

XL Series MORSE - VISES

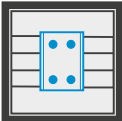
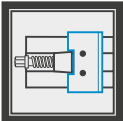
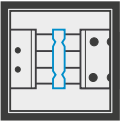
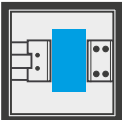
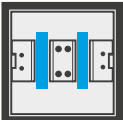
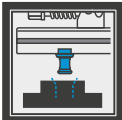
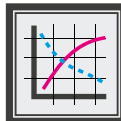


MADE IN ITALY





SIMBOLOGIA DATI TECNICI TECHNICAL DATA ICONS

GANASCE JAWS		 Fissa Fixed	 Mobile Movable	 Intermedia Intermediate	 Fissa con piastra singola Fixed with single plate	 Fissa con piastra doppia Fixed with double plate
PIASTRE GANASCE JAW PLATES		 Discendente Pull down	 Piana Straight	 Cambio rapido manuale Quick manual change	 GRIP GRIP	 Inserti GRIP Inserti GRIP
POSSIBILITÀ DI POSSIBILITY OF		 Serraggio di 1 particolare Clamping only 1 piece	 Serraggio di 2 particolari Clamping 2 pieces	 Montaggio sul fianco o in serie Side mounting or gang operation	 Posizionamento cambio rapido Quick change & positioning	 Cubi-morsa Vise tower
PAGINE PAGES				 Accessori & Ricambi Accessories & Spare Parts	 Istruzioni corretto utilizzo Instruction for a proper use	 Diagrammi forze di serraggio Clamping force diagrams

MORSE series XL

XL VISES series

La Morse XL prendono il nome dalle dimensioni Extra Large delle loro basi, molto più lunghe delle morse STD !
XL vises derive their name from the Extra Large vise base dimension that is much longer than STD vises !

Le morse **GERARDI** sono ormai considerate sinonimo di produzione ad alto livello tecnologico per l'accurata scelta dei materiali impiegati e per la precisione raggiunta anche nei minimi particolari. **Accuratamente rettificate** in ogni loro particolare ed ampiamente collaudate, consentono:

- ✓ una capacità di massimo rendimento della macchina / ✓ un forte carico di pressione / ✓ una maggior potenza di taglio,
- ✓ esclusione totale di vibrazioni / ✓ minor usura dell'utensile / ✓ una più precisa lavorazione

La costruzione con un sistema di elementi componibili consente le più svariate possibilità di impiego e combinazioni in caso di necessità.

Lo spazio sulla tavola della macchina a volte è limitato: le **morse XL** sono la risposta che vi permette di avere **due morse in una** perché si possono trasformare rapidamente da **morsa doppia a morsa singola di grande apertura**. La versione **XL doppia** permette la lavorazione di un numero maggiore di pezzi sfruttando al massimo la lunghezza della tavola della macchina utensile, ciò significa aumentare la produttività delle fasi attive del ciclo e di macchina stessa in quanto abbiamo:

- ✓ riduzione del numero dei carichi e conseguente risparmio dei tempi morti di fermo macchina / ✓ una minore incidenza (50%) dei tempi di cambio utensile / ✓ minori tempi di spostamento da una serie di pezzi a quella successiva / ✓ minore usura della macchina / ✓ operatore più libero dati i più lunghi tempi di ciclo complessivi.

In definitiva tutto ciò permette di ridurre al minimo i tempi morti di lavoro e quindi un **più rapido ammortamento degli impianti e delle stesse attrezzature**. La versione **XL singola** permette il serraggio di **pezzi di dimensioni insolite e di piastre** (con le appropriate ganasce). La notevole gamma di dimensioni e lunghezze delle basi garantisce il soddisfacimento delle più svariate necessità nonché una rigidità notevole dell'attrezzatura. Esiste la possibilità comunque di connettere due basi singole tramite un'apposita **ganascia fissa doppia di collegamento** per ottenere una morsa XL doppia da due basi standard (gr. 1) singole. A richiesta tutte le morse sono fornibili con tasselli di riferimento di varie grandezze o con fori calibrati.

GERARDI vises are manufactured under rigid quality control. Only the most suitable materials are used, and the accuracy of even the smallest components is assured.

As a result of the high standard construction Gerardi vises can maintain their accuracy under the most severe operating conditions. Hardened and Ground steel construction throughout allowing you maximum machine performance with:

- ✓ bigger clamping power / ✓ bigger cutting performances / ✓ total exclusion of vibrations / ✓ lower tool wear
- ✓ higher precision during machinework

The modular design and the concept of interchangeability makes possible a wide variety of set up combination and solutions.

Space on the machine table is sometimes limited: **XL vises** enable to have **2 vises in 1** because they can quickly change from **double vise to single vise with very large opening**. Double XL vise allows to machine more workpieces using the total length of the machine tool, this means to increase productivity of the workpiece and of the machine itself because:

- ✓ reduction of total number of loading and unloading with consequence **save of dead times/interruptions** if machine is not working,
- ✓ reduction (50%) of total tool changing time,
- ✓ lower moving time from a series of pieces to another,
- ✓ lower machine wear,
- ✓ more time the **operator can walk away** to do other work because of longer total cycle times.

In conclusion all this allows to reduce to a minimum dead times/interruptions and consequently **faster payback period of machines and fixtures**.

Single XL vise allows to clamp **pieces of unusual dimensions and plates** (with the right jaws). The very wide range of widths and lengths of bases guarantees the satisfaction of the widest variety of works and a big rigidity of the fixture too. There is anyway the possibility to connect 2 single vises through a dedicated **double fixed connection jaw** to get one XL vise starting from 2 standard single bases. On request all vises can be supplied with key-nuts of different sizes or with ground holes.



USURA INESISTENTE

Grazie all'accurata scelta dei materiali impiegati ed allo studio dimensionale computerizzato dei componenti. **Costruzione completamente in speciali leghe di acciaio** ad alta resistenza, normalizzato, cementato e temprato con **durezza 60 ±2 HRC**. Tutto ciò al fine di conferire massima rigidità, elevate prestazioni e usura inesistente. A riprova di tutto ciò assicuriamo **5 ANNI DI GARANZIA** su tutto il programma morse e organi meccanici in genere.

NO WEAR

Thanks to the manufacturing with only the most suitable materials and to the structure of the vise components (developed using computer customised softwares and the experience gained during many years spent working on the specific field). **High alloyed quality resistance steel, case hardened HRC 60 ±2**, is used in manufacturing all the Gerardi vises and accessories in order to give maximum rigidity, high performances and no wear. As evidence we give **5 YEARS WARRANTY** on all the vises and mechanical components.



DESIGN COMPATTO E MANEGGEVOLEZZA

La semplicità nonché la compattezza costruttiva consentono un'apertura notevole rispetto all'ingombro totale dell'attrezzatura. Inoltre lo stesso peso (solo 25 kg per una morsa da 150 mm di larghezza ganascia) è tale da consentire un facile trasferimento da una macchina all'altra.

SPACE SAVING DESIGN & HANDY

The space saving design and solid construction allow a maximum blocking ratio to total overall dimension of the vise. Furthermore the weight (only 25 kg for a 150 mm jaw width vise) allows a simple moving from one machine to another.

1-2 RAPIDITA' DEI SERRAGGI

Grazie allo **scorrimonto del gruppo di serraggio** nella guida della base (a cremagliera) fino in prossimità del pezzo da lavorare dove si adatterà automaticamente alla nicchia più vicina. L'operazione di serraggio si conclude agendo sulla vite di bloccaggio. Oltre a quello manuale meccanico, sono disponibili **4 ulteriori sistemi di serraggio** intercambiabili e indipendenti:

1 - Idraulici / 2 - Pneumatici / 3 - Idraulici manuali / 4 - Idraulici elettrici.
L'operazione è in termini di secondi.

1-2 QUICK CLAMPING

Thanks to the **clamping device sliding in the vise base slide** (compact rack type) till the proximity of the workpiece. The clamping is completed with the main screw. Besides the manual mechanic system, **4 further** interchangeable and independent **clamping systems** are available:

1- Hydraulic / 2- Pneumatic / 3- Manual hydraulic / 4- Electrical hydraulic.
The change needs only few seconds.

3-4 PRECISIONI $\pm 0,02$ mm

Slittone base con tutte le superfici di scorrimento ed accoppiamento rettificate. L'allineamento agli assi della macchina avviene grazie alle **chiavette longitudinali e trasversali** (16H7) o fori di posizionamento ($\varnothing 16$ mm F7), a richiesta, previsti nella parte inferiore della base di ciascuna morsa. Naturalmente tutto ciò consente oltre alle precisioni dichiarate **tempi di installazione ristrettissimi**.

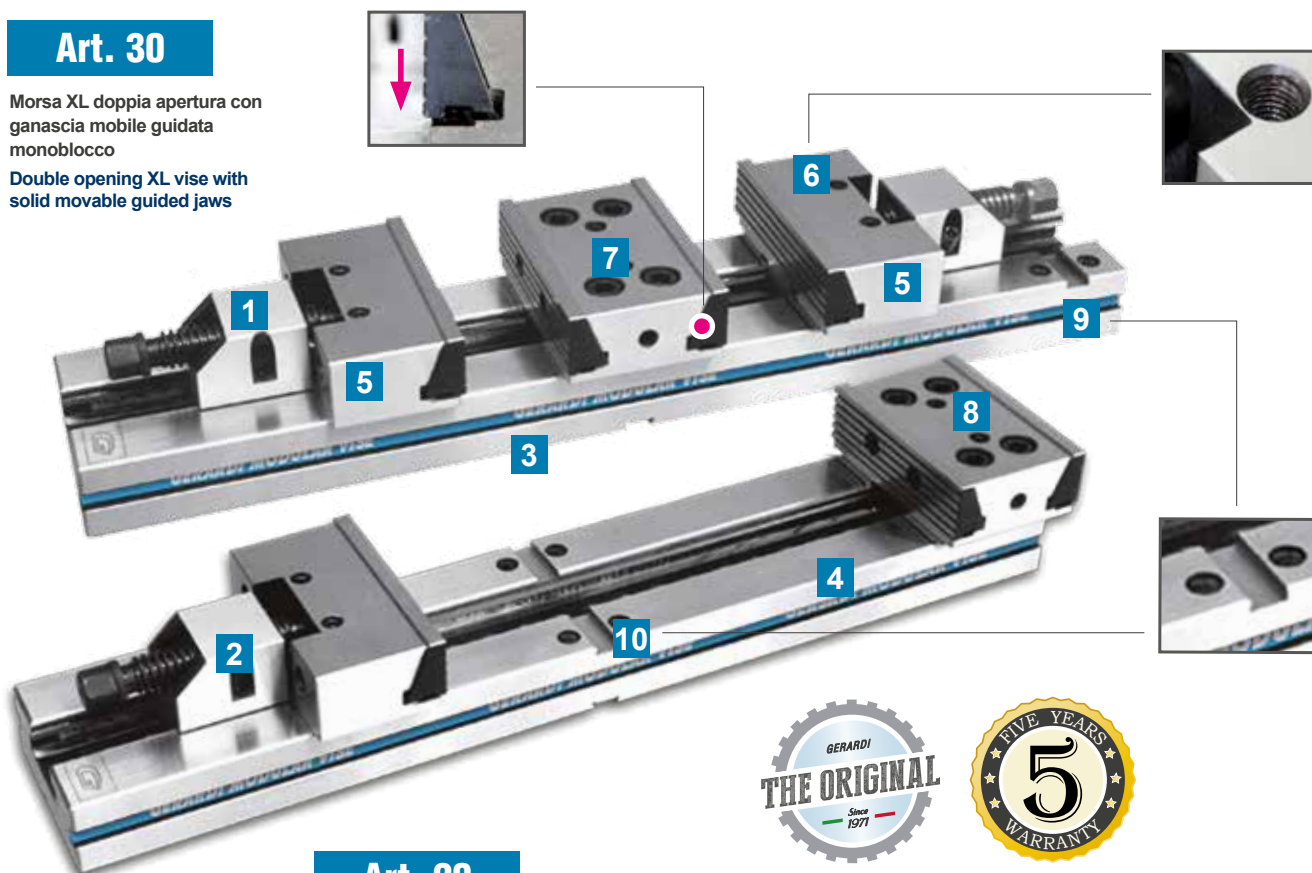
3-4 HIGHEST ACCURACIES $\pm 0,02$ mm

Solid vise base. Every sliding and coupling surface is ground. **Centesimal tolerances** are guaranteed by checking cycles with CNC measuring machine. The perfect alignment with the machine axis is given by **longitudinal and cross keyways** (16H7) upon specific request by positioning holes ($\varnothing 16$ mm F7) on the bottom surface of the vise base. Of course this allows **minimum of set up times and gang operations**.

Art. 30

Morsa XL doppia apertura con ganascia mobile guidata monoblocco

Double opening XL vise with solid movable guided jaws



Art. 20

5 SERRAGGI INDIPENDENTI

Due Gruppi di serraggio indipendenti

5 INDEPENDENT CLAMPINGS

Two independent clamping devices

7-8 GANASCIA FISSA DOPPIA

Ganascie fisse doppie posizionabili sia al centro (per serraggi doppi), sia all'estremità della base (per serraggi singoli di particolari di grosse dimensioni).

7-8 DOUBLE FIXED JAWS

Double fixed jaw position both in the center of the vise base (for double clamping) and at the end (for single big workpieces Clamping).

6 FORI FILETTATI SOPRA LE GANASCE PER APPLICAZIONI SPECIALI

Quattro fori filettati supplementari sopra le ganasce danno la possibilità di installare ganasce sovrapponibili per applicazioni speciali.

6 THREADED HOLES ON THE TOP OF THE JAWS FOR SPECIAL APPLICATIONS

4 extra tapped holes over the jaws for special Gerardi stack type jaw application

9-10 DUE SERIE DI CHIAVETTE

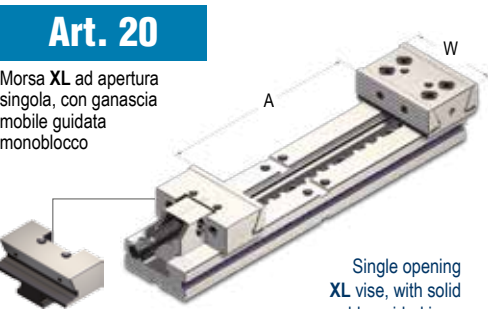
Due serie di chiavette per due posizioni alternative delle ganasce fisse doppie.

9-10 TWO DIFFERENT KEYWAYS

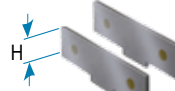
Two different keyways for two alternatives positions of the double fixed jaw.

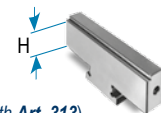


2

Tipo (grandezza) morsa / Vise (type) size	kN	1 16 kN	2 25 kN	3 30 kN		4 30 kN			
Apertura massima / Maximum spread	A	290	320	360	460	400	500	600	700
Art. 20 Morsa XL ad apertura singola, con ganascia mobile guidata monoblocco  Single opening XL vise, with solid movable guided jaws	W	100	125	150		175			
	B	30	40	50		60			
	C	35	40	50		58			
	D	460	520	580	680	666	766	866	966
	G	75	95	125		145			
	kg	10	17	32	35	47	52	56	61
	Cod.	3.21.00000	3.22.10000	3.23.20000	3.23.30000	3.24.20000	3.24.30000	3.24.40000	3.24.50000

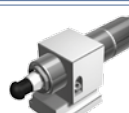
AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !

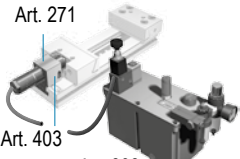
Art. 313 Piastre magnetiche parallele piane Magnetic parallel plates 	Cod.	4.31.31000	4.31.32000	4.31.33000	4.31.34000
	H	23	33	43	53

Art. 212 Ganascia mobile intermedia (da usare con Art. 313) Intermediate movable jaw (to be used with Art. 313) 	Cod.	1.21.21000	1.21.22000	1.21.23000	1.21.24000

Art. 217 Ganascia mobile prismatica Prismatic movable jaw 	Cod.	2.21.71000	2.21.72000	2.21.73000	2.21.74000

Art. 242G NEW! Piastra ganascia con inserti GRIP Jaw plate with GRIP inserts 	Cod.	1.24.2G100	1.24.2G200	1.24.2G300	1.24.2G400

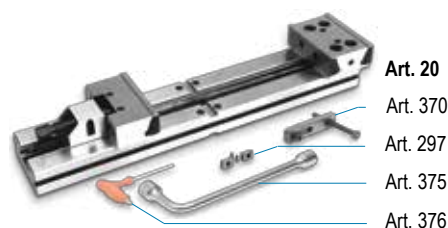
Art. 271 Supporto di serraggio con cilindro idraulico Clamping support with hydraulic cylinder 	Cod.	2.27.11000	2.27.12000	2.27.13000	2.27.14000

Art. 271 	Cod.	4.39.11000	4.39.12000	4.39.13000	4.39.14000
Art. 391 CNC / CNC					
Art. 403 	Cod.	4.39.21000	4.39.22000	4.39.23000	4.39.24000
Art. 393 Pneumatico / Air control					

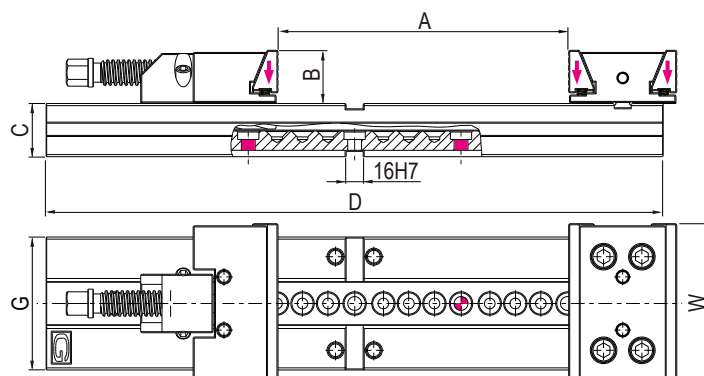
 Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

Dotazione standard:

- 1 arresto laterale Art. 370
- 1 coppia di tasselli di posizionamento Art. 297
(Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376

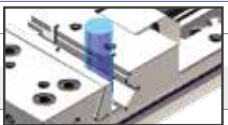
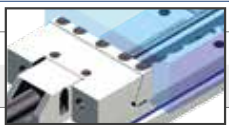

Standard equipment:

- 1 workstop Art. 370
- 1 pair of positioning key-nuts Art. 297
(Standard for 16 mm slot. Other dimensions available on request without price change)
- 1 box wrench Art. 375 ■ 1 T-wrench Art. 376

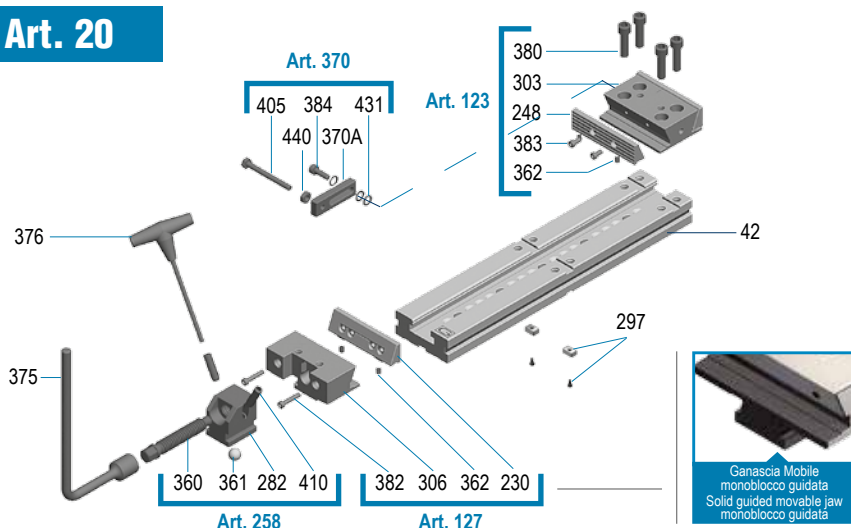

 Vedi gruppo 4 per gamma completa accessori
 See group 4 for complete range of accessories

5 40 kN					6 40 kN						
500	600	700	800	900	500	600	700	800	900	1000	1100
		200						300			
		65						80			
		70						78			
805	905	1005	1105	1205	900	1000	1100	1200	1300	1400	1500
		170						195			
64	69	74	79	84	95	105	115	125	135	145	155
3.25.20000	3.25.30000	3.25.40000	3.25.50000	3.25.60000	3.26.20000	3.26.30000	3.26.40000	3.26.50000	3.26.60000	3.26.70000	3.26.80000

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.31.35000		4.31.36000
Art. 313		
53		68
1.21.25000		1.21.26000
Art. 212		
2.21.75000		2.21.76000
Art. 217		
1.24.2G500		1.24.2G600
Art. 242G		
2.27.15000		2.27.16000
Art. 271		
4.39.15000		4.39.16000
Art. 391		
4.39.25000		4.39.26000
Art. 392		

 Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47

Art. 20


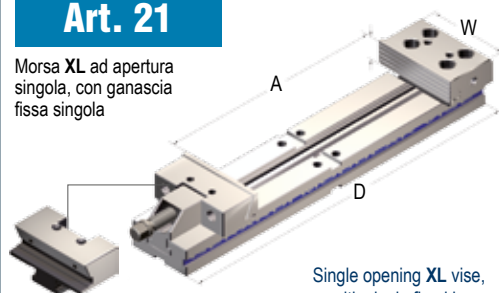
Art.	Pag.	Art.	Pag.
42	2.30	375	4.31
230	4.9	376	4.31
248	4.9	380	4.24
282	4.32	382	4.24
297	4.31	383	4.24
303	4.25	384	4.24
306	4.25	405	4.31
360	4.32	410	4.32
361	4.32	431	4.24
362	4.24	440	4.24
370A	4.31	-	-

Tipo (grandezza) morsa / Vise (type) size

	kN	1 16 kN	2 25 kN	3 30 kN	4 30 kN				
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	W	100	125	150		175			
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	D	460	520	580	680	666	766	866	966
	G	75	95	125		145			
	kg	10	17	32	35	47	52	56	61
	Cod.	2.21.00000	2.21.23200	2.21.33600	2.21.34600	2.21.44000	2.21.45000	2.21.46000	2.21.47000

Art. 21

Morsa XL ad apertura singola, con ganascia fissa singola

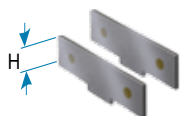


Single opening XL vise, with single fixed jaws

Monoblocco - Solid

AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !

Art. 313

 Piastre magnetiche parallele piane
 Magnetic parallel plates


Cod.	4.31.31000	4.31.32000	4.31.33000	4.31.34000
H	23	33	43	53

Art. 212

 Ganascia mobile intermedia
 (da usare con Art. 313)
 Intermediate movable jaw (to be used with Art. 313)


Cod.	1.21.21000	1.21.22000	1.21.23000	1.21.24000
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Art. 217

 Ganascia mobile prismatica
 Prismatic movable jaw


Cod.	2.21.71000	2.21.72000	2.21.73000	2.21.74000
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Art. 242G

NEW!

 Piastra ganascia con inserti GRIP
 Jaw plate with GRIP inserts

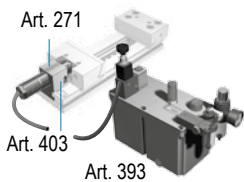

Cod.	1.24.2G100	1.24.2G200	1.24.2G300	1.24.2G400
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Art. 271

 Supporto di serraggio con cilindro idraulico
 Clamping support with hydraulic cylinder


Cod.	2.27.11000	2.27.12000	2.27.13000	2.27.14000
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Art. 271



Art. 403

Art. 393

Art. 391

CNC / CNC

Cod.	4.39.11000	4.39.12000	4.39.13000	4.39.14000
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Art. 392

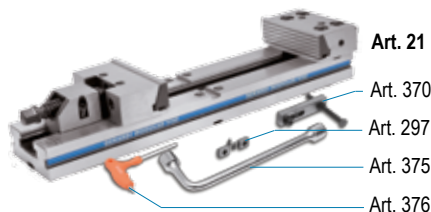
Pneumatico / Air control

Cod.	4.39.21000	4.39.22000	4.39.23000	4.39.24000
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 Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

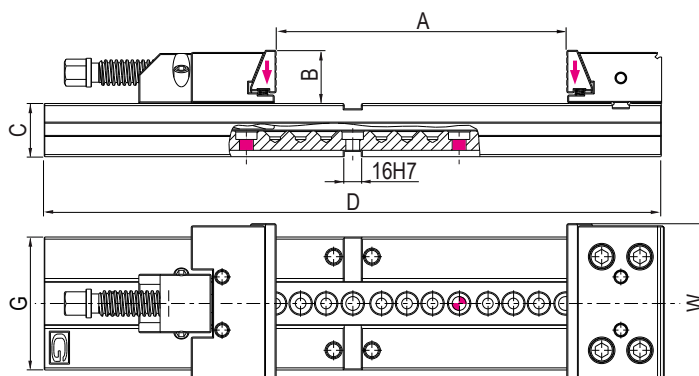
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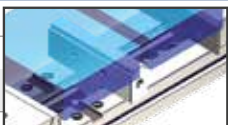
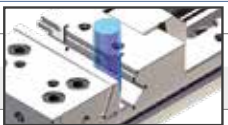
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(Standard for 16 mm slot. Other dimensions available on request without price change)
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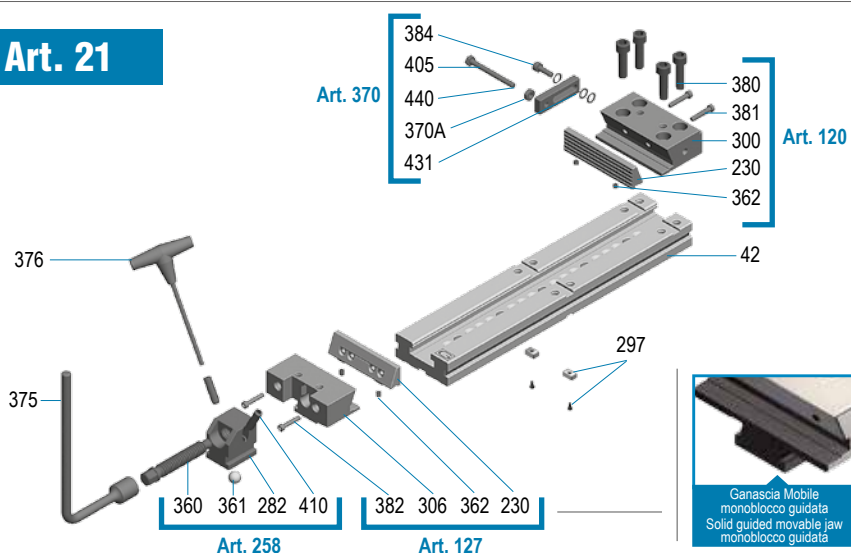

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		65						80			
		70						78			
805	905	1005	1105	1205	900	1000	1100	1200	1300	1400	1500
		170						195			
64	69	74	79	84	95	105	115	125	135	145	155
2.21.55000	2.21.56000	2.21.57000	2.21.58000	2.21.59000	2.21.65000	2.21.66000	2.21.67000	2.21.68000	2.21.69000	2.21.61000	2.21.61100

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.31.35000		4.31.36000
Art. 313		
53		68
1.21.25000		1.21.26000
Art. 212		
2.21.75000		2.21.76000
Art. 217		
1.24.2G500		1.24.2G600
Art. 242G		
2.27.15000		2.27.16000
Art. 271		
4.39.15000		4.39.16000
Art. 391		
4.39.25000		4.39.26000
Art. 392		

 Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47

Art. 21


Art.	Pag.
42	2.30
230	4.9
248	4.9
282	4.32
297	4.31
300	4.25
306	4.25
360	4.32
361	4.32
362	4.24
370A	4.31

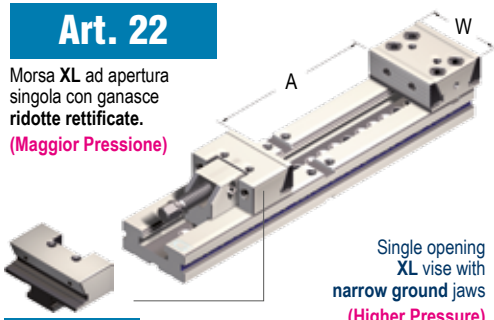
Art.	Pag.
375	4.31
376	4.31
380	4.24
382	4.24
383	4.24
384	4.24
405	4.31
410	4.32
431	4.24
440	4.24
-	-

Tipo (grandezza) morsa / Vise (type) size

	kN	1 16 kN	2 25 kN	3 30 kN	4 30 kN				
Apertura massima / Maximum spread	A	290	320	360	460	400	500	600	700
W		75	95	125			145		
B		30	40	50			60		
C		35	40	50			58		
D		460	520	580	680	666	766	866	966
G		75	95	125			145		
kg		9.4	15.8	29.8	32.8	44.8	49.8	54.8	59.8
Cod.		3.21.00220	3.22.10220	3.23.20220	3.23.30220	3.24.20220	3.24.30220	3.24.40220	3.24.50220

Art. 22

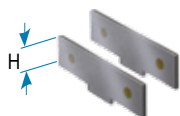
Morsa XL ad apertura singola con ganasce ridotte rettificate.
 (Maggior Pressione)



Monoblocco - Solid

AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !
Art. 313R

Piastre magnetiche parallele piane
 Magnetic parallel plates



Cod.	4.31.3R100	4.31.3R200	4.31.3R300	4.31.3R400
H	23	33	43	53

Art. 213

Ganascia mobile intermedia
 (da usare con Art. 313R)
 Intermediate movable jaw (to be used with Art. 313R)



Cod.	1.21.31000	1.21.32000	1.21.33000	1.21.34000
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Art. 218

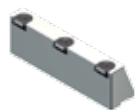
Ganascia mobile prismatica
 Prismatic movable jaw



Cod.	2.21.81000	2.21.82000	2.21.83000	2.21.84000
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Art. 243G
NEW!

Piastra ganascia ridotta con inserti GRIP
 Narrow width jaw plate with GRIP inserts



Cod.	1.24.3G100	1.24.3G200	1.24.3G300	1.24.3G400
------	------------	------------	------------	------------

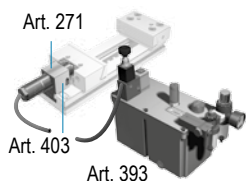
Art. 271

Supporto di serraggio con cilindro idraulico
 Clamping support with hydraulic cylinder



Cod.	2.27.11000	2.27.12000	2.27.13000	2.27.14000
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Art. 271


Art. 391

CNC / CNC

Cod.	4.39.11000	4.39.12000	4.39.13000	4.39.14000
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Art. 392

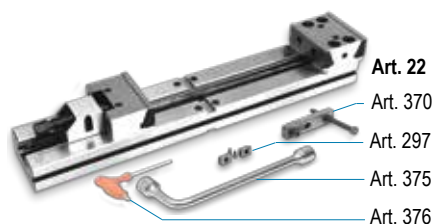
Pneumatico / Air control

Cod.	4.39.21000	4.39.22000	4.39.23000	4.39.24000
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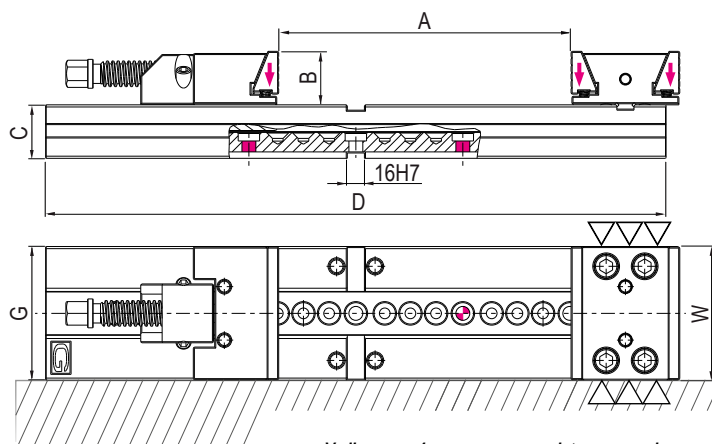
 Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

Dotazione standard:

- 1 arresto laterale Art. 370
- 1 coppia di tasselli di posizionamento Art. 297
 (Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376


Standard equipment:

- 1 workstop Art. 370
- 1 pair of positioning key-nuts Art. 297
 (Standard for 16 mm slot. Other dimensions available on request without price change)
- 1 box wrench Art. 375 ■ 1 T-wrench Art. 376

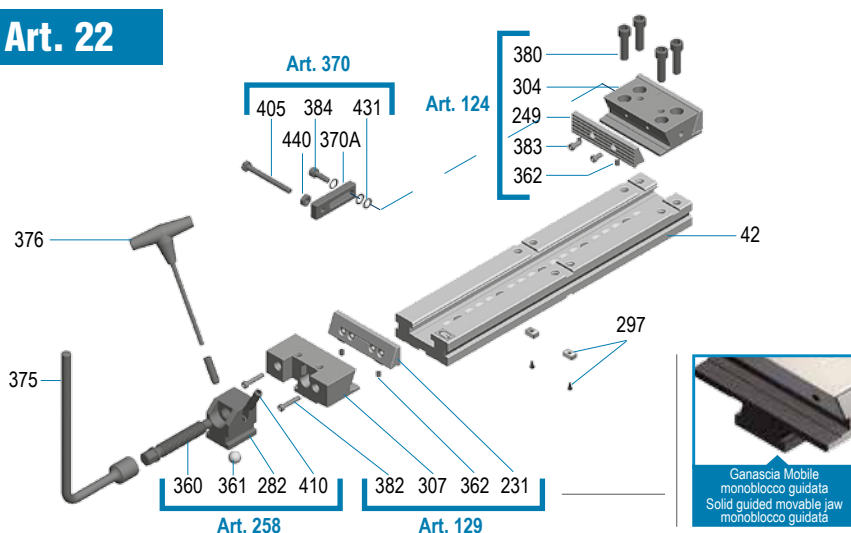

 Vedi gruppo 4 per gamma completa accessori
 See group 4 for complete range of accessories

5 40 kN					6 40 kN						
500	600	700	800	900	500	600	700	800	900	1000	1100
		170						195			
		65						80			
		70						78			
805	905	1005	1105	1205	900	1000	1100	1200	1300	1400	1500
		170						195			
82.5	88.5	96.5	103.5	110.5	116	129	139	149	159	169	179
3.25.20220	3.25.30220	3.25.40220	3.25.50220	3.25.60220	3.26.20220	3.26.30220	3.26.40220	3.26.50220	3.26.60220	3.26.70220	3.26.80220

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.31.3R500		4.31.3R600
Art. 313R		
53		68
1.21.35000		1.21.36000
Art. 213		
2.21.85000		2.21.86000
Art. 218		
1.24.3G500		1.24.3G600
Art. 243G		
2.27.15000		2.27.16000
Art. 271		
4.39.15000		4.39.16000
Art. 391		
4.39.25000		4.39.26000
Art. 392		

 Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47

Art. 22


Art.	Pag.	Art.	Pag.
42	2.30	375	4.31
231	4.9	376	4.31
249	4.9	380	4.24
282	4.32	382	4.24
297	4.31	383	4.24
304	4.25	384	4.24
307	4.25	405	4.31
360	4.32	410	4.32
361	4.32	431	4.24
362	4.24	440	4.24
370A	4.31	-	-

2

Tipo (grandezza) morsa / Vise (type) size	kN	1 16 kN	2 25 kN	3 30 kN	4 30 kN				
Apertura massima / Maximum spread	A	290	320	360	460	400	500	600	700
Art. 24 Morsa XL con ganasce a piastre piane Monoblocco - Solid	W	100	125	150		175			
	B	30	40	50		60			
	C	35	40	50		58			
	D	460	520	580	680	666	766	866	966
	G	75	95	125		145			
kg		9.4	15.8	29.8	32.8	44.8	49.8	54.8	59.8
Cod.		2.24.12900	2.24.23200	2.24.33600	2.24.34600	2.24.44000	2.24.45000	2.24.46000	2.24.47000
XL vise with straight-plate jaw									

AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !

Art. 313 Piastre magnetiche parallele piane Magnetic parallel plates 	Cod.	4.31.31000	4.31.32000	4.31.33000	4.31.34000				
H		23	33	43	53				

Art. 212 Ganasce mobile intermedia (da usare con Art. 313) Intermediate movable jaw (to be used with Art. 313) 	Cod.	1.21.21000	1.21.22000	1.21.23000	1.21.24000				
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Art. 246 Piastra piana in acciaio lavorabile Machinable steel straight jaw plate 	Cod.	1.24.61000	1.24.62000	1.24.63000	1.24.64000				
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Art. 246G NEW! Piastra piana con inserti GRIP Straight jaw plate with GRIP inserts 	Cod.	1.24.6G100	1.24.6G200	1.24.6G300	1.24.6G400				
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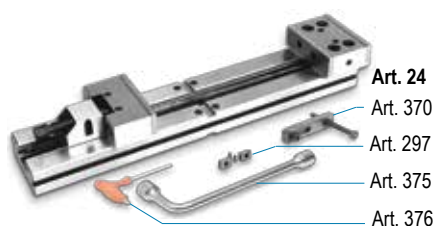
Art. 271 Supporto di serraggio con cilindro idraulico Clamping support with hydraulic cylinder 	Cod.	2.27.11000	2.27.12000	2.27.13000	2.27.14000				
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Art. 271 Art. 403 Art. 393 CNC / CNC Art. 392 Pneumatico / Air control	Cod.	4.39.11000	4.39.12000	4.39.13000	4.39.14000				
	Cod.	4.39.21000	4.39.22000	4.39.23000	4.39.24000				

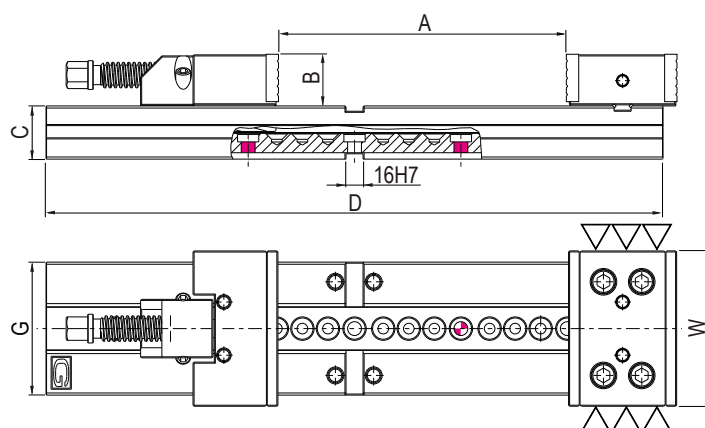
 Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

Dotazione standard:

- 1 arresto laterale Art. 370
- 1 coppia di tasselli di posizionamento Art. 297
(Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376

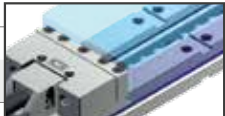

Standard equipment:

- 1 workstop Art. 370
- 1 pair of positioning key-nuts Art. 297
(Standard for 16 mm slot. Other dimensions available on request without price change)
- 1 box wrench Art. 375 ■ 1 T-wrench Art. 376

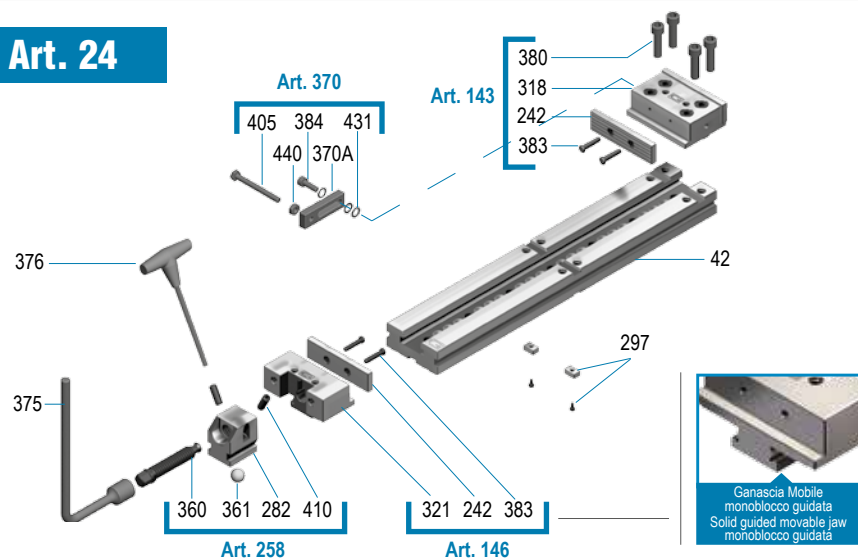

 Vedi gruppo 4 per gamma completa accessori
 See group 4 for complete range of accessories

[illegible]

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

Art. 313	4.31.35000		4.31.36000
	53		68
Art. 212	1.21.25000		1.21.26000
Art. 246	1.24.65000		1.24.66000
Art. 246G	1.24.6G500		1.24.6G600
Art. 271	2.27.15000		2.27.16000
Art. 391	4.39.15000		4.39.16000
	4.39.25000		4.39.26000
Art. 392			

Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47



Art.	Pag.	Art.	Pag.
42	2.30	380	4.24
242	4.11	383	4.24
282	4.32	384	4.24
297	4.31	405	4.31
318	4.26	410	4.32
321	4.26	431	4.24
360	4.32	440	4.24
361	4.32	-	-
370A	4.31	-	-
375	4.31	-	-
376	4.31	-	-

2

Tipo (grandezza) morsa / Vise (type) size		1 16 kN		2 25 kN		3 30 kN		4 30 kN			
Apertura massima / Maximum spread		A	290	320	360	460	400	500	600	700	
Art. 25 Morsa XL con ganasce a piastre GRIP a forte serraggio (ridotte rettificate) XL vise with GRIP jaw-plates for strongest clamping (narrow width ground)	W	75	95	125		145					
	B	30	40	50		60					
	C	35	40	50		58					
	D	460	520	580	680	666	766	866	966		
	G	75	95	125		145					
	kg	9.4	15.8	29.8	32.8	44.8	49.8	54.8	59.8		
	Cod.	2.25.12900	2.25.23200	2.25.33600	2.25.34600	2.25.44000	2.25.45000	2.25.46000	2.25.47000		

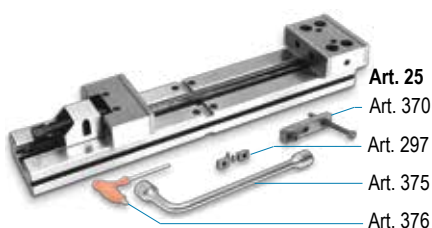
AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !

Art. 313R Piastre magnetiche parallele piane Magnetic parallel plates 	Cod. 4.31.3R100 4.31.3R200 4.31.3R300 4.11.3R400 H 23 33 43 53
Art. 218 Ganasca mobile prismatica Prismatic movable jaw 	Cod. 2.21.81000 2.21.82000 2.21.83000 2.21.84000
Art. 247 Piastra piana in acciaio lavorabile Machinable steel straight jaw plate 	Cod. 1.24.71000 1.24.72000 1.24.73000 1.24.74000
Art. 247G NEW! Piastra piana ridotta con inserti GRIP Narrow width straight jaw plate with GRIP inserts 	Cod. 1.24.7G100 1.24.7G200 1.24.7G300 1.24.7G400
Art. 271 Supporto di serraggio con cilindro idraulico Clamping support with hydraulic cylinder 	Cod. 2.27.11000 2.27.12000 2.27.13000 2.27.14000
Art. 391 CNC / CNC 	Cod. 4.39.11000 4.39.12000 4.39.13000 4.39.14000
Art. 392 Pneumatico / Air control 	Cod. 4.39.21000 4.39.22000 4.39.23000 4.39.24000

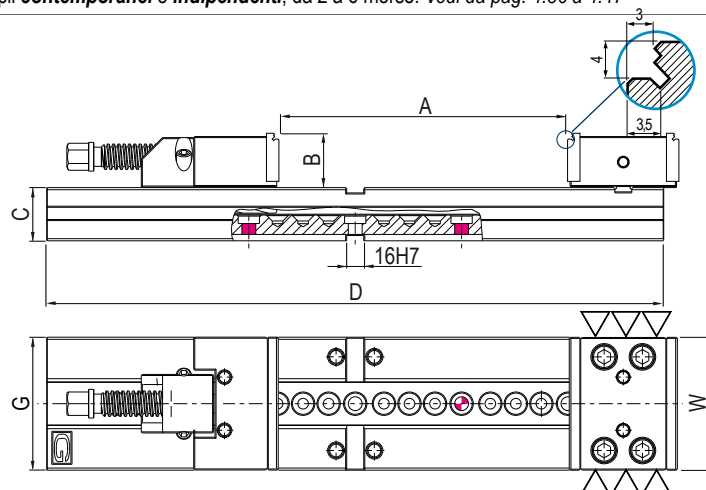
 Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

Dotazione standard:

- 1 arresto laterale Art. 370
- 1 coppia di tasselli di posizionamento Art. 297 (Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376


Standard equipment:

- 1 workstop Art. 370
- 1 pair of positioning key-nuts Art. 297 (Standard for 16 mm slot. Other dimensions available on request without price change)
- 1 box wrench Art. 375 ■ 1 T-wrench Art. 376

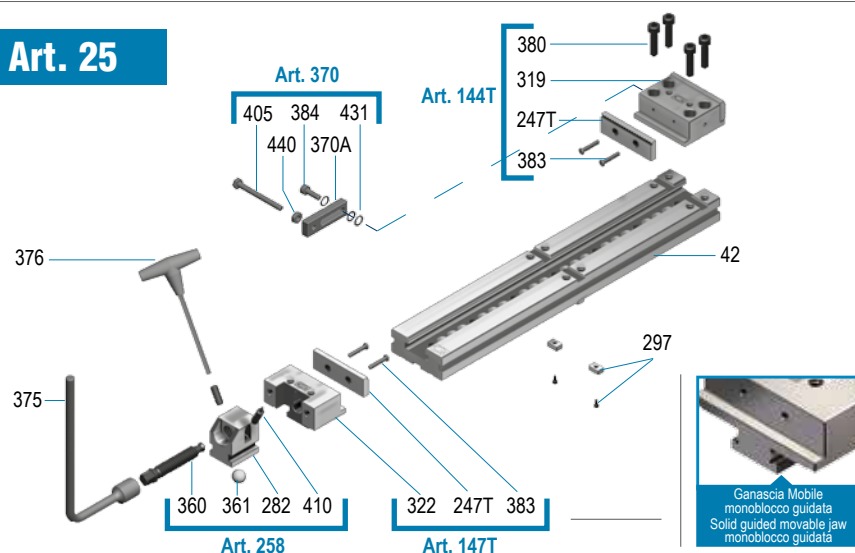

 Vedi gruppo 4 per gamma completa accessori
 See group 4 for complete range of accessories

5 40 kN					6 40 kN						
500	600	700	800	900	500	600	700	800	900	1000	1100
		170						195			
		65						80			
		70						78			
805	905	1005	1105	1205	900	1000	1100	1200	1300	1400	1500
		170						195			
82.5	88.5	96.5	103.5	110.5	116	129	139	149	159	169	179
2.25.55000	2.25.56000	2.25.57000	2.25.58000	2.25.59000	2.25.65000	2.25.66000	2.25.67000	2.25.68000	2.25.69000	2.25.61000	2.25.61100

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.31.3R500		4.31.3R600
Art. 313		
53		68
2.21.85000		2.21.86000
Art. 218		
1.24.75000		1.24.76000
Art. 247		
1.24.7G500		1.24.7G600
Art. 247G		
2.27.15000		2.27.16000
Art. 271		
4.39.15000		4.39.16000
Art. 391		
4.39.25000		4.39.26000
Art. 392		

 Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47

Art. 25


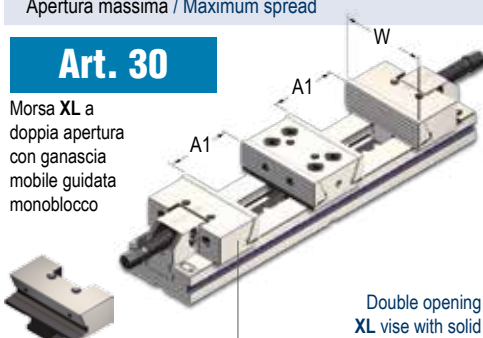
Art.	Pag.	Art.	Pag.
42	2.30	380	4.24
247T	4.11	383	4.24
282	4.32	384	4.24
297	4.31	405	4.31
319	4.26	410	4.32
322	4.26	431	4.24
360	4.32	440	4.24
361	4.32	-	-
370A	4.31	-	-
375	4.31	-	-
376	4.31	-	-

Tipo (grandezza) morsa / Vise (type) size

	kN	1 16 kN	2 25 kN	3 30 kN	4 30 kN				
Apertura massima / Maximum spread	A1	2 x 90	2 x 100	2 x 110	2 x 160	2 x 120	2 x 170	2 x 220	2 x 270
W		100	125	150			175		
B		30	40	50			60		
C		35	40	50			58		
D		460	520	580	680	666	766	866	966
G		75	95	125			145		
kg		14.5	21	39	43	59	64	69	74
Cod.		3.31.00600	3.32.10600	3.33.20600	3.33.30600	3.34.20600	3.34.30600	3.34.40600	3.34.50600

Art. 30

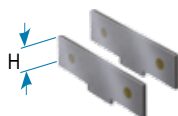
Morsa XL a doppia apertura con ganascia mobile guidata monoblocco



Double opening XL vise with solid movable guided jaws

Monoblocco - Solid

AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !
Art. 313

 Piastre magnetiche parallele piane
 Magnetic parallel plates


Cod.	4.31.31000	4.31.32000	4.31.33000	4.31.34000
H	23	33	43	53

Art. 212

 Ganascia mobile intermedia
 (da usare con Art. 313)
 Intermediate movable jaw (to be used with Art. 313)


Cod.	1.21.21000	1.21.22000	1.21.23000	1.21.24000
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Art. 217

 Ganascia mobile prismatica
 Prismatic movable jaw


Cod.	2.21.71000	2.21.72000	2.21.73000	2.21.74000
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Art. 242G
NEW!

 Piastra piana con inserti GRIP
 Straight jaw plate with GRIP inserts

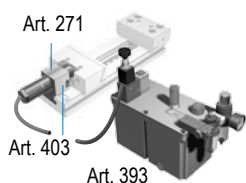

Cod.	1.24.2G100	1.24.2G200	1.24.2G300	1.24.2G400
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Art. 271

 Supporto di serraggio con cilindro idraulico
 Clamping support with hydraulic cylinder


Cod.	2.27.11000	2.27.12000	2.27.13000	2.27.14000
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Art. 271


Art. 391

CNC / CNC

Cod.	4.39.11000	4.39.12000	4.39.13000	4.39.14000
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Art. 392

Pneumatico / Air control

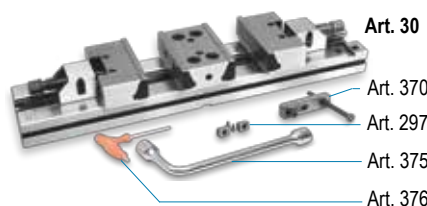
Cod.	4.39.21000	4.39.22000	4.39.23000	4.39.24000
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 Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

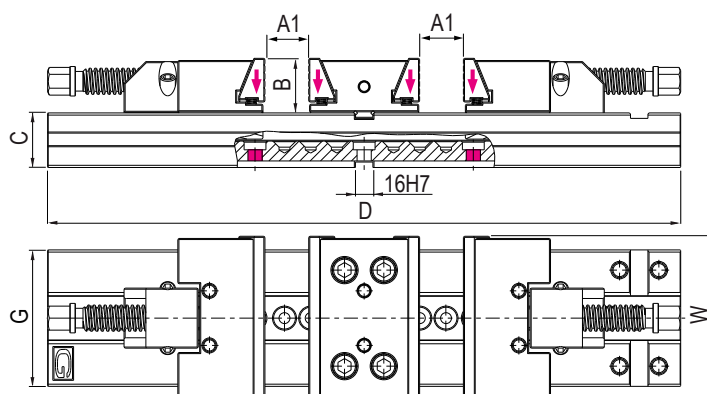
Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento Art. 297
 (Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376

Extra per ogni foro calibrato (tolleranza F7): € 85,00

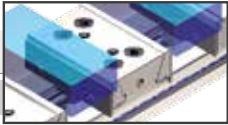
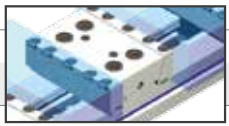

Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts Art. 297
 (Standard for 16 mm slot. Other dimensions available on request without price change)
- 1 box wrench Art. 375 ■ 1 T-wrench Art. 376

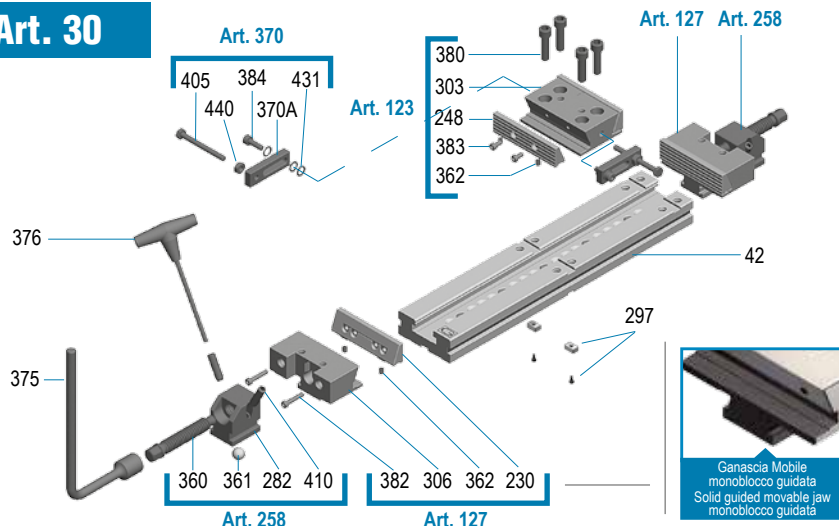

 Vedi gruppo 4 per gamma completa accessori
 See group 4 for complete range of accessories

5 40 kN					6 40 kN						
2 x 150	2 x 200	2 x 250	2 x 300	2 x 350	2 x 160	2 x 210	2 x 260	2 x 310	2 x 360	2 x 410	2 x 460
		200						300			
		65						80			
		70						78			
805	905	1005	1105	1205	900	1000	1100	1200	1300	1400	1500
		170						195			
96	102	108	114	120	155	163	171	179	187	195	213
3.35.20600	3.35.30600	3.35.40600	3.35.50600	3.35.60600	3.36.20600	3.36.30600	3.36.40600	3.36.50600	3.36.60600	3.36.70600	3.36.80600

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.31.35000		4.31.36000
Art. 313		
53		68
1.21.25000		1.21.26000
Art. 212		
2.21.75000		2.21.76000
Art. 217		
1.24.2G500		1.24.2G600
Art. 242G		
2.27.15000		2.27.16000
Art. 271		
4.39.15000		4.39.16000
Art. 391		
4.39.25000		4.39.26000
Art. 392		

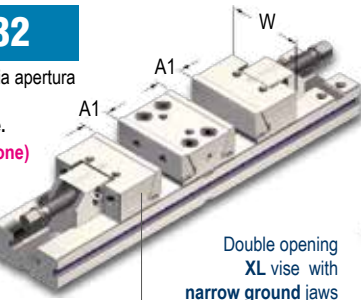
 Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47

Art. 30


Art.	Pag.
42	2.30
230	4.9
248	4.9
282	4.32
297	4.31
303	4.25
306	4.25
360	4.32
361	4.32
362	4.24
370A	4.31

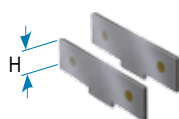
Art.	Pag.
375	4.31
376	4.31
380	4.24
382	4.24
383	4.24
384	4.24
405	4.31
410	4.32
431	4.24
440	4.24
-	-

2

Tipo (grandezza) morsa / Vise (type) size		kN	1 16 kN	2 25 kN	3 30 kN	4 30 kN				
Apertura massima / Maximum spread		A1	2 x 90	2 x 100	2 x 110	2 x 160	2 x 120	2 x 170	2 x 220	2 x 270
Art. 32 Morsa XL a doppia apertura con ganasce ridotte rettificate. (Maggior Pressione)  Double opening XL vise with narrow ground jaws (Higher Pressure)	W	75	95	125		145				
	B	30	40	50		60				
	C	35	40	50		58				
	D	460	520	580	680	666	766	866	966	
	G	75	95	125		145				
	kg	13.5	19.5	36	40	56	61	66	71	
	Cod.	3.31.00720	3.32.10720	3.33.20720	3.33.30720	3.34.20720	3.34.30720	3.34.40720	3.34.50720	

Monoblocco - Solid

AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !
Art. 313R

 Piastre magnetiche parallele piane
 Magnetic parallel plates


Cod.	4.31.3R100	4.31.3R200	4.31.3R300	4.31.3R400
H	23	33	43	53

Art. 213

 Ganascia mobile intermedia
 (da usare con Art. 313R)
 Intermediate movable jaw (to be used with Art. 313R)

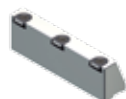

Cod.	1.21.31000	1.21.32000	1.21.33000	1.21.34000
------	------------	------------	------------	------------

Art. 218

 Ganascia mobile prismatica
 Prismatic movable jaw


Cod.	2.21.81000	2.21.82000	2.21.83000	2.21.84000
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Art. 243G
NEW!

 Piastra ganascia ridotta con inserti GRIP
 Narrow width jaw plate with GRIP inserts


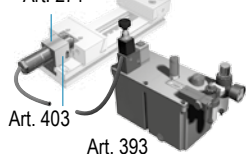
Cod.	1.24.3G100	1.24.3G200	1.24.3G300	1.24.3G400
------	------------	------------	------------	------------

Art. 271

 Supporto di serraggio con cilindro idraulico
 Clamping support with hydraulic cylinder


Cod.	2.27.11000	2.27.12000	2.27.13000	2.27.14000
------	------------	------------	------------	------------

Art. 271


Art. 391

CNC / CNC

Cod.	4.39.11000	4.39.12000	4.39.13000	4.39.14000
------	------------	------------	------------	------------

Art. 392

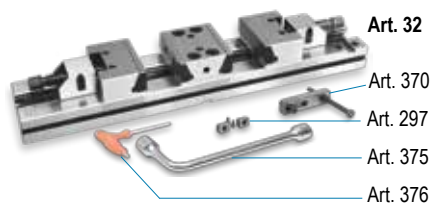
Pneumatico / Air control

Cod.	4.39.21000	4.39.22000	4.39.23000	4.39.24000
------	------------	------------	------------	------------

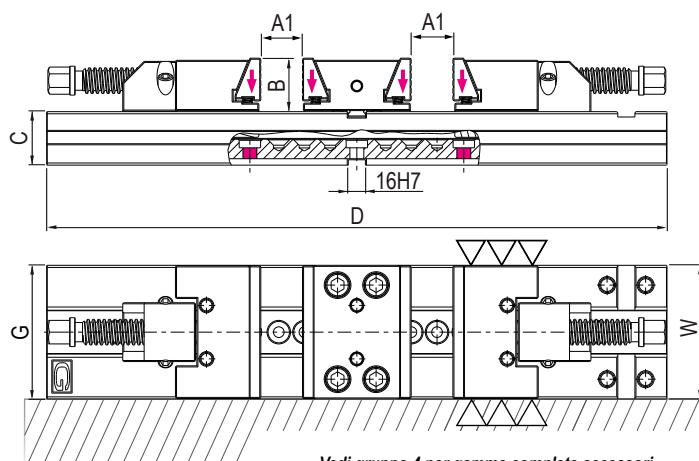
 Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento Art. 297
(Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376

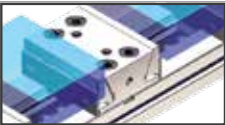
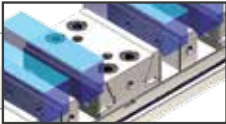
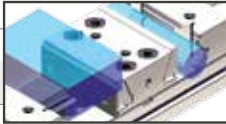

Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts Art. 297
(Standard for 16 mm slot. Other dimensions available on request without price change)
- 1 box wrench Art. 375 ■ 1 T-wrench Art. 376

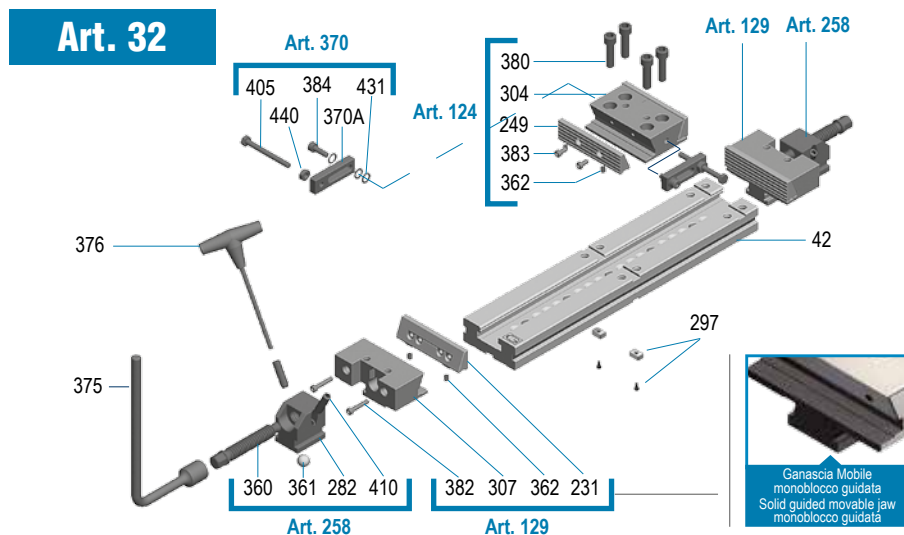

 Vedi gruppo 4 per gamma completa accessori
 See group 4 for complete range of accessories

[illegible]

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.31.3R500		4.31.3R600
Art. 313R		
53		68
1.21.35000		1.21.36000
Art. 213		
2.21.85000		2.21.86000
Art. 218		
1.24.3G500		1.24.3G600
Art. 243G		
2.27.15000		2.27.16000
Art. 271		
4.39.15000		4.39.16000
Art. 391		
4.39.25000		4.39.26000
Art. 392		

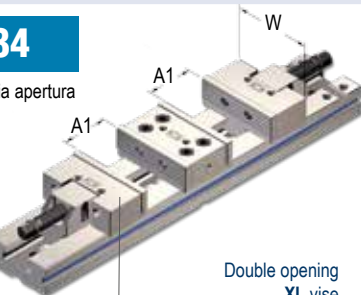
Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47



Art.	Pag.
42	2.30
231	4.9
249	4.9
282	4.32
297	4.31
304	4.25
307	4.25
360	4.32
361	4.32
362	4.24
370A	4.31

Art.	Pag.
375	4.31
376	4.31
380	4.24
382	4.24
383	4.24
384	4.24
405	4.31
410	4.32
431	4.24
440	4.24
-	-

2

Tipo (grandezza) morsa / Vise (type) size		kN	1 16 kN	2 25 kN	3 30 kN	4 30 kN				
Apertura massima / Maximum spread		A1	2 x 90	2 x 100	2 x 110	2 x 160	2 x 120	2 x 170	2 x 220	2 x 270
Art. 34 Morsa XL a doppia apertura con ganasce a piastre piane  Double opening XL vise with straight-plate jaws	W	100	125	150		175				
	B	30	40	50		60				
	C	35	40	50		58				
	D	460	520	580	680	666	766	866	966	
	G	75	95	125		145				
	kg	9.4	15.8	29.8	32.8	44.8	49.8	54.8	59.8	
	Cod.	2.34.19000	2.34.21000	2.34.31100	2.34.31600	2.34.41200	2.34.41700	2.34.42200	2.34.42700	

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AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !

Art. 313	Cod.	4.31.31000	4.31.32000	4.31.33000	4.31.34000
Piastrine magnetiche parallele piane Magnetic parallel plates	H	23	33	43	53

Art. 212	Cod.	1.21.21000	1.21.22000	1.21.23000	1.21.24000
Ganascia mobile intermedia (da usare con Art. 313) Intermediate movable jaw (to be used with Art. 313)					

Art. 246	Cod.	2.24.61000	2.24.62000	2.24.63000	2.24.64000
Piastra piana in acciaio lavorabile Machinable steel straight jaw plate					

Art. 246G	Cod.	1.24.6G100	1.24.6G200	1.24.6G300	1.24.6G400
Piastra piana con inserti GRIP Straight jaw plate with GRIP inserts					

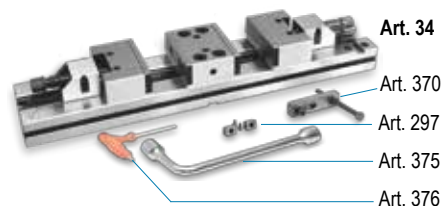
Art. 271	Cod.	2.27.11000	2.27.12000	2.27.13000	2.27.14000
Supporto di serraggio con cilindro idraulico Clamping support with hydraulic cylinder					

Art. 271	Cod.	4.39.11000	4.39.12000	4.39.13000	4.39.14000
Art. 403					
Art. 393					
Art. 391	Cod.	4.39.21000	4.39.22000	4.39.23000	4.39.24000
CNC / CNC					
Art. 392					
Pneumatico / Air control					

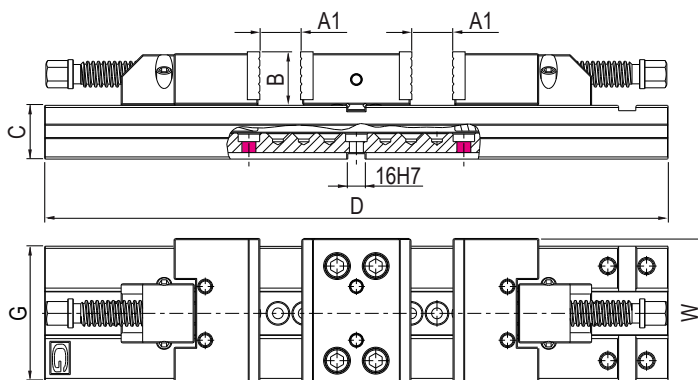
 Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento Art. 297
(Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376

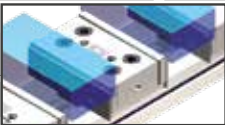
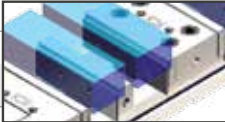

Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts Art. 297
(Standard for 16 mm slot. Other dimensions available on request without price change)
- 1 box wrench Art. 375 ■ 1 T-wrench Art. 376

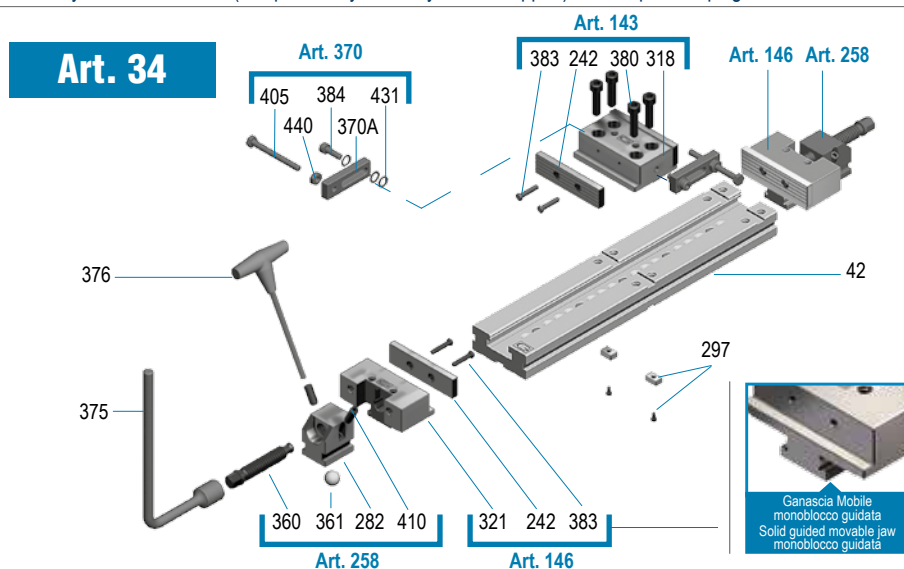

 Vedi gruppo 4 per gamma completa accessori
 See group 4 for complete range of accessories

[illegible]

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.31.35000		4.31.36000
Art. 313		
53		68
1.21.25000		1.21.26000
Art. 212		
2.24.65000		2.24.66000
Art. 246		
1.24.6G500		1.24.6G600
Art. 246G		
2.27.15000		2.27.16000
Art. 271		
4.39.15000		4.39.16000
Art. 391		
4.39.25000		4.39.26000
Art. 392		

Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47



Art.	Pag.
42	2.30
242	4.11
282	4.32
297	4.31
318	4.26
321	4.26
360	4.32
361	4.32
370A	4.31
375	4.31
376	4.31

Art.	Pag.
380	4.24
383	4.24
384	4.24
405	4.31
410	4.32
431	4.24
440	4.24
-	-
-	-
-	-
-	-

2

Tipo (grandezza) morsa / Vise (type) size		1 16 kN	2 25 kN	3 30 kN	4 30 kN
Apertura massima / Maximum spread	(kN)	2 x 90	2 x 100	2 x 110 2 x 160	2 x 120 2 x 170 2 x 220 2 x 270
Art. 35					
Morsa XL a doppia apertura con piastre ganasce GRIP a forte serraggio (ridotte rettificate)					
Double opening XL vise with GRIP jaw-plates for strongest clamping (narrow with ground)					
W		75	95	125	145
B		30	40	50	60
C		35	40	50	58
D		460	520	580 680	666 766 866 966
G		75	95	125	145
kg		9.4	15.8	29.8 32.8	44.8 49.8 54.8 59.8
Cod.		2.35.19000	2.35.21000	2.35.31100 2.35.31600	2.35.41200 2.35.41700 2.35.42200 2.35.42700

Monoblocco - Solid

AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !

Art. 313R				
Piastre magnetiche parallele piane Magnetic parallel plates				
H	23	33	43	53

Art. 218				
Ganascia mobile prismatica Prismatic movable jaw				
Cod.	2.21.81000	2.21.82000	2.21.83000	2.21.84000

Art. 247				
Piastra piana in acciaio lavorabile Machinable steel straight jaw plate				
Cod.	1.24.71000	1.24.72000	1.24.73000	1.24.74000

Art. 247G	NEW!			
Piastra piana ridotta con inserti GRIP Narrow width straight jaw plate with GRIP inserts				
Cod.	1.24.7G100	1.24.7G200	1.24.7G300	1.24.7G400

Art. 271				
Supporto di serraggio con cilindro idraulico Clamping support with hydraulic cylinder				
Cod.	2.27.11000	2.27.12000	2.27.13000	2.27.14000

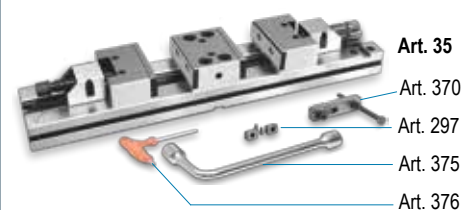
Art. 271				
CNC / CNC				
Cod.	4.39.11000	4.39.12000	4.39.13000	4.39.14000

Art. 392				
Pneumatico / Air control				
Cod.	4.39.21000	4.39.22000	4.39.23000	4.39.24000

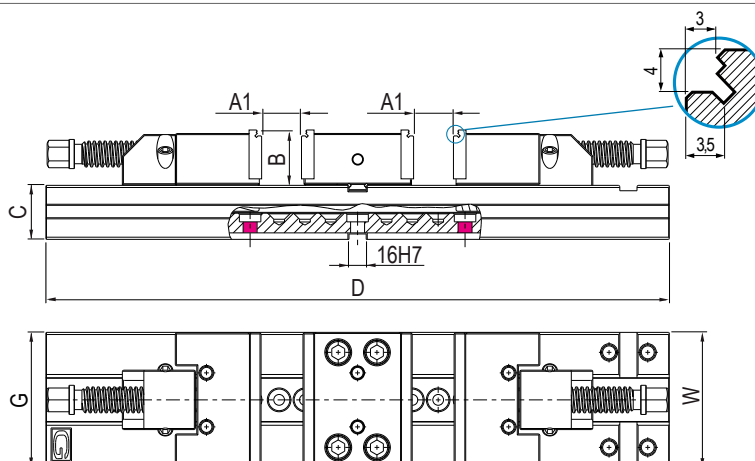
 Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento Art. 297
(Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376

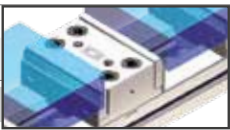
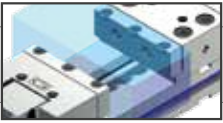

Standard equipment:

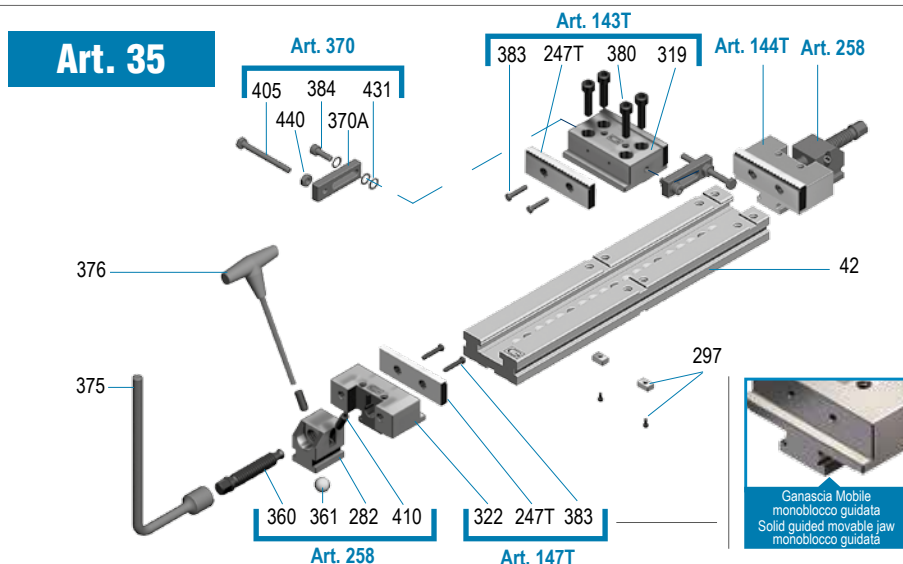
- 2 workstops Art. 370
- 1 pair of positioning key-nuts Art. 297
(Standard for 16 mm slot. Other dimensions available on request without price change)
- 1 box wrench Art. 375 ■ 1 T-wrench Art. 376


 Vedi gruppo 4 per gamma completa accessori
 See group 4 for complete range of accessories

5 40 kN					6 40 kN						
2 x 150	2 x 200	2 x 250	2 x 300	2 x 350	2 x 160	2 x 210	2 x 260	2 x 310	2 x 360	2 x 410	2 x 460
		170						195			
		65						80			
		70						78			
805	905	1005	1105	1205	900	1000	1100	1200	1300	1400	1500
		170						195			
82.5	88.5	96.5	103.5	110.5	116	129	139	149	159	169	179
2.35.51500	2.35.52000	2.35.52500	2.35.53000	2.35.53500	2.35.61600	2.35.62100	2.35.62600	2.35.63100	2.35.63600	2.35.64100	2.35.64600

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.31.3R500		4.31.3R600	68
Art. 313			
2.21.85000		2.21.86000	
Art. 218			
1.24.75000		1.24.76000	
Art. 247			
1.24.7G500		1.24.7G600	
Art. 247G			
2.27.15000		2.27.16000	
Art. 271			
4.39.15000		4.39.16000	
Art. 391			
4.39.25000		4.39.26000	
Art. 392			

 Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47


Art.	Pag.	Art.	Pag.
42	2.30	380	4.24
247T	4.11	383	4.24
282	4.32	384	4.24
297	4.31	405	4.31
319	4.26	410	4.32
322	4.26	431	4.24
360	4.32	440	4.24
361	4.32	-	-
370A	4.31	-	-
375	4.31	-	-
376	4.31	-	-

MORSE XL CON PIASTRE GANASCE A CAMBIO RAPIDO XL VISES WITH QUICK MANUAL CHANGE JAW PLATES

La Morsa più Evoluta! Dotata del geniale sistema a pettine per la rapida sostituzione delle piastre ganasce discendenti
The Most Recent Vise! Innovative comb system for quick pull-down jaw plate change

1 ALTISSIMA RIPETIBILITÀ DI POSIZIONAMENTO

con particolari perfettamente in squadra

1 HIGHEST REPOSITIONING ACCURACY

with perfect square workpieces.

2 RICONFIGURAZIONE RAPIDISSIMA

grazie alla piastra ganascia intercambiabile manualmente

2 GREAT SAVINGS IN VISE RESETTING TIMES

thanks to the manual interchangeable quick jaw plate

3 EFFETTO DISCENDENTE

Effetto discendente amplificato e migliorato e migliore protezione dai trucioli grazie al sistema a pettine

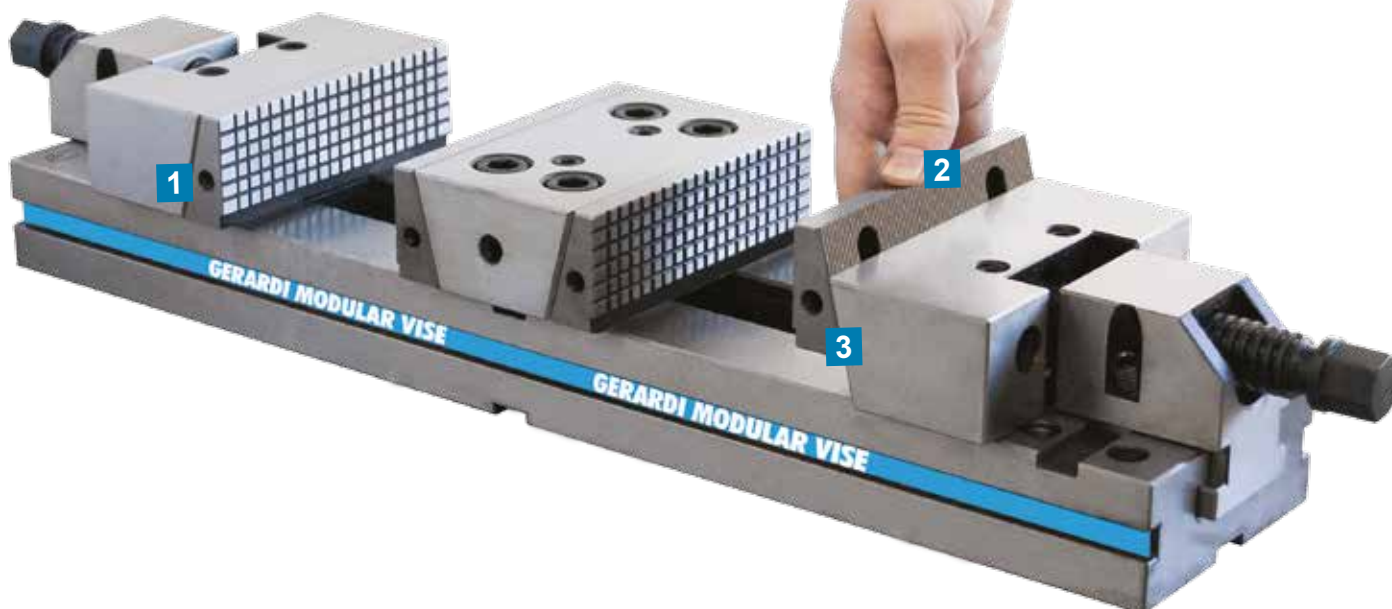
3 PULL DOWN ACTION

Increased and better pull down action and better protection from chips thanks to the comb system

Morsa con piastre ganasce a cambio rapido manuale
(Sistema a pettine)

Vise with quick manual change jaw plates
(Comb system)

Art. 30A



CARATTERISTICHE E VANTAGGI

- USURA INESISTENTE
- RAPIDITA' DEI SERRAGGI
- MODULARITA' & VERSATILITA'
- PRECISIONI $\pm 0,02$ mm
- RIGIDITA' & SICUREZZA
- DESIGN COMPATTO E MANEGGEVOLEZZA

Si rimanda a quanto esposto a pag. 1.4 e 1.5 (morse serie STANDARD)

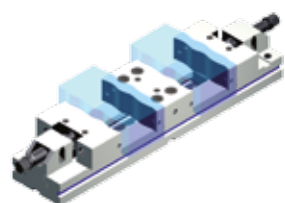
TECHNICAL FEATURES and ADVANTAGES

- NO WEAR
- QUICK CLAMPING
- MODULARITY & VERSATILITY
- HIGHEST ACCURACIES $\pm 0,02$ mm
- RIGIDITY & SAFETY
- SPACE SAVING DESIGN & HANDY

See pag. 1.4 and 1.5 (STANDARD series vises)

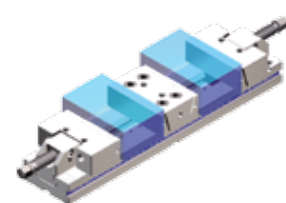
PIASTRE GANASCE DISCENDENTI INTERCAMBIABILI MANUALMENTE PULL DOWN JAW PLATES INTERCHANGEABLE by HAND

2



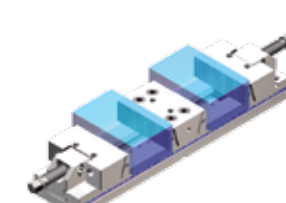
Art. 230B

Dolce
Soft



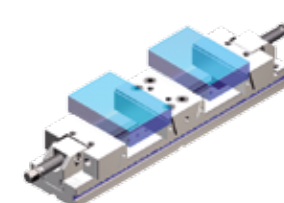
Art. 230C

Liscia
Smooth



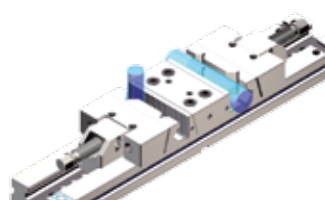
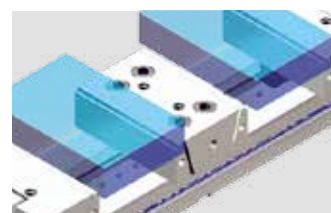
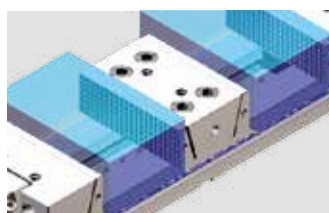
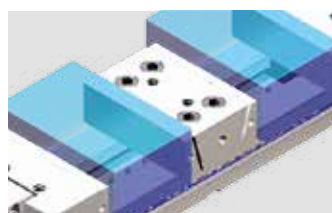
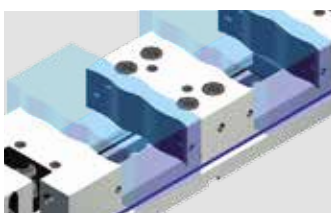
Art. 230D

Zigrinata
Serrated



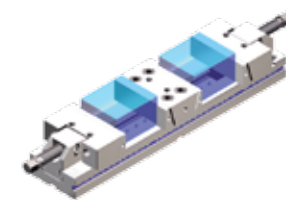
Art. 230E

Con gradino
With step



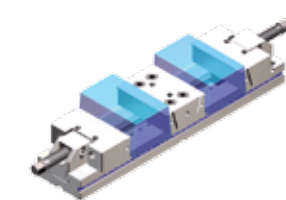
Art. 230F

Prismatica
Prismatic



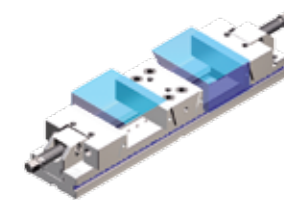
Art. 230G

Con arresto a 90°
With 90° stop



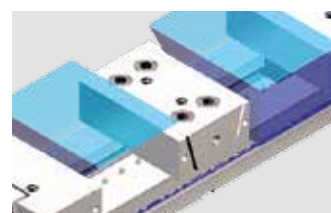
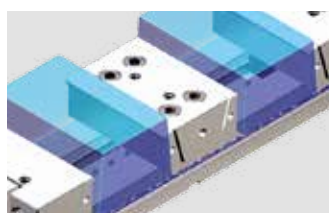
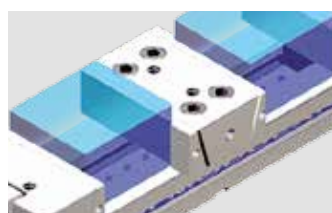
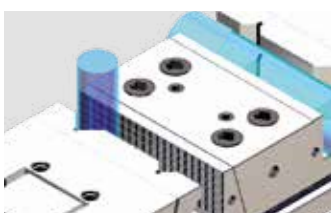
Art. 230H

Bombata
Round



Art. 230M

Angolo di 30° o 45°
30° or 45° angle

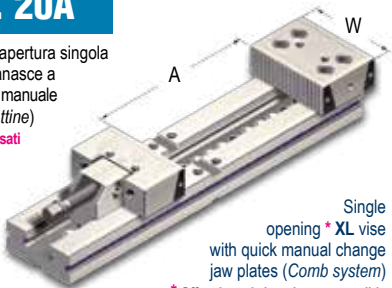


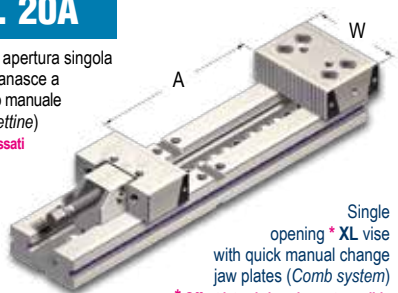
PORTAPIASTRE / THE RACK

Completo di piastre ganasce a cambio rapido a gradino Art.230E
Complete of quick change step jaw plates Art.230E

Vedi Pag. 4.18 - See Page.4.18

2

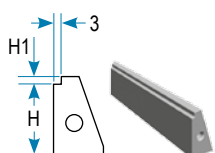
Tipo (grandezza) morsa / Vise (type) size	kN	1 16 kN	2 25 kN	3 30 kN		4 30 kN			
Apertura massima / Maximum spread	A	290	320	360	460	400	500	600	700
Art. 20A  Morsa * XL a apertura singola con piastre ganasce a cambio rapido manuale (Sistema a pettine) * Serraggi disassati lateralmente non possibili Single opening * XL vise with quick manual change jaw plates (Comb system) * Offset lateral clamping not possible	W	96	121	146		171			
	B	28	38	48		58			
	C	35	40	50		58			
	D	460	520	580	680	666	766	866	966
	G	75	95	125		145			
	kg	6.8	12.9	25.5	29	37	42	47	52
	Cod.	2.20.A1290	2.20.A2320	2.20.A3360	2.20.A3460	2.20.A4400	2.20.A4500	2.20.A4600	2.20.A4700



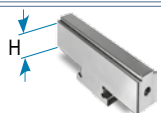
Single opening *XL vise with quick manual change jaw plates (Comb system)
 * Offset lateral clamping not possible

AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !

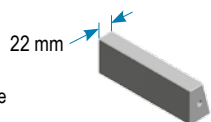
Art. 230E Piastra ganascia intercambiabile Interchangeable jaw plate	H1	3							
	H								
	H1	5	5	5					



Art. 212 Ganascia mobile intermedia (da usare con Art. 230E) Intermediate movable jaw (to be used with Art. 230E)	Cod.	1.21.21000	1.21.22000	1.21.23000		1.21.24000			



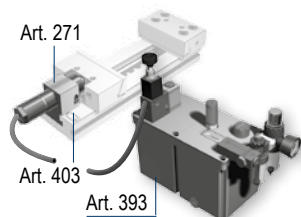
Art. 230B Piastra ganascia intercambiabile dolce Soft interchangeable jaw plate	Cod.	4.23.0B101	4.23.0B201	4.23.0B301		4.23.0B401			



Art. 230F Piastra ganascia intercambiabile prismatica Prismatic interchangeable jaw plate	Cod.	4.23.0F101	4.23.0F201	4.23.0F301		4.23.0F401			



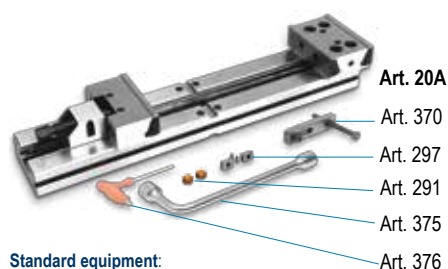
Art. 271 Art. 403 Art. 393	Art. 391 CNC / CNC Art. 392 Pneumatico / Air control	Cod.	4.39.11000	4.39.12000	4.39.13000		4.39.14000		
		Cod.	4.39.21000	4.39.22000	4.39.23000		4.39.24000		



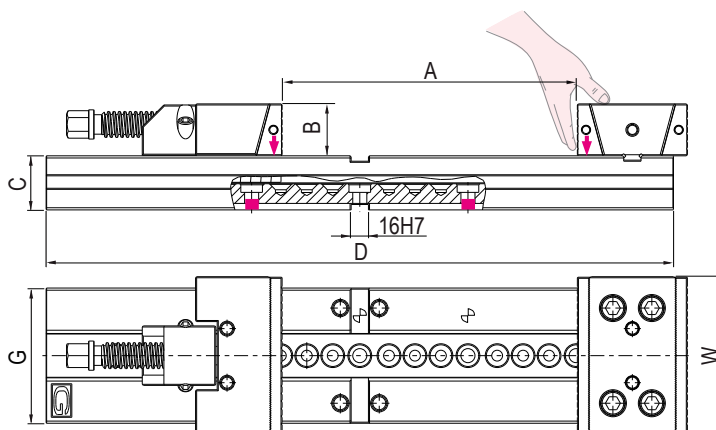
Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

Dotazione standard:

- 1 arresto laterale Art. 370
- 1 coppia di tasselli di posizionamento Art. 297
(Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 2 tappi Art. 291 ■ 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376


Standard equipment:

- 1 worktop Art. 370
- 1 pair of positioning key-nuts Art. 297
(Standard for 16 mm slot. Other dimensions available on request without price change)
- 2 inserts Art. 291 ■ 1 box wrench Art. 375 ■ 1 T-wrench Art. 376



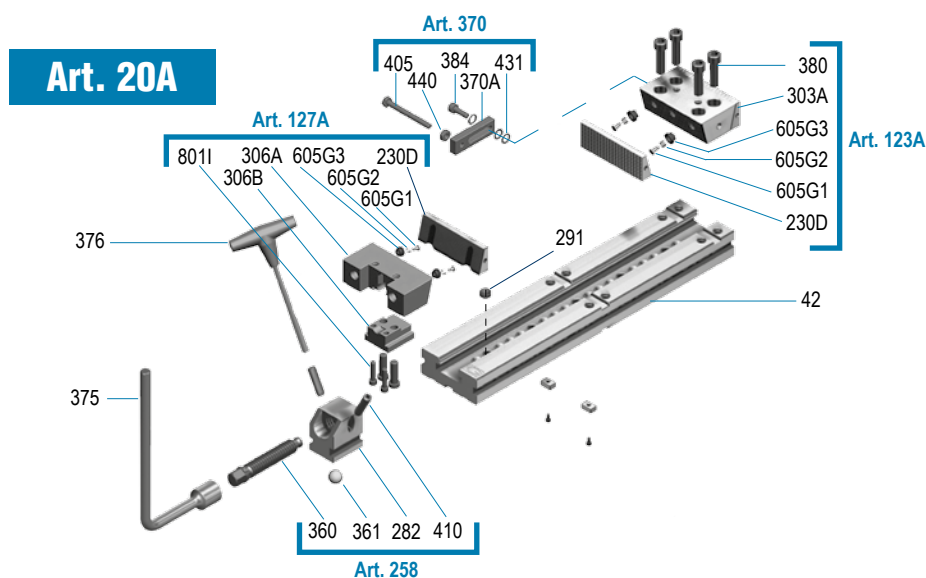
Vedi gruppo 4 per gamma completa accessori
 See group 4 for complete range of accessories

5 40 kN					6 40 kN						
500	600	700	800	900	500	600	700	800	900	1000	1100
		196						296			
		63						78			
		70						78			
805	905	1005	1105	1205	900	1000	1100	1200	1300	1400	1500
		170						195			
64	69	74	79	84	95	105	115	125	135	145	155
2.20.A5500	2.20.A5600	2.20.A5700	2.20.A5800	2.20.A5900	2.20.A6500	2.20.A6600	2.20.A6700	2.20.A6800	2.20.A6900	2.20.A6100	2.20.A6110

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.23.0E501		4.23.0E601
Art. 230E		
H	53	68
H1	10	10
1.21.25000		1.21.26000
Art. 212		
4.23.0B501		4.23.0B601
Art. 230B		
4.23.0F501		4.23.0F601
Art. 230F		
4.39.15000		4.39.16000
Art. 391		
4.39.25000		4.39.26000
Art. 392		

Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping **simultaneous** or **independent**, from 2 to 6 vises. See from page 4.36 to 4.47



Art.	Pag.
42	2.30
230D	4.17
282	4.32
291	4.31
297	4.31
303A	4.26
306A	4.26
306B	4.26
360	4.32
361	4.32
370A	4.31
375	4.31

Art.	Pag.
376	4.31
380	4.24
384	4.24
405	4.31
410	4.32
431	4.24
440	4.24
605G1	4.18
605G2	4.18
605G3	4.18
801I	5.61
-	-

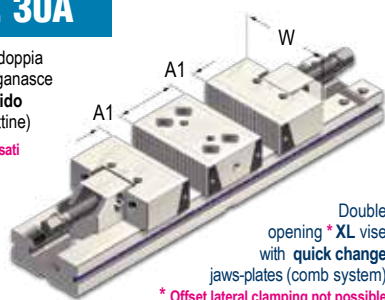
2

Tipo (grandezza) morsa / Vise (type) size	kN	1 16 kN	2 25 kN	3 30 kN	4 30 kN				
Apertura massima / Maximum spread	A1	2 x 90	2 x 100	2 x 110	2 x 160	2 x 120	2 x 170	2 x 220	2 x 270
	W	96	121	146		171			
	B	28	38	48		58			
	C	35	40	50		58			
	D	460	520	580	680	666	766	866	966
	G	75	95	125		145			
	kg	6.8	12.9	25.5	29	37	42	47	52
	Cod.	2.30.A190	2.30.A2100	2.30.A3110	2.30.A3160	2.30.A4120	2.30.A4170	2.30.A4220	2.30.A4270

Art. 30A

Morsa *XL a doppia apertura con ganasce a cambio rapido (sistema a pettine)

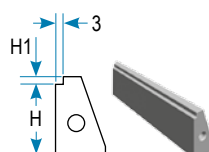
* Serraggi dissastati lateralmente non possibili



AMPLIA LE TUE APPLICAZIONI TRAMITE GLI ACCESSORI MODULARI !

Art. 230E

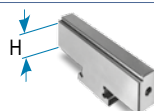
Piastra ganasce intercambiabile
Interchangeable jaw plate



Cod.	4.23.0E101	4.23.0E201	4.23.0E301	4.23.0E401
H	23	33	43	53
H1	5	5	5	5

Art. 212

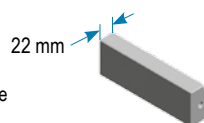
Ganascia mobile intermedia
(da usare con Art. 230E)
Intermediate movable jaw (to be used with Art. 230E)



Cod.	1.21.21000	1.21.22000	1.21.23000	1.21.24000
------	------------	------------	------------	------------

Art. 230B

Piastra ganasce intercambiabile dolce
Soft interchangeable jaw plate



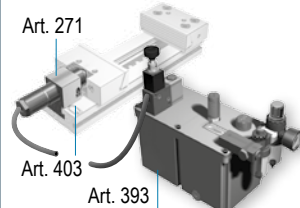
Cod.	4.23.0B101	4.23.0B201	4.23.0B301	4.23.0B401
------	------------	------------	------------	------------

Art. 230F

Piastra ganasce intercambiabile prismatica
Prismatic interchangeable jaw plate



Cod.	4.23.0F101	4.23.0F201	4.23.0F301	4.23.0F401
------	------------	------------	------------	------------



Art. 391
CNC / CNC

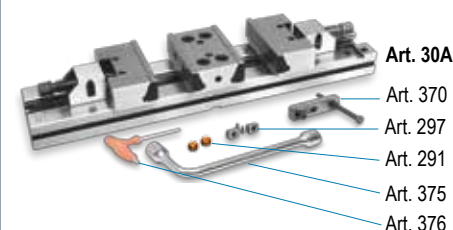
Art. 392
Pneumatico / Air control

Cod.	4.39.11000	4.39.12000	4.39.13000	4.39.14000
Cod.	4.39.21000	4.39.22000	4.39.23000	4.39.24000

Servocomandi oleopneumatici (completi di 1 cilindro e supporto) per serraggi multipli **contemporanei** o **indipendenti**, da 2 a 6 morse. Vedi da pag. 4.36 a 4.47

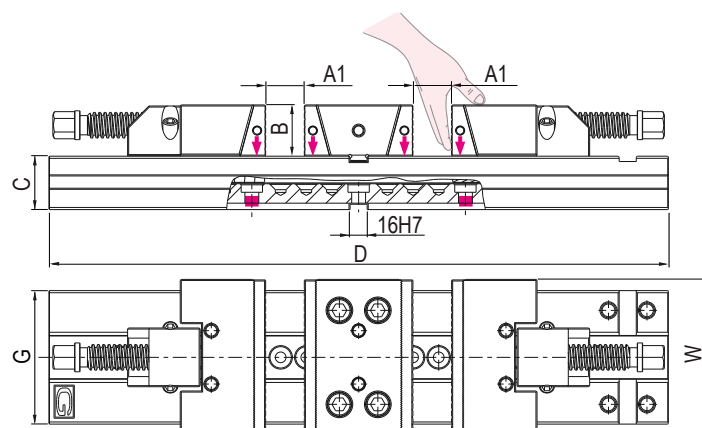
Dotazione standard:

- 2 arresti laterali Art. 370
- 1 coppia di tasselli di posizionamento Art. 297
(Standard per cava da 16 mm; altre dimensioni a richiesta senza variazione di prezzo)
- 2 tappi Art. 291 ■ 1 chiave a pipa Art. 375 ■ 1 chiave a "T" Art. 376



Standard equipment:

- 2 workstops Art. 370
- 1 pair of positioning key-nuts Art. 297
(Standard for 16 mm slot. Other dimensions available on request without price change)
- 2 inserts Art. 291 ■ 1 box wrench Art. 375 ■ 1 T-wrench Art. 376

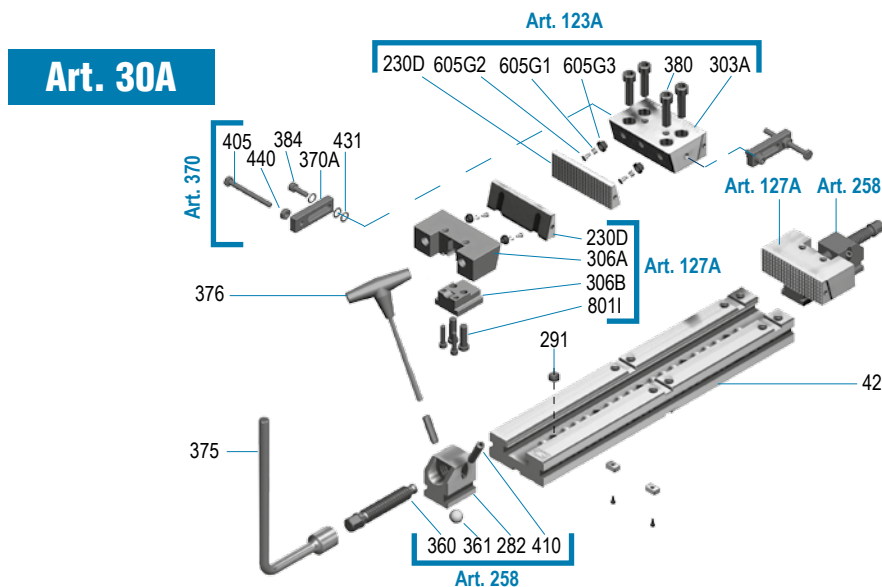


Vedi gruppo 4 per gamma completa accessori
See group 4 for complete range of accessories

5 40 kN					6 40 kN						
2 x 150	2 x 200	2 x 250	2 x 300	2 x 350	2 x 160	2 x 210	2 x 260	2 x 310	2 x 360	2 x 410	2 x 460
		196						296			
		63						78			
		70						78			
805	905	1005	1105	1205	900	1000	1100	1200	1300	1400	1500
		170						195			
64	69	74	79	84	95	105	115	125	135	145	155
2.30.A5150	2.30.A5200	2.30.A5250	2.30.A5300	2.30.A5350	2.30.A6160	2.30.A6210	2.30.A6260	2.30.A6310	2.30.A6360	2.30.A6410	2.30.A6460

UPGRADE YOUR VISE APPLICATIONS THROUGH MODULAR ACCESSORIES !

4.23.0E501		4.23.0E601
Art. 230E		
H	53	68
H1	10	10
1.21.25000		1.21.26000
Art. 212		
4.23.0B501		4.23.0B601
Art. 230B		
4.23.0F501		4.23.0F601
Art. 230F		
4.39.15000		4.39.16000
Art. 391		
4.39.25000		4.39.26000
Art. 392		

 Pneumo-hydraulic servo units (complete of hydraulic cylinder + support) for multiple clamping *simultaneous* or *independent*, from 2 to 6 vises. See from page 4.36 to 4.47


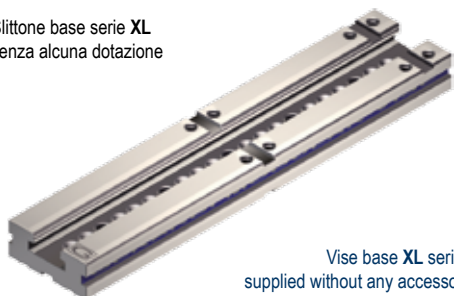
Art.	Pag.
42	2.30
230D	4.17
282	4.32
291	4.31
297	4.31
303A	4.26
306A	4.26
306B	4.26
360	4.32
361	4.32
370A	4.31
375	4.31

Art.	Pag.
376	4.31
380	4.24
384	4.24
405	4.31
410	4.32
431	4.24
440	4.24
605G1	4.18
605G2	4.18
605G3	4.18
801I	5.61
-	-

Tipo (grandezza) morsa / Vise (type) size

1
2
3
4

Art. 42

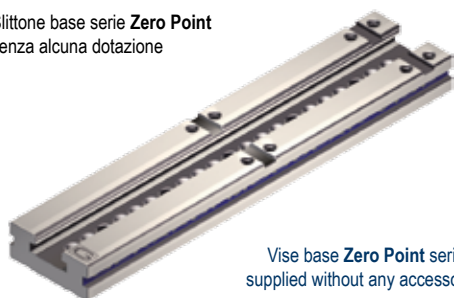
 Slittone base serie **XL**
 senza alcuna dotazione

 Vise base **XL** series
 supplied without any accessory

kg	6.6	10.7	20.7	24.7	30.2	34.8	39.3	43.8
Cod.	1.80.11460	1.80.21520	1.80.31580	1.80.31680	1.80.41666	1.80.41766	1.80.41866	1.80.41966

Versione normale: Cave da 16 mm (H7)

Versione opzionale: Fori rettificati e calibrati con tolleranza F7

Art. 42Z

 Slittone base serie **Zero Point**
 senza alcuna dotazione

 Vise base **Zero Point** series
 supplied without any accessory

kg	6.4	10.5	20.5	24.5	29.9	34.5	39	43.5
Cod.	2.42.Z1460	2.42.Z2520	2.42.Z3580	2.42.Z3680	2.42.Z4666	2.42.Z4766	2.42.Z4866	2.42.Z4966

Versione normale: Cave da 16 mm (H7)

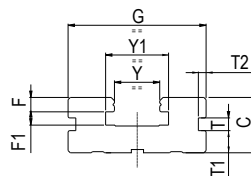
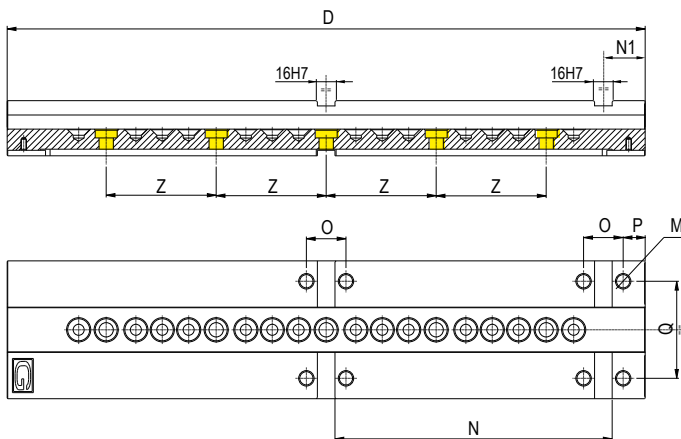
Versione opzionale: Fori rettificati e calibrati con tolleranza F7

Tolleranza / Tolerance

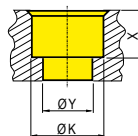
- 0,02

C	35	40	50	38
D	450	520	580 680	666 766 866 966
F	10	12	13	15
F1	10	10	12	18
G	75	95	125	145
Y	21	28	41	51
Y1	31	41	57	70
M	M10	M12	M14	M16
N	195	225	252 302	293 343 393 443
N1	35	35	38	40
O	32	32	36	36
P	19	19	20	22
Q	50	62	88	100
T	9,5	9,5	11,5	11,5
T1	15	15	20	20
T2	5	5	7	7
Z	100	100	100	100

Art. 42

 Slittone base serie **XL** / Vise base **XL** series


Dettaglio foro per vite TCEI / TCEI screw hole details



Type	1	2	3	4	5	6
X	4,5	5,5	8	8	17	17
Ø Y	6,5	8,5	13	13	17	17
Ø K	10,5	13,5	19	19	26	26

5
6
2

64	69	74	79	84	95	105	115	125	135	145	155
1.80.51805	1.80.51905	1.80.51005	1.80.51105	1.80.51205	1.80.61900	1.80.61000	1.80.61100	1.80.61200	1.80.61300	1.80.61400	1.80.61500

Normal version: 16 mm slots (H7)

Optional version: Ground calibrated holes F7 tolerance

60	65	70	75	80	91	101	111	121	131	141	151
2.42.Z5805	2.42.Z5905	2.42.Z5005	2.42.Z5105	2.42.Z5205	2.42.Z6900	2.42.Z6100	2.42.Z6110	2.42.Z6120	2.42.Z6130	2.42.Z6140	2.42.Z6150

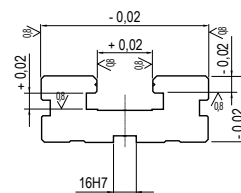
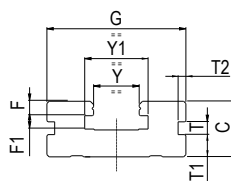
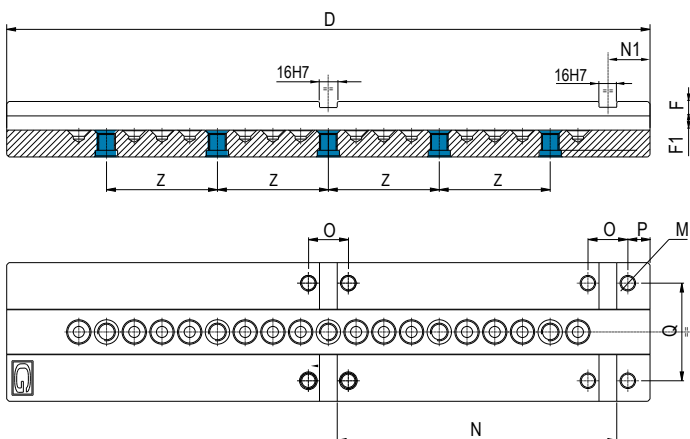
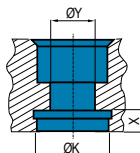
Normal version: 16 mm slots (H7)

Optional version: Ground calibrated holes F7 tolerance

70					78						
805	905	1005	1105	1205	900	1000	1100	1200	1300	1400	1500
20					20						
18					18						
170					195						
61					71						
80					90						
M20					M20						
357,5	407,5	457,5	507,5	557,5	405	455	505	555	605	655	707
45					45						
44					44						
23					23						
120					133						
17,5					17,5						
26					26						
10					10						
100					100						

Art. 42Z

 Slittone base serie **Zero Point** / Vise base **Zero Point** series

 Tolleranze generiche per morse **XL** / **XL** vise generic tolerances

Dettaglio foro per Zero Point / Zero Point hole details


Type	1	2	3	4	5	6
X						6
Y	M16	M16	M16	M16	M16	M16
Ø K						20

DIAGRAMMI SERRAGGIO MECCANICO CON CHIAVE DINAMOMETRICA DIAGRAMS MECHANICAL CLAMPING WITH TORQUE WRENCH



GRUPPI DI SERRAGGIO MECCANICI

(Art. 258 e similari)

I diagrammi seguenti consentono di determinare le forze di serraggio ottenibili con le morse di varia grandezza (da 1 a 6), in funzione del momento applicato

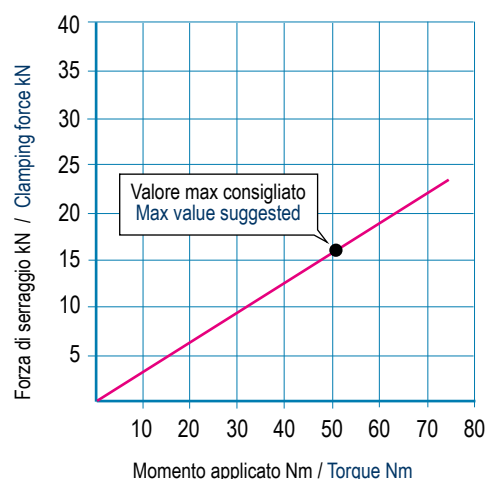
MECHANICAL CLAMPING DEVICES

(Art. 258 and similar)

The following diagrams give the clamping force that can be obtained with each vise type (size 1 to 6) depending on the torque

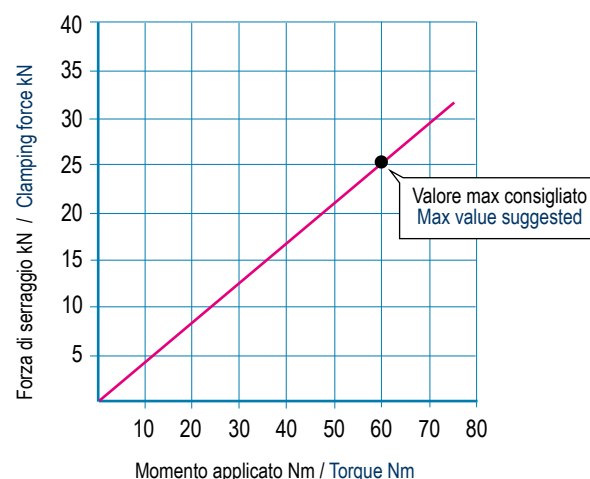
MORSE MODULARI XL TIPO 1 XL MODULAR VISES TYPE 1

Vite M12 - Passo 1,75mm
Screw M12 - Pitch 1,75mm



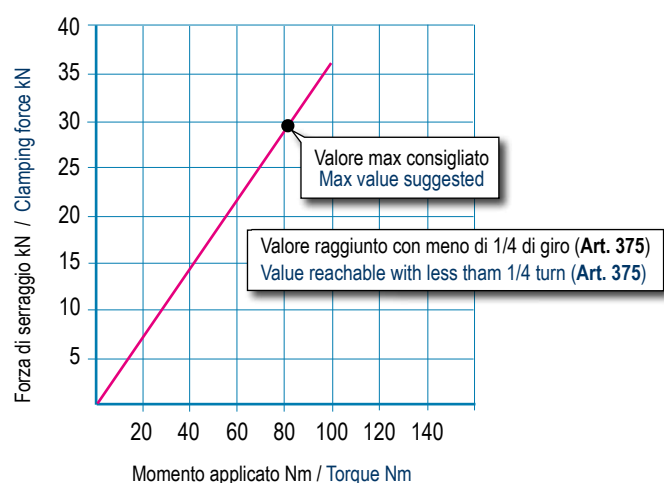
MORSE MODULARI XL TIPO 2 XL MODULAR VISES TYPE 2

Vite TPN18 - Passo 4mm
Screw TPN18 - Pitch 4mm



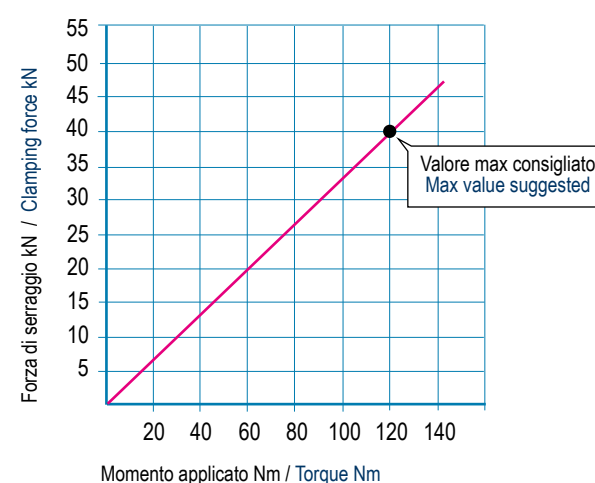
MORSE MODULARI XL TIPO 3-4 XL MODULAR VISES TYPE 3-4

Vite TPN24 - Passo 5mm
Screw TPN24 - Pitch 5mm



MORSE MODULARI XL TIPO 5-6 XL MODULAR VISES TYPE 5-6

Vite TPN30 - Passo 5mm
Screw TPN30 - Pitch 5mm



NB: Alcuni fattori, come la lubrificazione, lo staffaggio, gli attriti ed altro, possono modificare i valori indicati fino a $\pm 10\%$.
Per un corretto utilizzo non superare i valori indicati nel grafico

Some factor as lubrication, clamping on the machine table, frictions and more can modify above values within a $\pm 10\%$ range. For optimum operation do not exceed chart values.