Tipo (grandezza) Type (size)		1	2	3	4	5	6			
Larghezza base / Base length		200	300	400	500	600	700	800	900	1000
Cod.		5.81	5.81	5.81	5.81	5.81	5.81	5.81	5.81	5.81

Art. 818

Slitta integrale lunga
Solid long slide



A	18	24	30	30	30	36	36
A1	18	18	24	24	24	30	30
A2	24	24	30	30	30	36	36
B	35	45	50	60	60	70	80
C	170	264	256	356	466	556	346
D	M8	M10	M12	M16	M16	M16	M20
E	72	116	102	142	182	222	132
F	48.5	61.5	71	80	80	95	106
G	15	18	23	33	40	45	45
H	2	3	4	5	6	2	3
I	10	13	13	13	20	20	20
J	10	12	12	18	18	18	18
K	-	5	7	9	5	6	9
L	44	51	74	84	84	95	108
M	16	16	16	16	16	16	16
N	20	23	33	40	40	45	45
O	35	41	61	71	71	82	94
S	26	32	40	50	60	68	68
T	20	25	38	38	44	44	54
V	27	33	43	43	43	51	48
W	10	16	24	34	44	52	52

Art. 829A

Slitta con filetto destro
Slide with right thread

Art. 830

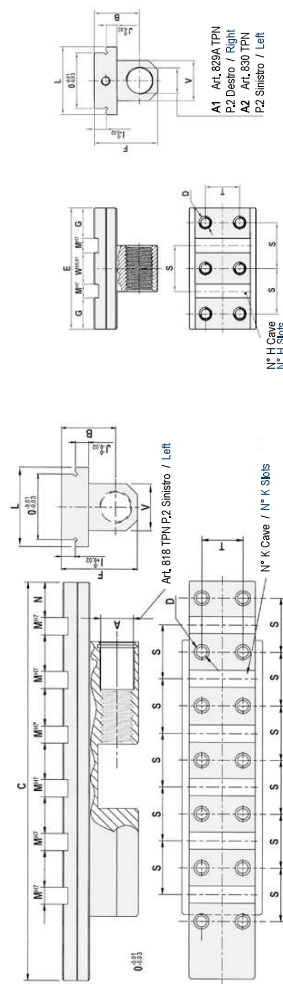
Slitta con filetto sinistro
Slide with left thread








U	5.82	5.82	5.82	5.82	5.82	5.82	5.82	5.82	5.82	5.82
AA	9A1200	9A1300	9A2300	9A2400	9A2500	9A2600	9A3400	9A3500	9A3600	9A3700
AB	9A4800	9A4900	9A5600	9A5700	9A5800	9A6800	9A6900	9A7000	9A7100	9A7200

A1	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
A2	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
P1	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
P2	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83

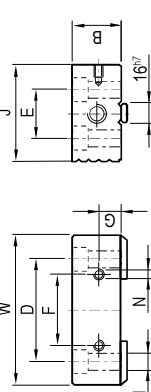
A1	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
A2	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
P1	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83
P2	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83	5.83



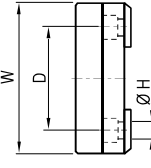
GANASCHE FISSA PER MORSE FMS
FIXED JAWS FOR FMS VISES

Tipo (grandezza) / Type (size)		1	2	3	4	5	6	
Art. 805*	 Ganascia fissa zigrinata da un lato Fixed jaw one side serrated	Cod.	5,80,5I100	5,80,5I200	5,80,5I300	5,80,5I400	5,80,5I500	5,80,5I600
Art. 805A*	 Ganascia fissa liscia Smooth fixed jaw	Cod.	5,80,5A100	5,80,5A200	5,80,5A300	5,80,5A400	5,80,5A500	5,80,5A600
Art. 805B*	 Ganascia fissa dolce Soft fixed jaw	Cod.	5,80,5B100	5,80,5B200	5,80,5B300	5,80,5B400	5,80,5B500	5,80,5B600
Art. 805C*	 Ganascia fissa zigrinata da ambo i lati Fixed jaw serrated on both sides	Cod.	5,80,5C100	5,80,5C200	5,80,5C300	5,80,5C400	5,80,5C500	5,80,5C600
Art. 870A*	 Ganascia fissa intermedia alta Fixed intermediate high jaw	Cod.	5,87,0A100	5,87,0A200	5,87,0A300	5,87,0A400	5,87,0A500	5,87,0A600

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

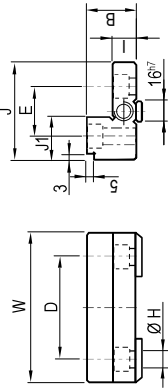


Art. 805N (Montata su Art. 863) (Assembled on Art. 863)

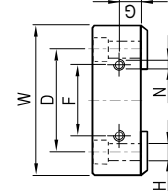





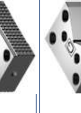




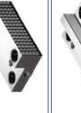







Art. 805O

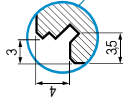
Ganascia fissa con gradino piccolo e grande
 Fixed jaw with small and large step



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


Tipo (grandezza) / Type (size)

Tipo (grandezza) / Type (size)		1	2	3	4	5	6	
Art. 805D*	 Ganascia fissa con gradino 3x5 zigrinata da un lato Fixed jaw with 3x5 step on side serrated	Cod.	5,80,5D100	5,80,5D200	5,80,5D300	5,80,5D400	5,80,5D500	5,80,5D600
Art. 805E*	 Ganascia fissa con gradino 3x5 liscia Fixed jaw with 3x5 step smooth	Cod.	5,80,5E100	5,80,5E200	5,80,5E300	5,80,5E400	5,80,5E500	5,80,5E600
Art. 805F*	 Ganascia fissa con doppio gradino 3x5 liscia Fixed jaw with double 3x5 step smooth	Cod.	5,80,5F100	5,80,5F200	5,80,5F300	5,80,5F400	5,80,5F500	5,80,5F600
Art. 805G*	 Ganascia fissa con doppio gradino 3x5 zigmata Fixed jaw with double 3x5 step serrated	Cod.	5,80,5G100	5,80,5G200	5,80,5G300	5,80,5G400	5,80,5G500	5,80,5G600
Art. 805H*	 Ganascia fissa con prisma verticale Fixed jaw with vertical prism	Cod.	5,80,5H100	5,80,5H200	5,80,5H300	5,80,5H400	5,80,5H500	5,80,5H600
Art. 805J*	 Ganascia fissa con doppio prisma verticale Fixed jaw with double vertical prism	Cod.	5,80,5J100	5,80,5J200	5,80,5J300	5,80,5J400	5,80,5J500	5,80,5J600
Art. 805K*	 Ganascia fissa con doppio prisma orizzontale Fixed jaw with double horizontal prism	Cod.	5,80,5K100	5,80,5K200	5,80,5K300	5,80,5K400	5,80,5K500	5,80,5K600
Art. 805L*	 Ganascia fissa con gradino Step fixed jaw	Cod.	5,80,5L100	5,80,5L200	5,80,5L300	5,80,5L400	5,80,5L500	5,80,5L600
Art. 805M*	 Ganascia fissa con gradino zigrinata da un lato Step fixed jaw one side serrated	Cod.	5,80,5M100	5,80,5M200	5,80,5M300	5,80,5M400	5,80,5M500	5,80,5M600
Art. 805N*	 Ganascia fissa con doppio gradino Fixed jaw with double step	Cod.	5,80,5N100	5,80,5N200	5,80,5N300	5,80,5N400	5,80,5N500	5,80,5N600
Art. 805O*	 Ganascia fissa con gradino piccolo e grande liscia da un lato Fixed jaw with small and large step on side smooth	Cod.	5,80,5O100	5,80,5O200	5,80,5O300	5,80,5O400	5,80,5O500	5,80,5O600
Art. 805P*	 Ganascia fissa con gradino piccolo e grande zigrin. da un lato Fixed jaw with small and large step one side serrated	Cod.	5,80,5P100	5,80,5P200	5,80,5P300	5,80,5P400	5,80,5P500	5,80,5P600
Art. 805Q*	 Ganascia fissa doppia con gradino piccolo e grande Double fixed jaw with small and large step	Cod.	5,80,5Q100	5,80,5Q200	5,80,5Q300	5,80,5Q400	5,80,5Q500	5,80,5Q600
Art. 805R*	 Ganascia fissa in alluminio Fixed jaw aluminum	Cod.	5,80,5R100	5,80,5R200	5,80,5R300	5,80,5R400	5,80,5R500	5,80,5R600
Art. 805T*	 Ganascia fissa doppia GRP per forti serraggi Double fixed jaw for strongest clamping	Cod.	5,80,5T100	5,80,5T200	5,80,5T300	5,80,5T400	5,80,5T500	5,80,5T600
Art. 805DT*	 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



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

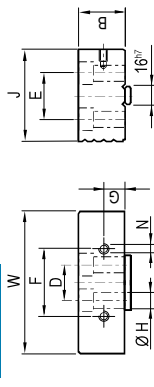
GANASCE MOBILI PER MORSE FMS MOVABLE JAWS FOR FMS VISES

Tipo (grandezza) / Type (size)

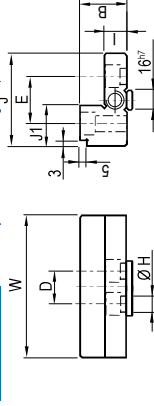
	1	2	3	4	5	6
Art. 810* Ganascia mobile zigrinata da un lato Movable jaw one side serrated	Cod. 5.81.0A100	5.81.0A200	5.81.0A300	5.81.0A400	5.81.0A500	5.81.0A600
Art. 810A* Ganascia mobile liscia Smooth movable jaw	Cod. 5.81.0A100	5.81.0A200	5.81.0A300	5.81.0A400	5.81.0A500	5.81.0A600
Art. 810B* Ganascia mobile dolce Soft movable jaw	Cod. 5.81.0B100	5.81.0B200	5.81.0B300	5.81.0B400	5.81.0B500	5.81.0B600
Art. 810D* Ganascia mobile con gradino 3x6 zigrinata da un lato Movable jaw with 3x6 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. 5.81.1A1000	5.81.1A2000	5.81.1A3000	5.81.1A4000	5.81.1A5000	5.81.1A6000

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

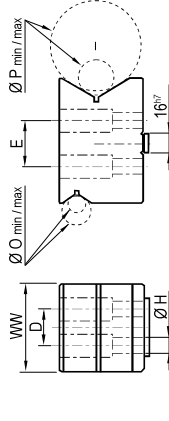
Art. 810 (Montata su Art. 860) / (Assembled on Art. 860)



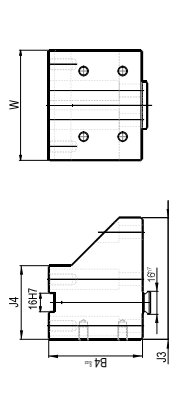
Art. 810
Ganascia mobile con gradino piccolo e grande
Movable jaw with small and large step



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



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



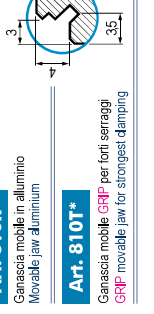
Tipo / Type	1x200	1x300	2	3	4	5	6	Tollerance Tolerance
W	74	124	144	169	189	-	-	-
WW	60	100	132	140	160	-	-	-
B	25	40	60	60	60	-0.02	-0.02	-
B4	60	80	110	120	160	-0.02	-0.02	-
D	20	38	44	44	54	-	-	-
E	26	40	50	60	68	-	-	-
F	40	50	65	65	100	-	-	-
G	10	10	15	25	25	-	-	-
H	9	11	13	17	22	-	-	-
I	12.5	15	20	25	30	-0.02	-0.02	-
J	56	82	98	108	108	-0.02	-0.02	-
J1	24	24	30	38	38	-0.02	-0.02	-
J3	76	104	168	168	189	-	-	-
J4	55	63	97	106	107	-	-	-
N	M5	M6	M6	M6	M6	-	-	-
Ø O	10/15	20/30	25/30	20/60	40/80	-	-	-
Ø P	10/25	20/50	45/150	63/200	73/300	-	-	-

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

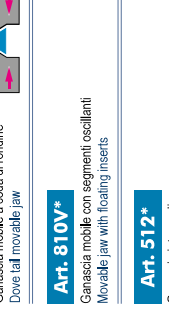
Tipo (grandezza) / Type (size)

	1	2	3	4	5	6
Art. 810E* Ganascia mobile con gradino 3x6 liscia Movable jaw with 3x6 step smooth	Cod. 5.81.0E100	5.81.0E200	5.81.0E300	5.81.0E400	5.81.0E500	5.81.0E600
Art. 810J* Ganascia mobile prismatica per tondi liscia Prismatic movable jaw for round parts smooth	Cod. 5.81.0J100	5.81.0J200	5.81.0J300	5.81.0J400	5.81.0J500	5.81.0J600
Art. 810K* Ganascia mobile prismatica per tondi zigrinata Prismatic movable jaw for round parts serrated	Cod. 5.81.0K100	5.81.0K200	5.81.0K300	5.81.0K400	5.81.0K500	5.81.0K600
Art. 810L* Ganascia mobile con gradino Step movable jaw	Cod. 5.81.0L100	5.81.0L200	5.81.0L300	5.81.0L400	5.81.0L500	5.81.0L600
Art. 810M* Ganascia mobile con gradino zigrinata da un lato Step movable jaw one side serrated	Cod. 5.81.0M100	5.81.0M200	5.81.0M300	5.81.0M400	5.81.0M500	5.81.0M600
Art. 810O* Ganascia mobile con gradino piccolo e grande Movable jaw with small and large step	Cod. 5.81.0O100	5.81.0O200	5.81.0O300	5.81.0O400	5.81.0O500	5.81.0O600
Art. 810P* Ganascia mobile con gradino piccolo e grande zigrin. da un lato Movable jaw with small and large step one side serrated	Cod. 5.81.0P100	5.81.0P200	5.81.0P300	5.81.0P400	5.81.0P500	5.81.0P600

Art. 810R*
Ganascia mobile in alluminio
Movable jaw Aluminium



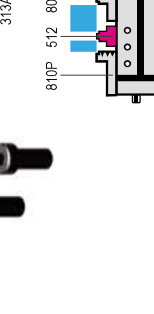
Art. 810DT
Ganascia mobile a coda di rondine
Dove tail movable jaw



Art. 810V*
Ganascia mobile con segmenti ciscillanti
Movable jaw with floating inserts



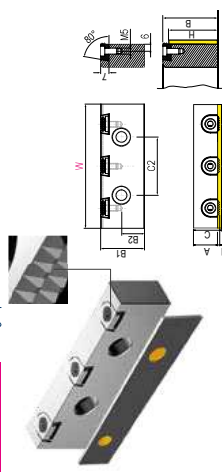
Art. 512*
Ganascia intermedia
Intermediate Jaw

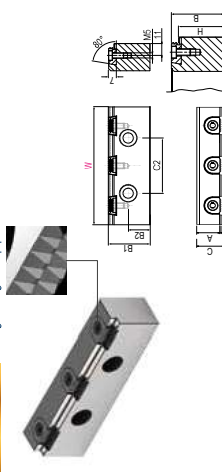


* Set viti per fissaggio a richiesta - Set of fixing screws on request.

PIASTRE GANASCE PIANE CON INSERTI GRIP STRAIGHT INSERT GRIP JAW PLATES

Art. 547G

 Piastra Piana con inserti GRIP
 Straight plate with GRIP inserts

Art. 547K

 Piastra Piana a granaio integrale con inserti GRIP
 Straight integral gear plate with GRIP inserts

NEW 2021
Dotazione Standard - Standard Equipment
 1 pc. AT-414R parallela magnetica - 1 pc. AT-414R magnetico parallelo

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

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

Art. 220 G02

 Per materiali di notevole durezza.
 For hardened workpieces clamping

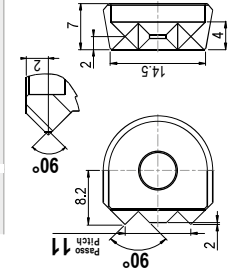
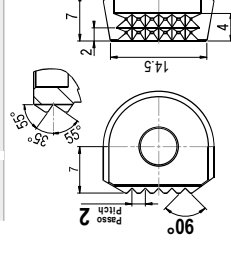
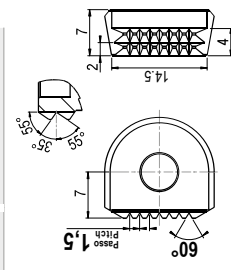
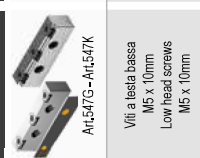
Art. 220 G11

 Per materiali teneri
 For soft material clamping


Cod. 4,22,01000 / G01

Cod. 4,22,01000 / G02

Cod. 4,22,01000 / G11


Tipo / Type

1
2
3
4
5
6

Art. 220 G01 - 3 pcs each

Art. 220 G02 - 3 pcs each

Art. 220 G02 - 5 pcs each

Art. 220 G02 - 5 pcs each

Art. 220 G02 - 7 pcs each

Art. 220 G02 - 7 pcs each

 Viti a testa bassa
 M5 x 10mm
 Low head screws
 M5 x 10mm

Art. 547G - Art. 547K - 3 pcs each

Art. 547G - Art. 547K - 3 pcs each

Art. 547G - Art. 547K - 5 pcs each

Art. 547G - Art. 547K - 5 pcs each

Art. 547G - Art. 547K - 7 pcs each

Art. 547G - Art. 547K - 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.

5,82,38100	5,82,39200	5,82,39300	5,82,39400	5,82,39500	5,82,39600
------------	------------	------------	------------	------------	------------

Art. 825

 Piastra di contenimento vite per morse 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 morse FMS per Art. 800
 Screw holding plate for FMS vise for Art. 800


Cod.

5,82,58100	5,82,59200	5,82,59300	5,82,59400	5,82,59500	5,82,59600
------------	------------	------------	------------	------------	------------

Art. 825C

 Piastra di contenimento vite per morse 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
------------	------------	------------	------------	------------	------------

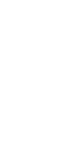
Art. 832

 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.

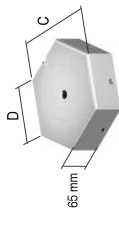
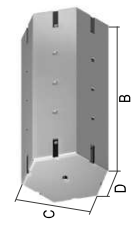
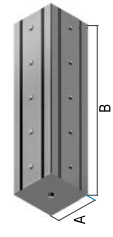
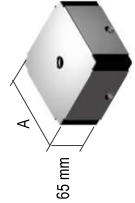
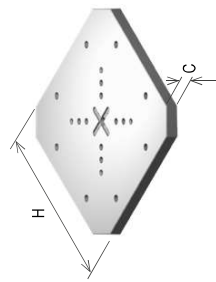
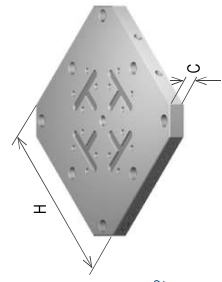
5,83,41000	5,83,42000	5,83,43000	5,83,44000	5,83,45000	5,83,46000
------------	------------	------------	------------	------------	------------

PIASTRE BASE PER MORSE FMS
BASE PLATES FOR FMS VISES

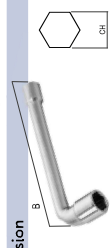
Tipo (grandezza) / Type (size)		1	2	3	4	5	6	7
Art. 827A Piastra base personalizzata per una o più morse Bussole di centraggio Art. 852 compresa Tailor made head plate for one or more vises Centering bushing Art. 852 included	H	300	350	400	450	500	630	800
	C	33	33	38	38	38	38	38
	Kg	21,5	29,5	43,5	55	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 Bussole di centraggio Art. 852 compresa Tailor made head plate for vise lower 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)		1	2	3	4	5	6
Art. 835 Distanziale quadrato per 4 morse FMS Square spacer for 4 FMS vises	A	75	95	125	145	170	190
	Cod.	5.83.5.000	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
	Cod.	5.83.6.000	5.83.62000	5.83.63000	5.83.64000	5.83.65000	5.83.66000

Tipo (grandezza) / Type (size)		1	2	3	4	5	6
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.	5.83.7.000	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.	5.83.8.000	5.83.82000	5.83.83000	5.83.84000	5.83.85000	5.83.86000
Art. 852 Bussole di centraggio per piastra base Centering bushing for base plate	Cod.	5.85.2.000	5.85.22000	5.85.23000	5.85.24000	5.85.25000	5.85.26000
Art. 853 Centraggio orizzontale per cubo FMS Horizontal centering for FMS cube	Cod.	5.85.3.000	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 Chiera 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
	* Foto indicativa * Indicative picture						
Art. 850E Bussole esagonale per innesto automatico Hexagonal bushing for automatic connection	CH	12/22	14/24	19/30	19/30	27/40	27/40
	Cod.	5.85.0E100	5.85.0E200	5.85.0E300	5.85.0E400	5.85.0E500	5.85.0E600
Art. 850T Distanziale per morse 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 morse FMS e cubo Hexagonal wrench for FMS vise and cube	Cod.	5.85.0H100	5.85.0H300	5.85.0H500			
Art. 801S Piastrina di collegamento file morse Slides vise connecting plate	Cod.	5.80.1S100	5.80.1S200	5.80.1S300	5.80.1S400	5.80.1S500	5.80.1S600


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

Tipo (grandezza) / Type (size)		1	2	3	4	5	6
Art. 800E Guarnizione per filetta 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 Crano di bloccaggio protezione centrale Setscrew for damping central protection	Cod.	5.80.1G100	5.80.1G200	5.80.1G300	5.80.1G400	5.80.1G500	5.80.1G600
Art. 800I Vite tor per ganasce Hex-socket head screw for jaws	Cod.	5.80.0I100	5.80.0I200	5.80.0I300	5.80.0I400	5.80.0I500	5.80.0I600
	Cod.	5.80.1I100	5.80.1I200	5.80.1I300	5.80.1I400	5.80.1I500	5.80.1I600
Art. 801H Vite tor 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 tor per piastra di contenimento Hex-socket head screw for screw holding plate	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

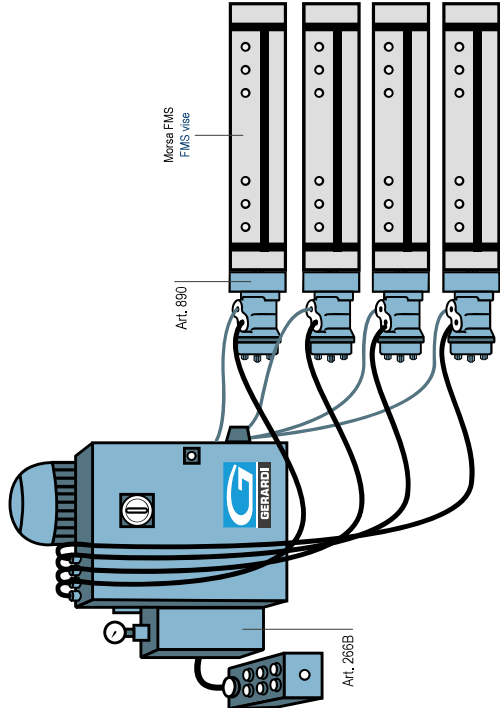
Tipo (grandezza) / Type (size)	1	2	3	4	5	6
Passo vite / screw pitch mm	2	2	2	2	3	3
bar	130	100	100	100	120	120
l/min	20	40	80	80	80	80
Cost.	5.95.0K/104	5.95.0K/204	5.95.0K/304	5.95.0K/404	5.95.0K/504	5.95.0K/604

Art.890K/4

Art. 266B + 4 Art. 890
Kit per automazione morse FMS
Kit for FMS vise automation.

DATI TECNICI:
IDROMOTORE: Art.586
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.586
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:**
- 10 "3 servocomandi Art. 89
 - 10 "1 centrale idrodinamica Art. 266B/1
 - Comando manuale elettrico da pulsantiera con disinnesto di apertura indipendente, singolo o simultaneo
 - Regolazione forza di bloccaggio idraulico
 - Fine corsa elettronico regolabile
- COMPOSIZIONE COMPLETA OF:**
- 10 "3 hydraulic servo units Art. 890
 - 10 "1 electric-hydraulic power pack Art. 266B/1
 - Electrically controlled by manual switch board independent, single or simultaneous
 - Adjustable damping 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 4.80 KN

Eccentric force reducer able to multiply 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

VELOCITÀ = 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, **500 l/min** (tipizzando una portata olio di **100 l/min**), $V = 2 \times 200 = 400 \times 25\% = 300$ mm/min per una morse.
Per più morse dividere la velocità ottenuta per il numero delle morse impegnate.

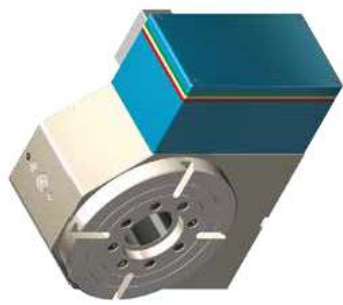
SPEED = Screw pitch x RPM (that you get from oil pump of 40 l/min) about - 25% for friction and other resistances.
Example: Screw pitch 2mm, **500 l/min** (taking in consideration oil pump of **100 l/min**), $V = 2 \times 200 = 400 \times 25\% = 300$ mm/min for one vise.
For more vises divide the speed obtained by the number of vises used.

DIVISORE AUTOMATICO DPG 250

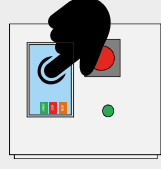
AUTOMATIC DIVIDING HEAD DPG 250

Divisore automatico
 Automatic dividing head

DPG 250

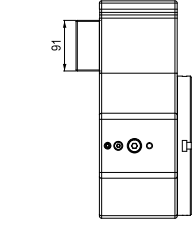
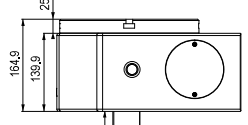
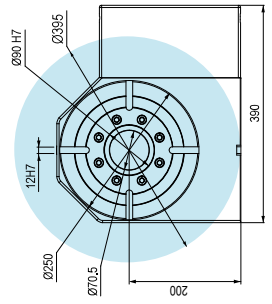

Dati tecnici
 Technical Data

Diametro del divisore Dividing head diameter	250 mm
Diametro del foro passante Clearance hole diameter	70,5 mm
Altezza punte Center height	200 mm
Dimensione della scanalatura a T T-Slot width	12 mm
Sistema di bloccaggio Clamping system	Idrraulico 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 G/rimin
Rapporti vite/corona Speed reduction ratio (screw/gear)	1/60
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	Kg.550
Max. carico di spinta applicabile sul divisore Max. allowable tool load on the dividing head	Kg.1600
	N 25000
	FxL Nm 1000
	FxL Nm 2200
Rapporti vite/corona Speed reduction ratio (screw/gear)	10,5 Kg. m ²
Coppia in lavoro Driving torque	698 Nm
Kg	110
Cod.	8.DPG2500

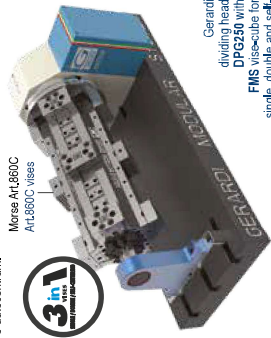
PROGRAMMAZIONE TOUCH SCREEN
 FACILE ED INTUITIVA O TRAMITE COLLEGAMENTO DIRETTO ALL' CNC

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

- Installazione semplice (alimentazione 220V)
- Corona in bronzo speciale
- Vite senza file in acciaio temprato e rettificato
- Vite e corona in bagno di olio
- Cuscinetti a vite preassemblati
- Recupero gioco con avviciamento assiale
- Completa tenuta stagna ai liquidi con possibilità di pressurizzazione
- Possibilità di montare motori di tutte le marche
- Dimensioni esterne contenute
- Finestra di controllo liquidi e condensa
- Lavorazione in posizionamento a 360°
- Easy installation (220V)
- Special bronze crown
- Simple latstock
- 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	300	400	500	600	700	800	900	1000
D	200	300	400	500	600	700	800	900	1000
G1	120	175	210	250	300	350	400	450	500
W	74	94	124	154	184	214	244	274	304
Cod.	5.P.G.25000	5.P.G.25010	5.P.G.25020	5.P.G.25030	5.P.G.25040	5.P.G.25050	5.P.G.25060	5.P.G.25070	5.P.G.25080

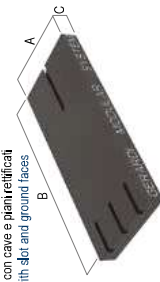
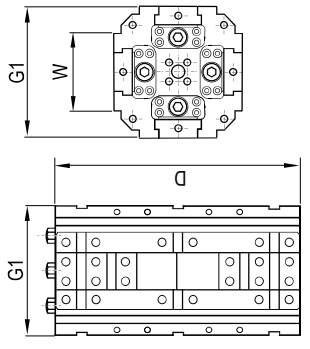
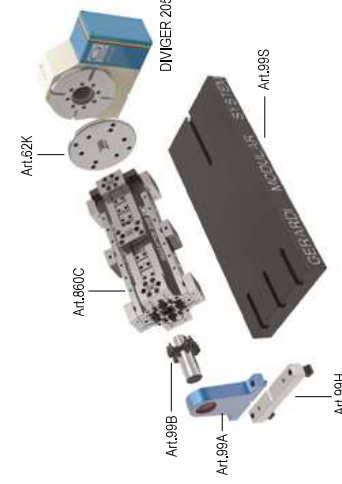

 Generati
 dividing head
 DPG 250
FMS vises are for
 single, double and self-
 centering damping

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

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES |

Art. 99A	Supporto Support	5.99.A1000
Art. 99B	Perno di centraggio completo di sistema d'allineamento Horizontal centering pin with alignment system	5.99.B2000
Art. 99H	Distanziale per supporto Spacer support	5.99.H1000
Art. 62K	Piastra di interfaccia per cubo FMS completa di sistema d'allineamento Connecting plate with alignment system FMS	5.62.K801A5 5.62.K801AG 5.62.K801A7

Dimensioni B mm Dimension B mm	A	C	Kg	Cod.
650	400	50	102	7.99.S065S
850	400	50	149	7.99.S085S
1250	400	50	185	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


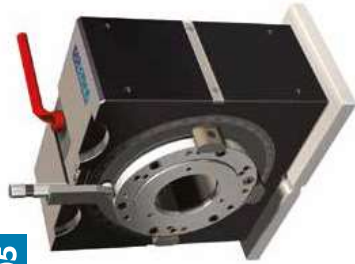
DIVISORE MECCANICO DIVIGER 205 MECHANICAL DIVIDING HEAD DIVIGER 205

Divisore automatico
Automatic dividing head

Dati tecnici
Technical Data

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	Mecanico Mechanical
Minimo incremento Minimum increment	1°
Precisione Indexing accuracy	±10 Sec.
Coppia in lavoro Driving torque	3000 Nm
Kg	93
Cod.	7.66.73000

DIVIGER 205

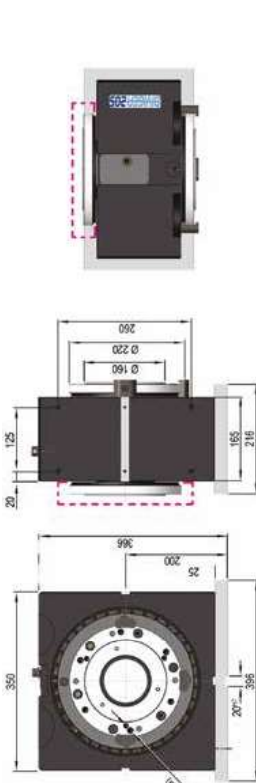


DIVISORE MECCANICO, SENZA CAVI O IDRAULICA, PERMACCHINE A CNC

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

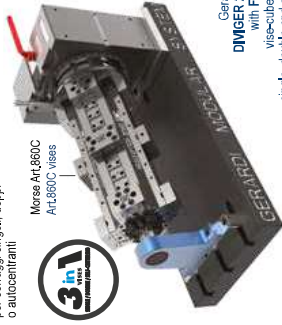
- Maggiore efficienza nella lavorazione su più lati
- Completamente autonomo dalla macchina
- Elevato momento torcente
- Divisione manuale o automatica tramite mandrino macchina
- 360 posizioni
- Serraggio simultaneo di due particolari grazie alla doppia flangia
- Lavorazione su 5 facce senza contropunta
- 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)

kN	1			2			3				
	25 kN			25 kN			30 kN				
D	200	300	400	300	400	500	400	500	600	700	800
G1	120	175		175			210				
W	74	94		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



Gerardi
DIVIGER 205
with FMS
vises for
single, double and self-
centering clamping

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

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES I

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.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 il sistema d'allineamento
Connecting plate with alignment system for FMS



Cod. 5.62.K801A5

5.62.K801A7

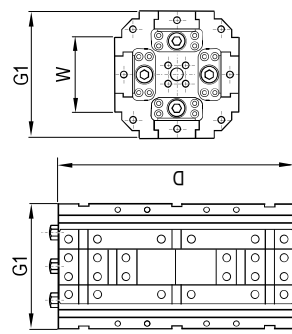
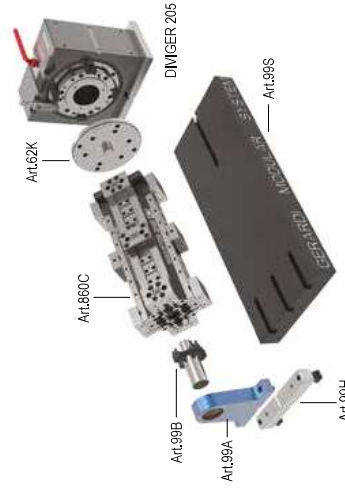
Art. 99S
Piastra base con cave e panni rifinitici
Base plate with slot and ground faces



Dimensioni B mm Dimension B mm	A	C	Kg	Cod.
650	400	50	102	7.99.S065S
850	400	50	149	7.99.S085S
1250	400	50	185	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 morse 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° 4	Per morse / each vise Importo per lavorazioni necessarie per predisporre ogni faccia del cubo e montaggio più allineamento di ogni morse. Amount needed for the set-up of each side and mounting alignment of each vise on it.	Art.238 Certificato di collaudo Certificate test
	Art.750 Tipo 3 n° morse Vises n° 4	Per morse / each vise Importo per lavorazioni necessarie per predisporre ogni faccia del cubo e montaggio più allineamento di ogni morse. Amount needed for the set-up of each side and mounting alignment of each vise on it.	Art.83 Certificato di collaudo Certificate test
Cod. 8.53.F00081 Dim. A=250 / B=400 / H=660	Art.864 Tipo 3x500 n° morse Vises n° 4	Per morse / each vise Importo per lavorazioni necessarie per predisporre ogni faccia del cubo e montaggio più allineamento di ogni morse. Amount needed for the set-up of each side and mounting alignment of each vise on it.	Art.238 Certificato di collaudo Certificate test
	Art.750 Tipo 3 n° morse Vises n° 4	Per morse / each vise Importo per lavorazioni necessarie per predisporre ogni faccia del cubo e montaggio più allineamento di ogni morse. Amount needed for the set-up of each side and mounting alignment of each vise on it.	Art.83 Certificato di collaudo Certificate test

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

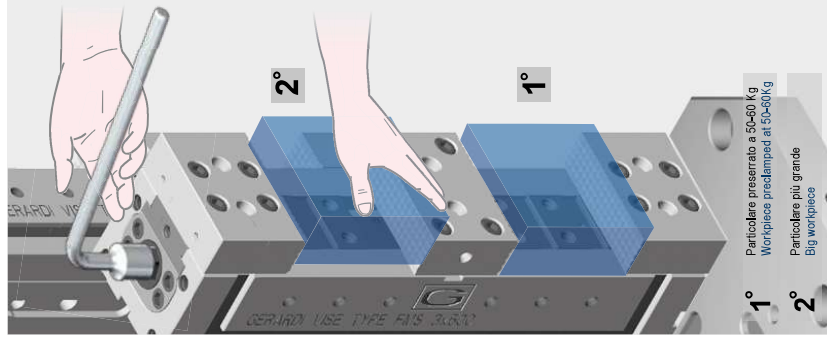
DISPOSITIVO TERZA MANO PER MORSE FMS DOPPIE THIRD HAND ACCESSORY FOR DOUBLE FMS VISES

DISPOSITIVO TERZA MANO PER MORSE FMS DOPPIE

Il meccanismo "Terza mano" nella 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.

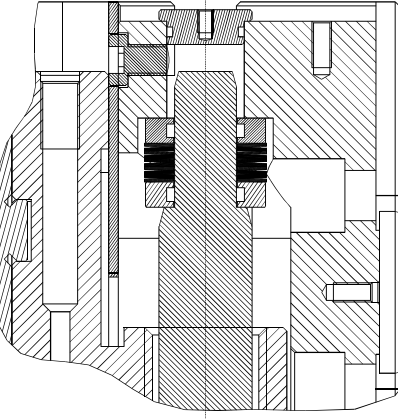
With the "Third Hand" device the two workpiece can be up to 2 mm different in gripping width.

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.

PS: 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

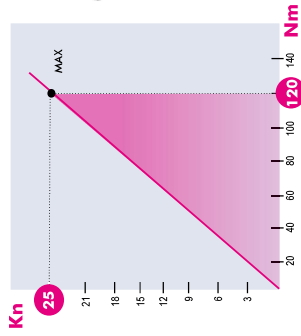
FMS

Diagrammi di serraggio meccanico con chiave dinamometrica
Mechanical clamping diagrams with torque wrench

Art. 357

1

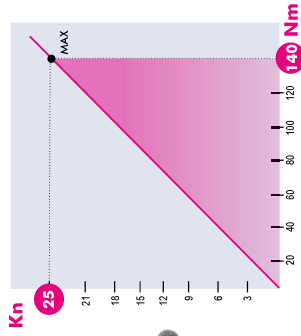
Morse tipo
Vises type
VITE: TPF 18 / 20 mm PASSO: 2 mm
SCREW: TPF 18 / 20 mm PITCH: 2 mm



Art. 357

2

Morse tipo
Vises type
VITE: TPF 18 / 24 mm PASSO: 2 mm
SCREW: TPF 18 / 24 mm PITCH: 2 mm



Diagrammi serraggio / Clamping diagrams

FMS

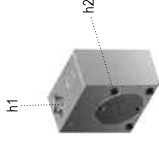
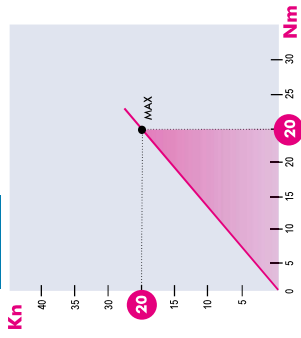
Diagrammi di serraggio meccanico con moltiplicatore di potenza
Mechanical clamping diagrams with pressure multiplier

Art. 802

1

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

Type 1 Cod. 5.80.21000 € 906

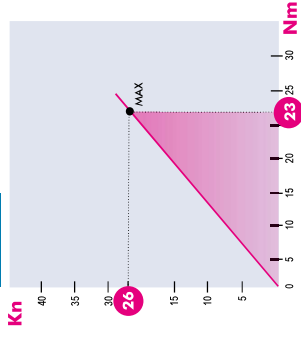


Art. 802

2

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

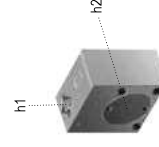
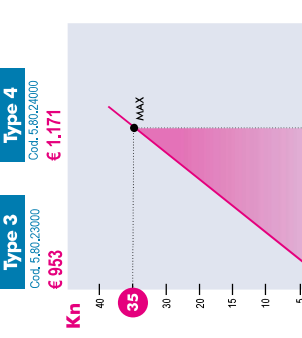
Type 2 Cod. 5.80.22000 € 906



3-4

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

Type 3 Cod. 5.80.23000 € 993

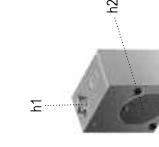
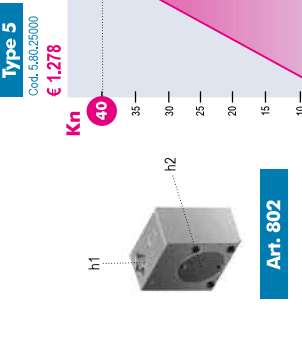


Art. 802

5-6

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

Type 4 Cod. 5.80.24000 € 1.171

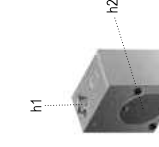
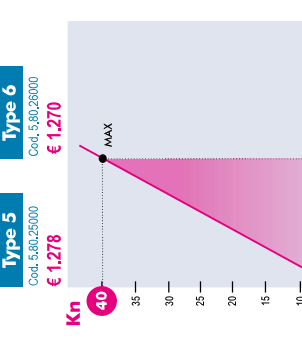


Art. 802

5-6

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

Type 5 Cod. 5.80.25000 € 1.278

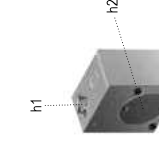
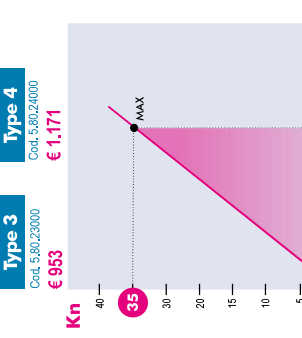


Art. 802

5-6

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

Type 6 Cod. 5.80.26000 € 1.270



Art. 802

NB: Alcuni fattori, come la lubrificazione, lo staffaggio, gli attrezzi 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, friction and more can modify above values within a $\pm 10\%$ range. For optimum operation do not exceed chart values.

NB: Alcuni fattori, come la lubrificazione, lo staffaggio, gli attrezzi 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, friction and more can modify above values within a $\pm 10\%$ range. For optimum operation do not exceed chart values.

Diagrammi serraggio / Clamping diagrams

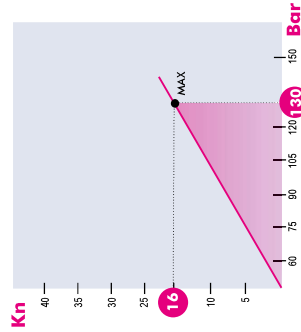
FMS

Diagrammi di serraggio meccanico tramite motore idraulico Mechanical clamping diagrams through hydraulic motor

Art. 890

1 Morso tipo Vises type

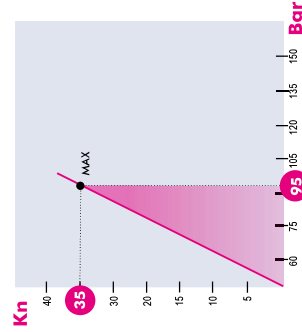
VITE: TPF 18 / 20 mm PASSO: 2 mm
SCREW: TPF 18 / 20 mm PITCH: 2 mm
Motore idraulico tipo OMM 32
Hydraulic motor type OMM 32



Art. 890

3-4 Morso tipo Vises type

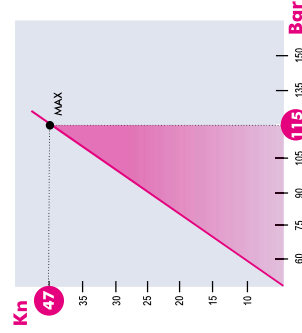
VITE: TPF 24 / 30 mm PASSO: 2 mm
SCREW: TPF 24 / 30 mm PITCH: 2 mm
Motore idraulico tipo OMR 200
Hydraulic motor type OMR 200



Art. 890

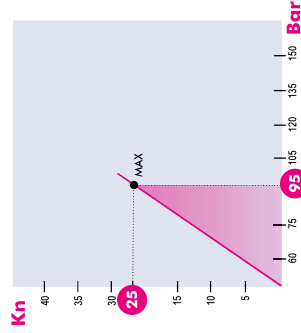
5-6 Morso tipo Vises type

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



2 Morso tipo Vises type

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



ISTRUZIONI PER UN CORRETTO UTILIZZO INSTRUCTIONS FOR A PROPER USE

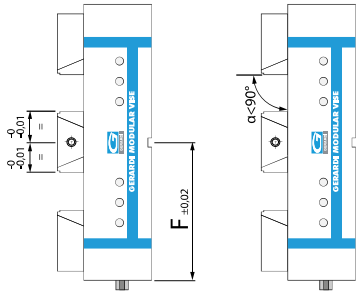
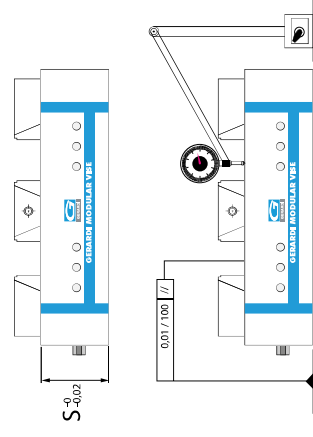


Libretto Istruzioni / Instruction Book

Scansiona il QR code e scarica
le istruzioni complete
Scan the QR code to download
the complete instructions

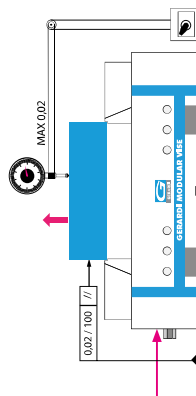
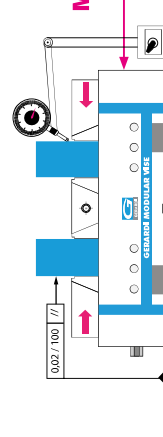
TOLLERANZE GEOMETRICHE

GEOMETRIC ACCURACIES



TOLLERANZE DINAMICHE

DINAMIC ACCURACIES



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

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

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

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

* Max coppia applicabile per
non superare i valori consigliati

1 kgf . m = 9,806

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

NB: Alcuni fattori, come la lubrificazione, lo sfregamento, gli attriti ed altro, possono modificare i valori indicati fino a +/- 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 +/- 10% range. For optimum operation do not exceed chart values.

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 sideway vise positioning by the

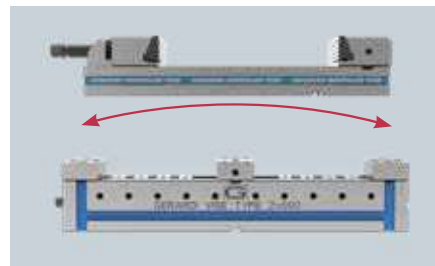


Accurata ripetibilità di posizionamento dei particolari da lavorare

Very accurate repetibility of workpieces position



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

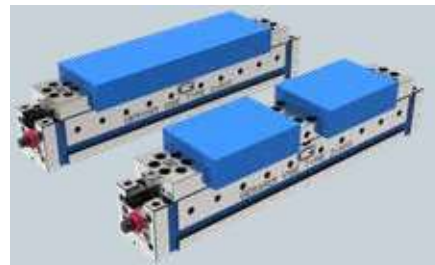


Flessioni ridotte di due volte rispetto alle morse modulari STANDARD

Bending reduced two times with respect to the STANDARD modular vises

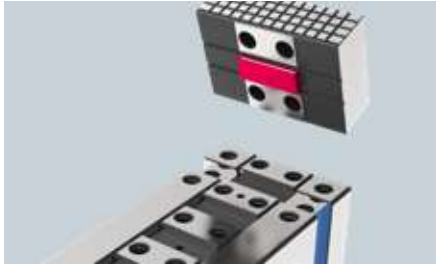


Possibilità illimitata per ganasce speciali
Unlimited range of special jaws

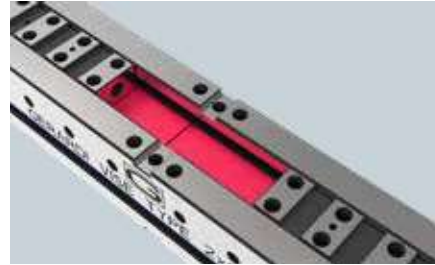


Trasformazione da autocentrante a doppia tramite la sostituzione delle ganasce sul corpo base universale e tramite la ghiera di regolazione.

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

5