Standard Injection Mould Systems / Innovative Solutions for Your Moulds CUMSA









Code: MG

Mini Guide

It is consisted of angular pin and locking thrust wedge. While mould is closed, it can be easily adjusted with allen key. All machining is made 90° to the parting line. Parts can be replaced from the parting line.

Material: 1.2312 \approx 1.080 N/mm². Patented System

Attention! Standard stroke of 4mm.



Order	A mm	CR (N)
MG.121648	12	50.000
MG.201648	20	90.000

Installation & Operation Examples

- 1- Determine the position of MB (mini base) and mount it.
- 2- Place the magnetic retainer into hole.
- 3- Insert MC (mini slide).
- 4- While mould is closed, please adjust MC (mini slide) up to 0.6mm maximum.



Mini Slide

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Code: MC

It is ready for machining, it comes with adjustment tolerances. It is only necessary to machine the cavity area. Material: 1.2344

Hardness: 44 ± 2 HRC Patented System

Attention! Machining reference is 13.2





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Order	A mm	B mm
MC.121252	12.5	12
MC.121652	12.5	16
MC.201252	20.5	12
MC.201652	20.5	16



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Mini Base

Code: MB

An unique unit hardened and ground with the adjustment tolerances. Has various assembly posibilities and it is also easy to change, with magnetic retainer. Minimum space required for installation.

Material: 1.2510 Hardness: 54 ± 2 HRC Patented System



Order	A mm	B mm
MB.122056	12.5	28
MB.202056	20.5	36

Mould Closed

M5x25 Screw - DIN 912 M5x16 Screw - DIN 912 Max. 0.6 ATTENTION!



Slide Unit

Code: SU

Ideal to de-mold external details. Compact unit with strokes up to 5mm. Slider is made from two different inserts, allowing flexibility regarding the molding feature. All machining can be made 90° to parting line. Easy to change molding inserts due to fixing method. Incorporates a slide retainer and an angle pin.

Material: 1.2344



									C	ode	e: 50
Orc	ler	Α	l	В	C	D	I		F		Н
SU.08	1220	8.2	1	2	20	10	1	8	28	3	32
SU.12	1626	12.2	1	6	26	12	2	4	37.	5	36
SU.16	2032	16.2	2	20	32	16	3	0	46.	5	40
K	L	M			R	S		Т			Х
12.5	8.25	8	3		.75	3		Μ	4		6.2

12.5	8.25	8	3.75	3	M4		
17	10.5	11	4.5	4	M5		
22	13	14	5	5	M6		



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Undercut Unit

Code: UU

Inverse movement regarding normal units, ideal for de-moulding internal detail. Compact unit with strokes up to 5mm. Slider is made from two different inserts, allowing flexibility regarding the molding feature. All machining can be made 90° to parting line.

Incorporates a slide retainer and an angle pin.

Material: 1.2344Hardness: 54 ± 2 HRC

Patented System



Code: UU

Order	Α	В	С	D	E	F	G
UU.081220	8.2	12	20	10	18	24.5	12
UU.121626	12.2	16	26	12	24	32.5	16
UU.162032	16.2	20	32	16	30	41	20

Н	J	K	L	М	S	R	Т	X
32	16	12.5	8.25	8	3	3.75	M4	6.2
36	20	17	10.5	11	4	4.5	M5	7.2
50	25	22	13	14	5	5	M6	9.2



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Adjustable Wedge Assembly (Heel Unit)



It is unit of core / slide system starting motion. Adjustable with the mold closed. All machining is made 90° to the parting line. Parts can be replaced from the Parting Line. Hardened steel pre-adjusted for immediate use. Hardened wear plate. Two outer screws force the heel against the slide forming the shut off, while the central screw locks it into position. Minimum space required for installation



							000		
0	rder	Α	A B		D	E	G	H	
CG.6	03035	60	30	35	25	23	6	23	
CG.6	604035	60	40	35	25	23	6	23	
CG.7	54049	75	40	49	30	32	7	27	
CG.8	864857	86	48	57	35	36	8	32	
K	М	R	TF	U	RP		CR (CR (N)	
29	43.7	17	M6x25	10	081015		180.000		
29	43.7	22	M6x25	10	1010	15	320.0	320.000	
39	58	22	M8x30	12	1010	20	320.0	000	
44	65	28	M8x35	16	1210	25	480.0	000	
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Adjustable Wedge (Heel Unit)

Code: CR

Adjustable with the mold closed. All machining is made 90° to the parting line. Parts can be replaced from the Parting Line. Hardened steel pre-adjusted for immediate use. Hardened wear plate. Interchangeable parts. Allows the slide to be adjusted with the mold closed. Two outer screws force the heel against the slide forming the shut off, while the central screw locks it into position. Minimum space required for installation



Patented System



Order		А		В		С		D
CR.40	.403840 40			38		40		25
CR.454	4849	45		48		49		28
CR.52	6052	52		60		52		32
CR. 52	6852	52		68		52		32
CR.52	7556	52		75	75 56 3		56	
E	G	Н		Т	RP		CR (N)	
30	22	12	Γ	N8x30	10	01020	3	320.000
35	28	16	N	110x35	12	21025	Z	180.000
40	35	16	N	110x35	14	1030	7	750.000
40	45	16	M10x35		14	1030	7	750.000
40	50	16	N	110x35	14	1030	7	750.000



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Code: CG

Adjustable Wedge Assembly

(Heel Unit & Including Pin)

It is consisted of angular pin and locking thrust wedge. While mould is closed, it can be easily adjusted with allen key. All machining is made 90° to the parting line. Parts can be replaced from the parting line. Angle pin included in CG - SET. Hardened steel pre-adjusted for immediate use. Hardened wear plate.

Material: 1.2312 \approx 1.080 N/mm². Patented System

Attention! Standard stroke of 12mm.



Order	Α		В	
CG.603075		17		30
CG.60407	ō	22		40
CR (N)	RP ((Screw)		Angle Pin
180.000	08	31015	(GI.010075
320.000	10	01015	(GI.010075



24 5 80 **17**⁰ Ŧ Β HZ 6.3 Α α6 R Γ 0 Rz 6.3 Order Α В CA.322080 32 20 CA.322480 32 24 CA.422080 42 20 CA.422480 42 24





Slide Base

Code: BC

The slide retainer is built into the set. Different hardness and materials between CA and BC to guarantees smooth movements. Interchangeable parts. Parts can be replaced from the Parting Line. Hardened and ground, with the correct adjusting tolerances. Incorporates a magnetic Retainer (RM) which must be installed after the slide adjustment and allows fixing the slide movement where needed. Minimum space required for installation.

Material: 1.2510 Hardness: 54 ± 2 HRC Patented System



Installation

- 1- Determine the position of BC (slide base) and mount it.
- 2- Place the magnetic retainer into hole.
- **3-** Determine the position of CA (adjusted slide).
- 4- While mould is closed, please adjust CA (adjused slide) up to 1 mm maximum.

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Angle Pin

Code: GI

This item can be fitted to any of the corresponding Cumsa sets (CG, GR & BG). Several diameters and lengths of angle pins.

Attention! When ordering, indicate the desired "L" dimension after the order reference code.

Material: 1.7242Hardness: 60 ± 2 HRC



Order	А	Bushing / Adjustment Area
GI.010 L	10	≈ 25
GI.012 L	12	≈ 30
GI.016 L	16	≈ 35
GI.020 L	20	≈ 40
GI.024 L	24	≈ 45
GI.028 L	28	≈ 50

М	Ν	L	R		
4	4	075	090	105	5
4	4	095	110	130	6
4	4	115	135	160	8
6	6	140	165	190	10
6	6	170	195	220	12
6	6	200	225	250	14

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Square Angle Pin Housing

This is similar to the round Angle Pin Housing (GR) but allows the fitting of angle pins from 15° or 20°. This unit is bigger than the GR to allow for the greater angles and it requires a square pocket to be machined in the mould base. All machining is made 90° to the parting line. Parts can be replaced from the Parting Line. Minimum space required for installation.



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Т

M6x35

M8x40

M8x45

M10x50

M6x35

M8x40

M8x45

M10x50

Order

BG.423016-15

BG.504020-15

BG.554024-15

BG.655028-15

BG.423016-20

BG.504020-20

BG.554024-20

BG.655028-20

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Ø 28

Ø 16

Ø 20

Ø 24

Ø 28

2 x Screw - DIN 912

С

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36

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45

F

7.5

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7.5

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20⁰

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19.5 8 6

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5.5

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M8x6

16

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24

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M8x20

15⁰

Angle Pin Housing

Code: GR

This unit incorporates a predrilled hole for the angle pin which eliminates the need to angularly drill the mould base. The mould base only needs to be drilled from the front to accept this unit. The unit comes in either 10° or 15°.

All drilling is made 90° to the parting line. Parts can replaced from the Parting Line. Minimum space required for installation. Several diameters and lengths of angle pins.





Core Cam (for lateral holes)

Code: UC

Mechanism to make lateral holes, automatic retention for the core insert. Requires very small area for installation. Reduces costs in machining and fitting. Reduces mould production time. Machining for installation is easier due to always being at 90° to parting line. Offers a standard solution to the mould makers.

Material: 1.2344 Hardness: 52 - 54 HRC Max. working temperature: 150°.



Compact Coring Unit (for lateral holes)

Code: UA

This unit uses the open and close movement of the mould to make lateral holes in wall sections of plastic parts. Easy to assemble and remove from the mould. Reduces costs in machining and fitting.Reduces mould production time. Machining for installation is easier due to always being at 90° to parting line. Offers a standard solution to the mould makers. Requires very small area for installation.





Automatic Retainer

Code: RA

This retainer for large slides is actuated by the angle pin, ensuring smooth and easy movement with no excess force required. Reduces costs in machining and fitting. No need for complex retaining systems or expensive hydraulic systems. Retention of cam slides up to 2000 Kg. Offers a standard solution to the mould makers.

Attention! Cut the rod 0.5mm shorter than the slide height.





Safety Strap

Code: BS

Keeps the mould closed when it is not in the machine. The mould is unlocked automatically, when mounted on the machine. Minimum space required for installation. Guarantees automatic opening and closing of the mould when loaded or unloaded from the machine.





Code: RCM

Slide Retainer

Incorporates a mechanical stopper. The fixing pin has rollers to avoid wear on friction surfaces. Less machining for installation compared to similar products on the market.



Order			A		В		С	Ε	F	G
RCM.163808			10	5	38	3	8	25	7.6	7.6
RCM.204810			20)	48	3	10	32	8.7	8.6
RCM.245712			24	4	57	1	12	37.5	5 9.6	9.6
Н	J	K			N		R	S	Т	U
4	10	8 Kg	J.		7		8	M5	M6	9
5	11	14 K	Kg.		8		10	M6	M8	12
6	12	18 K	n		9		12	M8	M10	15

K: Force to release the retainer.





Optional Dowel Pin for Slide Retainer

Optional method for holding the Slide Retainer, that simplifies the disassembling. This item must be ordered separately.

Material: 1.3505Hardness: 60 ± 2 HRC



Order	L	М	N	Р
PO.120320	12	M3x20	7.5	6
PO.150425	15	M4x25	10	8
PO.200530	20	M5x30	13	10
PO.250635	25	M6x35	16	12
PO.340850	34	M8x50	23	16





Slide Retainer

Code: PO

Code: RC

Less machining for installation compared to similar products on the market. Minimum space required for installation. Reduces costs in tool downtime. Offers a standard solution to the mould makers.

Material: 1.8159 Hardness: 45 ± 3 HRC



K: Force to release the retainer. **Slot depths should be:** F = +0.30mm.

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12	30	6x20	21	4.7
16	40	8x20	28	5.7
20	50	10x24	34	7.7
24	60	12x32	42	9.7
32	80	16x40	56	11.7
32	80	16x40	56	15.7
	12 16 20 24 32 32	12 30 16 40 20 50 24 60 32 80 32 80	12 30 6X20 16 40 8x20 20 50 10x24 24 60 12x32 32 80 16x40 32 80 16x40	12 30 6X20 21 16 40 8x20 28 20 50 10x24 34 24 60 12x32 42 32 80 16x40 56 32 80 16x40 56

G	Н	K	R	Т
4	16	5 Kg.	6	M5x16
5	15	7 Kg.	8	M6x20
6	17	14 Kg.	10	M8x25
7	23	21 Kg.	12	M10x30
9	27	28 Kg.	16	M12x35
9	25	38 Kg.	16	M12x50

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Retractable Core Extension

Standard extension. Flat for key position included. Hardened and ground to size. Enables a standard length of the PW up to 315mm. Keyed pocket included.



Order			Α	С	R
AP.080615			8	6	1.25
AP.100815			10	8	2.0
AP.1210	15		12	10	2.5
S	Т		U		V

5	I	U	V
9.5 x 2	M4	14	5
11.5 x 2	M5	16	6
14.5 x 2.5	M6	20	8



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After setting core, please machining 0.1mm from end section to make ejector effortlessly.

Sprung Core

Code: **PW**

Minimum space required for installation, only needs the space of an ejector. No milling, grinding or hardening other than the machining of detail needed. Machining for installation is easier due to always being at 90° to parting line. No need for complex mechanical systems. The opening of the sprung cores is a radial movement. Due to this, at the edge of the stroke, the opening is 3.5mm (0.138"), 4.5mm (0.177") and 5.5mm (0.217"), depending on the model (K dimension in the catalogue).

Correctly installed sprung cores (following our catalogue installation instructions) can produce more than 1 million parts. (welding is not recommended on any of the sprung core products & we only recommend using Balinit C coating, other coatings are not recommended as they can reduce the sprung core life) **Material:** 1.8159 **Hardness:** 45 \pm 3 HRC **Max. working temperature:** 150°.



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"PX" Cutting Jig

Enables accurate fine tuning in the height of the PX. Simplifies the measuring and cutting of the shaft of the PX. Easier to cut larger quantities of PX at a time.

Code: CX

How to use the PX Cutting Jig ?

Insert the PX into the corresponding slot, for 6 or 8mm. shank. Ensure that the shape of the PX head is adjusted in the housing support.
Use an allen key to select the correct option: flat ● or ● round.

3- Cut the PX to the required dimension.

Material: INOX / 1.4034





lifetime guarantee. Completely adjusted to fit an H7 housing, radiuses already made on the head of the sprung core. Simple fixing system due to its external thread.

Available in three lengths. Jig to guarantee the part is cut at the exact length (supplied separately). Material: 1.8159 Hardness: 45 ± 3 HRC Max. working temperature: 150° .

Stopper





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Two separte movements in one component. Minimum space required for installation, only needs the space of an ejector.

No milling, grinding or hardening other than the machining of detail needed. No need for complex mechanical systems. Useful to release small undercuts, this ejector is pre-adjusted and height adjustable. Easy to install, machining is 90° to parting line. The Balinit C® coating offers smooth action.

Material: 1.2101 Hardness: 45 ± 3 HRC Max. working temperature: 150°.

Every Ejector is adjusted individually with its bushing, with a tolerance g6/H7 between them. For this reason, it is important to keep track of both pieces in pairs while handling and installing. The opening of the sprung cores is a radial movement. Due to this, at the edge of the stroke, the opening is 3.0 mm.



Tulip Ejector

Four separte movements in one component. Useful to release small undercuts, this ejector is pre-adjusted and height adjustable. Cilindrical machining and made 90° regarding the parting line. No milling, grinding or hardening other than the machining of detail needed. The Balinit C® coating offers smooth action. Minimum space required for installation, only needs the space of an ejector.

Material: 1.2101 Hardness: 45 ± 3 HRC Max. working temperature: 150°.

Every Ejector is adjusted individually with its bushing, with a tolerance g6/H7 between them. For this reason, it is important to keep track of both pieces in pairs while handling and installing. The opening of the sprung cores is a radial movement. Due to this, at the edge of the stroke, the opening is 2.8mm (0.110").





Fixed Lifter Base

Code: DF

Keyed pocket for the lifter shaft. Minimum space required in the ejector plates. "VI" (Lifter Shaft) may be used as ejector.

Material: INOX 1.4034 Hardness: 48 ± 2 HRC



Cad Insertion Point Code: DF										
Ord	er	Α	A B			С	D			
DF.06	1220	6		12		20	11.5			
DF.08	1220	8		12		20	11.5			
DF.10	1624	10		16		24	13.5			
DF.12	1624	12		16		24	13.5			
DF.162	16		20		32	19				
DF.202	20		25		38	21				
DF.25	3148	25		31		48	28			
E	F		Н			Т				
12	0.5		1(0		M4 x 12				
12	0.5		10			M5 x 12				
14	0.5		12	2		M6 x 16				
14	1.0		12	2		M8 x	16			
18	1.5		1(5		M8 x 22				
21	1.5		10	9		M10 x 25				
26	2.0		24	4		M12>	35			



Adjustable Lifter Base Code: DA

Keyed pocket for the lifter shaft. Minimum space required in the ejector plates."DA" Allows easy adjustment of the lifter shaft height.

Material: INOX 1.4034 Hardness: 48 ± 2 HRC

Order

DA.061020

DA.081220

DA.101624

DA.121824

F

0.5

0.5

0.5

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15

15

17



Α

6

8

10

12

Н

9.0

8.5

10.2

Code: DA

D

11.5

11.5

13.5

13.5

Т

M4 x 40

M5 x 40

M6 x 40

С

20

24

В

10 20

12

16 24

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Lifter Head



Lifter Head hardened and ground to size. No need for threads or dowel pins to attach the Lifter Head to the Lifter Shaft. Offers a standard solution to the mould makers.

Material: 1.2344 Hardness: 45 ± 2 HRC





	Code: IF										
Order		Α	A B		С		D				
IF.0640	6.2		40	6		12					
IF.0840	8.2		40	7		14					
IF.104450		10.2	2	44	8		16				
IF.1244	12.2	2	44	9		18					
R	Х			Y		Z					
40	5			3.5			36				
38	10)		6.7		35					
38	15	5		10.2			34				
37	20)	13.5			32					



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VI Lifter Shaft F.Lifter Base BD Horizontal Base Mould Closed



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Lifter Shaft

Code: VI

Lifter shaft includes oilless bushing. No need for threads or dowel pins to attach the Lifter Head to the Lifter Shaft. Offers a standard solution to the mould makers.



Order	Α	E	L	U	۷
VI.064200	6	10	15	0.5	12
VI.085200	8	12	20	0.5	12
VI.106200	10	14	20	0.5	14
VI.127200	12	16	20	1.0	14





Adaptable Base

Cam slide for internal lifters. Different hardness and materials between base and limiter guarantees smooth movements. Minimum space required for installation.

Code: **BD**





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11.5	10	5	5	4	M5	28
11.5	10	5	5	4	M5	38
13.5	12	6	5	5	M6	32
19	15	6	5	5	M6	40
21	18	8	5	6	M8	46
28	18	10	8	8	M10	58





Horizontal Base

Code: **BD**

Code: **BD**

Cam slide for internal lifters. Different hardness and materials between base and limiter guarantees smooth movements. Minimum space required for installation. Material: 1.2311 Hardness: 45 ± 2 HRC



Code: **BD**

Order			Α	C		D	E	F
BD	BD.122036			36)	28	4	4.8
BD	.1422	66	14	66)	42	4	6.3
BD	.1624	40	16	40)	30	5	6.3
BD	.2032	60	20	60)	44	5	8.3
BD	BD.253872			72	2	56	7	10.3
BD	BD.314890			90)	74	8	13.3
G	L	Р	Q		R		Т	Z
11.5	10	5	5		4		M5	20
11.5	10	5	5		4		M5	22
13.5	12	6	5		5		M6	24
10.0								
19	15	6	5		5		M6	32
19 21	15 18	6 8	5 5		5 6		M6 M8	32 38



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Standard Lifter

Code: PS

Compact unit for the release of small undercuts. The unit is completely pre adjusted and easy to install. The space required for installation is reduced due to the vertical movement perpendicular to the ejector plates. Minimum space required for installation, only needs the space of an ejector. Mechanical solution. No milling, grinding or hardening

other than the machining of detail needed.

Material: INOX 1.4034 Hardness: 48 ± 2 HRC Patented System



How much can be cut from the top on the bushing and RP in Z axis?

PS.062250: 8 mm (0.315") PS.082250: 15 mm (0.591") PS.102250: 15 mm (0.591") PS.122250: 20 mm (0.787")

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TM Magnetic

S. Stopper

G110 Mounting Flange

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Custom-Made Sprung Cores

Special sprung cores to suit your dividual requirements. If no other Cumsa undercuts product is compatible, this is your solution. Delivery time from 6 to 8 weeks. Different strokes and undercut dimensions are available.

Material: 1.8159 Hardness: 45 ± 3 HRC



Custom-Made Angular Dog Lifters

This unit allows to use the advantages of the DB reference in angled parts. To order this part just fill the Ordering Table provided. Once we receive the required dimensions we will send to you a 3D file for your approval.

C

Max. 56

Pcs.

G

Material: 1.2311 Gas Nitrided \approx 840Hv.

Positive Angle Version



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"DR" Cooling Hose

Code: DK

Cooling Hose for 90° "DR" Lifters.

The swivel coupling prevents the hose from bending excessively when demolding the undercut.

Maximum cooling fluid temperature 50°C.



Double Rack Lifter (DR) Selection Table



Designed according to the colour system in the table!



00	DR.xx-	100L - 8	DR.xx-1	100L-12	DR.xx-	100L-16	DR.xx-	-100L-20
D	S (-β [°])	S (+β [°])	S (-₿°)	S (+β [°])	S (-ℬ ^⁰)	S (+β [°])	S (-β [°])	S (+β [°])
0	14	4.0	21	.2	2	3.6	3	6.4
1	14	14	21.1	21.3	28.5	28.8	36.1	36.6
2	13.9	14.1	21.1	21.4	28.3	28.9	25.9	36.8
3	13.9	14.1	21	21.5	28.2	29.1	35.7	37.1
4	13.9	14.1	20.9	21.5	28.1	29.2	35.4	37.3
5	13.8	14.2	20.8	21.6	27.9	29.4	35.2	37.5
6	13.8	14.2	20.7	21.7	27.8	29.5	35	37.8
7	13.8	14.3	20.7	21.8	27.7	29.7	34.8	38.1
8	13.7	14.3	20.6	21.9	27.5	29.8	34.6	38.3
9	13.7	14.3	20.5	22	27.4	30	34.4	38.6
10	13.7	14.4	20.4	22	27.2	30.2	34.2	38.8
11	13.6	14.4	20.4	22.1	27.1	30.3	33.9	39.1
12	13.6	14.4	20.3	22.2	27	30.5	33.7	39.4
13	13.6	14.5	20.2	22.3	26.8	30.7	33.5	39.7
14	13.5	14.5	20.1	22.4	26.7	30.8	33.3	40
15	13.5	14.6	20.1	22.5	26.6	31	33.1	40.3
16	13.5	14.6	20	22.6	26.5	31.2	32.9	40.6
17	13.4	14.6	19.9	22.7	26.3	31.4	32.7	40.9
18	13.4	14.7	19.8	22.8	26.2	31.6	32.5	41.2
19	13.4	14.7	19.8	22.9	26.1	31.8	32.3	41.6
20	13.3	14.8	19.7	23	25.9	32	32.1	41.9

Object Position / Mounting & Demounting

Measurement Table:

Stroke	F	G	Η	J	Κ	М	Ν	S	Т	W	Y	Ζ
DR16	10	4.6	4.5	3	2.35	3	2.8	2.5	M5	6	9	M4
DR22	13	5.6	5.6	4.2	3.7	4.2	3.5	2.5	M6	8	12	M4
DR28	16	7.5	7.5	5	5.4	4.8	4.8	2.5	M8	8	13.5	M4
DR34	16	10.5	8	7	7	5	6	4	M8	8	16	M4
DR40	20	11	11	7	8	7	7	4	M10	10	20	M6
DR46	25	13	13	8	8	9	9	5	M12	10	24	M6

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De-moulding strokes from 14mm to 60mm. Significant reduction to the ejection stroke. "Mirror" parts available for 1+1 cavities moulds.

In Mounting: Fast delivery of the required draft. Vertical function maximizing strength. Complete flexibility for the moulding insert dimension. Eliminates the need for high-precision angled housings in the core plates. Smaller and less expensive injection machine required. Possibility to produce angles bigger than ±20° upon request. Big savings in time & cost for machining and adjustments.

Stroke (Value): 14mm. Undercut Width (Value): 70mm. Ejection Stroke: 100mm. Mechanism Type: Mechanical Cooling Available: Yes Max. Undercut Degrees: +35° Min. Undercut Degrees: -55°



Ejector Foot

Code: DP



This unit is fixed through both ejector plates in conjunction with the spacer discs to provide support to the plates. These are fixed to the ejector plates so eliminating machining in the back plates. Easy installation by using just one screw.



Order	Α	В	C	D
DP.200506	20	5	6.5	3.5
DP.250508	25	5	8.5	4.4
DP.280610	28	6	12	5.5



Magnetic Safety Stopper (Code: TM)



Order	Α
TM.102214	10
TM.122214	12.5
TM.152214	15
TM.202214	20



This is a safety stop to prevent the actuation of the ejector bases. It can be easily removed to release the grip on the pins when required.

Shock Absorber Disc

Mounting Flange

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Code: **G110**







Used to minimize the vibrations caused by the ejector plates returning to position. The main advantage is the increase in the life of parts within the ejector frame through the reduction of damage and wear.

Order: TA.280806

★ It can also be used to support for ejector plates in injection moulds / etc.

8+0.1

★ Reliable product used for guide pillar with centre collar mountings min_d2 + 1

Support washer & Guide pillar fixa	tion		in injectio	n moulds / etc.	mountings mi	n. d3 + 1
		d3 +	Ø d3	Pillar Diameter d	Flange S	Screw M
	ĨØ	E 22 Ø 15 / 25 Ø 19 / 32 Ø 24 / 40 Ø 32 /	Ø 15 / 16			
			25	Ø 19 / 20	5.5 mm	
	Intersunk		32	Ø 24 / 25		
			40	Ø 32 / 30	7.5	M8 x 20
	Hes	Order:	50	Ø 38 / 40	0.5	
-	S	G110 x d3	60	Ø 48 / 50	9.5 mm	
		Usage: Support washer (Mould)	73	Ø 60 / 63		
	u3	Guide pillar fixation (Die)	93	Ø 80	12	M12 x 20
252 国		www.guvenal.net				G

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- 1Security Switch4Unique Part Number2Magnetic Fixing5IC Position Indicator
 - Total + Partial (Reset & Setting Up)

Order	Reset & Setting Up	Cycles / Min.
CC.HS5328	Suitable	Up to 500







High Speed Cycle Counter

Code: CC

The Counter is expected to last 3 to 5 years, if it worked 24hour 7day / 12 month. The Counter battery starts working when it is installed in the mould. When the Counter is removed from its placement, a capital "E" (error) is shown on the screen, which you cannot delete. This mechanism only activates after the first 25 consecutive shots. In case you want to know the injected pieces during mould testing, you can install the Counter and remove it with tape before the 25th shot, then the Counter will go back to 0. As it has 7 numbers, it can count up to 9.999.999 parts.

To check exact total life time of the mould. To ensure that how many shots a determined mould made when our sourced. To predict preventive maintenance. Available with partial reset. The unique part nº for each counter gives a guarantee to the mould makers and a planning aid for maintenance to the mould makers. Any tampering with the unit is shown in the screen.

This unit contains an electronic circuit which counts the number of cycles made by the mould.

Mounting Instructions:

- 1 Please machine housing in a way that as determined in technical drawing.
- 2 Please hammer Counter Pin (IC) of Counter to housing with bronze hammer.
- 3 Please insert Counter unit (CC) its housing.

Working Temperature:

We recommend the Cycle Counter be placed at zones under 60 °C (140°F).



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Ejector Plate Accelerator

Code: EP

This item allows increased movement of a second ejector plate within a normal ejector stroke. Simple mechanical double ejection system. Minimum space required for installation.

Avoids complex systems like others currently available in the market.

In small and medium moulds with standard ejectors, 1 piece is sufficient. In more larger moulds and systematic moulds according to their configurations,

dual Ejector Plate Accelerator can be used.

In a symmetric manner, generally 4 pieces.



NOTE: It is recommended two piece to be used reciprocatively in ejector system in mould applications.



Superior Double Ejector

Code: DX

The rear plates stop and the upper plates continue for the full ejection stroke. Thanks to the assembly of the units away from the center of mold but within the ejector frame the space required for installation is drastically reduced leaving more space for other mechanisms. Also works as the ejector guide pins and bushes, having the possibility of eliminating the need to install extra items. **Maximum working temperature 150°C.**



Standard Ejector Plate Combination

Size	D	X.14	1262	22	Size				DX.	163	027			
mm	1	2	3	4	mm	1	2	3	4	5	6	7	8	9
d1	5	5	5	5	d1	5	5	5	5	0	0	0	0	0
PI.1	17	17	17	17	PI.1	22	22	22	22	27	27	27	27	27
PI.2	9	12	12	12	PI.2	12	12	17	17	17	17	17	22	22
d2	13	10	5	5	d2	5	5	5	5	5	5	10	0	0
PI.3	12	12	17	17	PI.3	27	27	22	22	22	22	17	22	22
PI.4	9	9	9	12	PI.4	17	22	12	17	12	17	12	12	17

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Compact Double Ejection

Code: SY



Material: 1.1213 Hardness: 62 ± 2 HRC

Ø 70 н8

Detail

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Ø 32 h6

Developed for medium / large moulds. The upper ejector plate stops when reaching the core plate, and the rear plate continues until it reaches the upper plate. As the assembly of the units is not in the center of the mold, but within the ejector frame, the space required for



Two-Stage Ejector System

Code: DE

This unit divides the ejection travel in two predefined steps. Useful to obtain automatic ejector strokes in moulds with sprung cores and collapsible cores units. Only round pockets needed to install the part. Double ejector stroke up to 30mm.

Material: 1.7243 Hardness: 58 ± 2 HRC





Modular Retainer

Code: RM

Stroke Limiter

Stroke mechanical limiter for PR - Plate

Retainer. When PR coded product is used

dual opening systems with stripper limit

stroke of bearing plate which is opened

first in 1st group. Possibility to reduce

the max. opening - 60mm. Then 2nd

20-0.5

group's opening is engaged.

Cad Insertion Point

Useful for moulds that require delayed opening of parting line. Resistance can be increased by adding clips. No pocket machining required as needed with other similar products on the market. Minimum space required for installation. Reduces costs compared to conventional mechanisms. 4 pieces can be used on same surface max.

The system should be distributed to different areas if the more use is needed.







Plate Retainer

Code: SL

Code: PR

PR - Guarantees that the second opening stays closed until the first is completely open. 50 Kg. opening load required per unit (Minimum of 2 parts required).

Possibility to change inner spring from the parting line. Also protects mould affecting from vibrations and impacts by reducing speed tension and absorbing pinking during opening. The most important advantage of it is to extent life time of mould parts.



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Internal Latch Lock

Code: MX

Controls two stage opening of the tool. Internal mechanism. Reduced space required for installation. Developed for small / medium tools.

Can also be used to control two sets of ejection plates for two stage ejection.



After selecting the required stroke, fix the scale lever.



Designed for two steps opening moulds. The gradual scale allows selection of the first opening. The priority of opening depends on position of assembly. More accurate first plate opening compared to other conventional systems. Scale lever indicates opening of the first plate. Reduces costs compared to conventional mechanisms.



(Min. V)

Material: 1.2842 Hardness: 55 ± 3 HRC (friction area) Patented System

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Threaded Limiter

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Code: LR

Threaded Limiter (LR) is mounted and fixed to mould rear mounting / bearing plate (H5 A). Movable bush part of the unit is inserted into the ejector plates. Limits the stroke of a threaded lifter with respect to the ejector stroke.

Enables two stage ejection with only one ejector plate. All movements are 90° to the parting line.

Material: 1.7243 Hardness: 58±2 HRC Max. working temperature: 150°



Threaded Limiter Adapter Allows the use of the LR for internal threads. It is a dual different threaded adapter providing positioning of LR. In Addition: Fine tread part of AL also can be used as joint adapter for PW - Sprung Cores & PS - Standard

Code: AL



M8 x 10

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Ejector Pin Base (for headless ejector pins)

The ejector base unit is an automatic unit which holds the ejector pin in position until the top is actuated. The pins can be taken out from the front of the tool. Enables quick replacement of ejectors, ejector sleeve and moulding inserts without taking the mould from the press. There is no requirement for strip down when repair or maintenance is needed.



Order	Α	В	С	CR(N)	
BE.031115	3	11	15	≥ 2550	
BE.041216	4	12	16	≥ 2550	
BE.051317	5	13	17	≥ 3800	4
Code: BA	Code:	BT			

Or	dor	٨	B	C	D	
01	101	A	D	U	BA	BT
BA.061418	BT.061418	6	14	18	3.5	4.2
BA.081620	BT.081620	8	16	20	5.5	6.2
BA.101822	BT.101822	10	18	22	7	7
BA.122024	BT.122024	12	20	24	9	9



Accelerated Ejector Code: AE Allows to increase the stroke of selected ejectors within the tool. It is easy to install due to its cylindrical shape and possible to automate conventional tools Enables 8mm. / 15mm. / 20 mm. additional stroke on one ejector pin. Only round pockets needed to install the part. Possible to key. Enables quick replacement of the ejector pin. Material: 1.7225 Hardness: 54 ± 2 HRC Max. working temperature: 150° Patented System 0 ØD R М **Cad Insertion Point** Mat.: Brass Order А В С D Ε F AE.031620 3 16 20 12.5 22 13 AE.041620 16 12.5 4 20 22 13 AE.052430 5 24 16 30 34 16 AE.062430 24 6 30 16 34 16

J	K	L	М	N	Р	Q	R
8	32	22	17	37	-	4	3
8	32	22	17	37	-	4	3
15	44	36	27	57	2	4	3
15	44	36	27	57	2	4	3
15	44	36	27	57	2	4	3
20	62	46	34	78	2	6	4
20	62	46	34	78	2	6	4

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17

21.5

21.5

34

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17

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When the internal bushing of this piece gets in contact with the plate, the mechanism starts working. From that point, the ejector of the **AE** goes at double stroke. The extra strokes of units:

- 8mm (0.315") of extra stroke, with the AE031620 and AE041620.

AE.082430

AE.103036

AE.123036

8

10

12

24

30

30

- 15mm (0.591") of extra stroke, with the AE052430, AE062430 and AE082430.

- 20mm (0.787") of extra stroke, with the AE103036 and AE123036.

results to key for using a curved ejector pin. (except AE.031620 & AE.041620)





Code: IT

High Temperature Insert for Date Stamp

Due to fact that the insert is adjustable / removable from the front of the mould, there is no need to remove the tool from the machine or disassemble the mould.

Material: 1.2344 Nitrided





Order Arrow only	Order Year	С
IT.4719SF	IT.4719	4.7
IT.6719SF	IT.6719	6.7

* Please indicate the desired year after the code.

IMPORTANT!





High Temperature Date Stamp

High temperature date stamp. Designed for injection mold tools which operate in high temperature environments,

like: Zamak, Zinc, Polyester, Bakelite, etc.. Possibilty to change annual insert. Material: 1.2344 Nitrided + Inconel 2.4669 Max. working temperature: 450°



Possibilty to change annual insert.



Order 12 Months	Α	В	C	D	N
FT. 0847SF	8	12	4.7	11	5
FT. 1267SF	12	16	6.7	12	8
Order 12 Months + Year	Α	В	C	D	N
FT. 084712	8	12	4.7	11	5
FT. 126712	12	16	6.7	12	8
Order Year	Α	В	C	D	N
Order Year FT. 084705	A 8	B 12	C 4.7	D 11	N 5
Order Year FT. 084705 FT. 126708	A 8 12	B 12 16	C 4.7 6.7	D 11 12	N 5 8
Order Year FT. 084705 FT. 126708 * Please indicate th	A 8 12 he des	B 12 16	C 4.7 6.7 ear aff	D 11 12 ter the	N 5 8 code.
Order Year FT. 084705 FT. 126708 * Please indicate the the depth is the end	A 8 12 he des graving	B 12 16 ired y	C 4.7 6.7 ear aff	D 11 12 ter the	N 5 8 code. Stamp:

FT.08 (Year)	:	0.15-0.25mm
FT.08 (Arrow)	:	0.40-0.50mm
FT.12 (Year)	:	0.15-0.25mm
FT.12 (Arrow)	:	0.50-0.60mm





Block Base Insert

Code: BM

Wide range of diameters. Possibility of 3 or 4 information's. Only a H7 pocket required for assembly. No downtime when changing inserts. Guarantee that the insert will be replaced due to internal mechanism. **Material:** INOX 1.4034 **Hardness:** 51 ± 3 HRC **Max. working temperature:** 150°



BM.180604	18	6.5	8	4
BM.220903	22	8.7	10	3
BM.250904	25	8.7	10	4
BM.281103	28	11.5	12	3
BM.321104	32	11.5	12	4
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Date Stamp Plus

Code: FP...

Possibility for cooling circuits below the date stamp as they are removed from the front (with the EF). Inner insert is always at the same level as the body of the date stamp. Exact outer number positioning. Ideal clamping area.



C	D	L	N	
2.2	5.5	12	4	
3.0	5.5	12	4	1
3.2	8.0	20	5	
4.7	8.0	20	5	
5.7	8.0	20	6	'
6.7	8.0	20	8	
8.7	8.0	20	10	Г
10.7	8.0	20	10	
	C 2.2 3.0 3.2 4.7 5.7 6.7 8.7 10.7	C D 2.2 5.5 3.0 5.5 3.2 8.0 4.7 8.0 5.7 8.0 6.7 8.0 8.7 8.0 10.7 8.0	C D L 2.2 5.5 12 3.0 5.5 12 3.0 5.5 12 3.2 8.0 20 4.7 8.0 20 5.7 8.0 20 6.7 8.0 20 8.7 8.0 20 10.7 8.0 20	C D L N 2.2 5.5 12 4 3.0 5.5 12 4 3.0 5.5 12 4 3.2 8.0 20 5 4.7 8.0 20 5 5.7 8.0 20 6 6.7 8.0 20 10 8.7 8.0 20 10 10.7 8.0 20 10







Xtra Date Stamp

This is a permanent date stamp where only the central year insert is changed. The month is changed by using a screwdriver. Completely stainless. Only a H7 pocket required for assembly.

Material: INOX 1.4034 Hardness: 51 ± 3 HRC Max. working temp.: 100°

A	C	E	N	S		
6.0	3.2	4	5	0.25		
8.0	4.7	6	5	0.25		
10	5.7	8	6	0.35		
12	6.7	10	8	0.35		
Order: FX. (options) x A						



Code: IX..

Xtra Insert for Date Stamp

Due to fact that the insert is adjustable / removable from the front of the mold, there is no need to remove the tool from the machine or disassemble the mould. Material: INOX 1.4034

Hardness: 51 ± 3 HRC



C	Order					
	Year	Arrow Only				
3.2	IX.3215	IX.3215SF				
4.7	IX.4715	IX.4715SF				
5.7	IX.5715	IX.5715SF				
6.7	IX.6715	IX.6715SF				





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Bronze



Air Valve for High Pressure

Ø A m6

Developed for high injection pressures and high speed cycles. Incorporates an internal stopper to sustain injection loads, preventing the system to block. Keyed unit to allow the installation in angled or shaped surfaces. Easy installation thanks to its adjusting ring, as well as allowing uninstallation if needed.

ad Insertion Point

Code: VH

Material: INOX 1.4034

Hardness: 51 ± 3 HRC Max. working temp.: 150° Working pressure: 2-10 Bar 1 Bar \approx 1 Kg. / cm²



Air Poppet Valve

Code: VA

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Mechanical Stop

C -0.05

Μ

2.5

0.95

0.95

0.95

Manufactured completely from stainless steel this unit has the advantage of high airflow. Helps part ejection with air. Recommended working under 150°C (302°F). Above that temperature, steel starts dilatation, so the resort introduced on the Air Valve would lose efficiency. If so, the plastic material could go in and the Air Valve would be damaged.









Laminar Gas Vent

Order Code: LV.483610

Helps venting the mould cavity and the pneumatic ejection of the plastic part (allows air passing in both directions). Maximize performance installing at the end of the plastic flow. Supplied with 6 covers for maintenance purposes. Also designed for use with Cumsa VB and SV systems.

Material: 1.4021







Gas Venting Filter for Diecasting (aluminium & zamak moulds)

Code: AHV

It is designed / produced with heat treated and large discharge poles. It is a specially designed and highly productive product for Diecasting Moulds & Injection Moulds.

The service life of the product is longer than the equivalent products. You can minimize product replacement times by increasing productivity levels.



Order	D (Ø)	L (mm)	A (Pore pcs.)
AHV.03	3.0	10	40
AHV.04	4.0	10	40
AHV.05	5.0	10	90
AHV.06	6.0	10	90
AHV.08	8.0	10	200
AHV.10	10	10	340
AHV.12	12	10	340
AHV.16	16	15	340
AHV.20	20	15	550





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Code: SGA

Sintered Gas Venting Filter

With its sintered & multi-pores structure, it is a special product which discharges compressed gas in injection moulds. Sintered Gas Venting Filters are used for optimum venting of the mould cavity. It is a high quality, stainless product which does not leave marks on injected objects and can resist high pressures.





Sintered Gas Venting Filter with Steel Casing

- External surface grinded.
- Sintered structure.

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Material: Stainless Sintered Steel Filter Fineness: 10 Microns Tension: 300 N / mm² Resistance: Weak bases - Organic acids, Plastic metta - Synthetic resins

2	r lastic metto - Oynthetic realits						
	Order	D	L		Order	D	L
	GVSY.04	4			GVSY.12	12	12
ſ	GVSY.06	6	10		GVSY.16	16	14
ſ	GVSY.08	8			GVSY.20	20	15
	GVSY.10	10	12		GVSY.28	28	15
-	GVSY.08 GVSY.10	8 10	12		GVSY.20 GVSY.28	20 28	15



Code: GGA

Code: GGA

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Mounting

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Gas Venting Filter - Yellow Wired

In injection moulds, it drains unwanted gas created by melted raw material fast via wide channels. Does not resist to very high pressures, can dent and leave a mark on objects in stamp. It is mostly suitable to be used inner parts. It can be used in metal injection moulds which do not require very high temperature. **It is an economical product.**

In Mounting: Please use copper / rubber hammer. Do not make any mechanic or polishing / levelling process on filter unit, since this would clog up the pores.

In Production: Never touch Venting Filters on operating moulds by hand.



D

3.0

4.0

5.0

6.0

8.0

10

12

16

Order

GGA.03

GGA.04

GGA.05

GGA.06

GGA.08

GGA.10

GGA.12

GGA.16



Air Venting Valve for Blow Moulding

It is used in blow mouldings for optimum ventilation to mould cavity. Due to the air channels of valve being parallel and wide, it drains the air in mould rapidly, also air chamber inside of the unit acts as a pool in drainage of the air. If the burrs become on the product that should be cleaned instantly. Those burrs causes adhesion to pores. For cleaning, the compressed air or cleaning spray can be used. (**Guvenal Cleaning Spray Code:** W170104).

Mounting: It provides tight keep and inside the safe of hole thanks to its knurled outer part.







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Recycling Date Stamp

Code: GDM

(Plastic raw material data, definition & recycling stamps)

Text and Definition Characters: It is for precise sign / mark and definition of plastic raw material that is inlaid in 0.2 depth (conical graduated) processing on moulds in production according to diameters. In Addition, it facilitates to recognize raw material that is about to break.

Stamp: It is compatible with DIN 6120 single symbol, ISO 1043-1 normal sign / mark and international codes.



Date Stamp - Screwed

Code: VKT

The Date Stamps which are mostly preferred for medium and small dimensional moulds.

Easy to mount and can be mounted on tools such as Ejector Pins. Rotary inner hub of Date Stamps can be adjusted as limitless (worm gear). Mounting is completed by pressing on inner hub arrow and pulling with screw from lower part. We offer wide range of options with our affordable prices.



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Date Stamp

Code: **KT**

Standard Models

It is suitable to be used in all injection mould systems. Only a hole as product diameter (H7 - Reamed) is sufficient for mounting to mould. **Mounting:** Drill a suitable hole in the desired part of mould and place Date Stamp into it (with bronze or rubber hammer). Making a tight hole (not to rotate date stamp) is useful.

A wide range of options are available at affordable prices.







Multi-Date / Double Date Stamp

Code: DKT

Two different Date Stamps, with a unit as months + years. This Guvenal product reducing needs and area required for cost and two different Date Stamp, shows two different criteria on one unit. Its standard model is as 12 month + 6 year, in other words is not required any change along 6 years. The length of all Date Stamps are same (20 mm).



Order	D	В	С	E	Ν
DKT.08	8	5.5	3	6	5
DKT.10	10	6	3	10	6
DKT.12	12	8	4	10	6
DKT.16	16	10.5	5.3	12	10
DKT.20	20	12	6	16	12



- + 4 pcs, 1.5 2 2.5 3 head mini screwdriver.
- + 2 pcs, PH0 PH1 phillips head mini screwdriver.
- * Chrome vanadium steel.
- * Blackened stainless ends.
- * Ergonomic handles.
- * Upper part of handle is rotary head.

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Air Venting Valve

Code: CHV

"CHV" Air Venting Valves produced from stainless steel. It provides high air discharge. Also, the conical ejector rises and helps the product exit from mould. The operating temperature under 150°C is recommended.

In higher temperature than 150°C; steel starts to expand and melt plastic raw material gets into valve and prevents operation.



Material: INOX 1.4034 Operating air pressure: 1.5 - 6 Bar

1 BAR \gtrsim 1 Kg. / cm 2

Order	Α	В	С	D	Н	М
CHV.05	5	3	12	1.5	7	2.5
CHV.06	6	5.2	12	1.5	7	0.95
CHV.08	8	6.5	12	1.5	7	0.95
CHV.10	10	8	12	2	7	0.95
CHV.12	12	10	12	2.5	7	0.95
CHV.16	16	13	20	3	12	1.55
CHV.20	20	17	20	3.5	12	1.55



Double Air Venting Valve

Code: DHV

"DHV" Double Air Venting Valves produced from stainless steel. The product is effective for the semi-pneumatic ejection method. It is effective in discharging gas and air trapped in the final filling areas of deep details in the moulds or in other possible areas and it helps the product exit from mould.

In mounting; please use the copper or rubber hammer and bronze wedge.





Material: INOX 1.4034





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Order	d	d1	L	L1
DHV.08	8	5	12	7
DHV.10	10	6	12	7
DHV.12	12	8	12	7
DHV.16	16	10	20	12





