

FORZA®



2020

Tarifa

mordazas y cabezales para hacer chaveteros

mordazas

machine vices and milling heads

Iconografía
Iconographie

2



Torres de mordazas
integradas
*Integrated clamping
vice tower*

3-6

PERFECT



Mordazas de presión
descendente 30-30G
*30-30G Descending
machine vices*

8-11

PRODUCTION



Mordazas de presión
descendente PRD
*PRD Descending
machine vices*

12-13



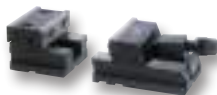
Prolongadores para
mordazas y calzos
*Vice bodies extensions
and lifting blocks*

14



Mordazas para cubos 60
60 Vices for cubes

15



Mordazas partidas
30 P Split vices

16,28



Mordazas
autocentrantes
Self centering vices

17-19



Mordazas de 5 ejes
y mordazas altas
*5 axis and
High jaws vices*

20-22



Mordazas gemelas
*Twin self centering
vices*

23-24



Mordazas dobles
*Double position
vices*

25-27



Mordazas para
escuadrar 30V
*30V Vices to make
square*

29

Aprietes y accesorios
*Clamping and
accessories*



40-46

Mordazas de boca
recta 29
29 Straight jaws vices



30-31

Otras Mordazas
Other vice



32-33

Mordazas 31
31 Vices



CLÁSICA

34-35

Mordazas de
rectificadora
*Grinding machine
vices*



36-37

Cabezal fresador
de interiores
Internal milling head



48,54

Llaves almenadas
para tuercas KM
KM nut spanner



52

Mordazas de taladro
Drilling vices



56-57

PROFESIONAL

Bridas y elementos
de sujeción
Clamp and vices



58-61

Pasadores roscados
Split pins threaded pullers



62

Portaherramientas
y moleteadores
*Tools holders and
knurling fool*



63-65

Escuadras y grapas
*Magnetics holders
and Quicks*



66-67

Fundición nodular



nodular casting material
fonte nodulaire
spharoguss
ghisa a noduli

Acero de cementación



hardened steel
acier cémenté
gehärtet geschmiedet
acciaio di cementazione

Selección curso rápida



quick course selection
rapide sélection de course
shnell positioner
selezione rapida del carrello

Tolerancia de acabado



finishing tolerance
tolérance de finissage
toleranzen
tolleranza finita

Aprietes intercambiables



interchangeable locks
vis interchangeables
austauschbar backen
chiusure intercambiabili

Paralelismo < 0,02 mm



parallelism <0,02 mm.
parallélisme <0,02 mm.
toleranzen parallel <0,02 mm.
parallelismo <0,02 mm.

Portabocas móvil oscilante



oscillating movable jaws suport
mors mobile effet plaqueur
pendel wirkung beweglich backen
ganasce mobili oscillanti

Portabocas móvil guiado



guide movable jaws support
mors mobile guidé
beweglich backen ohne pendel
wirkung
ganasce guidate

jaws with descending effect
effect plaqueur sur mors
niederzug wirkung
ganasce discendenti



Bocas con efecto descendente

soft jaws
mors doux
weich backen
ganasce morbide



Bocas blandas

control certificate
certificat de contrôle
prüfprotoko
certificato di controllo



Certificado de control

Mechanica lock
version manuelle
mecanische möglichkeite
chisura meccanica



Versión mecánica

swivel base admitted
base tournante optionelle
drehplatte möglichkeite
acetta base giratoria



Admite base giratoria

DOESN'T admit swivel base
N'ACCEPTE pas base tournante
OHNE drehplatte möglichkeite
NON accetta base giratoria



NO admite base

with alineation keyways
avec des ranures d'alignement
richtnuten
con chiavette di posizionamento



Con chaveteros de alineación

clamps
brides
spannpratzen
staffe



Brida

Torres de mordazas integradas

Integrated clamping vice tower
Tour d'étaux de serrage intégrée

Vea algunos ejemplos de algunas torres que ya hemos fabricado.

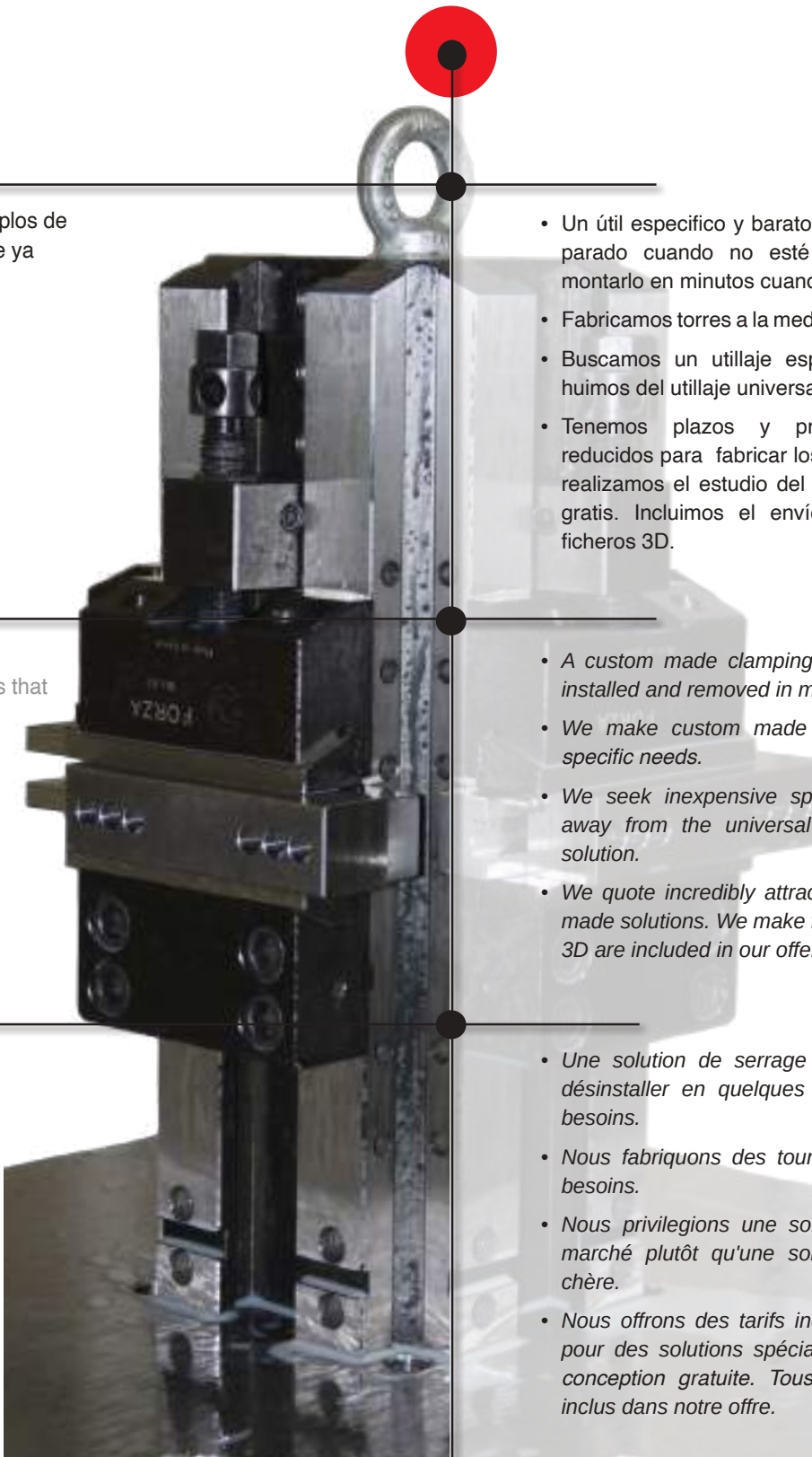
Check out a few examples of towers that we have already manufactured.

Voyez quelques tours que nous avons déjà fabriqué.

- Un útil específico y barato que le permite dejarlo parado cuando no esté fabricando piezas y montarlo en minutos cuando sea necesario.
- Fabricamos torres a la medida que usted necesite.
- Buscamos un utillaje específico (más barato), huimos del utillaje universal (mucho más caro).
- Tenemos plazos y precios increíblemente reducidos para fabricar los utillajes a medida. Le realizamos el estudio del utillaje completamente gratis. Incluimos el envío de los diseños en ficheros 3D.

- A custom made clamping solution meant to be installed and removed in minutes when required.
- We make custom made towers to meet your specific needs.
- We seek inexpensive special solution and go away from the universal very expensive type solution.
- We quote incredibly attractive prices for custom made solutions. We make free solution design. All 3D are included in our offer.

- Une solution de serrage spéciale à monter et désinstaller en quelques minutes au grès des besoins.
- Nous fabriquons des tours spéciales selon vos besoins.
- Nous privilégions une solution spéciale et bon marché plutôt qu'une solution universelle plus chère.
- Nous offrons des tarifs incroyablement attractifs pour des solutions spéciales. Nous offrons une conception gratuite. Tous les fichiers 3D sont inclus dans notre offre.

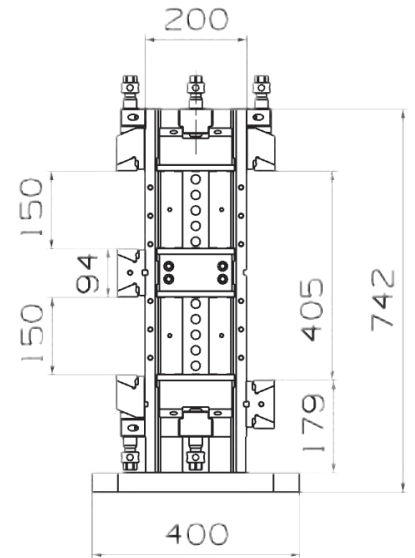


Torre de mordazas con boca de 150 mm.

Clamping tower with 150mm jaws
Tour d'étaux de serrage avec mors de 150mm



- Con este montaje se pueden amarrar 8 piezas de 150 mm de longitud o 4 piezas de 405 mm de longitud.



- Montada en posición doble, para amarrar 8 piezas.
- Set up in double station allowing the clamping of 8 workpieces
- Ce montage en double pour serrage de 8 pièces



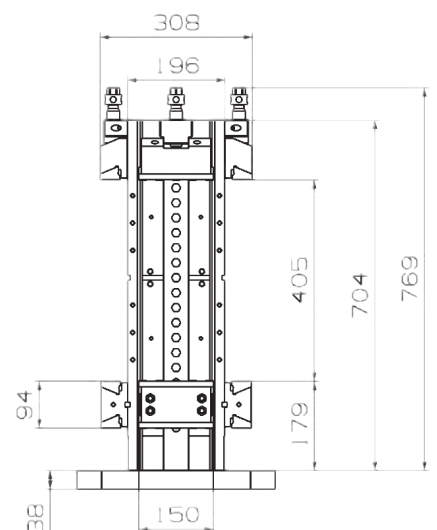
- This set up allows for the clamping of 8 pieces each 150mm long or 4 pieces each 405mm long.



- Ejemplos con 8 piezas
- Example with 8 workpieces
- Exemple avec 8 pièces



- Ce montage permet un serrage de 8 pièces de longueur 150mm chacune ou 4 pièces de longueur 405mm chacune.



- Montada en posición simple, para amarrar 4 piezas más largas.
- One station set up in order to clamp 4 longer workpieces.
- Montage en position simple pour serrer 4 pièces plus longues.

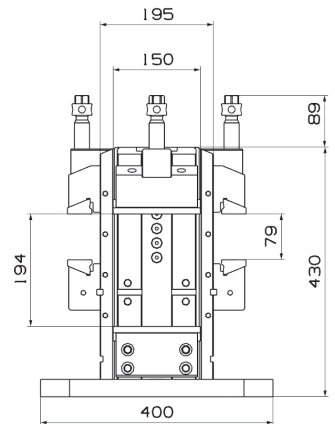
Torre de mordazas con boca de 150 mm.

Torre de mordazas con boca de 125 mm.

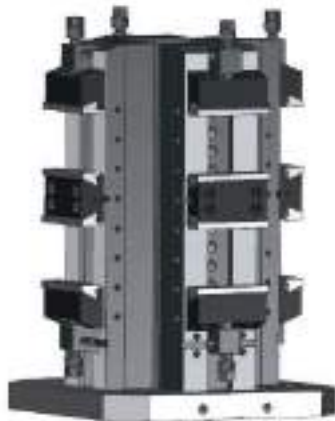


Clamping tower with 150mm jaws
Tour d'étaux de serrage avec mors de 150mm

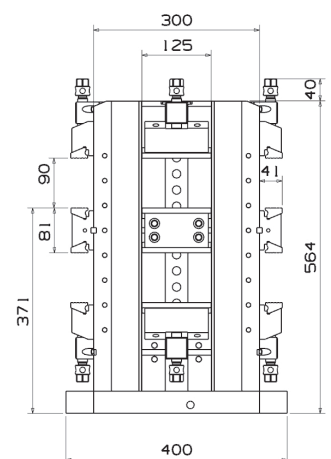
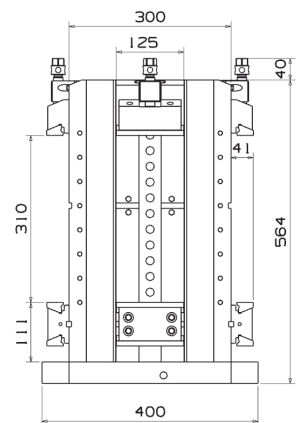
- Torre simple para amarrar 4 piezas a distintas alturas.
- Simple tower allowing the clamping of 4 different height workpieces.
- Tour simple permettant le serrage de 4 pièces de hauteur différentes.



Clamping vice tower with jaws 125mm
Tour d'étaux de serrage avec mors de 125mm

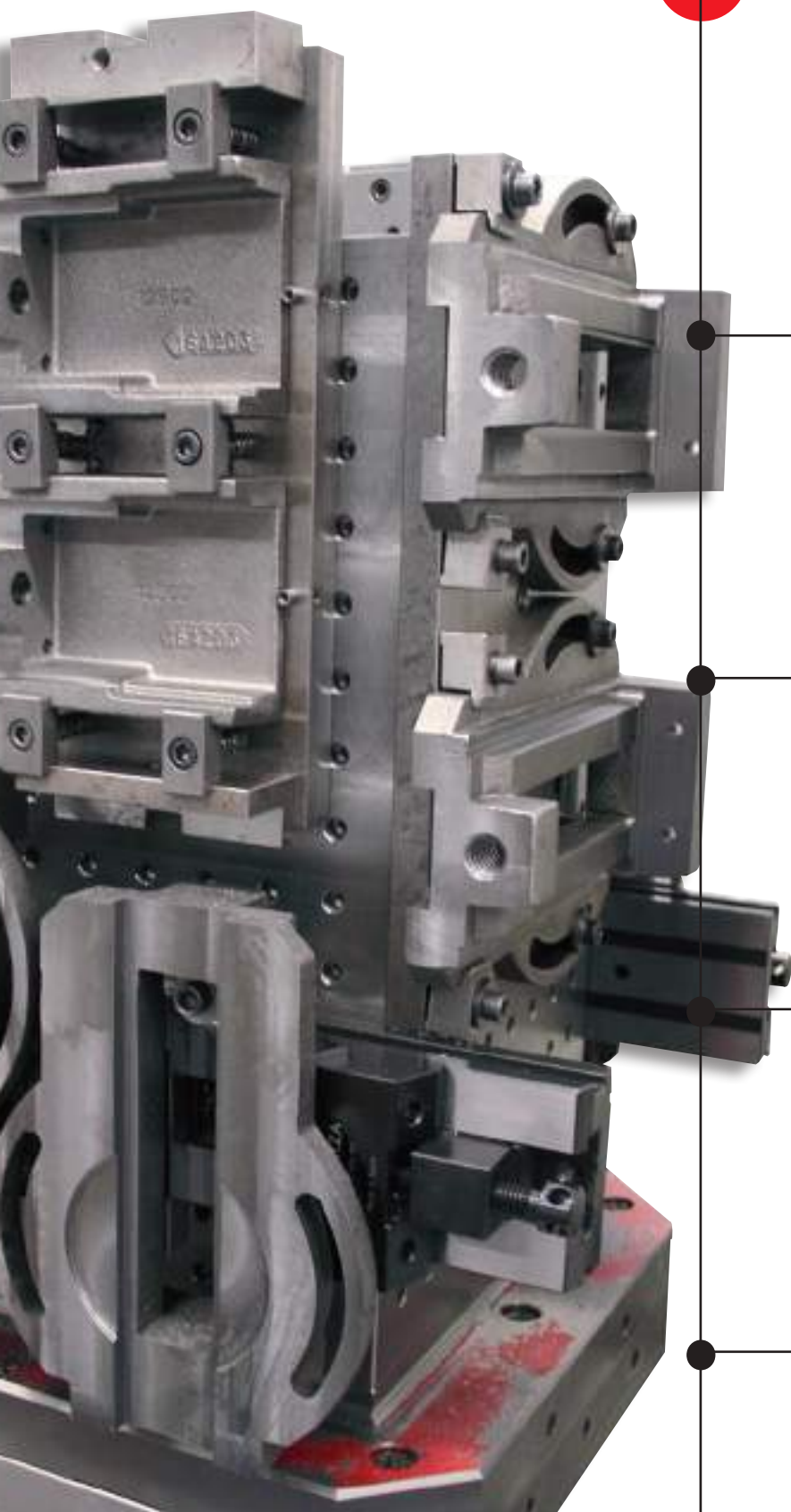


- Con cuerpo más ancho 300 mm para eliminar el vuelo de las herramientas.
- Se pueden amarrar 8 piezas de 90 mm ó 4 de 310 mm.
- A wider cube makes for smaller stiffer tools.
- The clamping of 8 pieces each 90mm or 4 pieces 310mm each is possible.
- Une tour plus large autorise des outils plus courts et rigides.
- Le serrage de 8 pièces de 90mm chacune ou 8 pièce de 310mm est possible.



Torres de mordazas

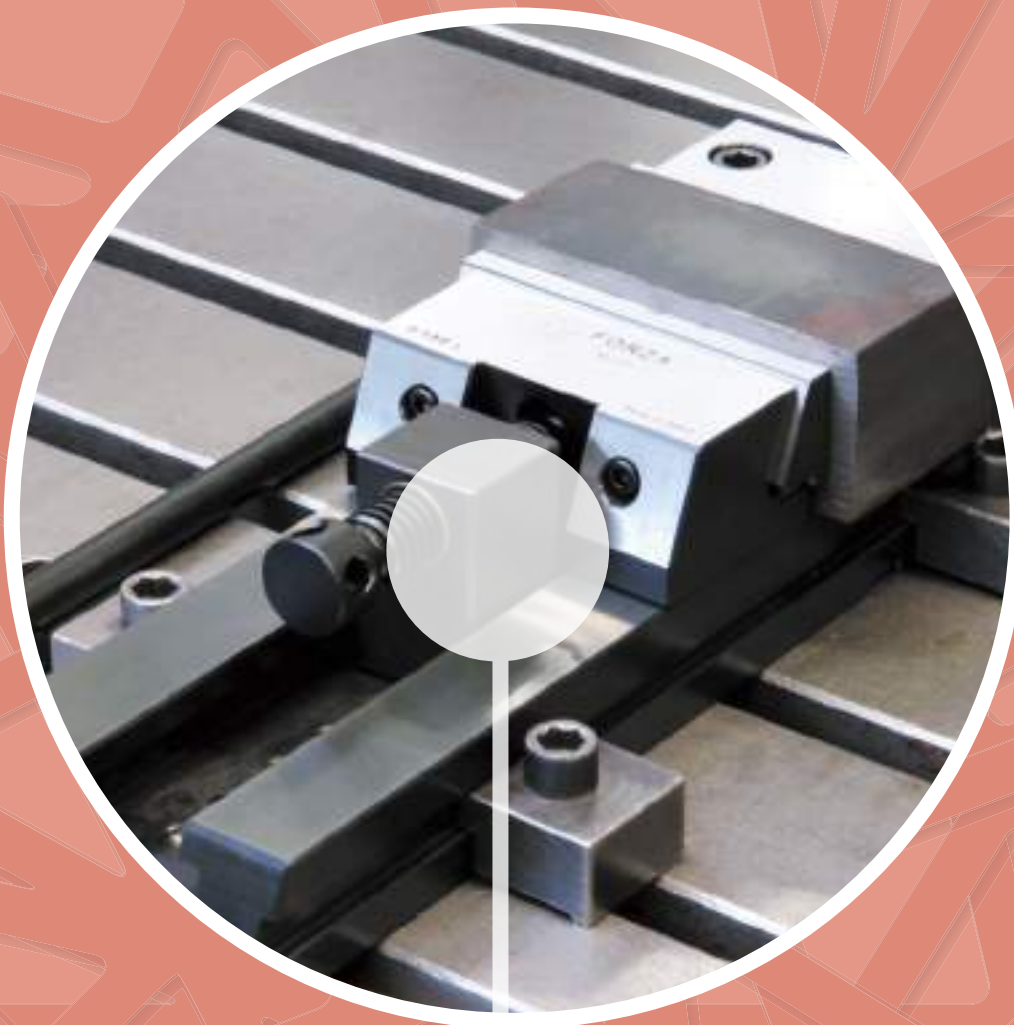
Clamping vice towers
Tours d'étaux de serrage



Otros montajes especiales.

Other special set ups
Autres assemblages especiaux





Mordazas

Machine vices



Serie 30 PERFECT

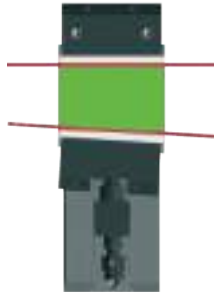
[No Guiadas]

Mordazas de alta precisión.
Para todos los trabajos: fresado, taladrado e incluso rectificado.

High precision vices
Vices designed for all machining jobs including grinding.



Mordazas no guiadas con efecto oscilante
Not guided machine vice



- ✓ Bocas con efecto descendente.
Jaws with descending effect.
- ✓ Acero de cementación (F 155)
Hardened steel HRc 60.
- ✓ Aprietes intercambiables.
Interchangeable locks.
- ✓ La boca se adapta a la pieza.
Jaw adapt to the workpiece.



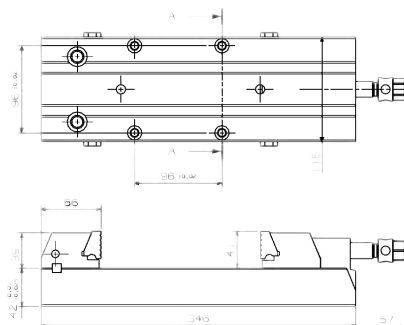
Husillo hexagonal y agujero para varilla.
Hexagonal spindle and hole for handle.



Mordazas para punto cero

Vices for zero point

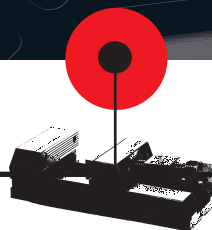
Sistema de paletización: Adaptamos las mordazas de nuestro programa a los diferentes sistemas de amarre PUNTO CERO.



Ejemplo de mordazas de boca 125 adaptadas al sistema de amarre LANG

Ref.	€/u.
30/125A1	1.059,00
30/125LA1	1.130,00

Otros modelos bajo presupuesto.
Other models under budget.



Medidas

30 PERFECT no guiada

Ref.	€/u.	A	B	C	D	F	H	L	M	mm.
30/100	881,00	250	109	33,5	37	90	100	18,6	51,5	12
30/100L	949,00	296	150	33,5	37	90	100	18,6	51,5	12
30/125	1.047,00	300	130	41	42	110	125	22,0	66	12
30/125L	1.114,00	346	175	41	42	110	125	22,0	66	12
30/125S	1.181,00	371	200	41	42	110	125	22,0	66	12
30/125R	1.295,00	345	140	53	49	115	125	3,0	82,5	16
30/125RL	1.370,00	395	189	53	49	115	125	3,0	82,5	16

		BASE
12561	7,5	B/100
12561	8	B/100
12561	13	B/125
12561	14	B/125
12561	14,5	B/125
15061	17,9	
15061	19,5	

30/150	1.575,00	402	200	56	51	135	150	32,2	83	16
30/150L	1.666,00	452	250	56	51	135	150	32,2	83	16
30/150S	1.864,00	502	300	56	51	135	150	32,2	83	16
30/150X	2.020,00	527	325	56	51	135	150	32,2	83	16
30/175	1.741,00	432	225	58	56	135	175	35,0	85	16
30/175L	1.839,00	482	275	58	56	135	175	35,0	85	16
30/175S	1.962,00	556	350	58	56	135	175	35,0	85	16
30/175X	2.070,00	610	400	58	56	135	175	35,0	85	16
30/200	2.115,00	470	250	66	61	160	200	52,2	93	16
30/200L	2.220,00	520	300	66	61	160	200	52,2	93	16
30/200S	2.451,00	570	350	66	61	160	200	52,2	92,5	16
30/200X	2.698,00	595	375	66	61	160	200	52,2	92,5	16
30/200XL	2.890,00	675	455	66	61	160	200	52,2	92,5	16
30/250	3.025,00	530	300	76	66	200	250	47,5	97,5	20
30/250L	3.270,00	580	350	76	66	200	250	47,5	97,5	20
30/250S	3.435,00	680	450	76	66	200	250	47,5	97,5	20
30/250X	3.625,00	755	525	76	66	200	250	47,5	97,5	20

Se incluyen 2 juegos de bridas

15061	26	B/150
15061	28	B/150
15061	30	B/150
15061	31,5	B/150
15061	34	B/150
15061	36,5	B/150
15061	40	B/150
15061	42,5	B/150
20061	44	B/200
20061	46,5	B/200
20061	49	B/200
20061	50,5	B/200
20061	53	B/200
20061	70	
20061	75	
20061	85	
20061	92	

30/300	4.650,00	670	390	83	78	245	300	38,5	121,5	20
30/300L	4.810,00	770	490	83	78	245	300	38,5	121,5	20
30/300S	4.999,00	870	590	83	78	245	300	38,5	121,5	20

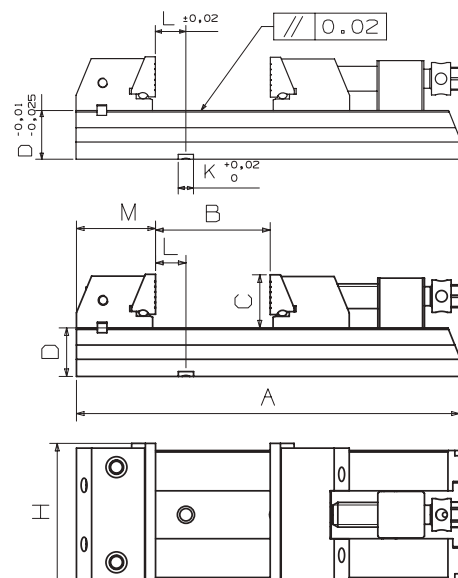
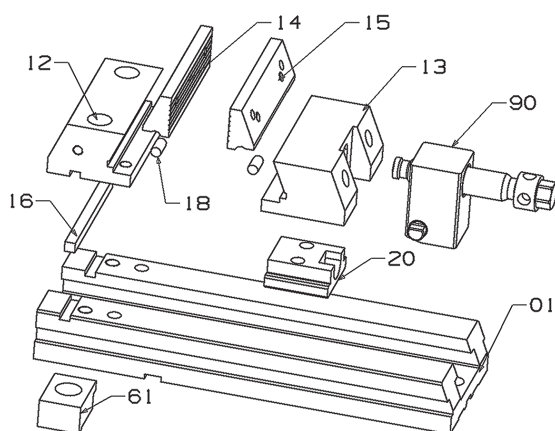
3030061	130	
3030061	145	
3030061	160	

Precio de la mordaza sin base giratoria. / Price without swivel base.

La mordaza de 300 mm de boca, sólo tiene chaveteros transversales. / The vice with a 300 mm. jaw it has only cross keyways.

En las mordazas de boca 150, 175, 200, 250 se incluyen 2 juegos de bridas sin cargo.

The machine vices 150, 175, 200 and 250 jaw include 2 set of clamps free of charge.



Cada mordaza incluye un certificado, con la medición real de las cotas principales en una máquina tridimensional Zeiss.
Each vice includes a measure certificate.

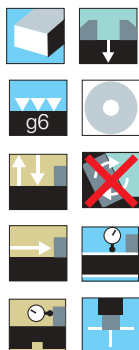


Serie 30G PERFECT

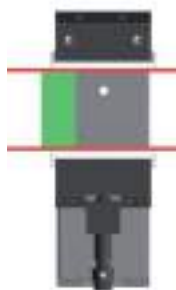
[Guiadas]

Mordazas de alta precisión.
Para todos los trabajos:
fresado, taladrado e incluso
rectificado.

High precision vices
Vices designed for all
machining works including
grinding.



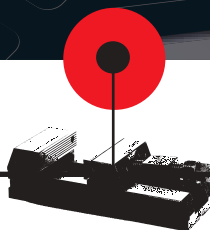
**Mordazas guiadas
sin efecto oscilante**
Guided machine vice



- ✓ Incluye "T" para obtener también el efecto oscilante
"T" is enclosed for oscilating effect
- ✓ Bocas con efecto descendente.
Jaws with descending effect.
Hardened steel HRc 60.
- ✓ Acero de cementación (F 155).
Hardened steel HRc 60.
- ✓ Aprietes intercambiables.
Interchangeables locks.
- ✓ Las bocas se desplazan en paralelo.
Jaw always move parallel.



Última Tecnología



Medidas

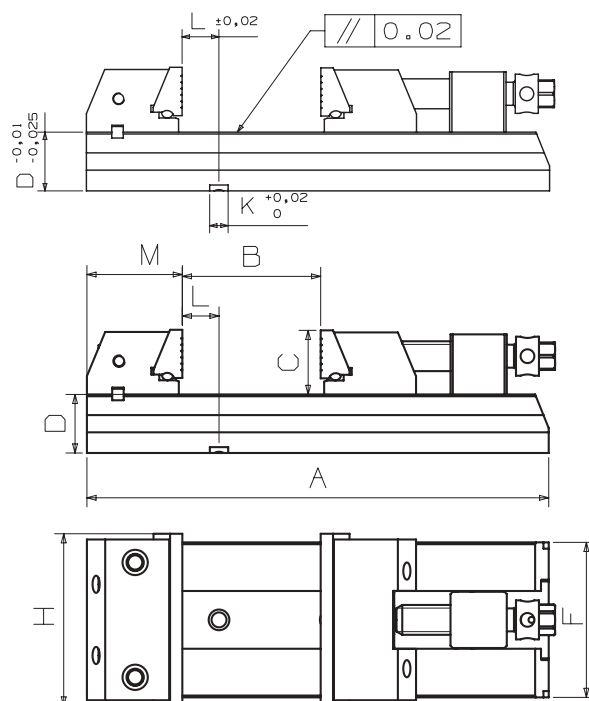
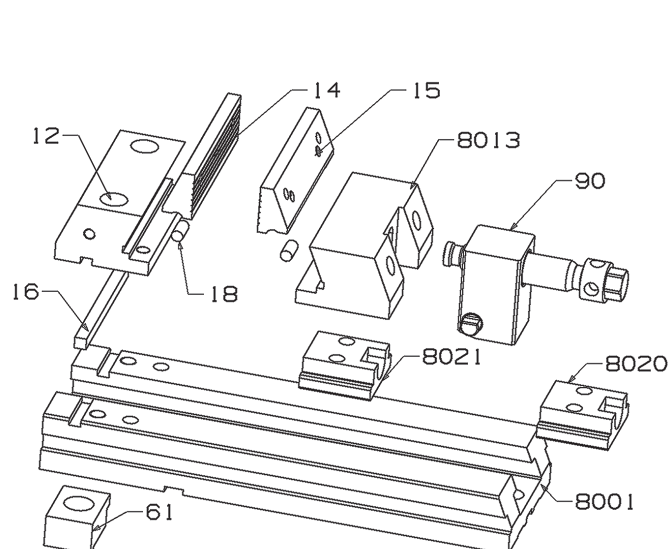
30G PERFECT guiada

Ref.	€/u.	A	B	C	D	F	H	L	M	 mm.			 BASE	
30/100G	1.003,00	250	109	33,5	37	90	100	18,6	51,5	12	12561	7,5	B/100	
30/100GL	1.092,00	296	150	33,5	37	90	100	18,6	51,5	12	12561	8	B/100	
30/125G	1.164,00	300	130	41	42	110	125	22,0	66	12	12561	13	B/125	
30/125GL	1.245,00	346	175	41	42	110	125	22,0	66	12	12561	14	B/125	
30/150G	1.782,00	402	200	56	51	135	150	32,2	83	16	Se incluyen 2 juegos de bridas	15061	26	B/150
30/150GL	1.859,00	452	250	56	51	135	150	32,2	83	16		15061	28	B/150
30/150GS	2.029,00	502	300	56	51	135	150	32,2	83	16		15061	31	B/150
30/150GX	2.135,00	527	325	56	51	135	150	32,2	83	16		15061	31,5	B/150
30/175G	1.949,00	432	225	58	56	135	175	35,0	85	16		15061	34	B/150
30/175GL	2.099,00	482	275	58	56	135	175	35,0	85	16		15061	36,5	B/150
30/175GS	2.165,00	556	350	58	56	135	175	35,0	85	16		15061	40	B/150
30/175GX	2.290,00	610	400	58	56	135	175	35,0	85	16		15061	42,5	B/150
30/200G	2.316,00	470	250	66	61	160	200	52,2	92,5	16		20061	44	B/200
30/200GL	2.485,00	520	300	66	61	160	200	52,2	92,5	16		20061	46,5	B/200
30/200GS	2.637,00	570	350	66	61	160	200	52,2	92,5	16		20061	49	B/200
30/200GX	2.903,00	595	375	66	61	160	200	52,2	92,5	16		20061	50,5	B/200
30/250G	3.199,00	530	300	76	66	200	250	52,2	97,5	20		20061	70	
30/250GL	3.512,00	580	350	76	66	200	250	47,5	97,5	20		20061	75	
30/250GS	3.719,00	680	450	76	66	200	250	47,5	97,5	20		20061	85	
30/250GX	3.980,00	755	525	76	66	200	250	47,5	97,5	20		20061	93	

Precio de la mordaza sin base giratoria. / Price without swivel base.

En las mordazas de boca 150, 175, 200, 250 se incluyen 2 juegos de bridas sin cargo.

The machine vices 150, 175, 200 and 250 jaw include 2 set of clamps free of charge.

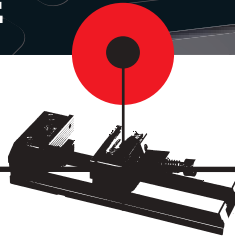


Cada mordaza incluye un certificado, con la medición real de las cotas principales en una máquina tridimensional Zeiss.

Each vice includes a measure certificate.

Serie PRD PRODUCTION

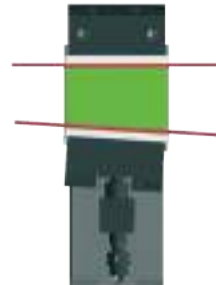
[No Guiadas]



Mordaza indicada para trabajos de fresadora.

Vice suitable for milling works.

Mordazas no guiadas con efecto oscilante
Not guided machine vice

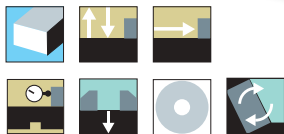


✓ Bocas con efecto descendente.
Jaws with descending effect.

✓ Acero de cementación (F 155).
Hardened steel HRC 60.

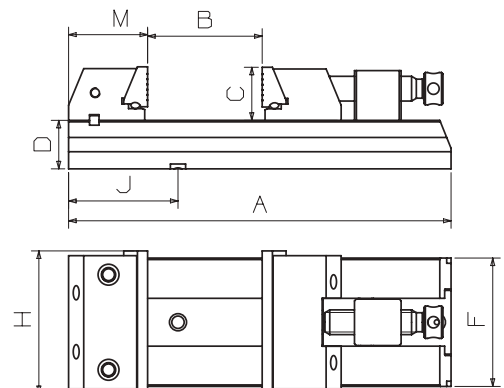
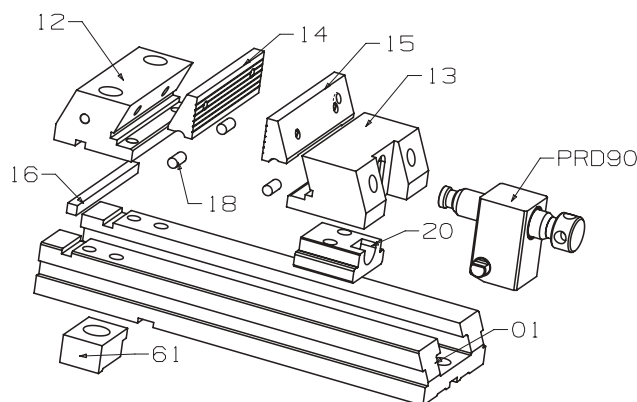
✓ Aprietes intercambiables.
Interchangeable locks.

✓ La boca se adapta a la pieza
Jaw adapts to the workpiece.



Ref.	€/u.	A	B	C	D	F	H	J	M	mm.			BASE
PRD/125	845,50	300	130	41	42	110	125	88	66	12	12561	13	B/125
PRD/125L	902,70	346	175	41	42	100	125	88	66	12	12561	1	B/125
PRD/150	1.258,00	402	200	56	51	135	150	115	83	16	15061	26	B/150
PRD/150L	1.330,00	452	250	56	51	135	150	115	83	16	15061	28	B/150
PRD/150S	1.483,00	502	300	56	51	135	150	115	83	16	15061	31	B/150
PRD/150X	1.625,00	527	325	56	51	135	150	115	83	16	15061	31,5	B/150
PRD/200	1.692,00	470	250	66	61	160	200	145	92,5	16	20061	44	B/200
PRD/200L	1.789,00	520	300	66	61	160	200	145	92,5	16	20061	46,5	B/200
PRD/200S	1.980,00	570	350	66	61	160	200	145	92,5	16	20061	49	B/200
PRD/200X	2.158,00	595	375	66	61	160	200	145	92,5	16	20061	50,5	B/200
PRD/200XL	2.292,00	675	455	66	61	160	200	145	92,5	16	20061	53	B/200

Precio de la mordaza sin base giratoria. / Price without swivel base.



V: El paralelismo de la mordaza varía de 0,03 a 0,06 mm, dependiendo de la longitud del cuerpo
The vice parallelism vary from 0.03 to 0.06 mm, depending on the body length.

[Guiadas]

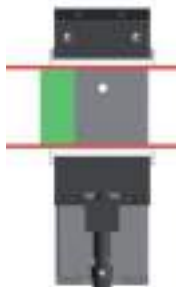
Serie PRD PRODUCTION

✓ Bocas con efecto descendente.
Jaws with descending effect.

✓ Acero de cementación (F 155).
Hardened smteel HRC 60.

✓ Aprietes intercambiables.
Interchangeable locks.

✓ La boca se desplazan en paralelo
Jaw always move parallel.



Mordazas guiadas
sin efecto oscilante
Guided machine vice

Mordaza indicada para
trabajos de fresadora.

Vice suitable for
milling works.

PRODUCTION

A diferencia de la serie 30 esta
mordaza no incluye "T" oscilante.

Oscillating "T" is not included.



Ref.	€/u.	A	B	C	D	F	H	J	M	mm.			BASE
PRD/125G	931,00	300	130	41	42	110	125	88	66	12	12561	13	B/125
PRD/125GL	999,50	346	175	41	42	110	125	88	66	12	12561	14	B/125
PRD/150G	1.370,00	402	200	56	51	135	150	115	83	16	15061	26	B/150
PRD/150GL	1.449,00	452	250	56	51	135	150	115	83	16	15061	28	B/150
PRD/150GS	1.560,00	502	300	56	51	135	150	115	83	16	15061	31	B/150
PRD/200G	1.815,00	470	250	66	61	160	200	145	92,5	16	20061	44	B/200
PRD/200GL	1.950,00	520	300	66	61	160	200	145	92,5	16	20061	46,5	B/200
PRD/200GS	2.070,00	570	350	66	61	160	200	145	92,5	16	20061	49	B/200
PRD/200GX	2.275,00	595	375	66	61	160	200	145	92,5	16	20061	50,5	B/200

Precio de la mordaza sin base giratoria. / Price without swivel base.



Cuerpos prolongadores para mordazas

Vice bodies extensions

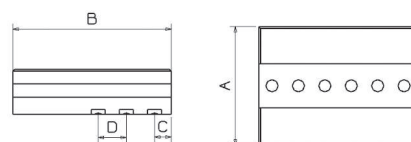
Estos prolongadores no son guiados. No sirven para las mordazas guiadas. Solo pueden trabajar con la T oscilante.

This extensions are not guided. They can't be used for guided vices. It can works with oscilating T.



- ✓ Con más agujeros en bola para la posición del taco.
With more semispherical hole to place the spindle blocks.
- ✓ Con tres chaveteros para disponer de más posiciones.
With 3 keyways enabling more positions.
- ✓ Reversible, se puede montar por los dos lados.
Reversible hense can operate both ways.

Ref.	€/u.	A	B	C	D		
1252211	279,00	110	150	15	21	1251261	3,6
1502211	379,00	135	180	19	32	15061	6,5
1752211	423,00	135	180	19	32	15061	7,5
2002211	495,00	160	200	24	32	2001261	11,7
2502211	639,00	200	242	31	36	20061	19,5

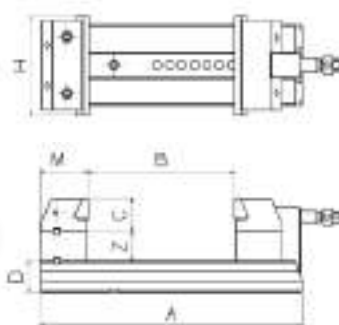
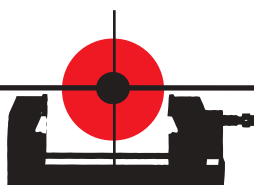


Calzos para aumentar la altura de las mordazas

Lifting blocks to increase the height of the vices

Estos calzos no son guiados. No sirven para las mordazas guiadas. Si tiene una mordaza G, tiene que adquirir una T 20 y por tanto, deja de ser guiada.

The parts meant are not guided. They can't be used for guided vices. In case you all ready had a G vice, you have to get a T nº 20 and therefore it is not guide any more.



Ref.	€/u.	Z	H	
15031	620,00	60	150	12,9
20031	701,00	60	200	18,5
25031	1.031,00	60	250	21,5
30030031	1.550,00	60	300	34,5

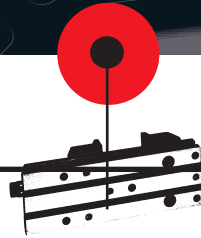
TACOS ALTOS		
Ref.	€/u.	Mordaza
30020090	232,00	150 - 200
30025090	374,00	250
30030090	537,00	300



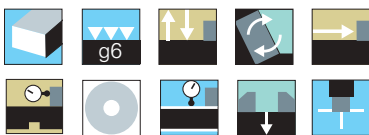
15031 Juego de 2 calzos, taco husillo, chaveta y tornillos.
Set of 2 lifting blocks, spindle blocks keynut and screws.

Vices for cubes

Serie 60
Mordaza para cubos

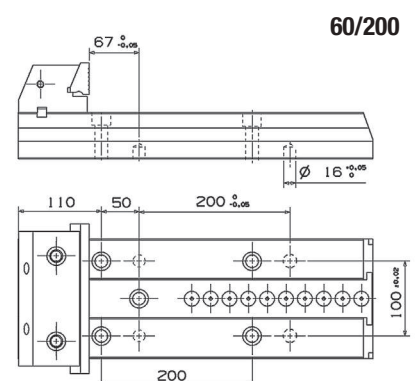
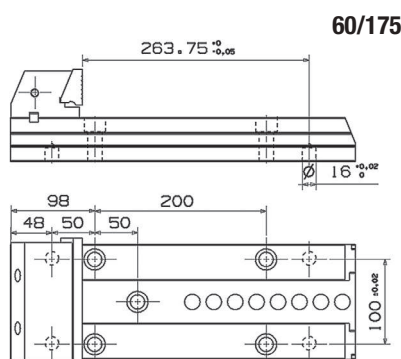
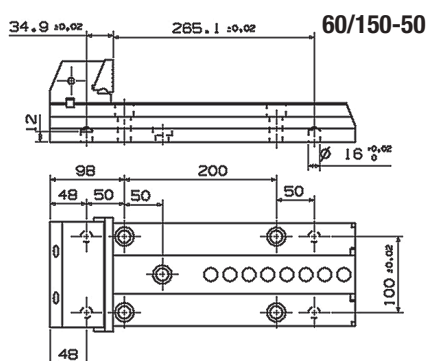
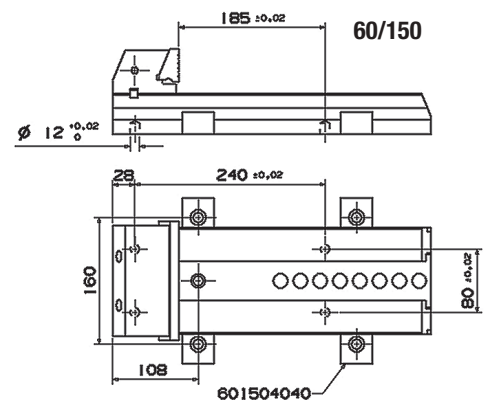
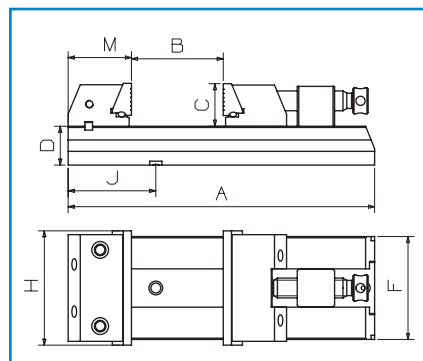
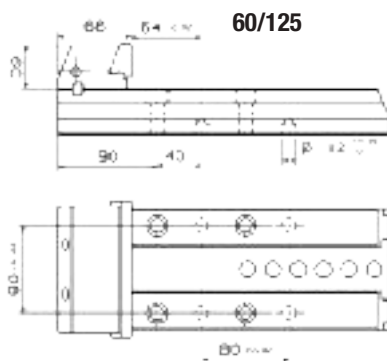


- ✓ Bocas con efecto descendente.
Jaws with descending effect.
- ✓ Acero de cementación (F 155).
Hardened steel HRc 60.
- ✓ Aprietes intercambiables.
Interchangeable locks.
- ✓ Tolerancia de acabado: g6 en la cota D.
Finishing tolerance: g6 in date D.
- ✓ Portabocas móvil con efecto oscilante.
Oscilating movable jaws support.



Ref.	€/u.	A	B	C	D	F	H	P	⚖
60/125	1.047,00	328	130	41	42	110	125	40	7,5
60/125L	1.114,00	373	175	41	42	110	125	40	8
60/150	1.575,00	402	200	56	51	135	150	40	13
60/150-50	1.575,00	402	200	56	51	135	150	50	14
60/150L	1.666,00	452	250	56	51	135	150	40	28
60/150L-50	1.666,00	452	250	56	51	135	150	50	34
60/175	1.741,00	432	225	58	56	135	175	50	36,5
60/175L	1.839,00	482	275	58	56	135	175	50	44
60/200	2.115,00	470	250	66	61	160	200	50	46,5
60/200L	2.220,00	520	300	66	61	160	200	50	49
60/200XL	2.890,00	830	600	66	61	160	200	50	69

Precio de la mordaza sin base giratoria. / Price without swivel base.



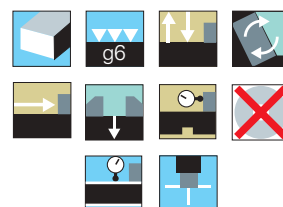
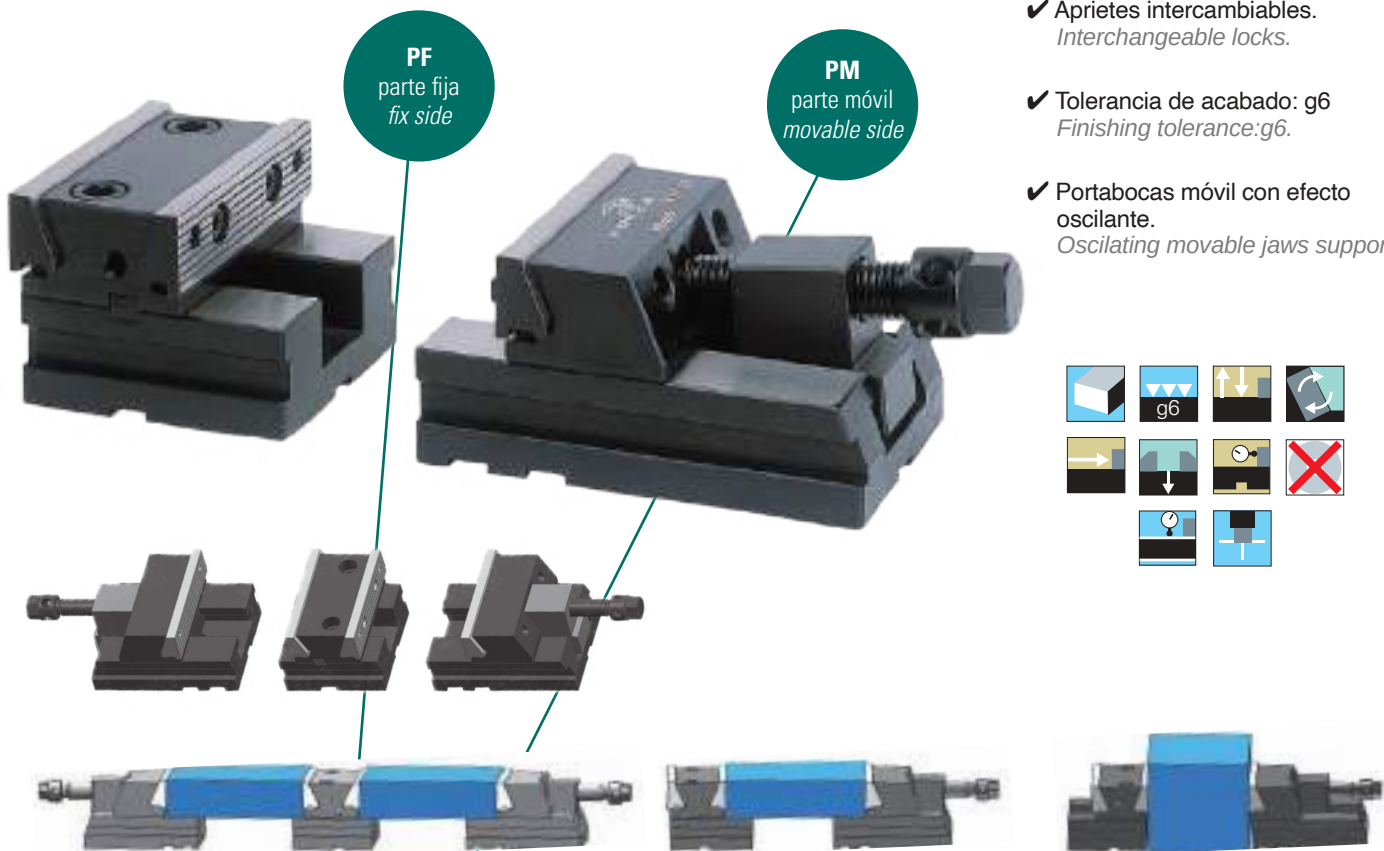
Serie 30P Mordaza grandes piezas

Vice for large pieces

Mordaza indicada para grandes piezas

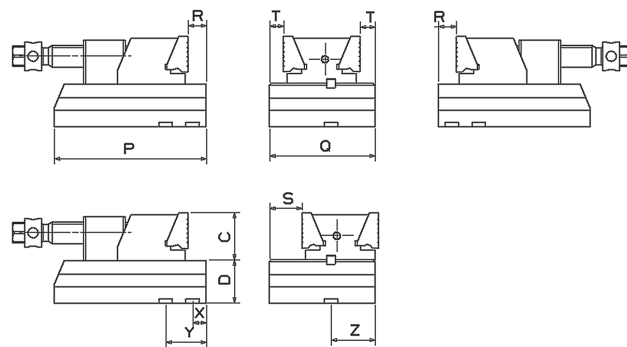
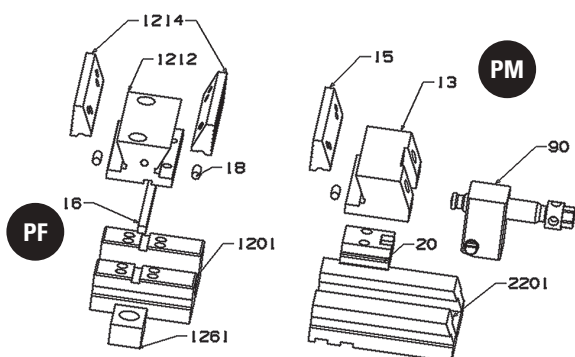
Machines vice indicated for large pieces

- ✓ Bocas con efecto descendente.
Jaws with descending effect.
- ✓ Acero de cementación (F 155).
Hardened steel HRC 60.
- ✓ Aprietes intercambiables.
Interchangeable locks.
- ✓ Tolerancia de acabado: g6
Finishing tolerance:g6.
- ✓ Portabocas móvil con efecto oscilante.
Oscilating movable jaws support.



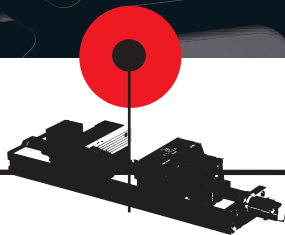
Ref.	€/u. TOTAL (PF+PM)	€/u. TOTAL (PF)	€/u. TOTAL (PM)	C	D	P	Q	R	S	T	X	Y	Z	mm.		
30/100P	1.022,00	487,90	534,10	33,5	37	140	90	50	30	13	17	42	37	12	1251261	9,5
30/125P	1.191,00	606,50	585,30	41	42	150	103	55	35	16	22	50	43,5	12	1251261	16,5
30/150P	1.737,00	843,50	893,50	56	51	180	125	58	40	20	26	58	52	16	1501261	24,5
30/200P	2.322,00	1.118,50	1.203,50	66	51	190	140	63	44	22	26	58	59	16	2001261	41

Estas mordazas se suministran con 2 juegos de bridas. / 2 sets of clamps enclosed.



Self centering vice

Serie 26 Mordaza autocentrante



✓ Cada husillo tiene un mecanismo multiplicador de par.
Each spindle features a torque multiplier.

✓ Cada taco tiene 3 posiciones de bloqueo, para cambiar de posición basta con aflojar los dos prisioneros.
Each spindle allows 3 positions. Loosen up screws in order to change positions.

✓ Bocas con efecto descendente.
Jaws with descending effect.

✓ Acero de cementación (F 155).
Hardened steel HRc 60.

✓ Tolerancia de acabado: g6
Finishing tolerance: g6.

✓ Portabocas móvil con efecto oscilante.
Oscilating movable jaws support.

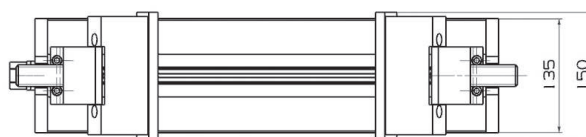
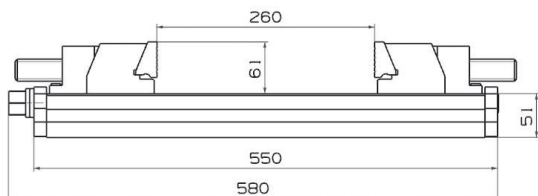
Ref.	€/u.	
26/150	2.780,00	36,5



Bridas Clamps

Bridas/ Clamps	€/juego.
15061	31,00

Necesita 2 juegos. / It need 2 sets.



Serie 24 Mordaza autocentrante

Self centering vice

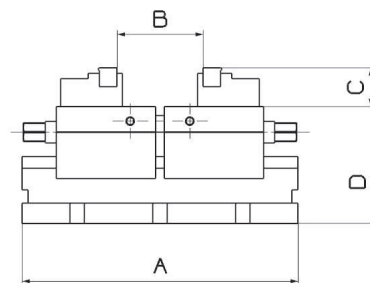
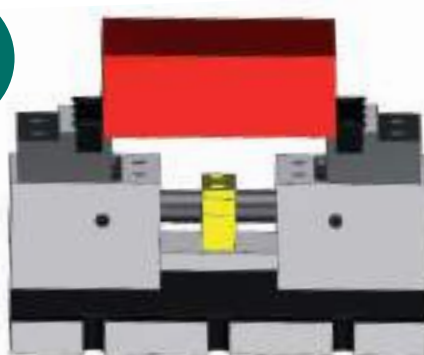


- ✓ Carro con dos posiciones de anclaje al portabocas.
Clamping block with double jaw holder positioning.
- ✓ Portabocas reversible.
Reversible jaw holder.
- ✓ Husillo con rosca trapecial.
Spindle with trapezoid thread.
- ✓ Bocas reversibles. Planas por un lado y con mordientes por el otro.
Reversible jaws. Flat on one side and indented on the other.
- ✓ Acero de cementación (F 155).
Hardened steel HRc 60.

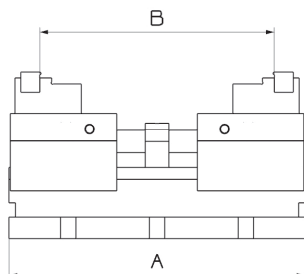
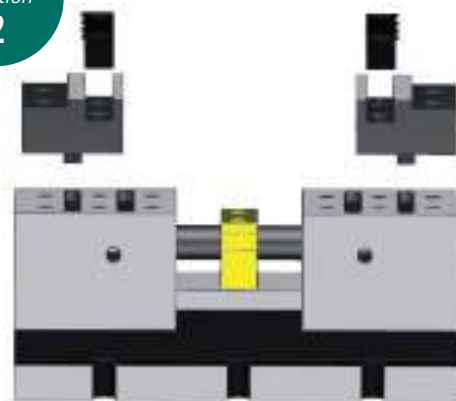
Ref.	€/u.	A	Posición 1		Posición 2		C	D	E	⚖
			B min	B max.	B min	B max.				
24/75	1.125,00	192	12	110	60	155	28	90	70	9,3
24/95	1.299,00	250	20	140	80	200	35	105	90	17,0
24/100	1.697,00	394	45	285	105	345	38	105	100	23,5



Posición
Position
1



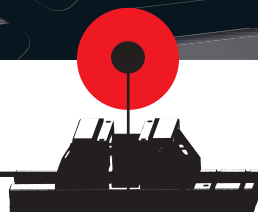
Posición
Position
2





Serie 25 Mordaza de 5 ejes

Vices for 5 axes machine

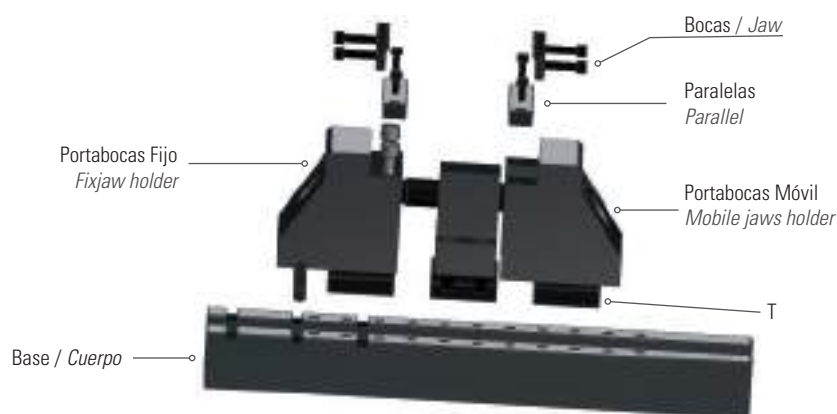


Mordaza autocentrante

Self centering vice



- ✓ Husillo completamente escondido.
Fully embedded spindle.
- ✓ 3 posiciones del portabocas fijo ayudan a posicionar la pieza de la forma más eficaz.
3 adjustments of jaw holder aiming at a better workpiece positioning.
- ✓ Portabocas móvil con rodamiento integrado para facilitarte el apriete.
Mobil jaw holder with built in bearing enabling an easier clamping.
- ✓ Paralelas mecanizables para regular la altura del escalón.
Soft parallel aimed at a better step height adjustment.
- ✓ Bocas reversibles. Planas por un lado y con mordientes por el otro.
Reversible jaws. Flat on one side and indented on the other.



Cambiar la posición del portabocas

Changing of the jaw holder position



1. Quitar los tornillos y la paralela del portabocas.
Take out screws and parallel of jaw holder.
2. Sacar los tornillos de refuerzo M-12.
Pull out the M-12 reinforce screw.



3. Extraer la chaveta.
Take out key nut.



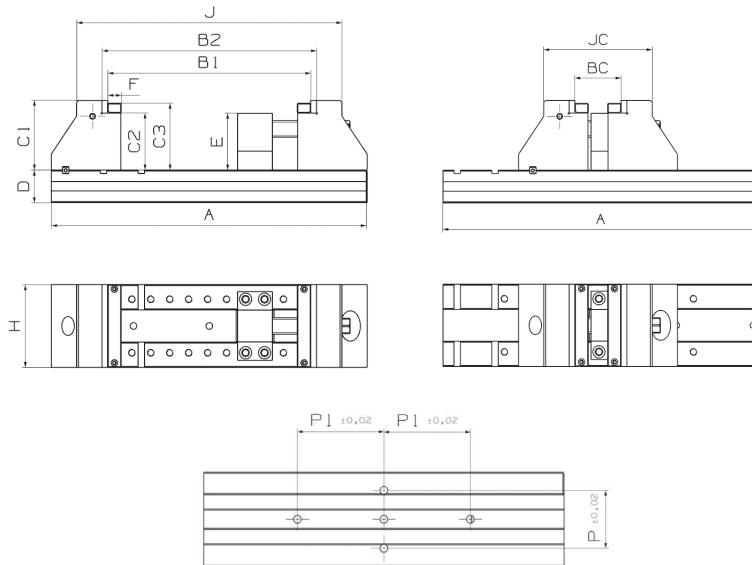
4. Desplazar el portabocas.
Move back the jaw holders.
5. Meter la chaveta.
Place the key nuts.



6. Montar los tornillos M-12 (Solo para grandes esfuerzos de fresado).
Place the M12 reinforced screws (suitable for hight clamping force requirement).
7. Montar la paralela.
Mount the parallel.

Medidas / Dimensions

Serie 25 - 5 ejes / 5 axes



Ref.	€/u.	A	BC	B1	B2	C1	C2	C3	D	E	F	H	JC	J	P	P1	⚖
25/130	2.020,00	500	74	320	340	110	90	105	51	90	21	130	171	420	80	120	39
25/130L	2.259,00	600	74	420	440	110	90	105	51	90	21	130	171	520	80	120	42,3
25/175	2.995,00	590	74	370	400	150	125	140	76	122	25	175	182	480	100	100	87,5
25/175L	3.195,00	710	74	490	520	150	125	140	76	122	25	175	182	600	100	100	95,8

25/160	2.845,00	470		220	270	190	150	160	61	150	30	160		360			74,0
--------	----------	-----	--	-----	-----	-----	-----	-----	----	-----	----	-----	--	-----	--	--	------

La mordaza 25/160 se amarra con la brida referencia 20061 y tiene chaveteros de alineación de 16 mm

Bocas/jaws	€/u.	Mordaza
2513024	59,00	25/130
2517524	75,00	25/175

No incluidas en la mordaza / Not included



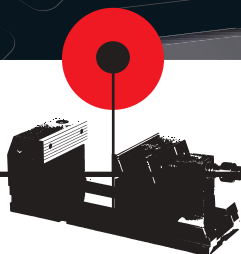
Bocas fresadas con dientes

Grip jaw-plates



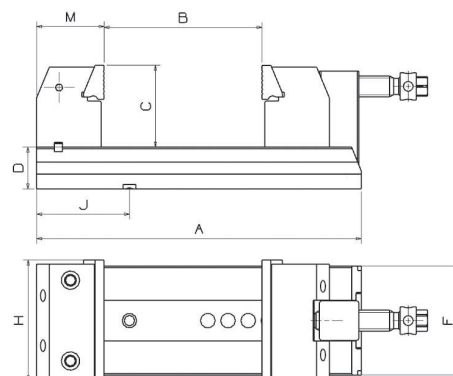
Serie 300 Mordaza de bocas altas

Series 300 High jaws vices



✓ Bocas con efecto descendente.
Jaws with descending effect.

✓ Acero de cementación (F 155).
Hardened steel HRC 60.

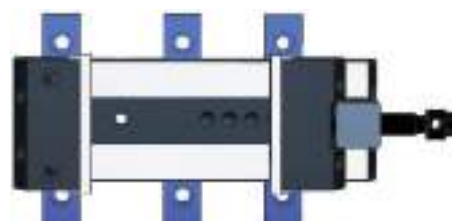


Ref.	€/u.	A	B	C	D	F	H	J	M	mm.		
300/150	1.710,00	402	200	101	51	135	150	115	83	16	15061	34
300/150L	1.820,00	452	250	101	51	135	150	115	83	16	15061	36
300/200	2.199,00	470	250	130	61	160	200	145	93	16	20061	48
300/200L	2.405,00	520	300	130	61	160	200	145	93	16	20061	51
300/200S	2.680,00	570	350	130	61	160	200	145	93	16	20061	42
300/200X	2.955,00	595	375	130	61	160	200	145	93	16	20061	55



Montar siempre con 3 juegos de bridas

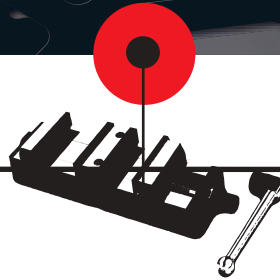
Always clamping with 3 set of strap



50 AÑOS DE MEJORA
EN NUESTROS SISTEMAS DE PRODUCCIÓN Y CALIDAD
50 YERS
IMPROVING MANUFACTURE AND QUALITY

Twin self centering vice

Serie 30CF Mordaza gemela



✓ Bocas con efecto descendente.
Jaws with descending effect.

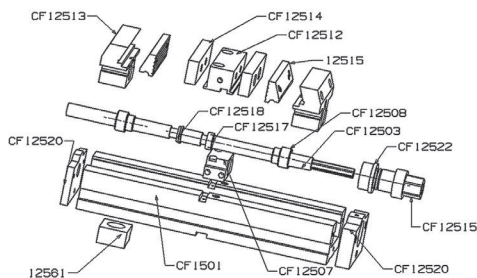
✓ Paralelismo <0,015 mm.
Parallelism < 0,015 mm.

✓ Husillo en posición fija. No aumenta la longitud al abrir la mordaza.
Spindle in fix position. Does not increase the length when the vice is opened.

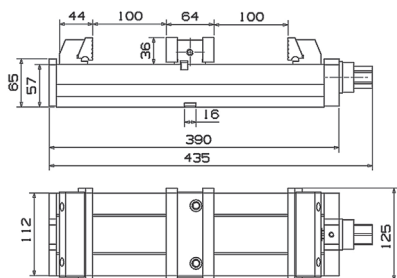
CF



Cuerpo de acero cementado (HRc 60)
Hardened steel body (HRc 60)



Ref.	€/u.	mm.	
CF/125	2.530,00	12	13



Ref.	€/Juego.
12561	29,00

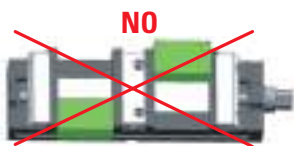
Necesita 2 juegos / It needs 2 sets.

Bridas
Clamps



Ejemplos de uso /

Use example



No apretar piezas cruzadas, disminuye la fuerza de apriete y puede soltarse la pieza y estropear la mordaza.
Do not tighten pieces crosswise risk of unintended loosening of jaws and vise damaging.



La pieza de mayor tamaño, se debe colocar en la boca opuesta a la llave.
The biggest work piece must be clamped on the opposite to the spindle lever.

Estas mordazas pueden convertirse en autocentrantes

Convertible in self centering



MORDAZAS DOBLES O AUTOCENTRANTES

TWIN-SELF CENTERING VICES

Serie 30CF Mordaza gemela con portabocas de aluminio

Aluminium jaws holder
Twin self centering vice

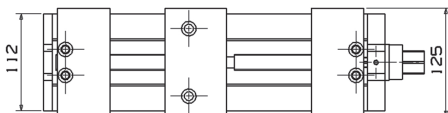
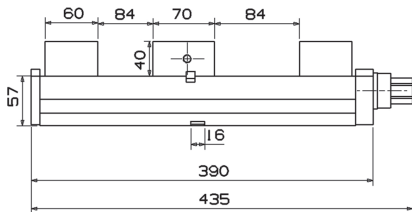


- ✓ Portabocas de aluminio mecanizables.
Aluminium machinable jaws.
- ✓ Simplifica la fabricación de útiles.
Simplifies the tools manufacturing.
- ✓ Cuerpo de acero cementado (60Hrc).
Hardened cemented steel vice body (60Hrc).

CFA



Ref.	€/u.	mm.	
CFA125	1.799,00	16	20



Aplicación CFA/125



Portabocas /Jaws Holder

Ref.	€/u.	Descripción
CFA12512	180,00	Portabocas fijo
CFA12513	201,00	Portabocas móvil

Accesorios
Accessories



Mordaza gemela autocentrante CFB

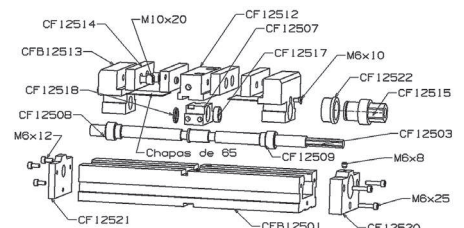
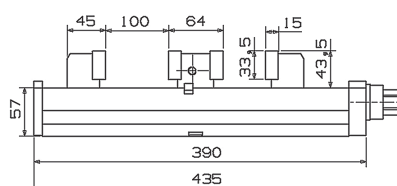
CFB Twin-Self centering vice

- ✓ Portabocas de aluminio equipadas con bocas rectas templadas.
Aluminium jaws holder with hardened straight jaws.
- ✓ Cuerpo de acero cementado (60Hrc).
Hardened cemented steel vice body (60Hrc).

CFB



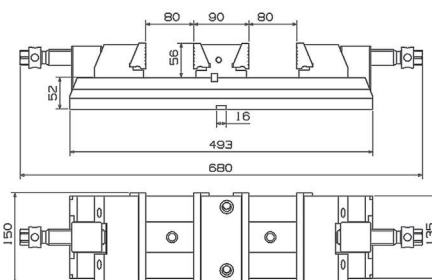
Ref.	€/u.	mm.	
CFB125	2.039,00	16	20



MORDAZAS DOBLES DE PRESIÓN DESCENDENTE

Serie 30D

Mordaza doble



Ref.	€/u.	BASE	
30/150D	2.320,00	B/150	40

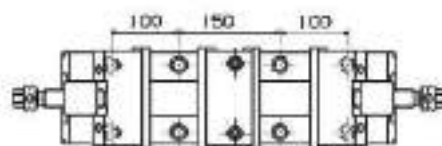
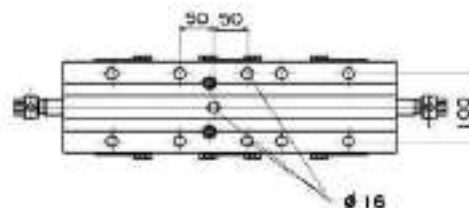


Bridas

Clamps

Ref.	€/juego.
15061	31,00

Double position for cubes
step 50



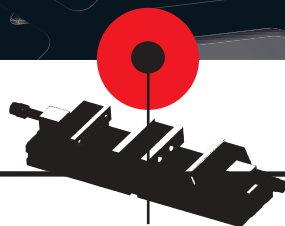
Ref.	€/u.	Paso	
60/150D	2.296,00	50	40

MORDAZAS DOBLES EXTRA LARGAS

DOUBLE POSITION VICE-EXTRA LONG

Serie DF Mordaza doble
(recta/descendente)

Double position vice
(straight/pull down jaws)



El portabocas central se puede amarrar...
One can fix the central jaw holder...



...en la parte central y nos permite agarrar dos piezas de forma independiente.

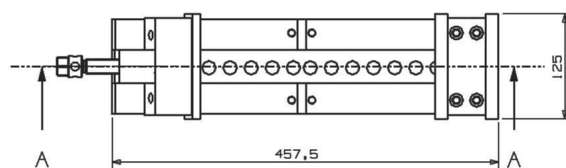
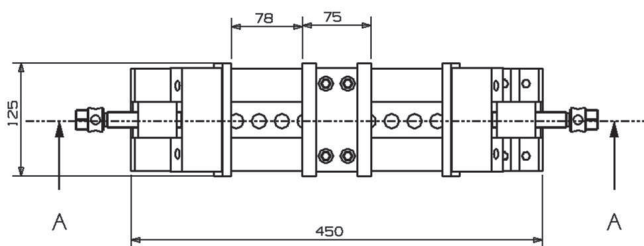
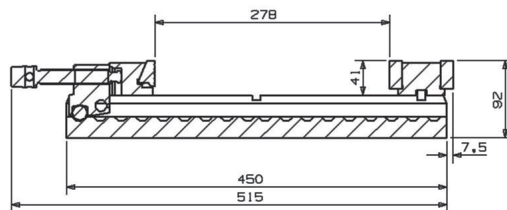
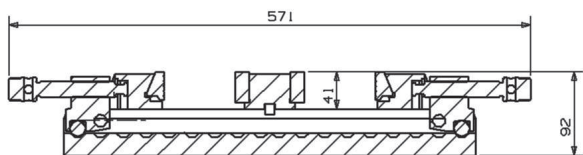
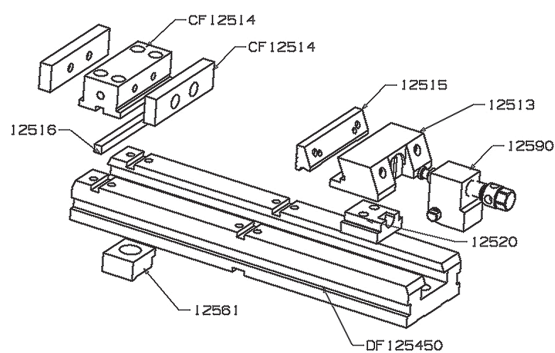
In the vice center and allows to clamping two different work piece.

...en el extremo del cuerpo y transforma la mordaza en una mordaza convencional de gran abertura.

In the far side of the vice giving a wide clamping capacity.



Ref.	€/u.	
DF125/450	1.830,00	24



DOUBLE POSITION VICE-EXTRA LONG

MORDAZAS DOBLES EXTRA LARGAS

Double position vice
(pull down jaws)

Serie DD Mordaza doble
(descendente)



Transformación



DD125-600



DD125-600-1

Mordazas dobles /

Double position vices

Ref.	€/u.	A	B	⚖
DD125/500	2.096,00	504	102	24,5
DD125/600	2.356,00	604	152	25,5



Mordazas simples /

Simple vices

Ref.	€/u.	C	D	⚖
DD125/500-1	1.756,50	178	320	20,0
DD125/600-1	2.017,50	228	425	21,0

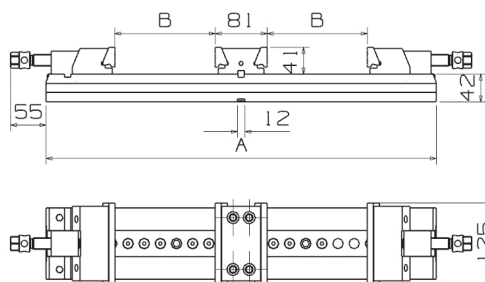
Mordazas dobles guiadas /

Double position guided

Ref.	€/u.	A	B	⚖
DD125/500G*	2.322,00	504	102	24,7
DD125/600G*	2.549,00	604	152	25,7



*Incluyen 2 T guiadas
*Two T guided included



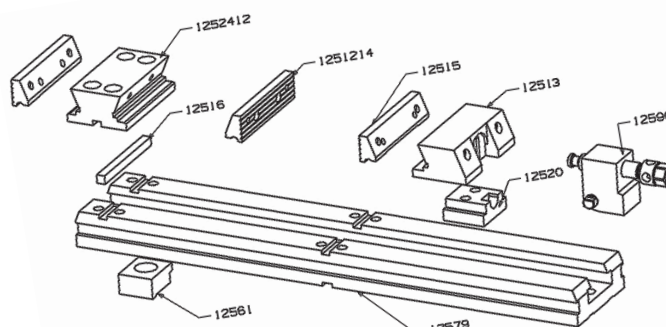
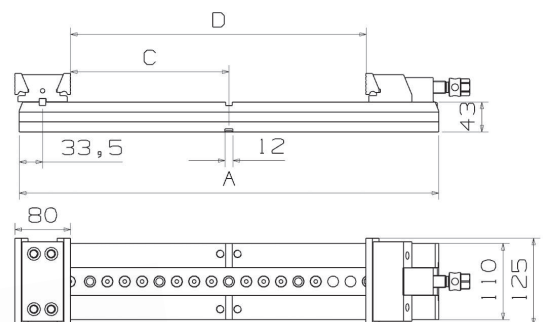
Mordazas simples guiadas /

Simple vices guided

Ref.	€/u.	C	D	⚖
DD125/500G-1*	1.924,00	178	320	20,1
DD125/600G-1*	2.124,00	228	425	21,1



*Incluyen 1 T guiada
*One T guided included



Serie 30V Mordaza partida alta

Hight split vice

Mordaza partida alta

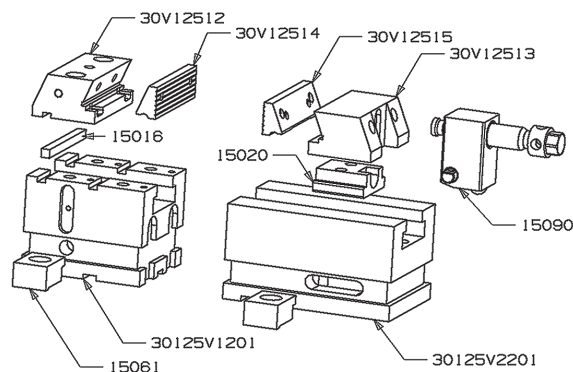
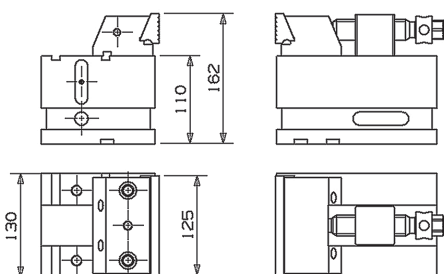
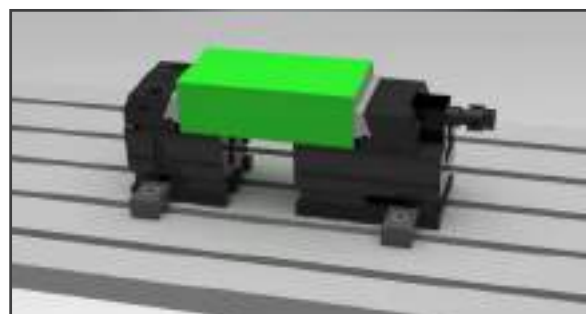
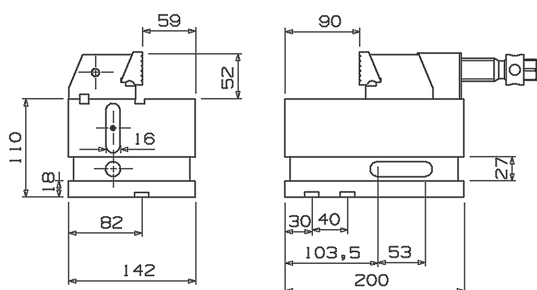
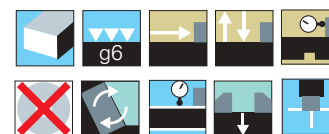
Hight split vice



✓ La pieza se apoya sobre el cuerpo de la mordaza.
Altura del cuerpo 110 mm.
*The work piece pushed down against the vice base.
Base height 110 mm.*

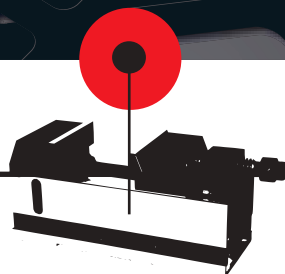
✓ La pieza se apoya sobre la mesa de la máquina.
Amarre a 150 mm. de altura.
*The work piece is pushed down against the machine table.
Clamping 150 mm.high.*

Ref.	€/u.	Observaciones	
30V125P	3.180,00	Se incluyen 2 juegos de bridas de la ref. 15061 It contains 2 sets of clamps 15061	35,8



Vice to make square

Serie 30V Mordaza para escuadrar



- ✓ Las bocas tienen efecto descendente; por su geometría, al apretar la pieza hacen que esta descienda.
Jaws with descending effect. Due to its geometry, when the part is tighten it goes down.

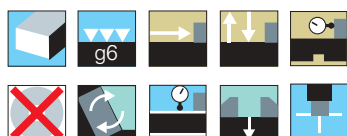
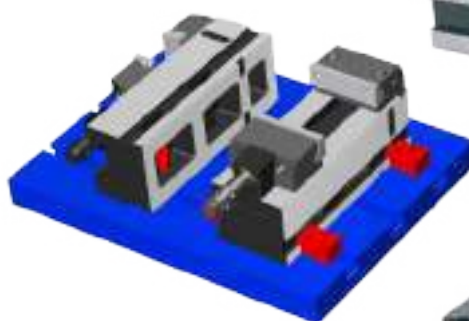
- ✓ Perpendicularidad negativa de las bocas de 0,025 a 0,04 mm. Las bocas se fabrican con un ángulo negativo para compensar las deformaciones durante el apriete.
Negative perpendicular alignment of the jaws from 0.025 to 0.04 mm. Jaws are made in negative angle in order to countertrack the deformation during the tightening.

- ✓ Aprietes intercambiables: mecánico, hidráulico con multiplicador o apriete oleoneumático.
Interchangeable spindle: mechanical, hydraulic or with mechanical multiplier.

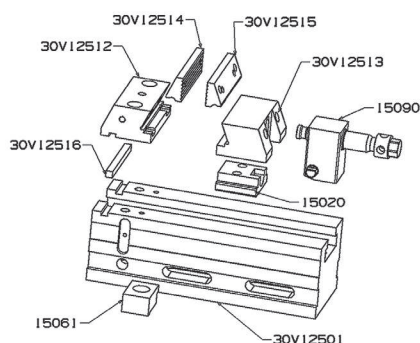
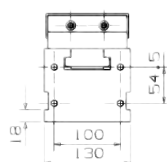
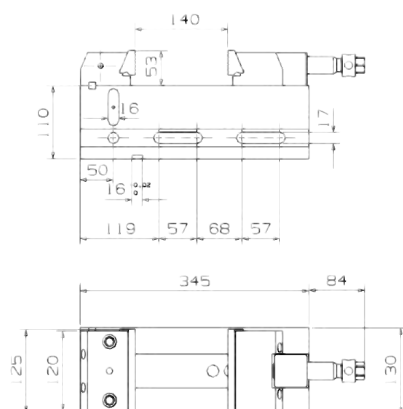
Completamente
rectificada
Full grinding

Mordaza para escuadrar

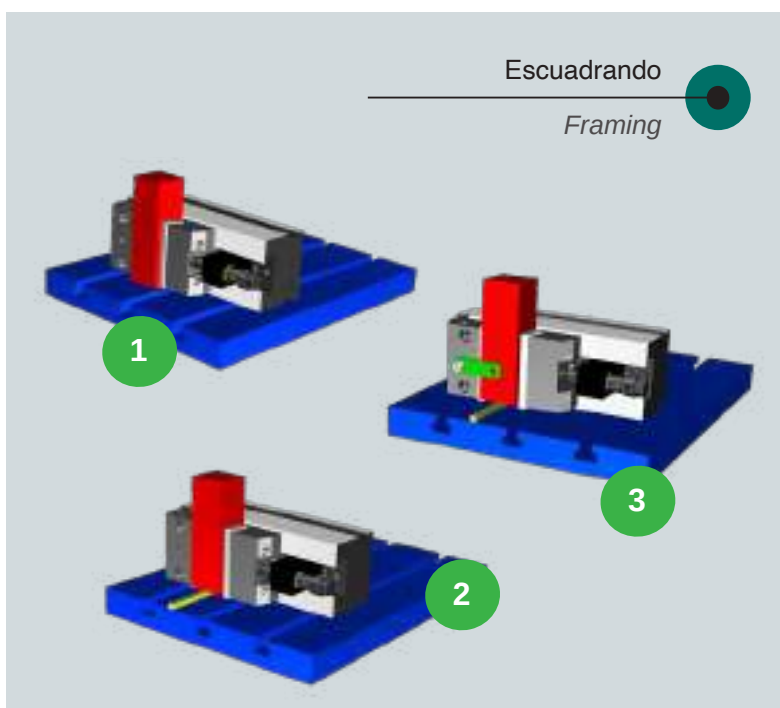
Vice to make square



Ref.	€/u.	kg
30V125	2.110,00	35,5



Escuadrando
Framing



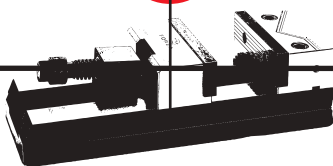
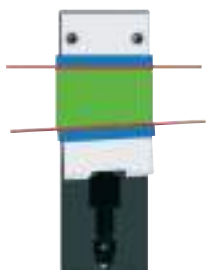
Serie 29 STANDARD

No Guiadas

Mordazas mecánicas boca recta

Straight jaws mechanical vices.

Mordazas no guiadas
Not guided machine vice

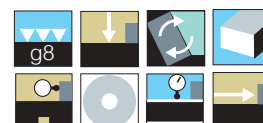


✓ Por el ataque del husillo:
NO LEVANTA LAS PIEZAS.
DOESN'T LIFT THE WORK PIECES

✓ 60HRC tolerancia de acabado g8.
60HRC Finishing tolerance g8.

✓ Aprietes intercambiables.
Interchangeable locks.

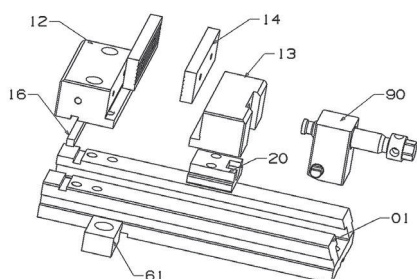
✓ La boca de adapta a la pieza.
Jaw adapt to the workpiece.



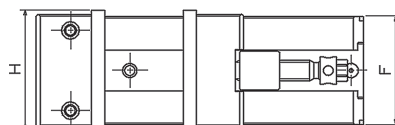
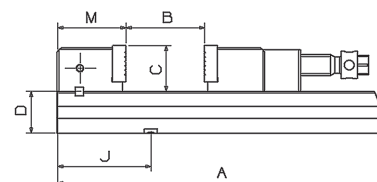
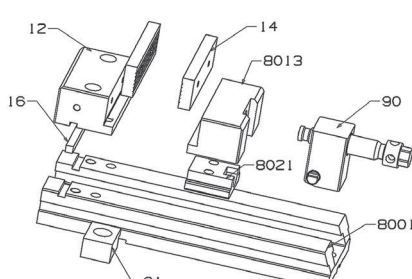
Ref.	€/u.	A	B	C	D	F	H	J	M	mm.			BASE
29/100	758,00	250	109	34	37	90	100	70	50	12	12561	7,5	B/100
29/100L	826,00	296	150	34	37	90	100	70	50	12	12651	8	B/100
29/125	874,00	300	130	39,5	42	110	125	88	64	12	12561	13	B/125
29/125L	941,00	346	175	39,5	42	110	125	88	64	12	12561	14	B/125
29/125S	1.009,50	371	200	39,5	42	110	125	88	64	12	12561	14,5	B/125
29/150	1.278,00	402	200	57	51	135	150	115	84	16	15061	26	B/150
29/150L	1.369,00	452	250	57	51	135	150	115	84	16	15061	28	B/150
29/150S	1.567,00	502	300	57	51	135	150	115	84	16	15061	30	B/150
29/150X	1.723,00	527	335	57	51	135	150	115	84	16	15061	31,5	B/150
29/175	1.435,00	432	225	58,5	56	135	175	120	86	16	15061	34	B/150
29/175L	1.533,00	482	275	58,5	56	135	175	120	86	16	15061	36,5	B/150
29/175S	1.656,00	556	350	58,5	56	135	175	120	86	16	15061	40,0	B/150
29/175X	1.743,00	610	400	58,5	56	135	175	120	86	16	15061	42,5	B/150
29/200	1.728,00	470	250	65,5	61	160	200	145	92,5	16	20061	44	B/200
29/200L	1.833,00	520	300	65,5	61	160	200	145	92,5	16	20061	46,5	B/200
29/200S	2.064,00	570	350	65,5	61	160	200	145	92,5	16	20061	49	B/200
29/200X	2.311,00	595	375	65,5	61	160	200	145	92,5	16	20061	50,5	B/200
29/200XL	2.422,00	675	455	65,5	61	160	200	145	92,5	16	20061	53	B/200

Precio de la mordaza sin base giratoria. / Price without swivel base.

Serie 29

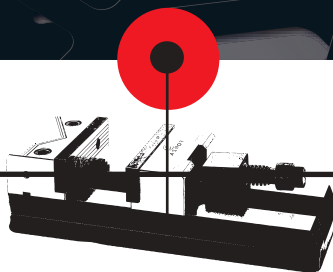


Serie 29G



Guiadas

Serie 29 STANDARD



✓ Por el ataque del husillo:
NO LEVANTA LAS PIEZAS.
DOESN'T LIFT THE WORK PIECES

✓ 60HRc tolerancia de acabado g8.
60HRc Finishing tolerance g8.

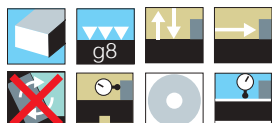
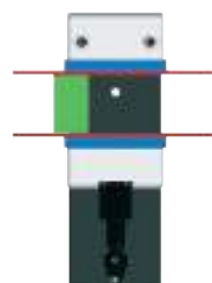
✓ Aprietes intercambiables.
Interchangeable locks.

✓ Las bocas se desplazan en paralelo.
Jaw always move parallel.

Mordazas guiadas
boca recta

Straight guided
jaws vices

Mordazas guiadas
Guided machine vice



Ref.	€/u.	A	B	C	D	F	H	J	M	mm.			BASE
29/100G	835,00	250	109	34	37	90	100	70	50	12	12561	7,5	B/100
29/100GL	924,00	296	150	34	37	90	100	70	50	12	12651	8	B/100
29/125G	953,00	300	130	39,5	42	110	125	88	64	12	12561	13	B/125
29/125GL	1.034,00	346	175	39,5	42	110	125	88	64	12	12561	14	B/125
29/150G	1.442,00	402	200	57	51	135	150	115	84	16	15061	26	B/150
29/150GL	1.519,00	452	250	57	51	135	150	115	84	16	15061	28	B/150
29/150GS	1.622,00	502	300	57	51	135	150	115	84	16	15061	28	B/150
29/175G	1.597,00	432	225	58,5	56	135	175	120	86	16	15061	34	B/150
29/175GL	1.747,00	482	275	58,5	56	135	175	120	86	16	15061	36,5	B/150
29/175GS	1.813,00	556	275	58,5	56	135	175	120	86	16	15061	40	B/150
29/200G	1.920,50	470	250	65,5	61	160	200	145	92,5	16	20061	44	B/200
29/200GL	2.079,50	520	300	65,5	61	160	200	145	92,5	16	20061	46,5	B/200
29/200GS	2.233,00	570	350	65,5	61	160	200	145	92,5	16	20061	49	B/200

Precio de la mordaza sin base giratoria. / Price without swivel base.

Ref.	€/u	
2910014	37,00	100
2912514	40,40	125
2915014	54,00	150
2917514	62,00	175
2920014	81,00	200

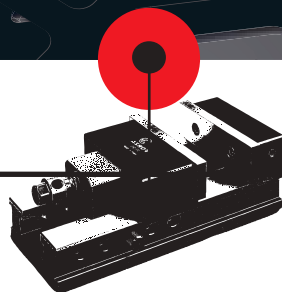


Bocas estándar Serie 29

Standard jaws serie 29

Mordaza Serie 27

27 Serie vice



Mordazas corta con husillo protegido

Vice with protected spindle.

✓ Acero de cementación (F 155).
Hardened steel HRC 60.

✓ Por su concepción, no levanta las piezas al amarrar.
Due to its special desing, it doesn't lift workpieces while clamping.

✓ Husillo protegido.
Protected spindle.

✓ Selección de curso con bulón lateral.
Opening selection with bolt.

✓ Husillo mecánico.
Mechanical spindle.



Ref.	€/u.	Abertura Opening	Anchura Width	⚖️
27/160	1.129,00	160	160	26,5

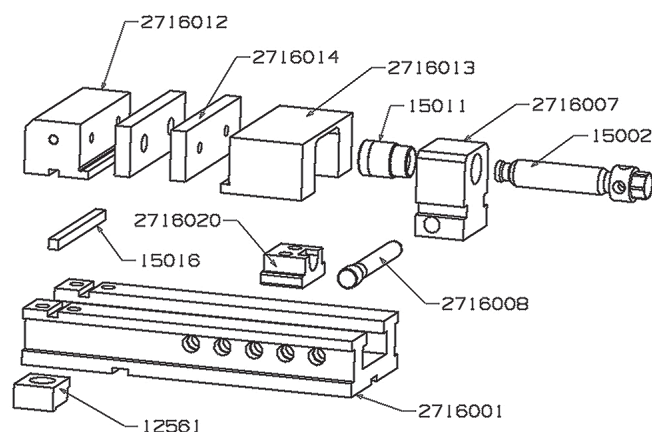
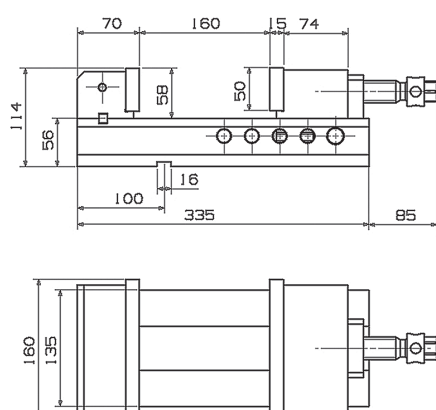
BASE 	€/u.	⚖️
B27160	260,00	11,0

Bridas Clamps	€/juego/set
12561	29,00

Accesorios para base giratoria
Swivel base accessories



Juego = 2 unidades. / Set = 2 units.



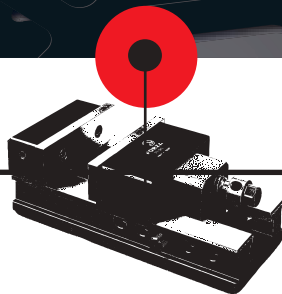
28 Serie vice

Mordaza Serie 28

- ✓ La manilla giratoria evita chocar con cualquier obstáculo: Mesa fresadora, etc...
The rotatory handle avoids any peripheral impact: Milling machine table, etc...

Mordazas para taladros y roscadoras

Drilling and tapping machine vice



Llave hex. 24 mm.
Hexagonal wrench 24 mm

Ref.	€/u.	Abertura Opening	Anchura Width	⚖️
28A150	1.189,00	150	150	28,0

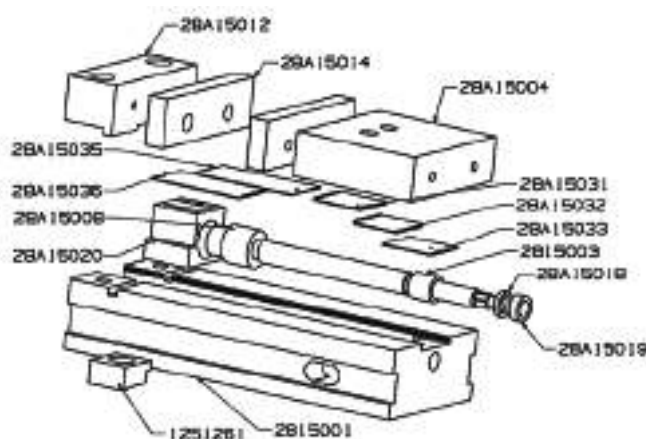
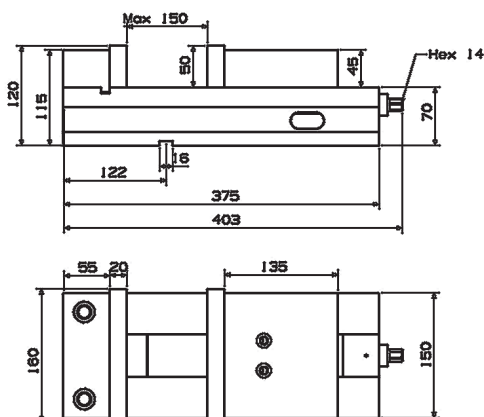


Accesorios para base giratoria Swivel base accessories

BASE 	€/u.	⚖️
B28150	286,00	11,0

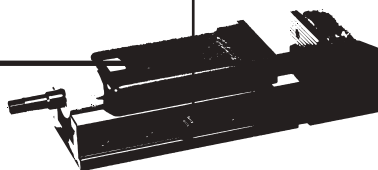
Bridas Clamps	€/juego/set
1251261	39,90

Juego = 2 unidades. / Set = 2 units.



Mordaza mecánica Serie 31

Mechanical machine vices 31 Serie



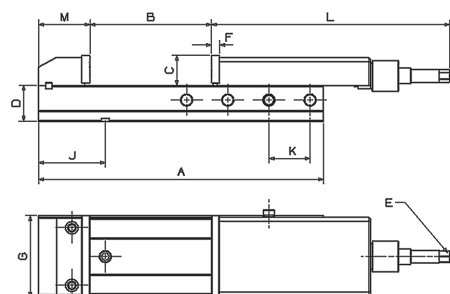
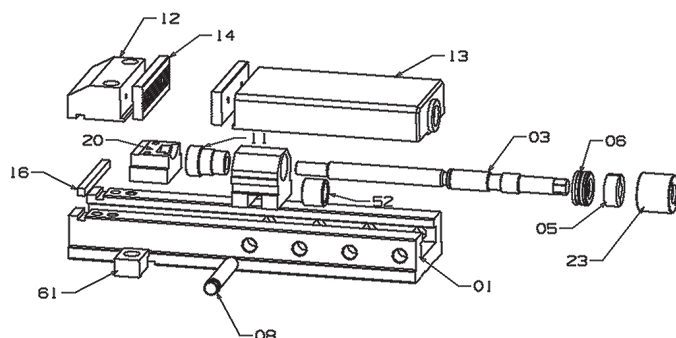
✓ Versión mecánica: equipadas con rodamiento axial para reducir el esfuerzo de trabajo.

Mechanical version: fitted with axial bearing to decrease working strenght.

CLÁSICA



Ref.	€/u.	A	B	C	D	E	F	G	J	K	L	M	mm.			BASE
31/125	1.252,00	430	210	48	66	14	12	125	115	60	355	85	16	15061	29	GN/125
31/125L	1.335,00	490	270	48	66	14	12	125	115	60	355	85	16	15061	31,5	GN/125
31/160	1.557,00	554	325	59	70	22	16	160	130	80	465	107	16	1501261	48	GN/160
31/160L	1.686,00	634	400	59	70	22	16	160	130	80	465	107	16	1501261	53	GN/160

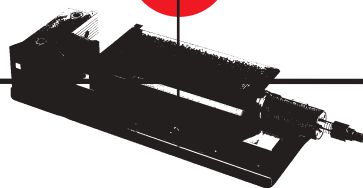


OTHER MACHINE VICES

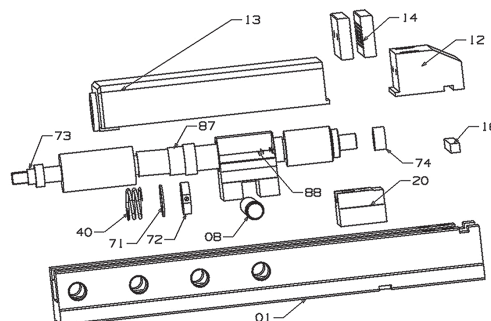
OTRAS MORDAZAS

Hydraulic machine vice
Serie 31H

Mordaza hidráulica
Serie 31H



CLÁSICA



Ref.	€/u.	A	B	C	D	E	F	G	J	K	L	M	mm.			BASE
31/125H	1.621,00	430	210	48	66	14	12	125	115	60	375	85	16	15061	29	GN/125
31/125HL	1.648,00	490	270	48	66	14	12	125	115	60	375	85	16	15061	31,5	GN/125
31/160H	1.979,00	554	295	59	70	16	16	160	130	80	482	107	16	1501261	48	GN/160
31/160HL	1.997,00	634	375	59	70	16	16	160	130	80	482	107	16	1501261	53	GN/160

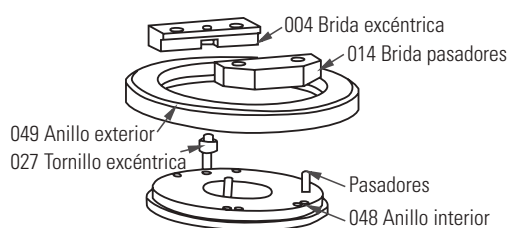
Base giratoria y sus bridas

Swivel base and its clamps

Bridas Clamps	€/ juego/set
15060	43,30

Juego = 2 unidades. / Set = 2 units.

BASE	€/u.		mm.		
GN/125	313,90	125	16	15060	14
GN/160	389,00	160	16	15060	20



Mordaza Serie 32N

32N Serie machine vice

Mordazas alta precisión

High precision vice.

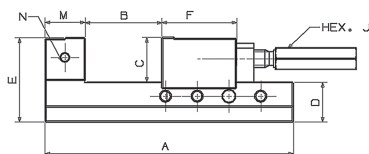


✓ Acero de cementación (F 155).
Hardened steel HRc 60.

✓ Trabaja en cualquier posición.
It work in any position.

✓ Tolerancia en paralelismo y perpendicularidad: $\pm 0,01$ mm.
Tolerance in parallelism and perpendicularity $\pm 0,01$ mm.

✓ Dureza 60 HRc.
Hardened steel HRc 60.



Ref.	€/u.	A	B	C	D	E	F	ØG	H	J	M	⚖
32/50 N	765,00	148	70	25	25	50	45	6	50	14	25	2
32/75 N	929,00	194	91	34	34	68	57	8	75	19	35	4,5
32/100 N	1.053,00	250	123	45	40	85	75	8	100	22	40	9,5

Mordaza de senos Serie 32S

Sinus machine vice 32S



Ref.	€/u.	A	B	C	D	E	F	G	H	J	M	TR	MAX. A
32/50 S	234,00	140	60	25	32	87	87	16	50	100	25	16 x 4	255
32/80 S	378,00	200	95	40	44	121	122	20	80	100	34	20 x 4	350
32/100 S	589,00	245	125	45	50	139	145	26	100	100	38	24 x 5	433

Inclinación de 0° a 45°. Distancia de apoyo 100 mm. / Till angle 0° to 45°. Lifting height 100 mm.



Trabajo con mordaza de senos

Working with angulation vice

Para calcular la cala que hay que poner para conseguir un ángulo.

To calculate the gage block.

X= altura de la cala / X= gage block height

100= distancia entre bulones / 100= distance between bolts

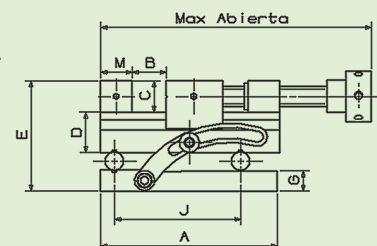
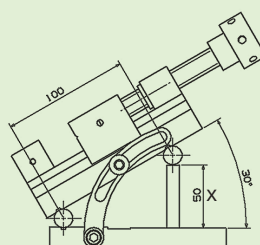
X= 100 x seno del ángulo deseado / X= 100 x sin of the desire angle

Ejemplo 30° / Example 30°

X= 100 x sen 30 = 100 x 0,5 = 50 mm

Otro ejemplo 16° / Other example 16°

X = 100 x sen 16 = 100 x 0,2756 = 27,56 mm



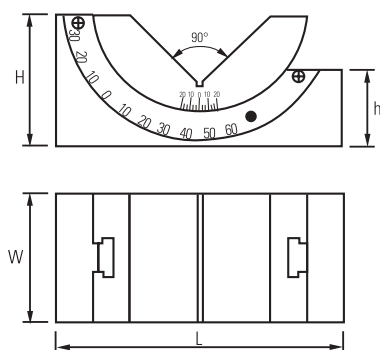
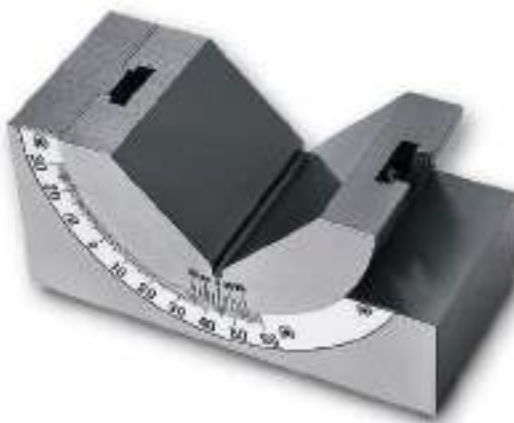
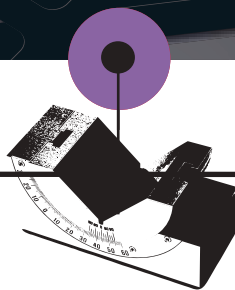
Multi-angular

Multiangular

✓ Elemento ideal para posicionamiento de piezas.
Ideal for positioning of pieces.

✓ Dispone de graduación angular.
It has angular adjustment.

económica
e
economic



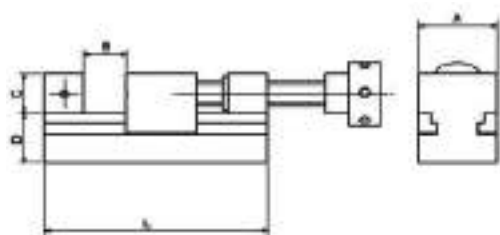
Ref.	€/u.	H	W	L	H	⚖
32/25 M	129,90	32	25	75	22	0,5
32/30 M	166,80	46	30	102	28	1,0
32/46 M	179,90	47	46	102	28	1,5

Spindle vice Serie 32 D

Serie 32D Mordaza

✓ Dureza 58HRc.
Hardened steel HRc 58.

Con husillo /
With spindle



Otros modelos

económica
e
economic



Ref.	€/u.	A	B	L	D	⚖
32/60D	160,50	60	55	110	25	2,4
32/80D	226,80	80	100	220	40	6,5
32/100D	375,00	100	125	260	45	13,0
32/125D	537,50	125	160	300	50	19,5

32/150D	629,00	150	175	315	50	23,8
---------	--------	-----	-----	-----	----	------

32/150D



Mordazas especiales.

Special vice / Étaux spéciaux

Se realizan todo tipo de proyectos para la construcción de mordazas personalizadas para trabajos especiales.

Bajo presupuesto

Any project can be offered to produce personalized vices for special works.

With budget

Nous réalisons tous projects d'étaux pour applications spéciales.

Sur budget



Mordaza especial.
Apertura /Opening: 1.100 mm.
Ancho de boca / Jaws width: 150 mm.

Sistemas de paletización

Paletization systems / Système de palettes

Se pueden adaptar las mordazas a los diferentes sistemas de paletización.

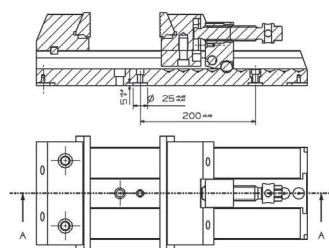
Bajo pedido

Vices can be adjusted to fit different paletization system.

Upon request

Les étaux peuvent être adaptés à différents palettes.

Sur devis





Accesorios
para mordazas

Accessories
for machine vices

FORZA[®]



ACCESORIOS

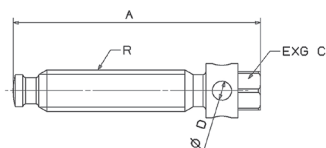
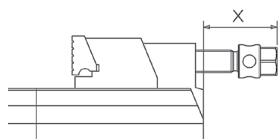
Apriete para mordazas

ACCESSORIES.

Spindles for machine vices

Mecánico

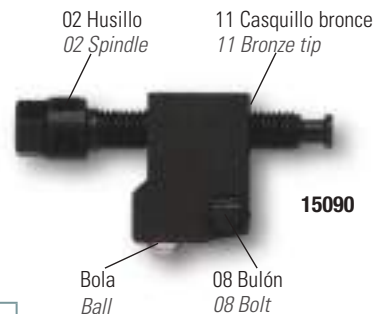
Mechanical



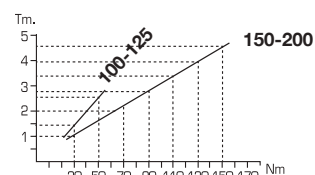
X1
Husillo
standar

X2
Husillo
corto

Ref.	€/u.	A	C	ØD	R	ØF	G	X1	X2	
10090	95,30	120	22	10	M18 x 2,5	13	44	65	50	100
12590	99,50	120	22	10	M18 x 2,5	14	55	60	50	125
15090	167,00	154	24	12	TR26 x 5	16	68	95	75	150-175-200
25090	249,50	154	24	12	TR26 x 5	18	87	85	65	250
3030090	413,00	189	28	18	TR30 x 5	18	87	100		300



15090

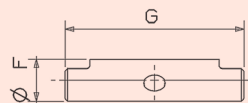


Despiece aprietes para mordazas mecánico

Spindle for machines vices spare parts

Standard spindle

Short spindle



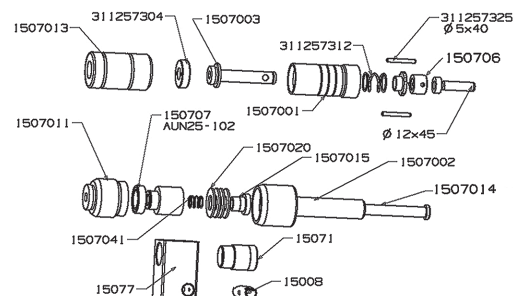
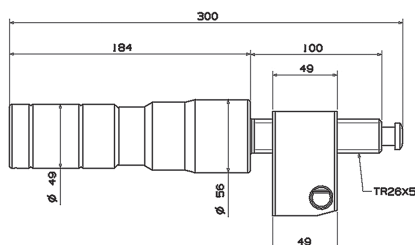
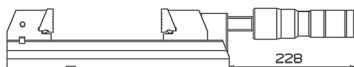
Mordaza	Ref. husillo estándar X1	€/u.	A	Ref. husillo corto X2	€/u.	A	Ref. Taco	€/u.	Ref. Bulón	€/u.	A	Ref. Casquillo bronce	€/u.
100	10002	32,50	120	10022	32,50	104	10007	52,00	10008	9,60	13	-	-
125	10002	32,50	120	10022	32,50	104	12507	55,70	12508	10,00	14	-	-
150-175-200	15002	45,00	154	15022	45,00	134	15007	79,00	15008	10,60	16	15011	31,00
250	15002	45,00	154	15022	45,00	134	25007	149,90	25008	22,00	18	15011	31,00
300	3030002	103,00	189	-	-	-	3030007	214,60	3030008	35,50	18	3030011	58,50

Husillo hidráulico

Hydraulic spindle



Ref.	€/u.	Descripción	Ancho de Boca	
15070	599,00	Husillo hidráulico 5 Tn	150-175-200	5,4



ACCESSORIES. Spindles for machine vices

ACCESORIOS Apriete para mordazas

Vertical position

Posición vertical

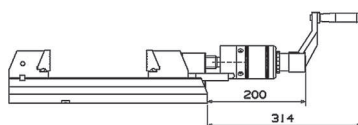
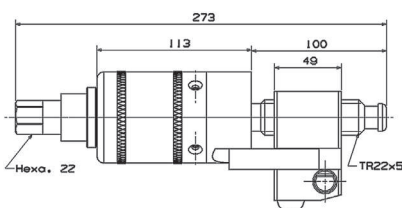
Ref.	€/u.	A	C	ØD	R	X	
12595	99,50	120	22	10	M18 x 2,5	60	125
15095	167,00	154	24	12	TR26 x 5	95	150-175-200
25095	249,50	154	24	12	TR26 x 5	85	250



Mecánico

Torque multiplier

Multiplicador Par



Ref.	€/u.	Descripción	Ancho de Boca	
15092	599,00	Husillo multiplicador	150 - 175 - 200	5,8

Oilpneumatic

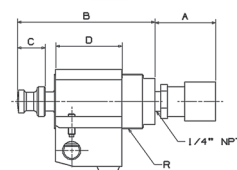
Oleoneumático

Husillos / Spindles

Ref.	€/u.	A	B	C	D	R	Ton	Boca	F	
10080	293,00	53	95	23	45	M36 x 1,5	2	100	7	0,9
12580	297,00	53	95	23	48	M36 x 1,5	2	125	10	1,2
15080	397,00	53	128	25	58	M48 x 1,5	5	150-200	27	2,3
25080	496,00	53	128	25	51	M48 x 1,5	5	250	20	3,1



12580



Cuando se monta este husillo en la mordaza la apertura máxima se reduce en "F".
When this spindle is assembled in the vice the maximum opening is reduced to "F"

Bombas / Pumps

Ref.	€/u.	Descripción	Ancho de Boca	
15082*	1.195,00	Bomba oleoneumática	Todos los modelos	10,0

* Incluye manguera.



15082

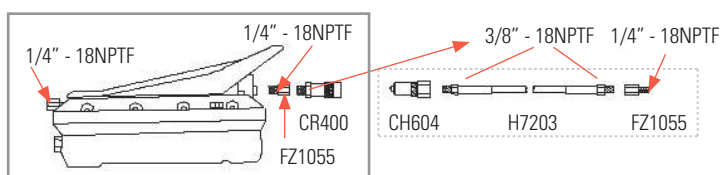
Accesorios para bomba OLN 15082

Accessories for pump OLN 15082

Es imprescindible usar una bomba para accionar los husillos oleoneumáticos.

It is essential to use the pump to operate the oilpneumatic spindle.

Ref.	€/u.	Descripción	
150821	119,00	Manguera de 2 m.con racores	1,01
150822	39,90	Distribuidor 2 salidas con racores	0,16
150823	79,00	Distribuidor 3 salidas con racores	0,30



Manilla articulada

Elbowed handle



Llave hex. 24 mm.

Ref.	€/u.	Descripción
15004	69,00	150 - 175 - 200 - 250

Bridas

Clamps



Ref. Mordazas / Stándar vices	€/juego	
12561	29,00	100 - 125
15061	31,00	150 - 175
20061	36,00	200 - 250
3030061	65,00	300

Ref. Mordazas partidas / Split vices	€/juego	
1251261	39,90	100 - 125
1501261	53,50	150
2001261	93,00	200

Juego = 2 unidades. / Set = 2 units.

Todas las bridas tienen agujero para tornillo M-16. / All clamps have holes for M16 screws.

Chavetas de alineación

Alignment keynuts

Ref.	€/juego	Medida	
12540	31,50	12 / 12	30/100 30/125
12541	35,00	12 / 14	
12544	35,00	12 / 16	
12547	42,50	12 / 18	
12549	53,90	12 / 22	
12543	37,00	14 / 14	B/100
12545	38,00	14 / 16	B/125
15040	45,00	16 / 14	30/150 30/175 30/200
15041	41,00	16 / 16	
15042	45,50	16 / 18	
15043	47,50	16 / 20	
15044	50,10	16 / 22	
15048	78,00	16 / 28	



15041



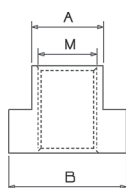
15042

Ref.	€/juego	Medida	
15045	47,10	18 / 18	
15046	51,20	18 / 20	
15049	63,50	18 / 22	
25043	69,00	20 / 18	30/250 30/300
25044	57,80	20 / 20	
25045	68,70	20 / 22	
25048	73,00	20 / 28	

Juego = 2 unidades. / Set = 2 units.

Tuercas T / T slot nuts

Cancamo / Eyebolt



Ref.	€/u.	A	B	Métrica
150T16	16,50	16	25	M-14
395644	15,40	18	28	M-16
395645	17,90	20	32	M-16
395646	19,90	22	35	M-16
395647	20,50	24	40	M-16

Para levantar las mordazas con seguridad.
To lift the vices safely.



Ref.	€/u.	A	B	C	
15035	60,40	45	50	31	150 - 200

Spare rubbers

Gomas de repuesto

Ref.	4 gomas €/juego		
10018	1,00	100	6
12518	1,00	125	8

NOTA: Es aconsejable cambiar las gomas cada año.
It is advisable to change the rubber each year.

Ref.	4 gomas €/juego		
15018	1,50	150-175	10
20018	1,50	200	10
25018	2,00	250-300	12

T Supports

Soporte en T

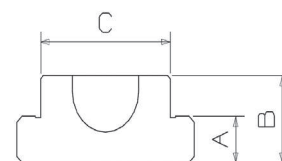
Tipo 1



Tipo 2



Tipo 3



Modelo	"T" Tipo	Ref. T oscilante estándar	€/u.	A	B	C	Ref. T guiada	€/u.	A	B	C	Ref. T oscilante para mordazas guiadas	€/u.	A	B	C
100	1	10020	33,00	8	20	32,5	1008021	48,00	11	23	32,9	1008020	37,00	11	23	32,5
125	1	12520	37,00	10	23	39	1258021	55,00	13	26	40,9	1258020	40,50	13	26	39
150-175	1	15020	51,00	12,5	27	49	1508021	72,00	16	28,5	50,9	1508020	55,00	16	28,5	50
200	2	20020	53,00	12,5	27	49	2008021	78,00	16	28,5	50,9	2008020	59,00	16	28,5	50
250	2	25020	82,50	16	29	69	2508021	110,00	16	29	70,9	25020	82,50	16	29	69
300	3	3030020	119,00	18	33	69										

Positioning bolt

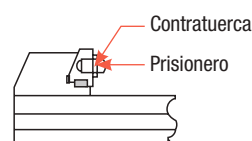
Prisionero de bloqueo

Para amarrar piezas muy irregulares o muy bastas (forja, fundición, oxicorte, ...).

Para conseguir 4 buenos puntos de amarre.

To fasten irregular or very coarse working pieces (forged, iron cast, metal cutting with oxyacetylene. To get 4 good fastening points.

Ref.	€/juego		Contratuera
10059	4,30	100 - 125	M - 8
15059	4,50	resto	M - 10



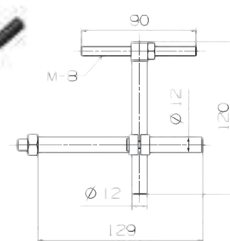
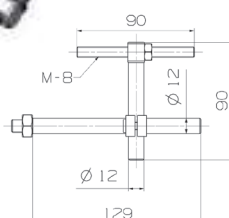
Juego = 4 unidades.
Set = 4 units.



Work stop

Tope lateral

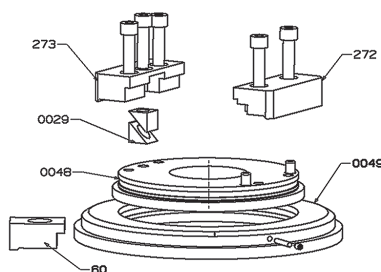
Ref.	€/u.		
10058	72,60	100	0,40
10058L	76,80	100	0,45
15058	74,00	resto	0,40
15058L	78,00	resto	0,45



Base giratoria

Swivel base

Ref.	€/u.		mm.		
B/100	314,00	100	14	12560	6,5
B/125	332,00	125	14	12560	9,5
B/150	451,00	150-175	16	15060	14,0
B/200	613,00	200	16	15060	20,0



Accesorios para base giratoria

Swivel base accessories

Bridas / Clamps

Ref. Brida base	€/juego	BASE
12560	40,60	B/100 - B/125
15060	43,30	B/150 - B/200

Juego = 2 unidades. / Set = 2 units.
Todas las bridas tienen agujero para tornillo M-16. / All clamps have holes for M16 screws.

Chavetas / Keynuts

Ref. Chaveta de alineación	€/juego	BASE	mm.
12545	38,00	B/100 - B/125	14/16
12543	37,00	B/100 - B/125	14/14

Juego = 2 unidades. / Set = 2 units.
Las chavetas de 16 mm, ver en la página 42. / 16mm keynuts, see pag. 42.

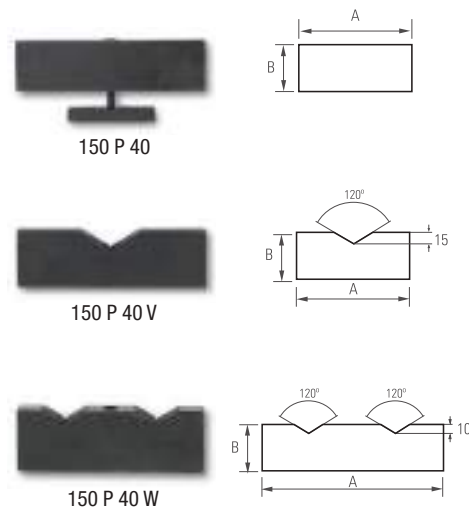
Parallels with clamp (thickness 16 mm)

Paralelas con brida (espesor 16 mm)

La brida sujeta la paralela evitando que se mueva. / The clamps fit the parallel avoiding its movement.

Ref. forma simple	€/u.	Ref. forma V	€/u.	Ref. forma W	€/u.
150 P 40	38,10	150 P 40 V	62,90	150 P 40 W	69,50
150 P 45	38,10	150 P 45 V	62,90	150 P 45 W	69,50
150 P 50	38,10	150 P 50 V	62,90	150 P 50 W	69,50
175 P 42	42,60	175 P 42 V	63,90	175 P 42 W	74,00
175 P 47	42,60	175 P 47 V	63,90	175 P 47 W	74,00
175 P 52	42,60	175 P 52 V	63,90	175 P 52 W	74,00
200 P 52	47,20	200 P 52 V	73,00	200 P 52 W	81,90
200 P 57	47,20	200 P 57 V	73,00	200 P 57 W	81,90
200 P 62	47,20	200 P 62 V	73,00	200 P 62 W	81,90

Todas las paralelas incluyen brida de amarre para evitar que se muevan durante el trabajo.
All the parallels include a fastening clamp to avoid any movement during the work.



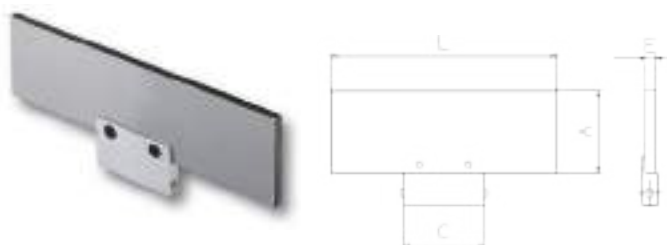
Parallels with support

Paralelas con soporte

Se fija en la ranura central del cuerpo de la mordaza.
It must be fixed into the central slot of the vice body.

Ref.	€/juego	A	L	Espesor	⚖️
12599930	120,00	30	110	4	0,29
12599935	120,00	35	110	4	0,32
15099940	138,00	40	140	6	0,60
15099950	138,00	50	140	6	0,65
20099950	165,00	50	180	6	0,93
20099958	165,00	58	180	6	1,06

Juego = 2 unidades. / Set = 2 units.



Jaws for vices 30 and 60 series

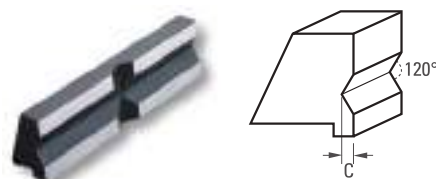
Bocas para mordaza serie 30 y 60

Bocas blandas / Soft jaws



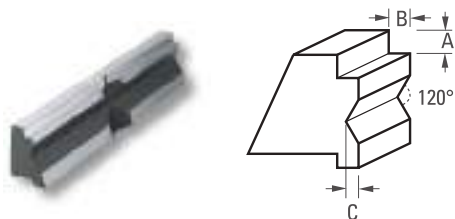
Ref.	€/juego	
10050	38,00	100
12550	48,00	125
15050	55,00	150
17550	62,00	175
20050	75,00	200

Bocas prismáticas / Prismatic jaws



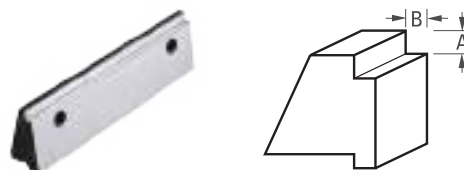
Ref.	€/juego		C
10053	147,00	100	3
12553	180,00	125	4
15053	240,00	150	5
17553	260,00	175	5
20053	294,00	200	5

Bocas prismáticas con escalón / Stepped prismatic jaws



Ref.	€/juego		A	B	C
10051	162,00	100	4	3	3
12551	201,00	125	4	4	4
15051	253,00	150	6	5	5
17551	283,50	175	6	5	5
20051	325,00	200	6	5	5

Bocas lisas con escalón / Stepped smooth jaws



Ref.	€/juego		A	B
10052	135,00	100	4	3
12552	161,00	125	4	4
15052	211,00	150	6	5
17552	229,50	175	6	5
20052	262,00	200	6	6

Bocas para mordaza serie 30 y 60

Jaws for vices 30 and 60 series

Bocas lisas / Smooth jaws



Ref.	€/juego	
10054	122,00	100
12554	138,00	125
15054	194,00	150
17554	224,00	175
20054	265,00	200
25054	406,00	250
3030054	708,00	300

Bocas estándar / Standard jaws

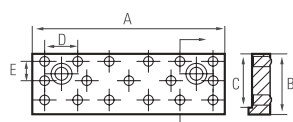


Ref.	€/juego	
10055	122,00	100
12555	138,00	125
15055	194,00	150
17555	224,00	175
20055	265,00	200
25055	406,00	250
3030055	708,00	300

Juego = 2 unidades.

Set = 2 units.

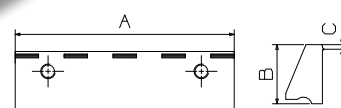
Bocas con pinchos / Jaws with positioning pins



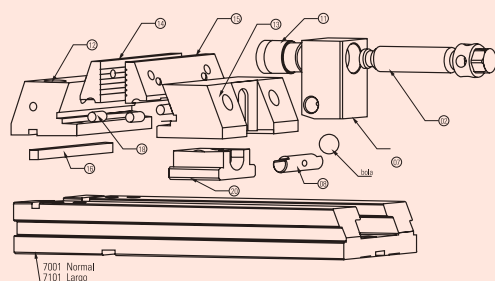
Ref.	€/juego	
12556	140,00	30/100
15056	153,80	30/150
17556	180,00	30/175
20056	205,60	30/200

Juego: 2 bocas + 12 pitones
Set: 2 jaws + 12 pins

Bocas con mordientes / Grip jaw-plates



Ref.	€/juego	A	B	C
10057	122,00	100	24	1,5
12557	129,00	125	29,5	1,5
15057	194,00	150	40	3
17557	202,00	175	40	3
20057	232,00	200	40	3
25057	349,00	175	40	3

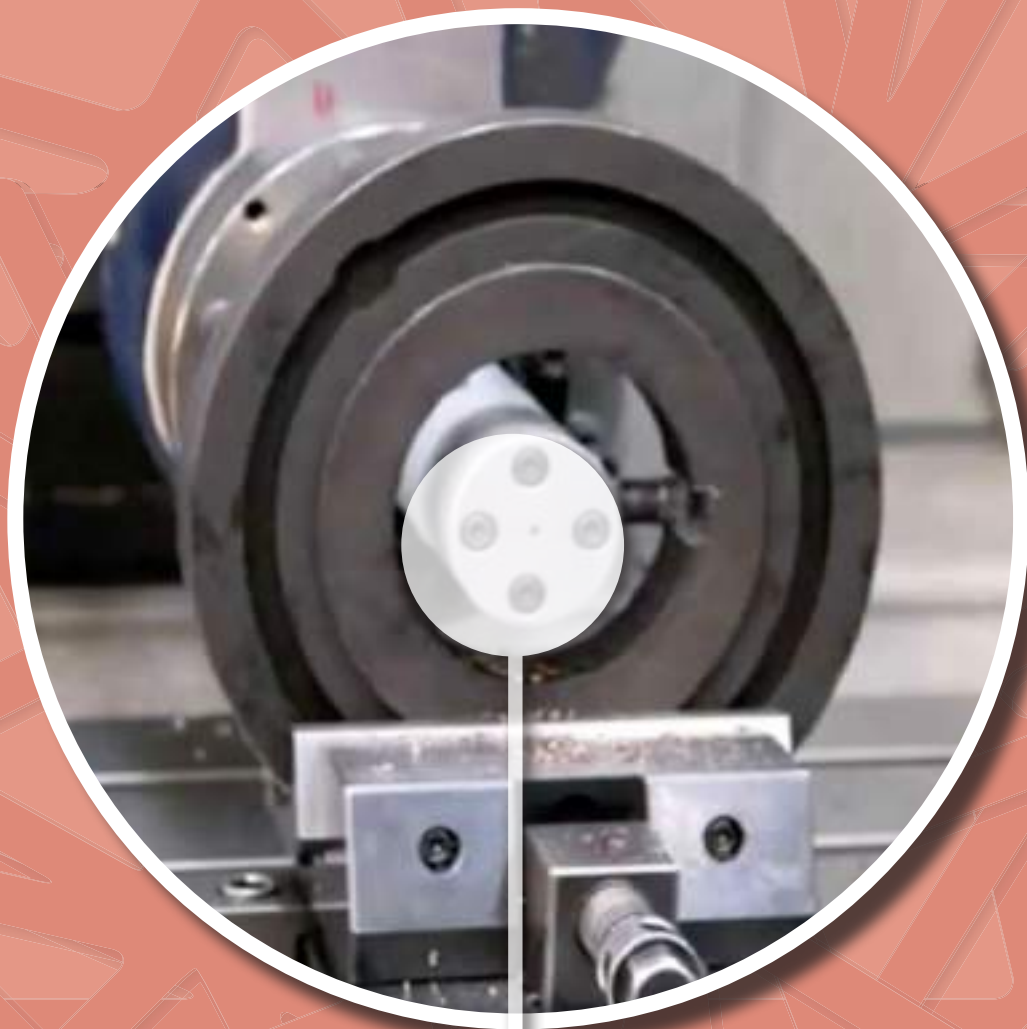


Despiece de mordaza (todos los modelos)

Machine vice spare parts (all models)

* El taco husillo siempre se suministra con el casquillo de bronce y la bola.
Para solicitar cualquier despiece se debe indicar la cota H (ancho de boca) + el n° de despiece.
Ej.: ref. 15015 = Boca móvil para mordaza 30/150.
* The pin block is always supplied with the ball and the bronze tip.
To order any spare parts the H figure (jaw wide) must be indicated + spare part number.
E.g. Ref. 15015 = Movable jaw for vice 30/150.

Husillo	02	Spindle
* Taco husillo	07	Pin block
Bulón taco	08	Contrast pin block
* Casquillo de bronce	11	Bronze tip
Portabocas fijo	12	Fixed jaws support
Portabocas móvil	13	Movable jaws support
Boca fija	14	Fixed jaws
Boca móvil	15	Movable jaws
Chaveta portabocas	16	Key nut jaw support
Juego de gomas	18	Pair of rubbers
Soporte en T	20	T Support
* Bola		*Ball



Cabezales
para hacer chaveteros

Internal
milling head



Video cabezal fresador
interiores trabajando



Cabezal fresador de interiores

Internal milling head



Velocidad de entrada máx. r.p.m. 3.000
Maximum input speed 3.000 r.p.m.

Ref.	€/u.	Ø Min.	ØA	B	C	ØE	ØG	E/P	ØJ	M	R	⚖
CAFN1	1.339,00	42	35	106	16	130	14	11	1	M35x1,5	16	3,10
CAFN2	2.034,00	54	47	132	35	130	15	13	11	M45x1,5	18	4,10
CAFN3	2.701,00	78	68	180	50	130	18	15	11	M65x2	30	8,10
CAFN4	3.746,00	95	85	220	58	196	25	22	13	M80x2	40	18,30
CAFN5	4.899,00	130	113	282	76	196	30	25	13	M105x2	42	30,80

- ✓ Dispone de dos tipos de amarres para las fresas: pinza y portafresas (sólo en los modelos 3, 4 y 5).

There are two kinds of fastening for the cutters: collet and driver (only in the models, 3, 4 & 5).

- ✓ Para montar el CAF en la fresadora, es necesaria, la fabricación de una placa de adaptación (ver manual de instrucciones)

To set up the CAF in to the milling head, it's necessary the production of an adaptation plate (see operating instructions).

- ✓ Se suministra con cono de arrastre (ISO 40 ó 50), pinza estándar y portafresas.

It's supplied with drawing cone (ISO 40 ar 50), standard collet and drivers.

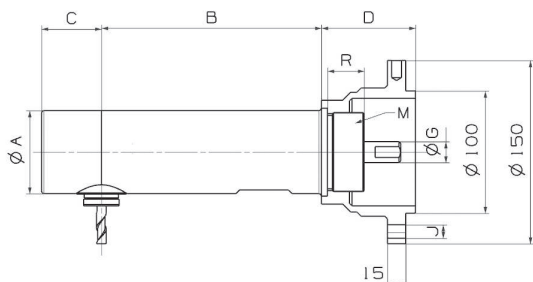
- ✓ Relación de transmisión 1:2.

Transmission relation 1:2.

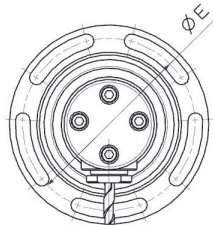


Manual de instrucciones en www.forza.es

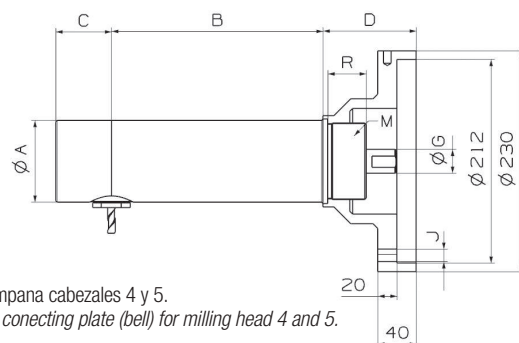
Manual instructions in www.forza.es



Plano de la campana cabezales 1, 2 y 3.
Drawing of the connecting plate (bell) for milling head 1, 2 and 3.



Plano de la campana cabezales 4 y 5.
Drawing of the connecting plate (bell) for milling head 4 and 5.



Cabezal de fresar solo mandrino

Milling head, without adaptor plate



Ref.	€/u.	⚖
71110	1.030,00	1,0
71210	1.699,00	2,0
71310	1.956,50	6,0
71410	2.616,00	11,5
71510	3.298,00	24,0

Drivers

Portafresas

Portafresas con chavetero / Keyway drivers

Ref.	€/u.	Ø	Cabezal
714216	165,00	16	CAFN4
715216	178,00	16	CAFN5
715222	185,00	22	CAFN5



Ø 16 y Ø 22

Portafresas para fresas roscadas / Thread mill drivers

Ref.	€/u.	R rosca	Cabezal
713110	150,40	M-10	CAFN3
714110	158,00	M-10	CAFN4
714112	158,00	M-12	CAFN4
715110	175,00	M-10	CAFN5
715112	175,00	M-12	CAFN5
715116	175,00	M-16	CAFN5



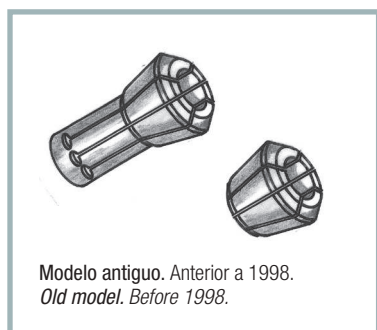
Todos los arrastradores van incluidos en los cabezales completos 3, 4 y 5.
All drives are including in CAF 3, 4 and 5.

Collets

Pinzas

Pinzas para cabezales

Collets for milling heads



Ref.	€/u.	Medida	CAF	ER
711904	55,00	Ø 4	1	-
711905	55,00	Ø 5	1	-
711906*	55,00	Ø 6	1	-
712904	55,50	Ø 4	2	ER 11
712905	55,50	Ø 5	2	
712906	55,50	Ø 6	2	
712907	55,50	Ø 7	2	
712908*	55,50	Ø 8	2	ER 11 especial
713906	68,40	Ø 6	3	ER 16
713907	68,40	Ø 7	3	
713908	68,40	Ø 8	3	
713910*	68,40	Ø 10	3	
714904	74,00	Ø 4	4	ER 20
714906	74,00	Ø 6	4	
714907	74,00	Ø 7	4	
714908	74,00	Ø 8	4	
714910	74,00	Ø 10	4	
714912*	74,00	Ø 12	4	
715906	86,40	Ø 6	5	ER 25
715908	86,40	Ø 8	5	
715909	86,40	Ø 9	5	
715910	86,40	Ø 10	5	
715912	86,40	Ø 12	5	
715914	86,40	Ø 14	5	
715916*	86,40	Ø 16	5	

✓ Pinzas normalizadas de alta precisión tipo ER.
Standard collets high precision type ER.

*Pinza de mayor diámetro (incluida en el cabezal).
Large diameter collet (included in the milling head).



Modelo actual ER. Posterior a 1998.
New model. Since 1998.

Accesorios del cabezal

Accessories

Conos / Cones

Ref.	€/u.
ISO 30	117,90
ISO 40	123,50
ISO 50	134,70
MORSE 5	168,30

Se incluye con el cabezal.
Included with the milling head.



Modelo antiguo / Old model



Modelo nuevo / New model

Adaptador de torreta / Vertical joint

Ref.	€/u.	Medidas	
711000	195,00	Para CAF 1	4,1
712000	195,00	Para CAF 2	4,1

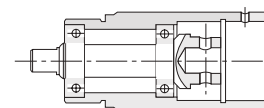


Montaje en fresadora de torreta

Alargaderas / Extra-longers

Ref.	€/u.	Longitud	Ø	CAF
711020	534,00	90	45	1
711030	588,00	120	45	1
712020	558,00	100	54	2
712030	614,00	150	54	2
713020	641,00	125	78	3
713030	696,00	175	78	3
714020	722,00	150	95	4
714030	773,00	220	95	4
715020	794,00	200	128	5
715030	864,30	320	128	5

Alargaderas de otras medidas bajo presupuesto
Extra-longers with other measures by estimate.



Head fast repair

Reparación rápida de cabezales

Grupo completo corona / Complete head of transmissions



Referencia Grupo corona	€/u.	CAF	Referencia Grupo piñón	€/u.
712012	395,00	2	712011	255,90
713012	559,00	3	713011	249,90
714012	776,00	4	714011	352,60
715012	864,00	5	715011	447,80

Grupo completo piñón / Complete transmission shaft



Ejemplo CAF3

CAF3 samples.



Cabezal	Ref. Contiene	Descripción	Cant.
CAF 3	713012	Soporte completo	1
	713002	Corona	1
	713303	Soporte corona	1
	713304	Platillo	1
	713402	Tuerca KM-2	1
	713513	Rodam. 51103	1
	713600	Rodam. 16004	1
	713622	Rodam. 6202	1
	MB2	Chapa seguridad	1

Cabezal	Ref. Contiene	Descripción	Cant.
CAF 3	713011	Piñón completo	1
	713001	Piñón	1
	713307	Porta-rodamientos	1
	713317	Arandela porta-rodamientos	1
	713618	Rodam. 61803	1
	713623	Rodam. 6003	1
	DI28	Anillo Seguer 28 Interior	1
	SW17	Anillos 17 mm exterior	1

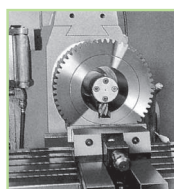
El usuario puede mandarnos el grupo corona usado para repararlo y disponer de él como repuesto.

Transmission head can be returned to be fixed thus keeping it as a spare.



Ejemplo de trabajo

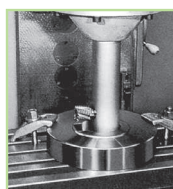
Work samples.



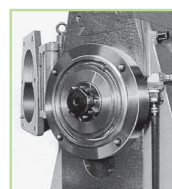
Fresado horizontal.
Horizontal milling.
Fraisage horizontal.



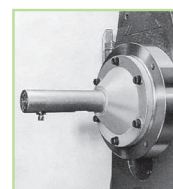
Montaje horizontal.
Horizontal assembling.
Montage horizontal.



Montaje vertical.
Vertical assembling.
Montage vertical.



Preparación para montaje horizontal.
See adaptation plate.
Preparation pour montage horizontal.

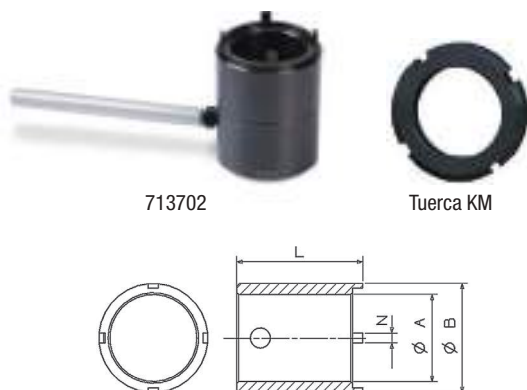


Montaje horizontal.
Horizontal assembling.
Montage horizontal.

Llaves almenadas para tuercas KM

KM nut spanner

Herramientas necesarias para montar el CAF/
KM nuts spanner for repair milling head



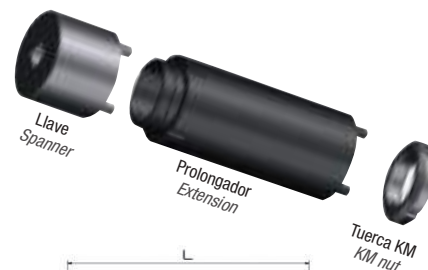
Ref.	€/u.	CAF	KM	B	A	N	L	⚖
711701	66,30	1		25	22	4,5	122	0,55
711702	75,20	1		32	27	6	77	0,53
711703	65,20	1	7	54	48	5	100	0,80
712701	70,50	2		28	21	4,5	120	0,65
712702	70,50	2		38	28,5	6	62	0,58
713701	83,50	3		44	25	6	140	1,10
713702	83,50	3	8	58,5	52,5	6	85	1,20
713703	83,50	3	13	95	79,2	7	95	1,50
713704	60,50	3	2	28	21,2	4	32	0,12
714701	83,50	4		48	35	5,8	140	1,20
714702	89,00	4	10	70	65	6	65	1,90
714703	71,20	4	16	105	98	8	110	1,90
714704	66,80	4	4	4	28	4	60	0,35
715701	95,00	5		62	45	5,8	165	2,00
715702	95,00	5	13	89	79	7	120	3,50
715703	102,00	5	21	140	128	12	120	3,60

Llaves para tuercas KM

KM nut spanner

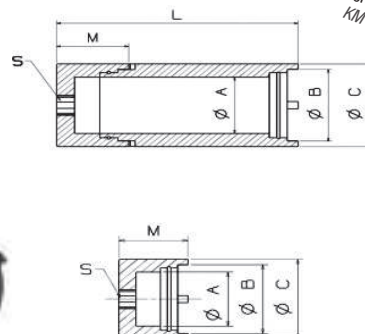
Llaves completas / Complete spanner

Ref.	€/u.	KM	ØA	ØB	ØC	L	M	N	S	⚖	ØKM
96104	82,40	4	18	28,5	34	124	40	100	1/2"	0,62	32
96105	86,90	5	24	34,5	40	124	40	100	1/2"	0,75	38
96106	93,00	6	31	41,5	47	134	40	100	1/2"	0,85	45
96107	103,00	7	36	48,5	54	134	40	100	1/2"	1,30	52
96108	112,00	8	42	53,5	60	134	40	100	1/2"	1,49	58
96109	122,50	9	47	58	67	144	40	110	1/2"	1,75	65
96110	133,50	10	52	65	72	144	40	110	1/2"	2,10	70
96111	158,00	11	57	70,5	77	144	49,5	110	3/4"	2,50	75
96112	179,00	12	62	76	82	144	49,5	110	3/4"	2,70	80



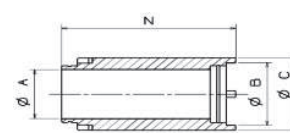
Solo llave corta / Short spanner

Ref.	€/u.	KM	ØA	ØB	ØC	M	S	⚖
961041	35,20	4	18	28,5	34	40	1/2"	0,18
961051	36,90	5	24	34,5	40	40	1/2"	0,22
961061	39,50	6	31	42	47	40	1/2"	0,29
961071	44,00	7	36	49	54	40	1/2"	0,37
961081	48,00	8	42	54	60	40	1/2"	0,43
961091	52,00	9	47	58	67	40	1/2"	0,54
961101	55,50	10	52	65	72	40	1/2"	0,60
961111	65,00	11	57	70,5	77	49,5	3/4"	0,81
961121	81,00	12	62	76	82	49,5	3/4"	0,88



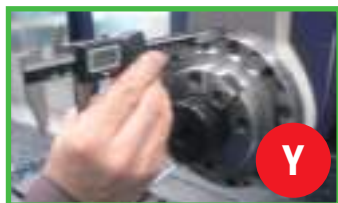
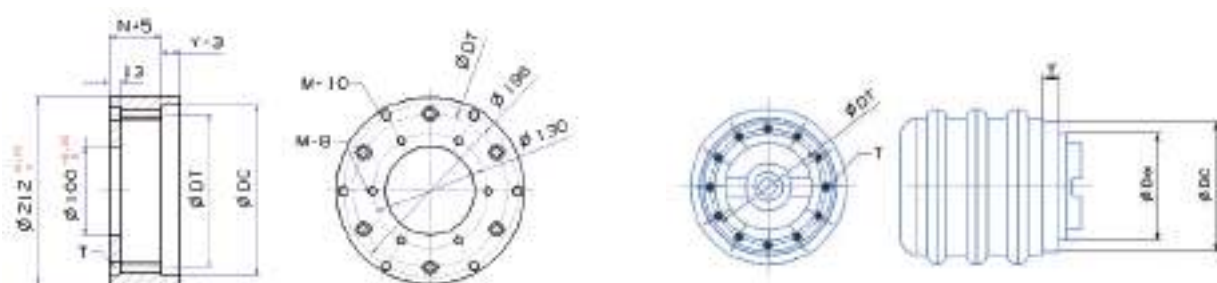
Solo prolongador / Only extension

Ref.	€/u.	KM	ØA	ØB	ØC	N	⚖
961042	47,20	4	18	28,5	34	100	0,44
961052	50,00	5	24	35	40	100	0,53
961062	53,50	6	31	42	47	100	0,65
961072	59,00	7	36	49	54	100	0,93
961082	65,00	8	42	54	60	100	1,06
961092	70,50	9	47	58	67	110	1,32
961102	78,00	10	52	65	72	110	1,60
961112	93,00	11	57	70,5	77	110	1,70
961122	98,00	12	62	76	82	110	1,78

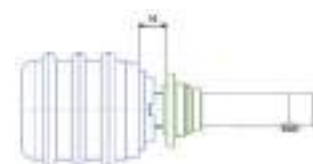


Make coupling plate

Fabricar la placa de acoplamiento



Ver manual.
See instructions book.



Video fabricación placa de acoplamiento
Video how to make coupling plate bell

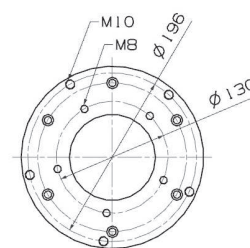
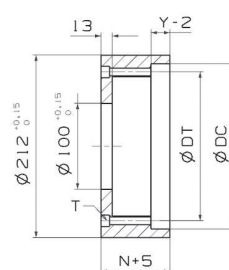
Montar el cabezal

Mounted milling head



Placa de acoplamiento

Coupling plate



Video cabezal trabajando

Video milling head working



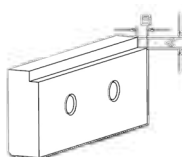
Mordazas
y portaherramientas

Clamps, vices
and tools holders

FORZA® 

Serie 33M Master

33M Serie Master



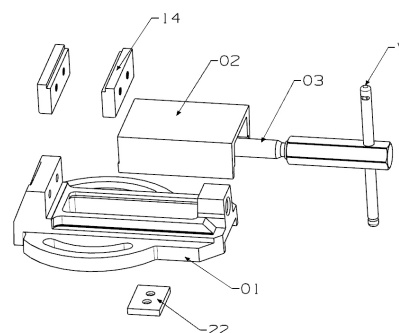
Ref.	€/u.	Boca Jaw	Abertura Opening	A	B	Weight
33/65M	138,20	65	76	3	3	2,7
33/85M	188,50	85	90	3	4	4,4
33/100M	297,50	105	116	4	4	9,0
33/125M	397,00	125	157	4,5	4,5	16,0
33/150M	448,00	150	190	6	6	24,00

Incluida manilla. / Pin included



✓ Admite base giratoria. (opcional)
Admit optional swivel base.

✓ Con bocas duras con escalón.
With hard jaws with step.



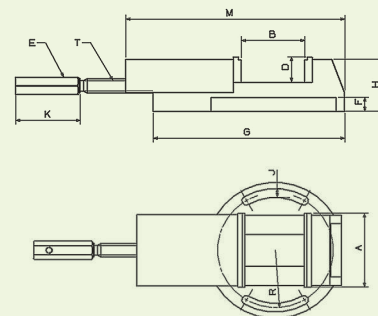
Características técnicas serie 33

33 serie Technical features



Construida en fundición nodular
Nodular cast made.

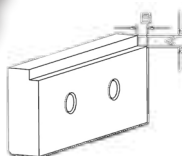
Ref.	A	B	D	E	F	G	H	J	K	M	R	T	V	Weight
33/65	65	76	25,5	19	11	163	49	4,5	81	207	53	14 x 3	336509	0,9
33/85	85	90	25,5	22	14,5	188	54	4,5	81	242	62	18 x 4	336509	1,2
33/100	105	116	31,5	24	18	241	66	5,5	90	310	82	20 x 4	111883	2,3
33/125	125	157	41,5	27	20,5	300	83	5,5	102	395	97	22 x 5	111883	1,2
33/150	150	190	52,5	27	21	345	95	8	102	470	105	22 x 5	111883	2,3



Serie 33P Profesional

33P Serie Profesional

PROFESIONAL



Saved more than +11% ¡Ahorro!



✓ Admite base giratoria. (opcional)
Admit optional swivel base.

✓ Con bocas duras con escalón + accesorios incluidos.
Hard jaws with step + accessories included..

Ref.	€/u. Mordaza+acces. Vice+acces	Boca Jaw	Abertura Opening	A	B
33/85P	266,00	85	90	3	3
33/100P	367,50	100	116	4	4
33/125P	464,00	125	157	4,5	4,5

Accesorios incluidos / Included accessories



1 Varilla de apriete
1 juego de bocas prismáticas
1 juego de bocas blandas
2 juegos de T: 12/14 - 16/18

1 Pin
1 set prismatic jaws
1 set soft jaws.
2 set T-nut:12/14 - 16/18

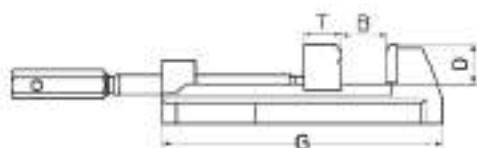
Serie 82 ECONOMY

Serie 82 ECONOMY

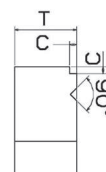
- ✓ Boca móvil con prismas a 90° y escalón.
Mobile jaw with 90° prisms and step.

- ✓ Resto de medidas ver página anterior.
Other dimensions see 33 series.

ECONOMY

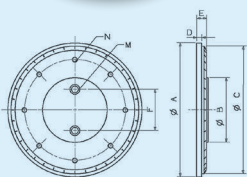


Ref.	€/u.	B	D	G	T	C	⚖️
82/85	153,70	95	25,5	188	25	3	4,0
82/100	227,40	116	31,5	241	40	4	8,5
82/125	266,50	160	41,5	300	40	4,5	14,7
82/150	302,60	190	52,5	345	40	6	18,0



Accesorios / Accessories

Base giratoria / Swivel base



Ref.	€/u.	A	B	C	D	E	M	N	F			
336598	67,90	160	60	149	8	17	M10	M8	40	336560	2,2	33/65M
338598	78,60	178	80	167	8	18	M10	M8	50	336560	2,9	33/85 - 33/85P
3310098	107,80	229	115	201	10	22	M12	M10	80	12560	6,0	33/100M - 33/100P
3312598	134,80	259	125	247	10	22	M12	M10	80	12560	7,6	33/125M - 33/125P
3315098	184,00	294	150	280	10	23	M14	M14	90	12560	9,5	33/150M

Ref.	€/juego	Para base giratoria For swivel base	🔧
336560	44,00	336598 - 338598	33/65 - 33/85
12560	40,60	3310098 - 3312598	33/100 - 33/125 - 33/150

Juego = 2 unidades.
Set = 2 units.

Varilla de apriete / Pin



Ref.	€/u.	🔧
336509	4,80	33/65 - 33/85
111893	6,60	33/100 - 33/125 - 33/150

Juego de bocas blandas / Set soft jaws



Ref.	€/juego	🔧
336550	22,00	33/65
338550	22,30	33/85
3310050	26,00	33/100
3312550	27,60	33/125
3315050	36,30	33/150

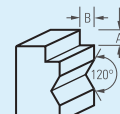
Tuercas en T / T-nut



Ref.	€/u.	Canal T Slot	🔧	M
33121408	14,00	para/for 12 - 14	33/65 - 33/85	M8
33161808	14,00	para/for 16 - 18	33/65 - 33/85	M8
33121410	14,00	para/for 12 - 14	33/100 - 33/125	M10
33161810	14,00	para/for 16 - 18	33/100 - 33/125	M10
33161814	18,20	para/for 16 - 18	33/150	M14
33202214	18,20	para/for 20 - 22	33/150	M14

Juego de bocas prismáticas con escalón / Set prismatic jaws with step

Set prismatic jaws with step



Ref.	€/juego	🔧	A	B
336551	38,90	33/65	3	3
338551	44,60	33/85	3	3
3310051	50,20	33/100	4	4
3312551	62,30	33/125	4,5	4,5
3315051	73,00	33/150	6	6

Serie 37 Mordaza autocentrante

37 Serie self-centering vice

Mordaza de taladro autocentrante

Self centering
press drill vice



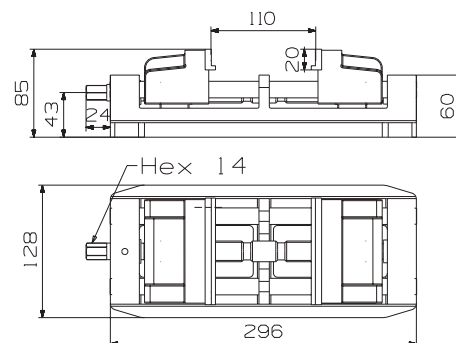
Con manilla
With handle
37/103



- ✓ Fundición nodular.
Nodular cast made.
- ✓ Admite base giratoria (opcional).
Admit swivel base (opcional).
- ✓ Incluye dos juegos de bocas blandas.
Included 2 set soft jaws.
- ✓ Equipada con bocas con escalón.
Step jaws are included.

Con pomo de aluminio.
With aluminium handle
37/103P

Ref. Sin base Without swivelbase	€/u.	Boca Jaw	Abertura Opening	Características Characteristics	
37/103	521,00	103	110	Con manilla With handle	11,7
37/103P	482,00	103	110	Con pomo de aluminio With aluminium handle	10,9



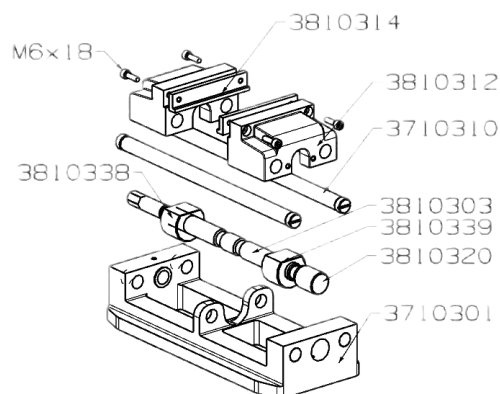
Ref. Con base With swivelbase	€/u.	
37/103B	696,40	17,5
37/103BP	657,40	17,6

Bridas / Clamps

Ref.	€/juego	Descripción
12561	29,00	Juego de bridas Clamps set

Juego = 2 unidades. / Set = 2 units.

Ref.	€/u.	Descripción
3710319	49,00	Manilla / Handle



Serie 38 Quick clamp vice

Serie 38 Mordaza rápida

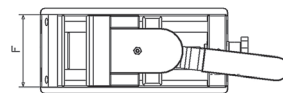
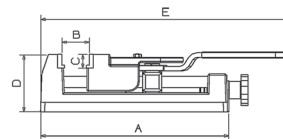
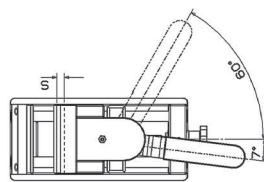
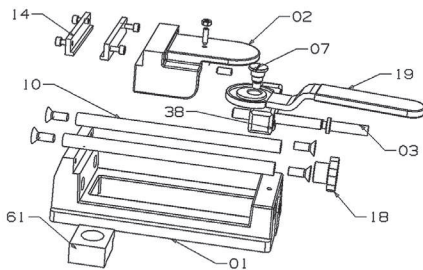
✓ Incluye dos juegos de bocas blandas.
included 2 set soft jaws..

✓ Fácil manejo que le permite sujetar y soltar la pieza en décimas de segundo.
Very fast action.



Mordaza rápida de taladro

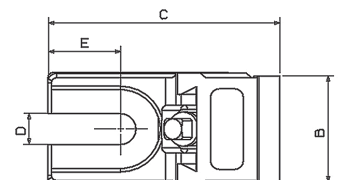
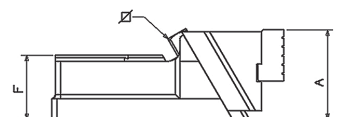
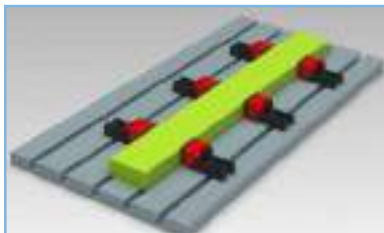
Quick clamp drill vice



Ref.	€/u.	A	B	C	D	E	F	Carrera apriete / Stroke		
38/80	393,00	230	80	20	75	385	80	6	12561	7,0
38/103	469,50	275	90	20	85	420	103	8	12561	10,5
38/125	548,00	400	125	30	105	555	125	9	15061	25,0

Serie 34 Standard vice

Serie 34 Morzada estandar



Juego: 2 mordazas + 1 llave / Set: 2 vices + 1 wrench

Ref.	€/juego	A	B	C	D	E	F	S Din 471	M		Rosca Thread	
34/60	341,60	50-68	60	135	18	42	45	D15	M8	12	TR14x3	4,2
34/62	426,00	82-92	60	175	19	74	57	D15	M8	12	TR14x3	8,0
34/79	453,40	65-85	79	168	25	45	57	D20	M10	12	TR18x4	8,2
34/112	885,00	89-120	120	246	30	65	75	D25	M12	17	TR22x5	26,5

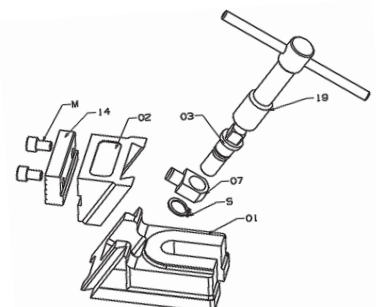
Mordazas sueltas / One vice

Accesorios / Accessories



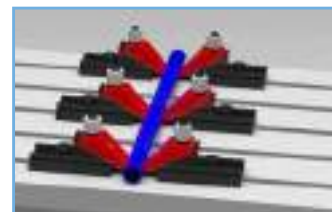
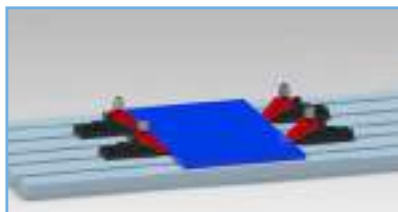
Ref.	€/u.	
346000	162,30	2,0
346200	204,50	3,9
347900	218,20	4,4
3411200	428,50	12,7

Ref.	€/u.	Ref.	€/u.
346003	11,50	346019	17,00
346003	11,50	346019	17,00
347903	14,70	346019	17,00
3411203	23,00	3411219	28,00



Serie 35 Mordaza deslizante

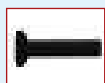
35 Serie Downsliding vice



Juego: 4 mordazas / Set: 4 vices

Ref.	€/juego	A	B max	B min	C	D	E	⚖
35/45	446,80	45	13	0	20	60	23	6,4

Accesorios / Accessories



Ref.	€/u.
354503	15,10



Ref.	€/u.
354514	1,60



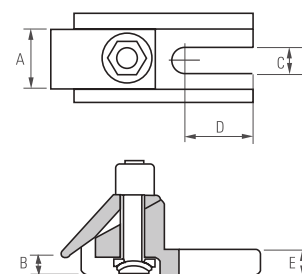
Ref.	€/u.
395608	2,50

Mordazas sueltas

One vice

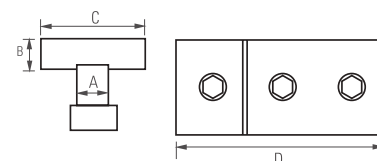
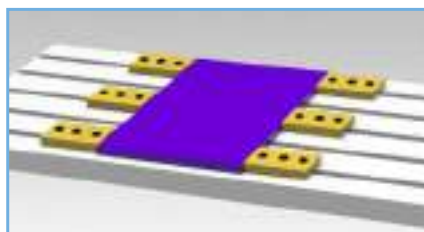


Ref.	€/u.
354500	111,70



Serie 36 Mordaza plana

36 Serie Plain vice



Juego: 4 mordazas / Set: 4 vices

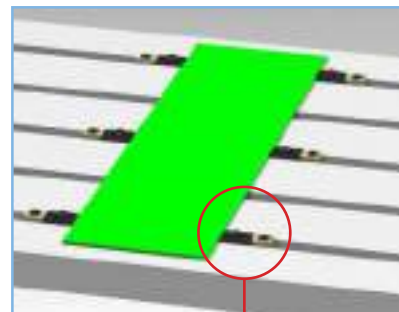
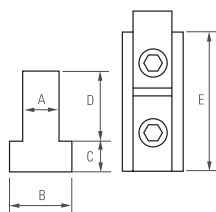
Ref.	€/juego/ set	A	B	C	D	⚖	Para T For T
36/60	313,20	15,5	12	60	75	2,3	16
36/64	352,80	17,5	15	65	105	4	18
36/65	359,20	19,5	15	65	105	4	20
36/66	379,60	21,5	15	65	105	4,3	22
36/78	490,00	17,5	15	80	125	6,1	18
36/79	495,20	19,5	15	80	125	7,2	20
36/80	522,80	21,5	15	80	125	7,5	22

Mordazas sueltas / One vice

Ref.	€/u.
366000	78,30
366400	88,20
366500	89,80
366600	94,90
367800	122,50
367900	123,80
368000	130,70

37 Serie T slot vices

Serie 37 Mordaza de canal



Juego: 4 mordazas

Set: 4 vices

Ref.	€/juego	A	B	C	D	E	⚖
37/12	147,20	11,5	20	8	16	38	0,4
37/14	148,00	13,5	23	9	18	40	0,6
37/16	177,60	15,5	26	10	21	45	0,8
37/18	217,20	17,5	29	11	24	45	1,0
37/20	228,00	19,5	33	13	26	50	1,5
37/22	256,80	21,5	35	14	29	53	1,7

Mordazas sueltas /

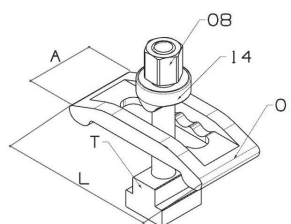
One vice

Ref.	€/u.
371200	36,80
371400	37,00
371600	44,40
371800	54,30
372000	57,00
372200	64,20

Serie 39 Arched clamp

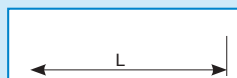
Serie 39 Brida de arco

Ref.	€/u.	L x A	T	Rosa / Thread	⚖
39/56	42,20	123 x 56	18	M16	1,0
39/57	44,70	123 x 56	20	M16	1,0
39/58	46,70	123 x 56	22	M16	1,1
39/59	47,30	123 x 56	24	M16	1,2
39/70	66,90	160 x 70	22	M20	2,0
3971	69,90	160 x 70	24	M20	2,1
39/72	71,90	160 x 70	28	M20	2,3



Accesorios / Accessories

Espárrago brida / Clamps spindle



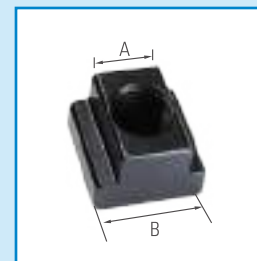
Ref.	€/u.	L	Rosca / Thread
395603*	7,90	150	M16
395604	9,60	250	M16
397003*	13,00	165	M20
397004	14,30	300	M20

* Standard

Tuercas en T / T nuts

Ref.	€/u.	Para T / For T	A x B	Rosca / Thread
395644*	15,40	18	17,5 x 28	M16
395645	17,90	20	19,5 x 32	M16
395646	19,90	22	21,5 x 35	M16
395647	20,50	24	23,5 x 35	M16
397044*	19,00	22	21,5 x 35	M20
397045	22,00	24	23,5 x 40	M20
397046	24,00	28	27,5 x 45	M20

* Standard



Extractor de pasadores roscados

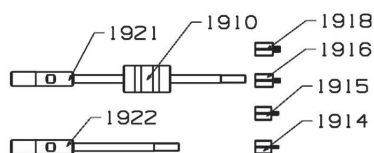
Split pins threaded pullers



Ref.	€/u.	Descripción	⚖️
1950	127,40	Juego completo/complet set: M4 - M10	1,5



Los pasadores **M10** se extraen sin adaptador.
The split pins **M10** are pulled out without adapter.



Componentes / Spare parts

Ref.	€/u.	Descripción
1921	32,00	Eje/Shaft 300 mm
1922	26,00	Eje/Shaft 215 mm
1910	21,10	Maza deslizante/Hammer
1914	12,10	Adapt. M4
1915	12,10	Adapt. M5
1916	12,10	Adapt. M6
1918	12,10	Adapt. M8

Extractor de pasadores roscados

Split pins threaded pullers



Componentes / Spare parts

Ref.	€/u.	Contiene/Contains	⚖️
1960	208,00	Juego completo/complete set: M6, M8, M10, M12, M14, M16, M20 + 3/8" y 5/8"	1,1

Ref.	€/u.	Descripción/Description
4390	76,60	Barra de impacto / Slide hammer
196020	14,30	Adapt. 1/2" 20h. a 3/8" 24h.
1102306	6,50	Adapt. 3/8" 24h. a M6 x 1
1102308	6,50	Adapt. 3/8" 24h. a M8 x 1,25
1102310	6,50	Adapt. 3/8" 24h. a M10 x 1,5
196021	14,30	Adapt. 1/2" 20h. a 5/8" 18h.
1110312	13,60	Adapt. 5/8" 18h. a M12 x 1,75
1110314	13,60	Adapt. 5/8" 18h. a M14 x 2
1110316	13,60	Adapt. 5/8" 18h. a M16 x 2
1110318	13,60	Adapt. 5/8" 18h. a M18 x 2,5
1110320	13,60	Adapt. 5/8" 18h. a M20 x 2,5

Knurling tool

Moleteador

✓ Incluye juego de moletas 1 mm helicoidal.
1 mm. helicoidal knurl set included.

Ref.	€/u.	A x B x C	⚖
ME20/50	219,70	25 x 18 x 210	1,1

✓ Incluye juego de moletas 1 mm helicoidal.
1 mm. helicoidal knurl set included.

Ref.	€/u.	A x B x C	⚖
MF2/20	149,90	19,5 x 20 x 185	0,7
M2/20	149,90	25 x 20 x 185	0,7

✓ Incluye moleta 1 mm recta.
1 mm. helicoidal knurl included.

Ref.	€/u.	A x B x C	⚖
M1/8	72,90	16 x 16 x 140	0,3



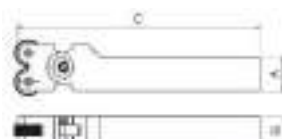
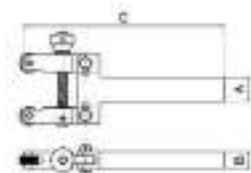
ME20/50



M2/20



M1/8



Moletas de acero HSS 8% Co / Knurls

Ref. Rectas/ Straight	Ref. Helicoidales/ Helicoidals	€/juego	⚖
0,6R	0,6H	51,40	0,1
1R	1H	47,20	0,1
1,25R	1,25H	42,80	0,1
1,50R	1,50H	42,80	0,1
1,75R	1,75H	42,80	0,1

Juego = 2 unidades. D: Derecha - I: Izquierda - H: Helicoidal
Set = 2 units. D: Right - I: Left - H: Helicoidal



Rectas
Straight

Helicoidales
Helicoidals

Moletas sueltas / Spare Knurls

Ref. R	Ref. I	Ref. D	€/u.
0,6	0,6HI	0,6HD	25,70
1	1HI	1HD	23,60
1,25	1,25HI	1,25HD	21,40
1,50	1,50HI	1,50HD	21,40
1,75	1,75HI	1,75HD	21,40

Serie 400 Tools holders

Serie 400 portaherramientas

✓ Equipados con una cuchilla y rompevirutas de metal duro (widia).
Blade and hard metal chip included.

Ref. Izquierda/ Left	€/u.	∠ Cuchilla / Blade	A x B x C	⚖
410	49,00	10 x 8 x 45	22 x 24 x 160	0,8
412	75,00	12 x 10 x 55	28 x 32 x 180	1,6

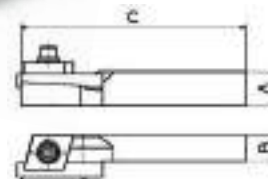


Serie 500 Tools holders

Serie 500 portaherramientas

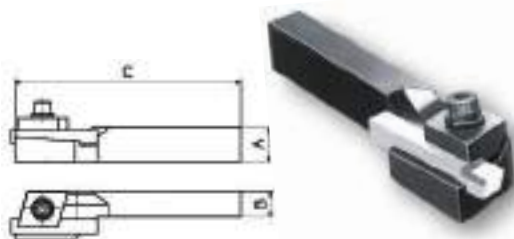
Ref. Derecha/ Right	Ref. Izquierda/ Left	€/u.	∠ Cuchilla / Blade	A x B x C	⚖
508D	508I	55,60	6 - 8	20 x 14 x 125	0,3
510D	510I	73,40	8 - 10	24 x 18 x 155	0,5
512D	512I	93,00	10 - 12	30 x 24 x 180	1,1

D: Derecha - I: Izquierda / D: Right - I: Left



Serie 600 portaherramientas

Serie 600 Tools holders

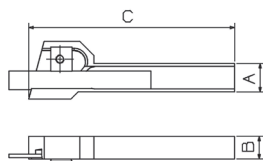


Ref. Derecha/ Right	Ref. Izquierda/ Left	€/u.	Cuchilla / Blade	A x B x C	
608D	608I	57,80	6 - 8	19 x 13,5 x 126	0,3
610D	610I	74,40	8 - 10	24 x 18 x 155	0,6
612D	612I	95,50	10 - 12	30 x 24 x 180	1,2

D: Derecha - I: Izquierda / D: Right - I: Left

Serie 700 Tronzar

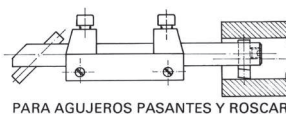
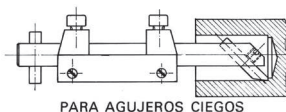
Serie 700 Cutt off



Ref. Derecha/ Right	€/u.	Cuchilla / Blade	A x B x C	
701T	63,60	2,5 x 15 - 2 x 13	19,5 x 15 x 153	0,4
702T	62,10	2,5 x 15 - 2 x 13	26 x 13 x 153	0,4
703T	82,50	3,5 x 19 - 4 x 22	35 x 16 x 178	0,8

Serie 800M portaherramientas de interiores

Internal tool holders

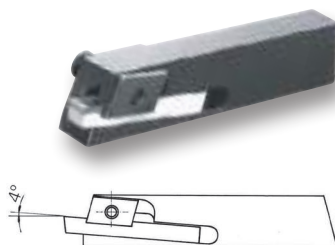


✓ Equipados con dos cuchillas de acero rápido HSS.
2 Blades HSS included.

Ref.	€/juego/ set	Ø Cuchilla/ Blade		
809M	72,80	4	Ø 9 x 115	0,2
812M	91,50	6	Ø 12 x 130	0,4
815M	99,50	8	Ø 15 x 170	0,6
818M	127,00	8	Ø 18 x 220	1,1
822M	137,00	10	Ø 22 x 260	1,8
826M	179,00	10	Ø 26 x 285	2,5
830M	212,00	12	Ø 30 x 330	3,5

Serie 900 portaherramientas

Tool holders Serie 900



D: Derecha - I: Izquierda / D: Right - I: Left

Ref. Derecha/ Right	Ref. Izquierda/ Left	€/u.	Cuchilla / Blade	A x B x C	
906RD	906RI	29,90	6 - 8	25 x 14 x 130	0,3
908RD	908RI	43,90	8 - 10	32 x 18 x 155	0,6
910RD	910RI	49,50	10 - 12	38 x 22 x 250	1,5

Los portaherramientas no incluyen cuchilla, excepto en los modelos indicados.

Toolholders without blades.

Cut off Serie CC

Serie CC Tronzar

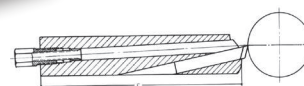
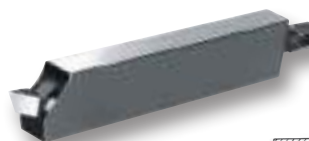
Ref.	€/u.	✂️ cuchilla/Blade	A x B x C	⚖️
CCN1	39,90	2,5 x 15 - 2 x 13	17,5 x 16 x 158	1,1



Tool holders

Cuña L10

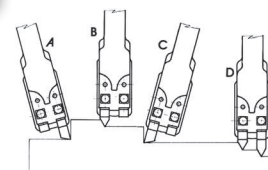
Ref.	€/u.	✂️ Cuchilla / Blade	A x B x C	⚖️
L10	99,00	10	18 x 34 x 175	1,1



Tools holders

Serie para torno

Ref.	€/u.	✂️ Cuchilla / Blade	A x B x C	⚖️
L300	52,00	8	195 x 24 x 12	0,9
L500	62,00	10	210 x 28 x 20	1,3



Tools holders

Serie limadora

Ref.	€/u.	✂️ Cuchilla / Blade	A x B x C	⚖️
TN1	52,20	8	19 x 16 x 175	0,5
TN2	71,00	10	24 x 18 x 200	1,0
TN3	100,30	12	26 x 29 x 235	2,1



Tools holders

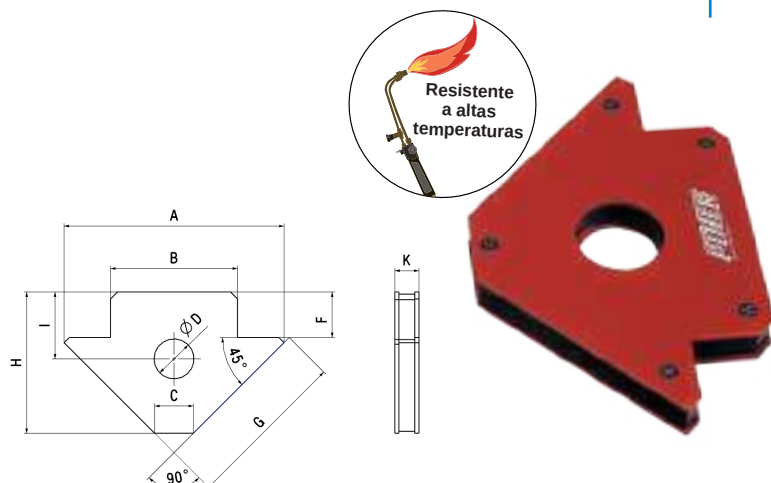
Serie W

Ref.	€/u.	✂️ Cuchilla / Blade	A x B x C	⚖️
WN2	68,00	10	24 x 18 x 200	1,1
WN3	79,50	12	26 x 29 x 235	2,1



Escuadra magnética

Magnetic holders



- Imán de ferrita protegido con banquelita resistente a altas temperaturas
- Capacidad de 45° y 90°.
- Chapas de acero de 2,5 mm unidas con tornillos roscados.

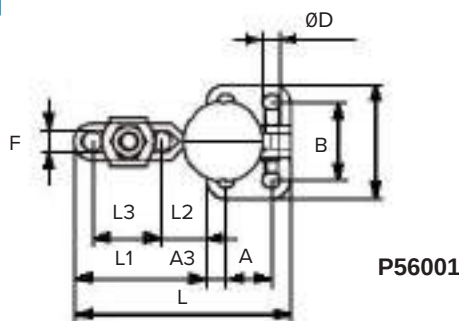
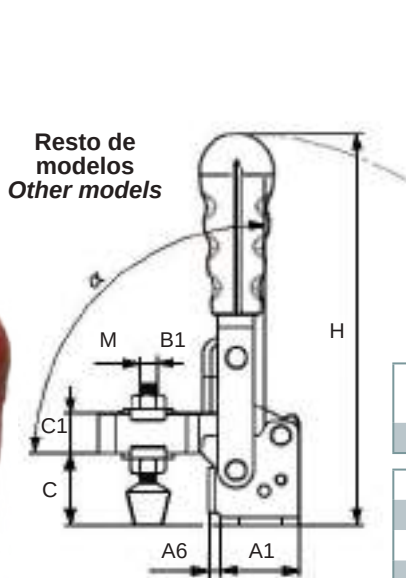
- Ferrite magnet protected with bakelite resistant to high temperatures.
- For welding 45° and 90° angles.
- 2,5 mm thick steel sheet joined with threaded screws.

Ref.	€/u.	A	B	⚖️
P29003	11,70	85	150	0,3
P29004	19,10	110	195	0,65
P29005	30,60	140	260	1,2

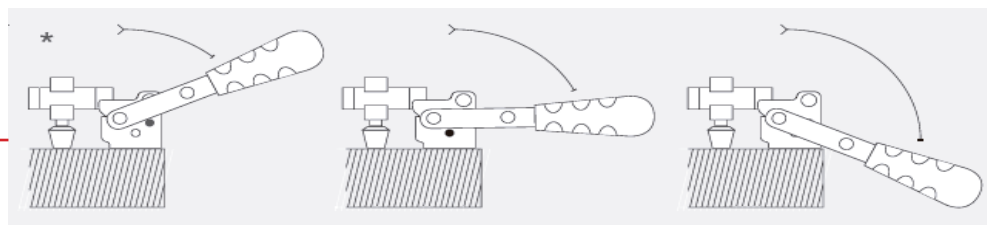
Grapa rápida vertical

Quick vertical toggle clamps

Resto de modelos
Other models



Ref.	€/u.	Fuerza max.	⚖️	Fuerza max.
P56001	19,80	450 N - 45Kg	0,05	450N - 45Kg
P56002*	25,20	1500 N - 150Kg	0,19	1500N - 150Kg
P56003*	29,20	2500 N - 250Kg	0,38	2500N - 250Kg
P53004*	37,90	3400 N - 340Kg	0,81	3400N - 340Kg
P56005*	59,50	3600 N - 360Kg	1,10	3600N - 360Kg



Ref.	A mm	A1 mm	A3 mm	A6 mm	B mm	B1 mm	C mm	C1 mm	C2 mm	D mm	F mm	H mm	L mm	L1 mm	L3 mm	M	a
56001	16	26	5	-	23,4	33,4	19	8	2	4,4	5	77	50,4	24,4	16,4	M5	67,4°
56002*	12,7	27	7	-	26,9	37,9	23	11	3	5,1	6	111	69,9	42,9	21,5	M6	93°
56003*	19	35	8	5,5	32	47	32	17,5	3,2	7,1	8,9	175	90	55	28	M8	90,4°
53004*	32	50	9	10	45	64	42	22	4	8,3	10,6	218	143	92,8	60,5	M10	90°
56005*	32	50,8	9,5	12,2	45	64	50,8	22,5	3	8,7	13,4	224	176	125	82,5	M12	101°

Quick horizontal toggle clamps

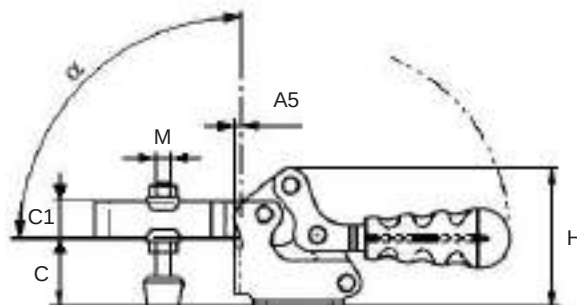
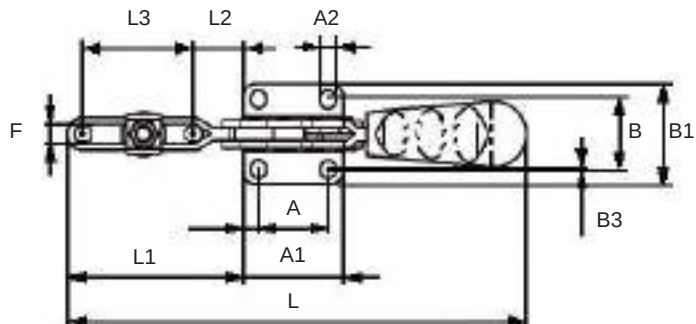
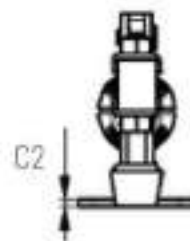
Grapa rápida horizontal



P56050

Resto de modelos
con mango reforzadoOther models with
reinforce handle

Ref.	€/u.	Fuerza max.		Fuerza max.
P56050	17,40	380 N - 38Kg	0,03	380N - 38Kg
P56051	22,20	700 N - 70Kg	0,07	700N - 70kg
P56052	24,50	900N - 90Kg	0,23	900N - 90Kg
P56053	30,10	2200 N - 220Kg	0,43	2200N - 220Kg
P56054	37,50	3400 N - 340Kg	0,91	3400N - 340Kg



Ref.	A mm	A1 mm	A2 mm	A3 mm	B mm	B1 mm	B3 mm	C mm	C1 mm	C2 mm	F mm	H mm	L mm	L1 mm	L2 mm	L3 mm	M	a
P56050	11,1	24	6,8	4	16	23,8	4,4	7,4	6,8	1,6	4,8	17	68	21	6,5	9,5	M4	87°
P56051	13,5	25	5,2	5,7	19	27	-	19	9,5	2	5,8	38,2	105	36,8	12	20	M5	94°
P56052	26	38	5,5	6	28	40	3	25	14	2,5	6,2	52,6	162	61,4	19	3,5	M6	96°
P56053	26	42	6,6	8	31	47	2,5	34	17,5	3	9	68,5	189	66,3	22	36,8	M8	95°
P56054	41,2	59	8,7	9	43	59	1,8	45	23,8	4	11,4	90	269	103	28,5	64,8	M10	95°

Ref.	€/u.	Pág.	Ref.	€/u.	Pág.	Ref.	€/u.	Pág.	Ref.	€/u.	Pág.	Ref.	€/u.	Pág.
0,6H	51,40	63	12560	40,60	44	15099950	138,00	45	1,75HI	21,40	63	2513024	59,00	21
0,6HD	25,70	63	12561	29,00	23	150 P 40	38,10	44	1,75R	42,00	63	2517524	75,00	21
0,6HI	25,70	63	12580	297,00	41	150 P 40 V	62,90	44	20018	1,50	43	26/150	2780,00	17
0,6R	51,40	63	1258020	40,50	43	150 P 40 W	69,50	44	2001261	93,00	42	27/160	1129,00	32
10002	32,50	40	1258021	55,00	43	150 P 45	38,10	44	20020	53,00	43	28A150	1189,00	33
10007	52,00	40	12590	99,50	40	150 P 45 V	62,90	44	2002211	495,00	14	29/100	758,00	30
10008	9,60	40	12595	99,50	41	150 P 45 W	69,50	44	20031	701,00	14	29/100G	835,00	31
10018	1,00	43	12599930	120,00	45	150 P 50	38,10	44	20050	75,00	45	29/100GL	924,00	31
10020	33,00	43	12599935	120,00	45	150 P 50 V	62,90	44	20051	325,00	45	29/100L	826,00	30
10022	32,50	40	15002	45,00	40	150 P 50 W	69,50	44	20052	262,00	45	29/125	874,00	30
10050	38,00	45	15004	69,00	42	150T16	16,50	42	20053	294,00	45	29/125G	953,00	31
10051	162,00	45	15007	79,00	40	1752211	123,00	14	20054	265,00	46	29/125GL	1034,00	31
10052	135,00	45	15008	10,60	40	17550	62,00	45	20055	265,00	46	29/125L	941,00	30
10053	147,00	45	15011	31,00	40	17551	283,50	45	20056	205,60	46	29/125S	1009,50	30
10054	122,00	46	15018	1,50	43	17552	229,50	45	20057	232,00	46	29/150	1278,00	30
10055	122,00	46	1501261	53,50	42	17553	260,00	45	20061	36,00	42	29/150G	1442,00	31
10057	122,00	46	15020	51,00	43	17554	224,00	46	2008020	59,00	43	29/150GL	1519,00	31
10058	72,60	43	15022	45,00	40	17555	224,00	46	2008021	78,00	43	29/150GS	1622,00	31
10058L	76,80	43	1502211	379,00	14	17556	180,00	46	20099950	165,00	45	29/150L	1369,00	30
10059	4,30	43	15031	620,00	14	17557	202,00	46	20099958	165,00	45	29/150S	1567,00	30
10080	293,00	41	15035	60,40	42	175 P 42	42,60	44	200 P 52	47,20	44	29/150X	1723,00	30
1008020	37,00	43	15040	45,00	42	175 P 42 V	63,90	44	200 P 52 V	73,00	44	29/175	1435,00	30
1008021	48,00	43	15041	41,00	42	175 P 42 W	74,00	44	200 P 52 W	80,90	44	29/175G	1597,00	31
10090	95,30	40	15042	45,50	42	175 P 47	42,60	44	200 P 57	47,20	44	29/175GL	1747,00	31
1002306	6,50	62	15043	47,50	42	175 P 47 V	63,90	44	200 P 57 V	73,00	44	29/175GS	1813,00	31
1002308	6,50	62	15044	50,10	42	175 P 47 W	74,00	44	200 P 57 W	81,90	44	29/175L	1533,00	30
1102310	6,50	62	15045	47,10	42	175 P 52	42,60	44	200 P 62	47,20	44	29/175S	1656,00	30
1110312	13,60	62	15046	51,20	42	175 P 52 V	63,90	44	200 P 62 V	73,00	44	29/175X	1743,00	30
1110314	13,60	62	15048	78,00	42	175 P 52 W	74,00	44	200 P 62 W	81,90	44	29/200	1728,00	30
1110316	13,60	62	15050	55,00	45	1910	21,10	62	24/100	1697,00	18	29/200G	1920,50	31
1110318	13,60	62	15051	253,00	45	1914	12,10	62	24/75	1125,00	18	29/200GL	2079,50	1
1110320	13,60	62	15052	211,00	45	1915	12,10	62	24/95	1299,00	18	29/200GS	2233,00	31
111893	6,60	57	15053	240,00	45	1916	12,10	61	25/130	2020,00	21	29/200L	1833,00	30
12507	55,70	40	15054	194,00	46	1918	12,10	62	25/130L	2259,00	21	29/200S	2064,00	30
12508	10,00	40	15055	194,00	46	1921	32,00	62	25/160	2845,00	21	29/200X	2311,00	30
12518	1,00	43	15056	153,80	46	1922	26,00	62	25/175	2995,00	21	29/200XL	2422,00	30
1251261	39,90	33	15057	194,00	46	1950	127,40	62	25/175L	3195,00	21	2910014	37,00	31
12520	37,00	43	15058	74,00	43	1960	208,00	62	25007	149,90	40	2912514	40,40	31
1252211	279,00	14	15058L	78,00	43	196020	14,30	62	25008	22,00	40	2915014	54,00	31
12540	31,50	42	15059	4,50	43	196021	14,30	62	25018	2,00	43	2917514	62,00	31
12541	35,00	42	15060	43,30	35	1H	47,20	63	25020	82,50	43	2920014	81,00	31
12543	37,00	42	15061	31,00	17	1HD	23,60	63	2502211	639,00	14	30/100	881,00	9
12544	35,00	42	15070	599,00	40	1HI	23,60	63	25031	1031,00	14	30/100G	1003,00	11
12545	38,00	42	15080	397,00	41	1R	47,20	63	25043	69,00	42	30/100GL	1092,00	11
12547	42,50	42	15082	1195,00	41	1,25H	42,80	63	25044	57,80	42	30/100L	949,00	9
12549	53,90	42	150821	119,00	41	1,25HD	21,40	63	25045	68,70	42	30/100P	1022,00	16
12550	48,00	45	150822	39,90	41	1,25HI	21,40	63	25048	73,00	42	30/125	1047,00	9
12551	201,00	45	150823	79,00	41	1,25R	42,80	63	25054	406,00	46	30/125A1	1059,00	8
12552	161,00	45	1508020	55,00	43	1,25H	42,00	63	25055	406,00	46	30/125AL1	1130,00	8
12553	180,00	45	1508021	72,00	43	1,50HD	21,40	63	25057	349,00	46	30/125G	1164,00	11
12554	138,00	46	15090	167,00	40	1,50HI	21,40	63	25080	496,00	41	30/125GL	1245,00	11
12555	138,00	46	15092	599,00	41	1,50R	42,80	63	2508021	110,00	43	30/125L	1114,00	9
12556	140,00	46	15095	167,00	41	1,75H	42,80	63	25090	249,50	40	30/125P	1191,00	16
12557	129,00	46	15099940	138,00	45	1,75HD	21,40	63	25095	249,50	41	30/125R	1295,00	9

Índice por referencias

References Index



Ref.	€/u.	Pág.	Ref.	€/u.	Pág.	Ref.	€/u.	Pág.	Ref.	€/u.	Pág.	Ref.	€/u.	Pág.
30/125RL	1370,00	9	3030011	58,50	40	336550	22,00	57	372200	64,20	61	711020	534,00	50
30/125S	1181,00	9	3030020	119,00	43	336551	38,90	57	38/103	469,50	59	711030	588,00	50
30/150	1575,00	9	3030054	708,00	46	336560	44,00	57	38/125	548,00	59	71110	1030,00	48
30/150D	2320,00	25	3030055	708,00	46	336598	67,90	57	38/80	393,00	59	711701	66,30	52
30/150G	1782,00	11	3030061	65,00	42	338550	22,30	57	39/56	42,10	61	711702	75,20	52
30/150GL	1859,00	11	3030090	413,00	40	338551	44,60	57	39/57	44,70	61	711703	65,20	52
30/150GS	2029,00	11	30V125	2110,00	29	338598	78,60	57	39/58	46,70	61	711904	55,00	49
30/150GX	2135,00	11	30V125P	3180,00	28	34/112	885,00	59	39/59	47,80	61	711905	55,00	49
30/150L	1666,00	9	31/125	1252,00	34	34/60	341,60	59	39/70	66,90	61	711906	55,00	49
30/150P	1737,00	16	31/125H	1621,00	35	34/62	426,00	59	39/71	69,90	61	712000	195,00	50
30/150S	1864,00	9	31/125HL	1648,00	35	34/79	453,40	59	39/72	71,90	61	712011	255,90	51
30/150X	2020,00	9	31/125L	1335,00	34	3411200	428,00	59	395603	7,90	61	712012	395,00	51
30/175	1741,00	9	31/160	1557,00	34	3411203	23,00	59	395604	9,60	61	712020	558,00	50
30/175G	1949,00	11	31/160H	1979,00	35	3411219	28,00	59	395608	2,50	60	712030	614,00	50
30/175GL	2099,00	11	31/160HL	1997,00	35	346000	341,60	59	395644	15,40	42	71210	1699,00	48
30/175GS	2165,00	11	31/160L	1686,00	34	346003	11,50	59	395645	17,90	42	712701	70,50	52
30/175GX	2290,00	11	32/100D	201,50	37	346019	17,00	59	395646	19,90	42	712702	70,50	52
30/175L	1839,00	9	32/100N	1053,00	36	346200	240,00	59	395647	20,50	42	712904	55,50	49
30/175S	1962,00	9	32/100S	589,00	36	347900	218,00	5	397003	13,00	61	712905	55,50	49
30/175X	2070,00	9	32/125D	537,50	37	347903	14,70	59	397004	14,30	61	712906	55,50	49
30/200	2115,00	9	32/150D	629,00	37	35/45	446,80	60	397044	19,00	31	712907	55,50	49
30/200G	2316,00	11	32/25M	129,90	37	354500	111,70	60	397045	22,00	61	712908	55,50	49
30/200GL	2485,00	11	32/30M	166,80	37	354503	15,10	60	397046	24,00	61	713011	249,90	51
30/200GS	2637,00	11	32/46M	179,90	37	354514	1,60	60	410	49,00	63	713012	559,00	51
30/200GX	2903,00	11	32/50N	765,00	36	36/60	313,20	60	412	75,00	63	713020	641,00	50
30/200L	2220,00	9	32/50S	234,00	36	36/64	352,80	60	4390	76,60	62	713030	696,00	50
30/200P	2322,00	16	32/60D	160,50	37	36/65	359,20	60	508D	55,60	63	71310	1956,50	48
30/200S	2451,00	9	32/75N	929,00	36	36/66	319,60	60	508I	55,60	63	713110	150,40	49
30/200X	2698,00	9	32/80D	226,80	37	36/78	490,00	60	510D	73,40	63	713701	83,50	52
30/200XL	2890,00	9	32/80S	378,00	36	36/79	495,20	60	510I	73,40	63	713702	83,50	52
30/250	3025,00	9	33/100M	297,50	56	36/80	522,80	60	512D	93,00	63	713703	83,50	52
30/250G	3199,00	11	33/125M	397,00	56	366000	78,30	60	512I	93,00	63	713704	60,50	52
30/250GL	3512,00	11	33/150M	448,00	56	366400	88,20	60	60/125	1047,00	15	713906	68,40	49
30/250GS	3719,00	11	33/65M	138,20	56	366500	89,80	60	60/125L	1114,00	15	713907	68,40	49
30/250GX	3980,00	11	33/85M	188,50	56	366600	94,90	60	60/150	1575,00	15	713908	68,40	49
30/250L	3270,00	9	33/100P	367,50	56	367800	122,50	60	60/150-50	1575,00	15	713910	68,40	49
30/250S	3435,00	9	33/125P	464,00	56	367900	123,80	60	60/150D	2296,00	25	714011	352,60	51
30/250X	3625,00	9	33/85P	266,00	56	368000	130,70	60	60/150L	1666,00	15	714012	776,00	51
30/300	4650,00	9	3310050	26,00	57	37/103	521,00	58	60/150L-50	1666,00	15	714020	722,00	50
30/300L	4810,00	9	3310051	50,20	57	37/103B	696,40	58	60/175	1741,00	15	714030	773,00	50
30/300S	4999,00	9	3310098	107,80	57	37/103BP	657,40	58	60/175L	1839,00	15	71410	2616,00	48
300/150	1710,00	22	3312550	27,60	57	37/103P	482,00	58	60/200	2115,00	15	714110	158,00	49
300/150L	1820,00	22	3312551	62,30	57	37/12	147,20	61	60/200L	2220,00	15	714112	158,00	49
300/200	2199,00	22	3312598	134,80	57	37/14	148,00	61	60/200XL	2890,00	15	714216	165,00	49
300/200L	2405,00	22	33121408	14,00	57	37/16	177,60	61	608D	57,80	64	714701	83,50	52
300/200S	2680,00	22	33121410	14,00	57	37/18	217,20	61	608I	57,80	64	714702	89,00	52
300/200X	2955,00	22	3315050	36,30	57	37/20	228,00	61	610D	74,40	64	714703	71,20	52
30020090	232,00	14	3315051	73,00	57	37/22	256,80	61	610I	74,40	64	714704	66,80	52
30025090	347,00	14	3315098	184,00	57	3710319	48,00	58	612D	95,50	64	714904	74,00	49
30030090	537,00	14	33161808	14,00	57	371200	36,00	61	612I	95,50	64	714906	74,00	49
30030031	1550,00	14	33161810	14,00	57	371400	37,00	61	701T	63,60	64	714907	74,00	49
3030002	103,00	40	33161814	18,20	57	371600	44,40	61	702T	62,10	64	714908	74,00	49
3030007	214,60	40	33202214	18,20	57	371800	54,30	61	703T	82,50	64	714910	74,00	49
3030008	35,50	40	336509	4,80	57	372000	57,00	61	711000	195,00	50	714912	74,00	49

Ref.	€/u.	Pág.	Ref.	€/u.	Pág.	Ref.	€/u.	Pág.
715011	447,80	51	961091	52,00	52	P56002	25,20	66
715012	864,00	51	961092	70,50	52	P56003	29,20	66
715020	794,00	50	96110	133,50	52	P56004	37,90	66
715030	864,30	50	96111	158,00	52	P56005	59,50	66
71510	3298,00	48	96112	179,00	52	P56050	17,40	67
715110	175,00	49	961101	55,50	52	P56051	22,20	67
715112	175,00	49	961102	78,00	52	P56052	24,50	67
715116	175,00	49	961111	65,00	52	P56053	30,10	67
715216	178,00	49	961112	93,00	52	P56054	37,50	67
715222	185,00	49	961121	81,00	52	PRD/125	845,50	12
715701	95,00	52	961122	98,00	52	PRD/125G	931,00	13
715702	95,00	52	B/100	314,00	44	PRD/125GL	999,50	13
715703	102,00	52	B/125	332,00	44	PRD/125L	902,70	12
715704			B/150	451,00	44	PRD/150	1258,00	12
715906	86,40	49	B/200	613,00	44	PRD/150G	1370,00	13
715908	86,40	49	B27160	260,00	32	PRD/150GL	1449,00	13
715909	86,40	49	B28150	286,00	33	PRD/150GS	1560,00	13
715910	86,40	49	CAFN1	1339,00	48	PRD/150L	1330,00	12
715912	86,40	49	CAFN2	2034,00	48	PRD/150S	1483,00	12
715914	86,40	49	CAFN3	2701,00	48	PRD/150X	1625,00	12
715916	86,40	49	CAFN4	3746,00	48	PRD/200	1692,00	12
809M	72,80	64	CAFN5	4899,00	48	PRD/200G	1815,00	13
812M	91,50	64	CCN1	39,90	65	PRD/200GL	1950,00	13
815M	99,50	64	CF/125	2530,00	23	PRD/200GS	2070,00	13
818M	127,00	64	CFA125	1799,00	24	PRD/200GX	2275,00	13
82/100	227,40	57	CFA12512	180,00	24	PRD/200L	1789,00	12
82/125	266,50	57	CFA12513	201,00	24	PRD/200S	1980,00	12
82/150	302,60	57	CFB125	2039,00	24	PRD/200X	2158,00	12
82/85	153,70	57	DD125/500	2096,00	27	PRD/200XL	2292,00	12
822M	137,00	64	DD125/500-1	1756,50	27	TN1	52,20	65
826M	179,00	64	DD125/500G	2322,00	27	TN2	71,00	65
830M	212,00	64	DD125/500G-1	1924,00	27	TN3	100,30	65
906RD	29,90	54	DD125/600	2356,00	27	WN2	68,00	65
906RI	29,90	64	DD125/600-1	2017,50	27	WN3	79,50	65
908RD	43,90	64	DD125/600G	2549,00	27			
908RI	43,90	64	DD125/600G-1	2124,00	27			
910RD	49,50	64	DF125/450	1830,00	26			
910RI	45,50	64	GN/125	313,90	35			
96104	82,40	52	GN/160	389,00	35			
96105	86,90	52	ISO 30	117,90	50			
96106	93,00	52	ISO 40	123,50	50			
96107	103,00	52	ISO 50	134,70	50			
96108	112,00	52	L10	99,00	65			
96109	122,50	52	L300	52,00	65			
961041	35,20	52	L500	62,00	65			
961042	47,20	52	M1/8	72,90	63			
961051	36,90	52	M2/20	149,90	63			
961052	50,00	52	ME20/50	219,70	63			
961061	39,50	52	MF2/20	149,90	63			
961062	53,50	52	MORSE 5	168,30	50			
961071	44,00	52	P29003	11,70	66			
961072	59,00	52	P29004	19,10	66			
961081	48,00	52	P29005	30,60	66			
961082	65,00	52	P56001	19,80	66			

Este año
celebramos
nuestro
50
aniversario



50 años
mejorando
nuestros
sistemas de
producción
y calidad

1969 - 2019

Notas

Notes

- [illegible]

Notas

Notes

- [illegible]



AÑ50S

1969 **F O R Z A** 2019



FORZA®



San Miguel de Acha, 24
01010 VITORIA • España



Tfno: +34 945 249 716
Fax: +34 945 245 667



ventas@forza.es
www.forza.es