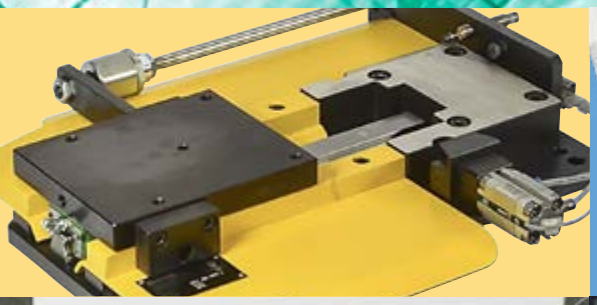

Presses
Accessories
Controls
Press Force Monitoring
Special machines
Service

GECHTER™

Your specialist in presses

Feel the Performance

Simply produce the best

www.gechter.com

Service and Contact

Please ask our *GECHTER* Serviceteam for quick and uncomplicated advice, support, or documentation.

Your service number Phone +49 (0)911 98 28 73-20 Fax +49 (0)911 98 28 73-99 sales@gechter.com

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D-39124 Magdeburg
Phone: +49 39 16 28 85 0
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E-Mail: info@goertler-hv.de
www.goertler-hv.de

GECHTER™
Your specialist in presses

Welcome and thank you for your interest in the ***GECHTER*** machinery program

The *GECHTER* range of products offers you a vast variety of cutting-edge and profitable solutions for the assembly of components.

The *GECHTER* service team will help you find the best solution for you.

www.gechter.de **Feel the Performance**
Simply produce the best

Content

You need to assemble or process components and you are wondering which type of connection best fits your needs? Bonding, brazing, welding or screwing are excluded due to safety or cost considerations?

Simply produce the best.

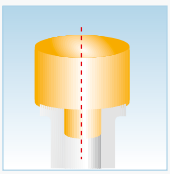
We offer solutions!

Our experts will help you to find the best approach to meet your specific requirements. Our strength is providing solutions. These range from standard solutions to customized ones that involve construction services.

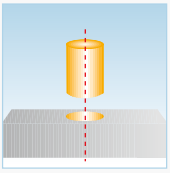
We`ve got the technology, we´ve got the experience, and we´ve got the solution. We can construct complete automation lines for you with sophisticated, type-examination tested safety and control technology. The ISO-compliant documentation, as well as the ***GECHTER*** safety and control programs with accurate force-displacement monitoring allow you to manufacture even the most sensitive component parts.

Flaring, press inserting, forming, calibrating, marking, mounting, riveting, cutting, punching, and crimping? What are your requirements? We will provide the perfect solution for the production of your component part.

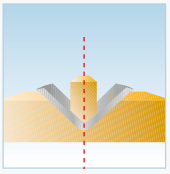
Flaring



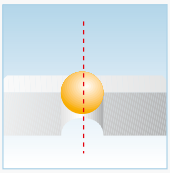
Press inserting



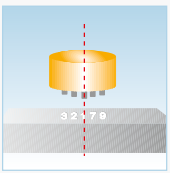
Forming



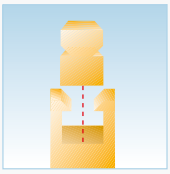
Calibrating



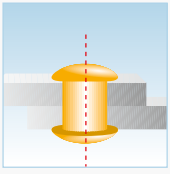
Marking



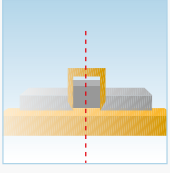
Mounting



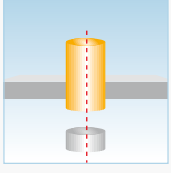
Riveting



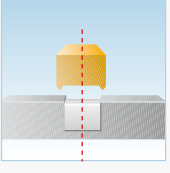
Cutting



Punching



Crimping

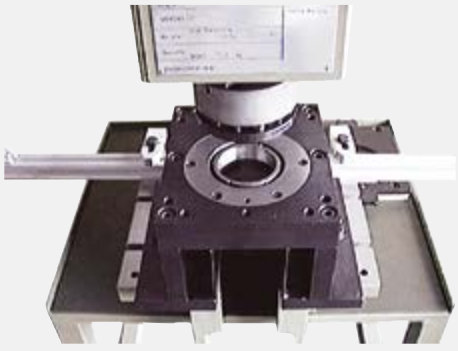


We would be happy to analyze for you whether the solution that best meets your needs is one of the ***GECHTER-***

Crimp presses
Manual rack and pinion presses
Manual toggle presses
Pneumatic aided manual presses
Linear acting pneumatic presses
Pneumatic toggle presses
H-frame hydro-pneumatic presses
C-frame hydro-pneumatic presses
Presses with light curtain/
Electropneumatic Rotary indexing tables/
sliding tables

or rather one of our:

Special machines, fixtures, and special tools.



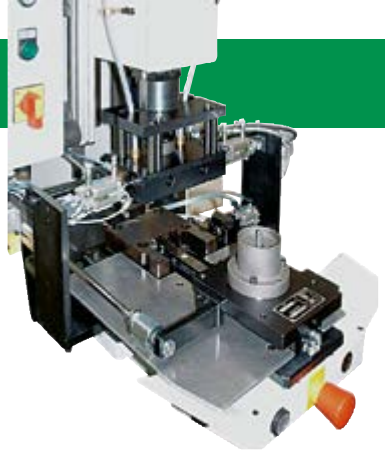
Punching and forming tool

Punching tool with punched part

Press inserting device

Cutting device

Press inserting device



Press inserting device

Crimping device

Punching device with punched part

Punching device

Technical Characteristics of the *GECHTER* Presses

This label indicates ***GECHTER*** presses with particularly evident differences in quality.

Pay attention to this label in the catalog!

The particular advantages of an object are not always visible at first sight. This applies to *GECHTER* presses and special machines as well. It is worthwhile taking a closer look

Commercial production requires reliable and robust machines that have been optimized for the task they have to perform. Our experts will accept no compromise in terms of material selection and production accuracy in mechanical engineering. The benefits mentioned on this page are a further proof of our practice-oriented love of detail. In combination with the optional accessories and tools, ***GECHTER*** presses guarantee you a successful production. To make things perfect, we also provide the corresponding manuals and technical documentation.

The height positioning *for tools with different fitting dimensions has a measuring device for precise adjustment. The press head is guided by a flat guide when it is adjusted (ISO fit H7/f7). The clamping is perfomed by means of several hexagonal bolts across the complete press body.*

No-play adjustable prism guide
Only ***GECHTER*** *presses are equipped with a no-play adjustable prism guide from the smallest class upwards. Lateral and twisting forces are effortlessly absorbed. This allows the use of cutting, embossing, and bending tools without a punch guide.*

Tool holder
The clamping piece at the ram is removable from the front (type 5 HKPV and higher) and facilitates the clamping and unclamping of the tool. It creates a strong positive holding force without damaging the tool's clamping pivot.

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Simply produce the best

Technical Characteristics

Pull lever
The pull lever can be repositioned by 360° and can thus be adjusted for right- or left-handed operators (except 4 HZP).

Clamping surface
Large table clamping surface with T-slots.

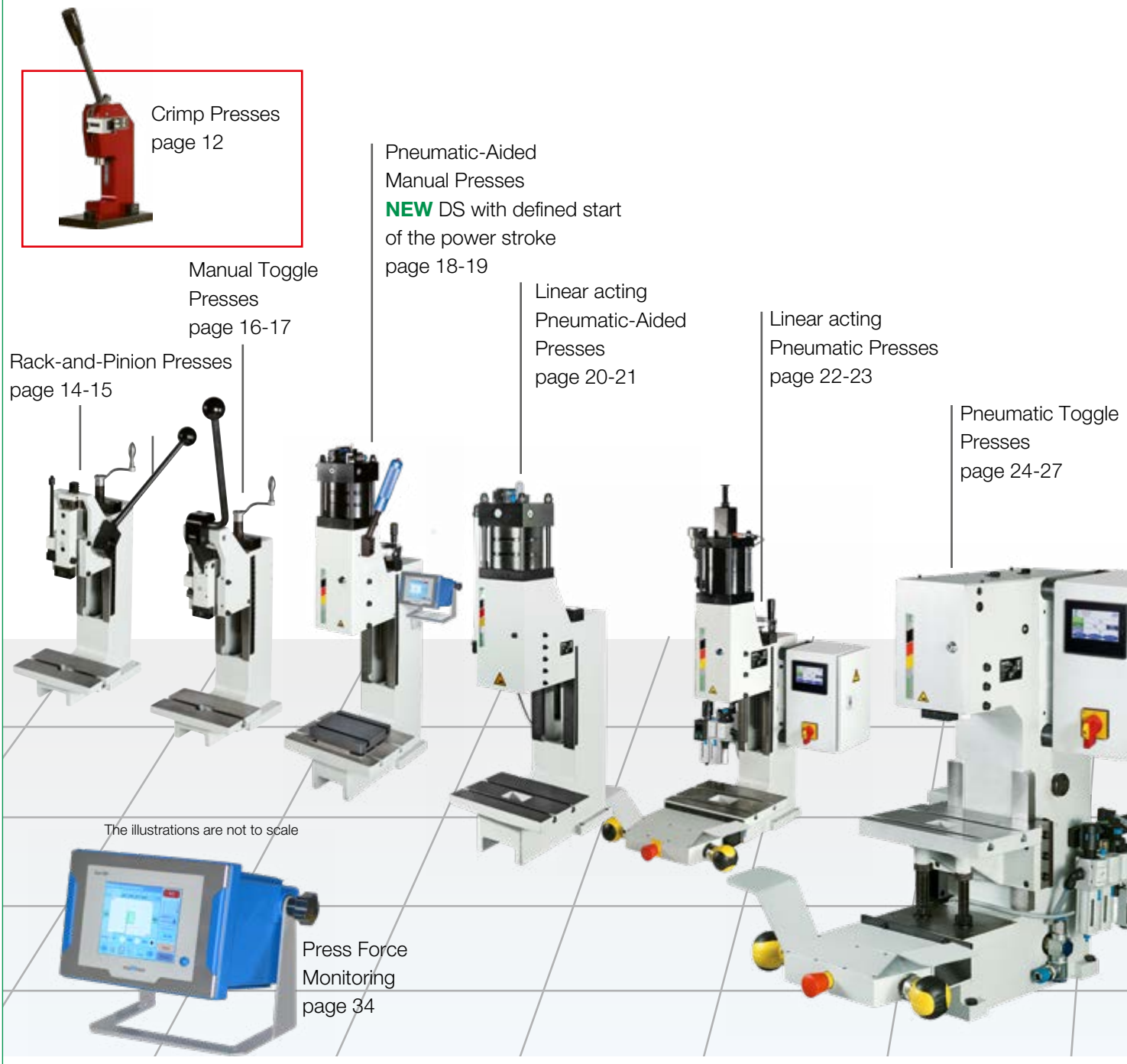
The customized GECHTER press for your individual applications

Extended daylight and throat
*All **GECHTER** presses from 4 kN to 60 kN with inverted V guide come with three different stand options*

The range of ***GECHTER*** presses provides you with a vast variety of solutions

On the following pages you will find several variations for each press-type and, of course, a detailed description of each. As your reliable partner for presses, we are looking forward to consulting you as to the type of press most suitable for your needs. Choosing a suitable press is crucial to your company's success. We also offer a wide variety of accessories and tools that will enable you to meet every challenge.

Design



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Feel the Performance
Simply produce the best

All-in-one solutions from a single supplier

Construction

Manufacturing

Tools

Hydro-Pneumatic
C-Frame Presses
page 28-31

Hydro-Pneumatic
H-Frame Presses
page 32-33

Servo Presses
SVR 10 | SVR 20 SVR 40
page 10-11

The illustrations are not to scale

Safety technology
Light curtain

The SRV servo presses with integrated force-displacement monitoring are particularly suitable for use in high-precision assembly processes.

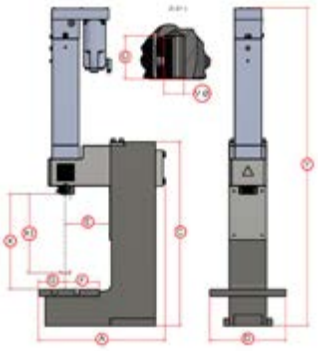
Due to exact controllability and positioning, you can realize efficiently force-controlled applications as joining, caulking, crimping, bending as well as test/measurement methods.

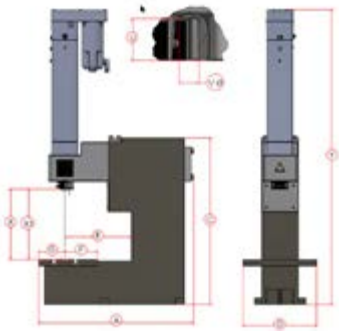
The direct access
Website SRV10
SRV20
SRV40

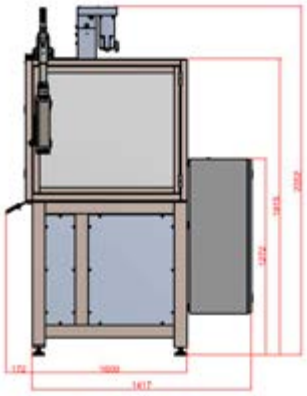
D-CON control

- Intuitive operating concept via HMI
- Error detection and localization in plain text, visual fault indication
- Integrated piece counter with various counting modes
- Exactly programmable holding time
- Connectivity to process automation
- Connectivity to process automation
- System expansion with i.e. rotary indexing table, pick&place unit, feeding systems
- Connectivity to safety-related equipment i.e. light curtain, optional ***GECHTER*** VISIO cover or closed safety cell
- Various expansion possibilities via digital inputs/outputs (Basis Siemens ET200 SP)
- Individual customized adaptations/system integration possible
- Remote maintenance module

- Precise force control
- Exact positioning allows high precision
- Intelligent bending compensation
- High flexibility due to free configurable pressing profiles
- Real-time behaviour thanks to direct control of the servo amplifier
- Integrated measurement technology
- Max. 128 programms can be created
- The integrated workflow control allows to represent even complex processes quickly and flexibly
- Max. 10 evaluation criteria can be integrated simultaneously
- Integrated curve memory for max. 5000 curves
- Statistics and logging of the measuring results (Q-DAS, CSV, PDF, XML, IPM 5.0, QDA9, QWX)
- Selected process values to diagram
- Substantive NIO reason diagnosis, process value trends, etc.
- Warnings and alarms, i.e. NIO-in-succession







High stand G602
(Dimensions in mm)

w/o ill.

Dimen-sions	10 & 20 kN	40 kN
A	565	565
C	815	815
D	340	340
E	200	200
F	150	150
G	120	120
U	32	50
VØ	Ø15H7	Ø25H7
X	425	410
X1	350	350
Y	1413	1563

Overhang stand G601
(Dimensions in mm)

w/o ill.

Dimen-sions	10 & 20 kN	40 kN
A	713	713
C	769	769
D	340	340
E	300	300
F	150	150
G	120	120
U	32	50
VØ	Ø15H7	Ø25H7
X	325	310
X1	325	310
Y	1363	1563

Seated workstation design

Total height	10 & 20 kN	40 kN
For G602	2105 mm	2252 mm
For G601	2155 mm	2302 mm

Standing workstation design

Total height	10 & 20 kN	40 kN
For G602	2205 mm	2352 mm
For G601	2255 mm	2402 mm

Weight:	495 kg
T-Nut:	2x DIN 650 M10x12 mm, 100 mm distance
Pass-through hole:	80x60 mm
max. permitted mass of the upper tool:	25 kg (max. permitted dimensions of the upper tool: Ø80 mm)
Bending:	0.015 mm/kN | 0.30 mm at 20kN
max. traverse speed:	250 mm/s
max. stroke length:	350 mm

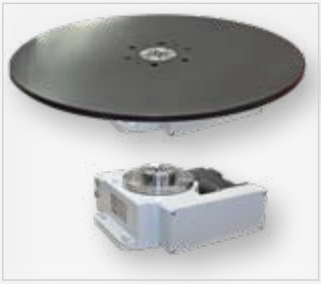
Subject to technical modifications.

ACCESSORIES

Safety technology
Light curtain

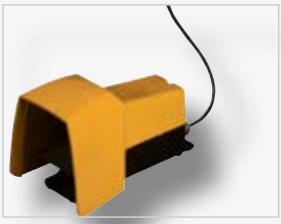
Sorry, illustration does not yet exist

- Visio cover
- Closed safety cell



Rotary table with fix cycle time TC150

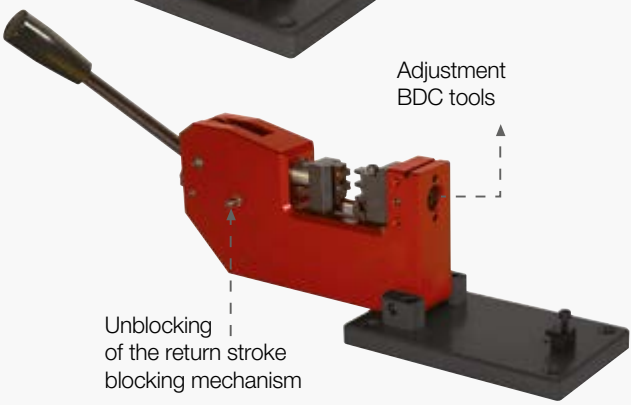
The ***GECHTER***-expansion modules for realising customized process workflows are also available for the new servo press.

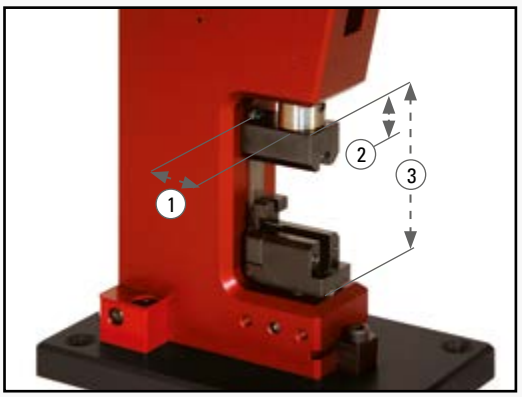


Electrical footswitch

Please ask for our special brochure on the servo press SRV10 | SRV 20 | SRV 40!

GECHTER Crimp Press CR10/H50

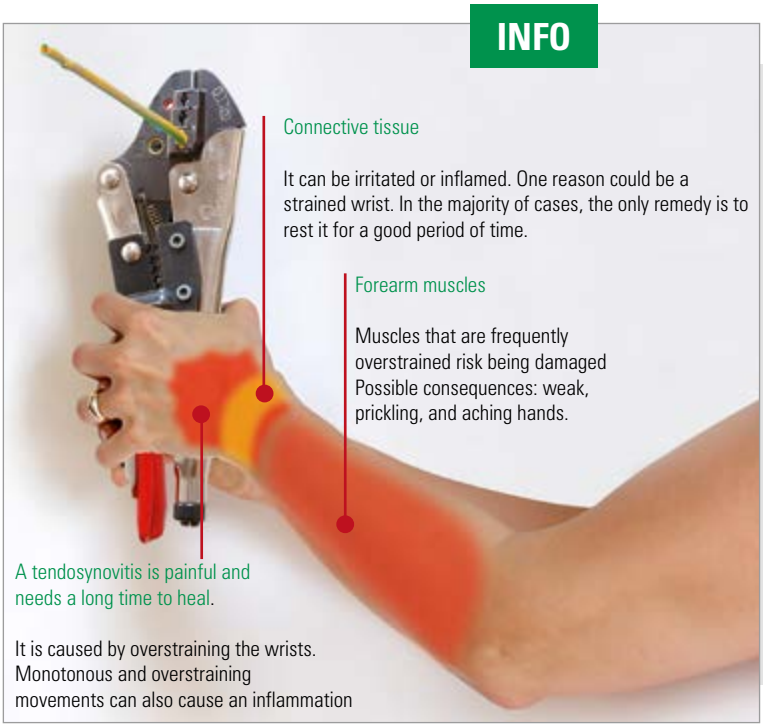




		CR10	CR10/H50
1	throat	22 mm	22 mm
2	Stroke length, adjustable	17mm	17 mm
3	daylight	76 mm	126 mm
	weight	3 kg	3.2 kg

Force at Bottom Dead Centre (BDC) at point of permissible lever-operating force max. 200 N
Press force at Bottom Dead Centre (BDC): 12 kN

INFO



Assemble component parts with constant precision and rapidity using minimal muscle force


Adapter bottom part*


Adapter upper part


Crimp tool insert

CR10


Holex

CR10


Pressmaster

CR10


AMP/Knipex/Tyco

CR10/H50


WEZAG

CR10/H50


WEZAG

Manual Toggle Presses with Circular Guide

The muscles and sinews of the hands and arms are not designed for frequent, repeated strain.

Avoid production losses, schedule difficulties and quality deterioration.

Dimension	Type 2.5 HKP/E
Force at BDC with permitted lever operating force	max. **5 kN** max. 190 N
A2	188
B	50
C	260
D	120
E*	70
F	55
G	39
U	21
V	Ø 10 H7
X*	70-165
X1	0-32
Y	413-510
Weight	7 kg

Subject to technical modifications.
Dimensions see page 14.

Advantages:

- higher press force
- ergonomic work movements
- easy and precise positioning of the workpieces in the tools
- we manufacture the suitable adapter
- suitable for many tools from various manufacturers
- adapter is exchangeable
- quick change crimp tools
- easy and precise adjustment
- integrated return stroke blocking mechanism
- stroke counter (optional)


1


2


3


1


4

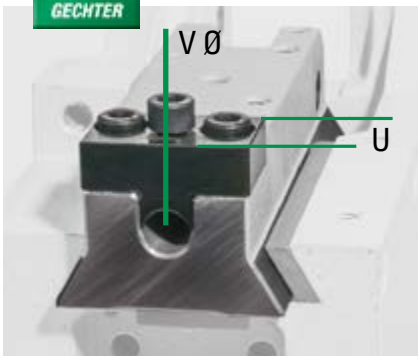

5


6

	Accessories for your press	Options	Your selection	1 Type 2,5 HKP/E
1	Standard press without accessories			X
2	Precision depth adjustment PTE (adapter)	select any		X
3	Ergonomic handle			X
4	Centering plate with center bore			X
5	Highly stressable sliding table, mechanical	select one		
	Highly stressable sliding table, mechanical with locking bolt			
6	Clamping pivot without collar	select one		X
	Clamping pivot with collar			X

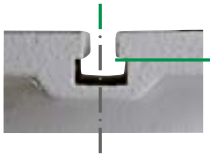
X = available

Please note that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.



Unique ***GECHTER*** quality*
No-play adjustable prism guide.
The clamping device can be removed towards the front, so that the clamping pivot is not damaged.

* applies only to 4HZP



With press force monitoring
Page 34

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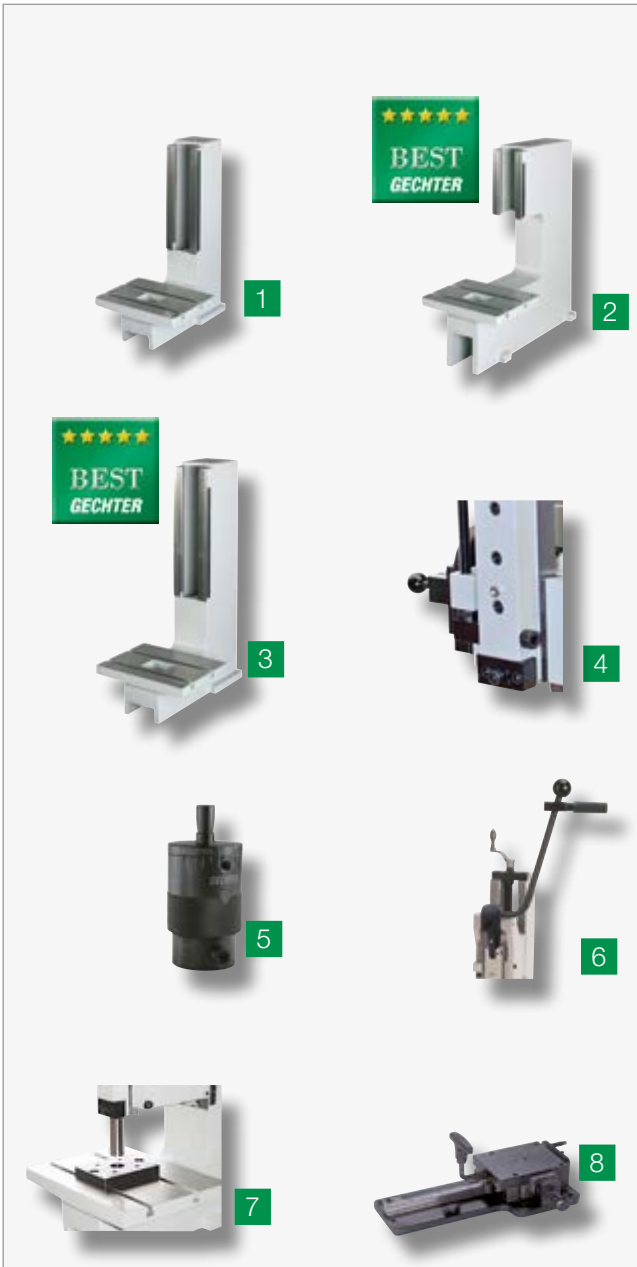
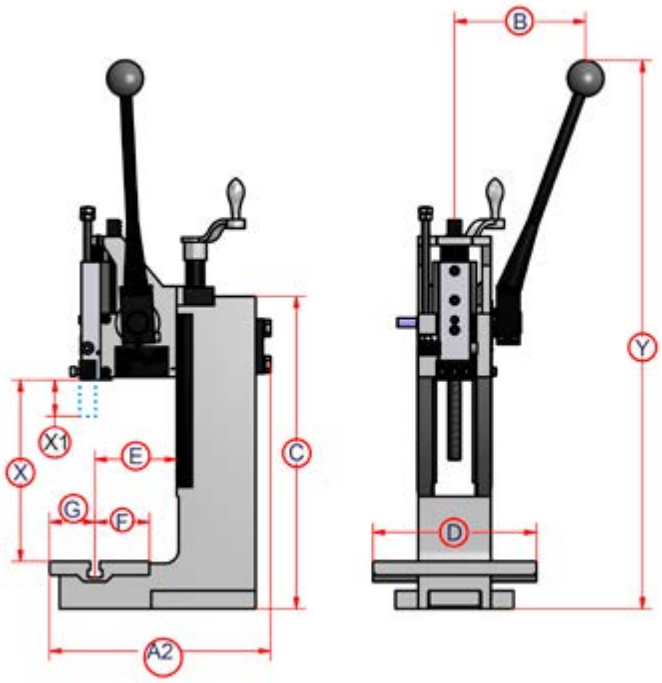




Dimen-sion	Type 2 HZP	Type 4 HZP
Force	1,5 kN	2,5 kN
A2	188	243
B	85	140
C	260	344
D	120	180
E	70	90
F	55	60
G	39	50
U	21	21
V	Ø 10 H7	Ø 10 H7
X	85-180	70-200
X1	0-54	0-100
Y	365-460	465-600
Weight	7,5 kg	19 kg

Subject to technical modifications.

	Accessories for your press	Options	Your selection	1 Type 2 HZP	2 Type 4 HZP
1	Standard press without accessories	select one		X	X
2	Extended throat up to 200 mm				X
3	Extended daylight + 100 mm				X
4	Return stroke blocking mechanism	select any		X	X
5	Precision depth adjustment PTE (adapter)			X	X
6	Ergonomic handle			X	X
7	Centering plate with center bore			X	X
8	Highly stressable sliding table, mechanical	select one			X
	Highly stressable sliding table, mechanical with locking bolt				X
9	Clamping pivot without collar	select one		X	X
	Clamping pivot with collar			X	X

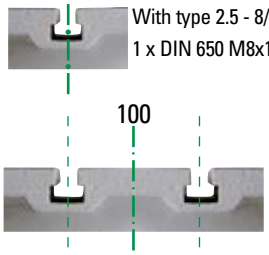
X = available

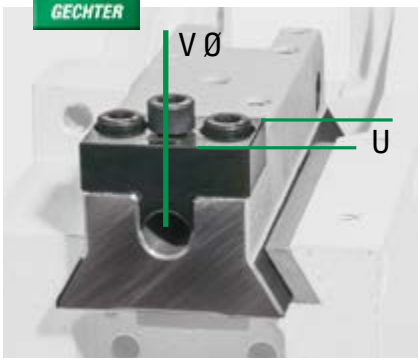
Force/stroke table

Dimension	8/12 HKPV	8/16 HKPV
x1 at <F. max x2 at F. max	0-45 0-23	0-56 0-25
KForce at BDC with short stroke	20 kN	32 kN
Force at BDC with long stroke	16 kN	24 kN

Subject to technical modifications.

On the following pages, you will find detailed descriptions and further illustrations on each topic:





Unique ***GECHTER*** quality
No-play adjustable prism guide.
The clamping device can be removed towards the front, so that the clamping pivot is not damaged.

With press force monitoring
Page 34

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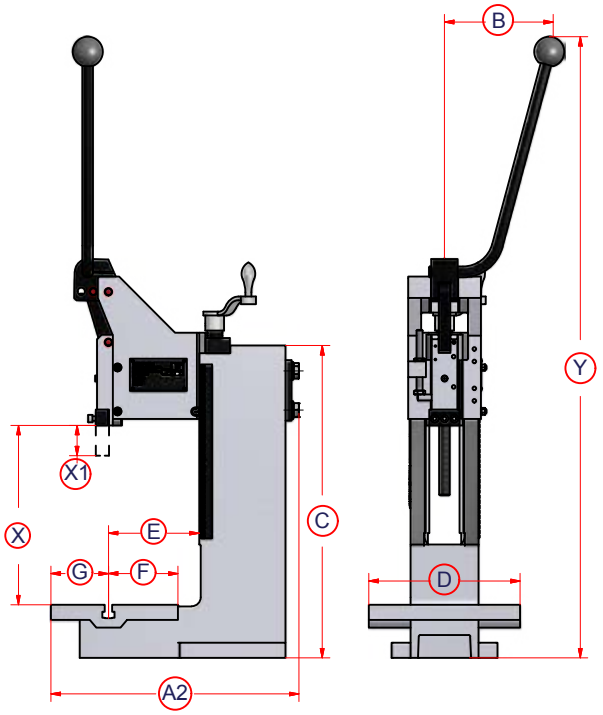


Dimension	Type 2.5 HKPV	Type 5 HKPV	Type 8/12 HKPV	Type 8/16 HKPV	Type 50 HKP
Force at BDC with permitted lever operating force	max. **8 kN**	max. **14 kN**	see table below		max. **55 kN**
	max. 280 N	max. 320 N	max. 350 N	max. 420 N	max. 330 N
A2	220	243	328	445	565
B	140	140	140	160	220
C	320	344	415	590	715
D	150	180	200	300	340
E*	90	90	120	160	200
E extended	-	200	300	300	300
F	60	60	92	130	150
G	40	50	75	100	120
U	25	21	21	29	44
V	Ø 10 H7	Ø 10 H7	Ø 10 H7	Ø 15 H7	Ø 25 H7
X*	75-190	70-195	75-240	100-320	110-370
X1**	0-42	0-40	0-45	0-56	0-15
Y	480-600	595-715	655-820	930-1150	1250-1510
Weight	11.5 kg	20 kg	32 kg	79 kg	242 kg

* Change of dimensions for HMS presses!
** Special stroke length on request

Subject to technical modifications.

Please note that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.

	Accessories for your press	Options	Your selection	1 Type 2,5 HKPV	2 Type 5 HKPV 8/12 HKPV 8/16 HKPV	3 Type 50 HKP
1	Standard press without accessories	select one		X	X	X
2	Extended throat (see table on the left)				X	X
3	Extended daylight + 100 mm				X	X
4	Integrated PFE fine tuning device	select any			X	
5	Mechanical return stroke blocking mechanism			X	X	
6	Precision depth adjustment PTE (adapter)			X	X	X
7	Ergonomic handle			X	X	
8	Centering plate with center bore			X	X	X
9	Mechanical stroke counter			X	X	X
10	Highly stressable sliding table, mechanical	select one		X	X	X
	Highly stressable sliding table, mechanical with locking bolt				X	X
11	Clamping pivot without collar	select one			X	X
	Clamping pivot with collar				X	X

X = available

	HKP/L-DS 2/4/8/12 kN	HKP/L-DS 13/20 kN	HKP/L-DS 33/45/56 kN
Operating pressure Press force kN at X bar approx.	2-7 bar 4/8/12 7.7 bar	2-7 bar 13/20 7 bar	2-6 bar 33/45/56 6.5 bar
Air-consumption, max. per stroke	0.07/0.07/0.11/0.14 L x bar	0.19/0.25 L x bar	0.45/0.56/0.67 L x bar
Pneumatic connection hose	1/4"	3/8"	1/2"
Weight in kg	ca. 42/42/43/44	ca. 102/104	ca. 215/ 219,5/221,5

Subject to technical modifications.

NEW

Defined start HKP/L DS

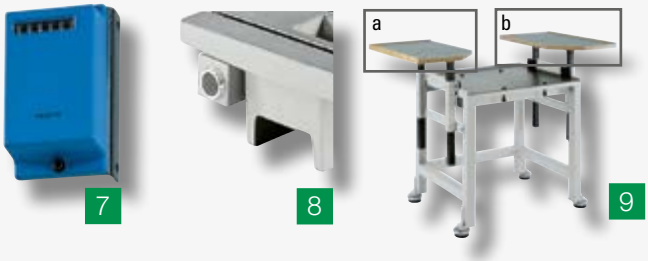
Functional description DS-handle
The ram is lowered with a lever via a toggle joint. Upon reaching this position, a position switch is operated and the worker can trigger a defined pneumatic power stroke of 5.9 mm by pressing a button or optionally by a slight rotary movement.

With definable force shut-off mechanism
Page 39

1 2 3

4 5 6

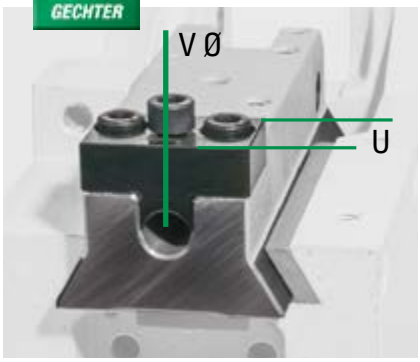
a + b must be ordered separately!



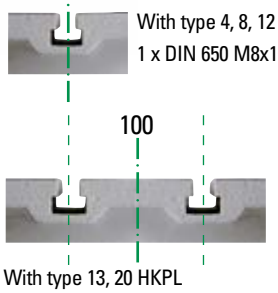
7 8 9

10 11

12



Unique ***GECHTER*** quality
No-play adjustable prism guide.
The clamping device can be removed towards the front, so that the clamping pivot is not damaged.

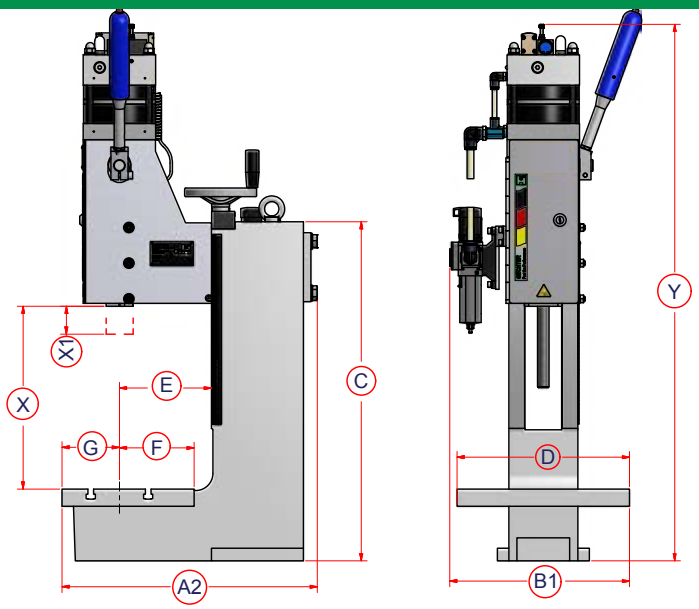


With type 4, 8, 12 HKPL
1 x DIN 650 M8x10

With type 13, 20 HKPL
2 x DIN 650 M8x10
With type 33, 45, 56 HKPL
2 x DIN 650 M10x12

With press force monitoring
Page 34

maXYmos



Dimension	HKP/L-DS 2/4/8/12 kN	HKP/L-DS 13/20 kN	HKP/L-DS 33/45/56 kN
A2	340	445	565
B1	260	310	360
C	415	590	715
D	200	300	340
E	120	160	200
F	92	130	150
G	75	100	120
U	21	29	44
V	Ø 10 H7	Ø 15 H7	Ø 25 H7
X	73-240	100-320	120-375
X1*	6-46	6-58	6-59
Ymax	678/678/697/729	955/988	1170/1216/1262

* Special stroke length on request

Subject to technical modifications.

	Accessories for your press CE	Options	Your selection	1 Type 4 kN HKP/L-DS 8 kN HKP/L-DS 12 kN HKP/L-DS	2 Type 13 kN HKP/L-DS 20 kN HKP/L-DS	3 Typ 33 kN HKP/L-DS 45 kN HKP/L-DS 56 kN HKP/L-DS
1	Standard press without accessories	select one		X	X	X
2	Extended throat up to 300 mm			X	X	X
3	Extended daylight + 100 mm			X	X	X
4	Integrated PFE fine tuning device	select any		X	X	X
5	Precision depth adjustment PTE (adapter)			X	X	X
6	Centering plate with center bore			X	X	X
7	Pneumatic stroke counter			X	X	X
8	Additional start button control, for a definable triggering e.g. for sheltered workshops			X	X	X
	Press foundation H approx. 800 x W 690 x D 565 mm, adjustable with machine bearing elements			X	X	X
9	Deposit table for lateral attachment to the press foundation on the left side (a), height adjustable			X	X	X
	Deposit table for lateral attachment to the press foundation on the right side (b), height adjustable			X	X	X
10	Highly stressable sliding table, mechanical	select one		X	X	X
	Highly stressable sliding table, mechanical with locking bolt			X	X	X
11	Clamping pivot without collar	select one			X	X
	Clamping pivot with collar				X	X
12	Press force monitoring			X X	X X	X X

X = available X X = page 34-35

Please note that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.

Linear acting Pneumatic Aided Presses

NEW

Functional description
Force stroke 4 mm (5.9 mm with closed tool) triggering via foot switch or via tool contact

	LPL 4/8/12 kN	LPL 13/20 kN	LPL 33/45/56 kN
Operating pressure Press force kN at X bar approx.	2-7 bar 4/8/12 7.7 bar	2-7 bar 13/20 7 bar	2-6 bar 33/45/56 6.5 bar
Air-consumption, max. per stroke	0.07/0.11/0.14 L x bar	0.19/0.25 L x bar	0.45/0.56/0.67 L x bar
Pneumatic connection hose	1/4"	1/4"	1/2"
Weight in kg	ca. 36/38/40	ca. 92/94	ca. 199/204/209

Subject to technical modifications.

With definable force shut-off mechanism (stroke 5.9 mm)
Page 39


1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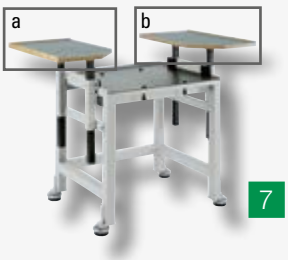
a + b must be ordered separately!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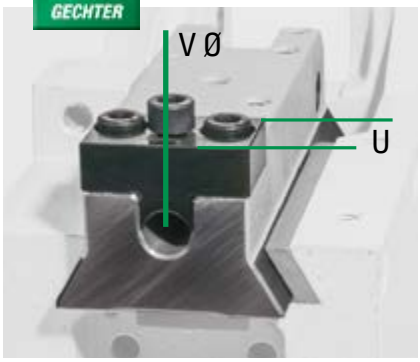
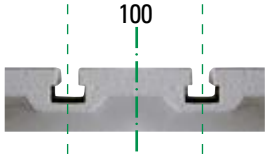


Unique ***GECHTER*** quality
No-play adjustable prism guide.
The clamping device can be removed towards the front, so that the clamping pivot is not damaged.

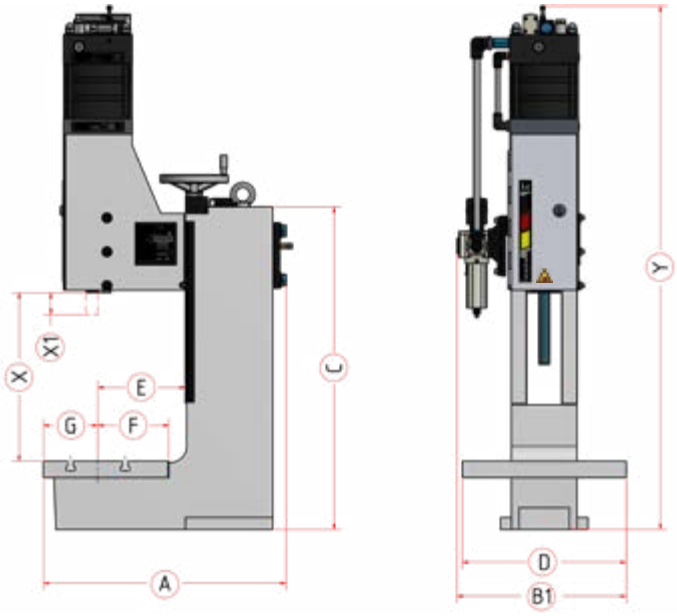
With type 4, 8, 12 LPL
1 x DIN 650 M8x10



With type 13, 20 LPL
2 x DIN 650 M8x10
With type 33, 45, 56 LPL
2 x DIN 650 M10x12

With press force monitoring
Page 34

maXYmos



Dimension	LPL 4/8/12 kN	LPL 13/20 kN	LPL 33/45/56 kN
A2	340	445	565
B1	260	310	360
C	415	590	715
D	200	300	340
E	120	160	200
F	92	130	150
G	75	100	120
U	21	29	44
V	Ø 10 H7	Ø 15 H7	Ø 25 H7
X	73-240	100-320	120-375
X1*	4 (5,9)	4 (5,9)	4 (5,9)
Ymax	678/697/729	955/988	1170/1216/1262

* Special stroke length on request

Subject to technical modifications.

	Accessories for your press CE	Options	Your selection	1 Type: 4 kN LPL, 8 kN LPL, 12 kN LPL	2 Type: 13 kN LPL, 20 kN LPL	3 Type: 33 kN LPL, 45 kN LPL, 56 kN LPL
1	Standard press without accessories	select one		X	X	X
2	Extended throat up to 300 mm			X	X	X
3	Extended daylight + 100 mm			X	X	X
4	Centering plate with center bore	select any		X	X	X
5	Pneumatic stroke counter			X	X	X
6	Additional start button control, for a definable triggering e.g. for sheltered workshops			X	X	X
	Press foundation H approx. 800 x W 690 x D 565 mm, adjustable with machine bearing elements			X	X	X
7	Deposit table for lateral attachment to the press foundation on the left side (a), height adjustable			X	X	X
	Deposit table for lateral attachment to the press foundation on the right side (b), height adjustable			X	X	X
8	Highly stressable sliding table, mechanical	select one		X	X	X
	Highly stressable sliding table, mechanical with locking bolt			X	X	X
9	Clamping pivot without collar	select one			X	X
	Clamping pivot with collar				X	X
10	Footswitch, connected to plug-in connection for SPICE Flex			X	X	X

X = available X X = Page 34-35

1

2

3

Please note that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.

	LP 2 kN	LP 4/8/12 kN	LP 13/20 kN	LP 33/45/56 kN
Operating pressure Press force kN at X bar approx.	3-7 bar 2 6 bar	3-7 bar 4/8/12 7,8 bar	3-7 bar 13/20 7 bar	3-6 bar 33/45/56 6,5 bar
Air-consumption, max. per stroke	0.3 L x bar	0.48/0.56/0.75 L x bar	1.3/1.7 L x bar	3.2/4.0/4.8 L x bar
Pneumatic connecting hose	1/8"	1/4"	1/4"	1/2"
Mains supply		90-240 V AC	90-240 V AC	90-240 V AC
Control voltage		24 V DC	24 V DC	24 V DC
No. of strokes/min.		55	50	40
Weight approx.	8 kg	36,5 kg	94 kg	205 kg

INFO

GECHTER LP or LHP presses from 4kN upward come equipped with a ram fine-adjustment mechanism as standard (scaling 0.05 mm)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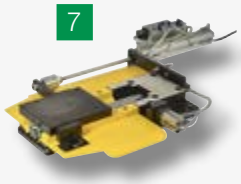
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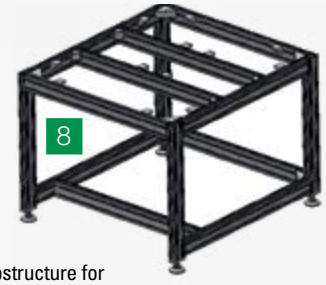
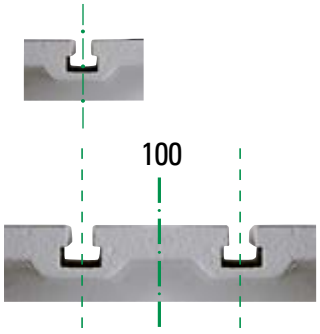

8

Substructure for protective housing

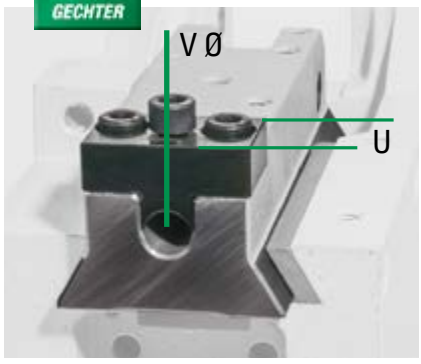

10


11

With type 2, 4, 8, 12 LP
1 x DIN 650 M8x10



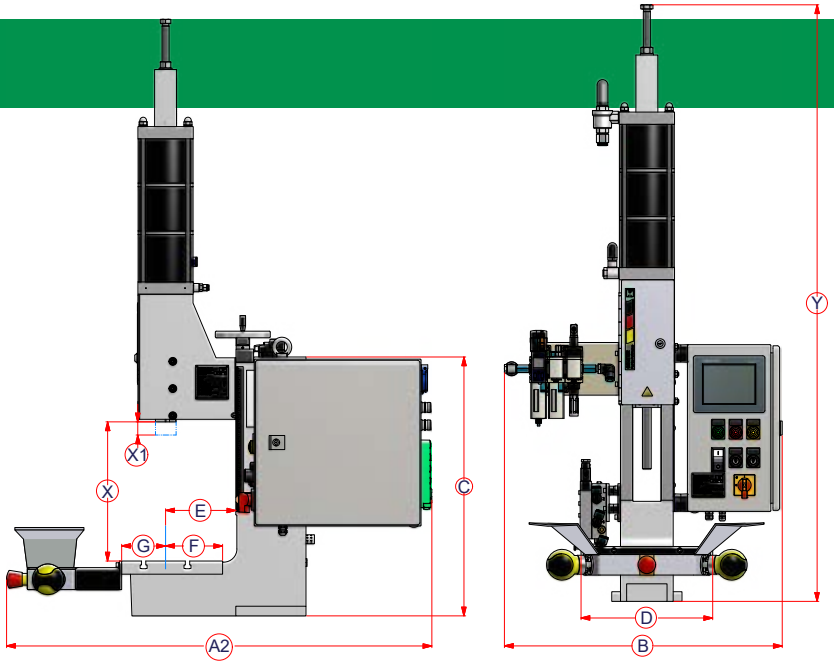
With type 13, 20 LP 2 x DIN 650 M8x10
With type 33, 45, 56 LP 2 x DIN 650 M10x12



Unique ***GECHTER*** quality
No-play adjustable prism guide.
The clamping device can be removed towards the front, so that the clamping pivot is not damaged.

With press force monitoring
Page 34

maXYmos



Dimension	LP 2 kN	LP 4/8/12 kN	LP 13/20 kN	LP 33/45/56 kN
A2		800	930	950
B		580	650	760
C	260	415	590	715
D	120	200	300	340
E	70	120	160	200
F	55	92	130	150
G	39	75	100	120
U	22	21	29	44
V	Ø 10 H7	Ø 10 H7	Ø 15 H7	Ø 25 H7
X	83-180	73-240	100-320	115-370
X1*	0-40	0-40	0-40	0-40
Y	497	778/850/929	1101/1161	1390/1465/1540

* Special stroke length on request

Subject to technical modifications.

	Accessories for your press CE	Options	Your selection	1 Type 2 kN LP	2 Type 4 kN LP 8 kN LP 12 kN LP	3 Type 13 kN LP 20 kN LP	4 Type 33 kN LP 45 kN LP 56 kN LP
	Standard press, 40 mm stroke			X	X	X	X
1	Stroke length 60 mm	select one			X	X	X
	Stroke length 80 mm					X	X
	Special stroke length on request				X	X	X
2	Extended throat up to 300 mm	select one			X	X	X
3	Extended daylight + 100 mm				X	X	X
	Two-hand safety controls ES	select one			X	X	X
	ZS				X	X	X
	SPICE Flex modular				X	X	X
4	3-sided protective housing SE according to EN 16092-1 see page 42/43				X	X	X
5	Rotary table adjustable to segmentations of 2-24, suitable for presses with SPICE Flex control systems	select one			X	X	X
6	Highly stressable sliding table, mechanical				X	X	X
	Highly stressable sliding table, mechanical with locking bolt				X	X	X
7	Highly stressable sliding table with electro-pneumatic control				X	X	X
8	Substructure for protective housing SE U see page 42/43	select one			X	X	X
9	Modulator valve for stroke speed regulation (no image available)	select any			X	X	X
	Fall protection HGL for tools heavier than 15 kg (no image available)				X	X	X
10	Footswitch, connected to plug-in connection for SPICE Flex				X	X	X
11	Clamping pivot without collar	select one			X	X	X
	Clamping pivot with collar				X	X	X

Detailed description of the controls, see Page 40

X = available


1


2

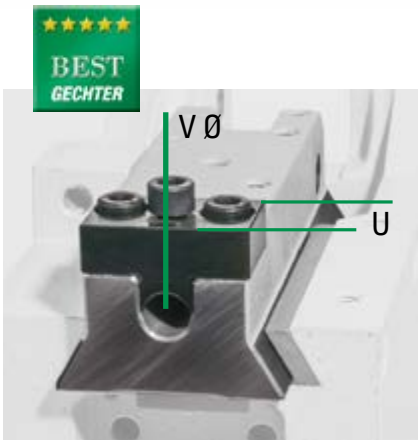

3


4

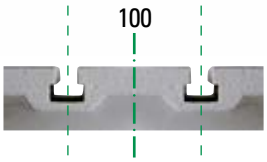
Pneumatic Toggle Presses, with Adjustable Gu

	KHKP 20 kN	KHKP 60 kN
Operating pressure Press force kN at X bar approx.	3-6 bar 20 6 bar	3-6 bar 60 6 bar
Air-consumption, max. per stroke	1.12 L x bar	4.8 L x bar
Pneumatic connecting hose	1/4"	1/2"
Mains supply	90-240 V AC	90-240 V AC
Control voltage	24 V DC	24 V DC
No. of strokes/min.	66	40
Weight	43 kg	200 kg

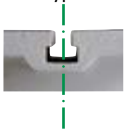
Subject to technical modifications.



Unique ***GECHTER*** quality
No-play adjustable prism guide.
The clamping device can be removed towards the front, so that the clamping pivot is not damaged.



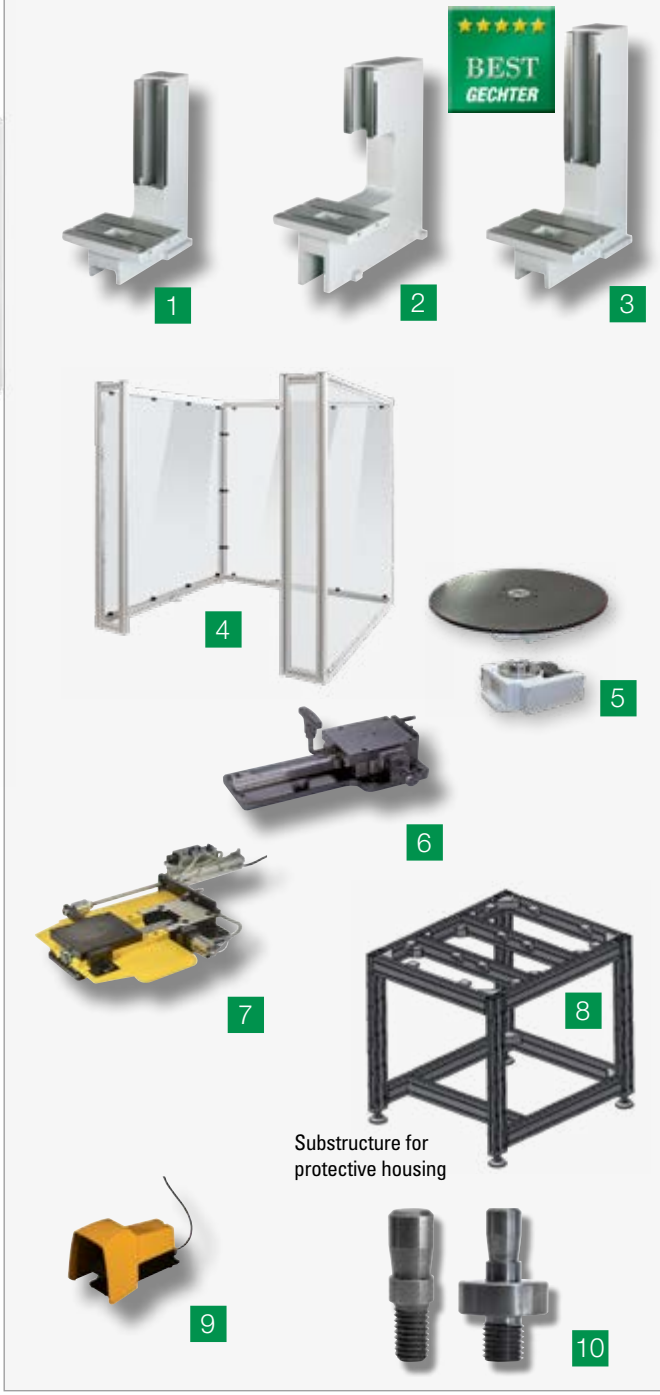
With type 60 KHKP 2 x DIN 650 M8x10



With type 20 KHKP
1 x DIN 650 M8x10

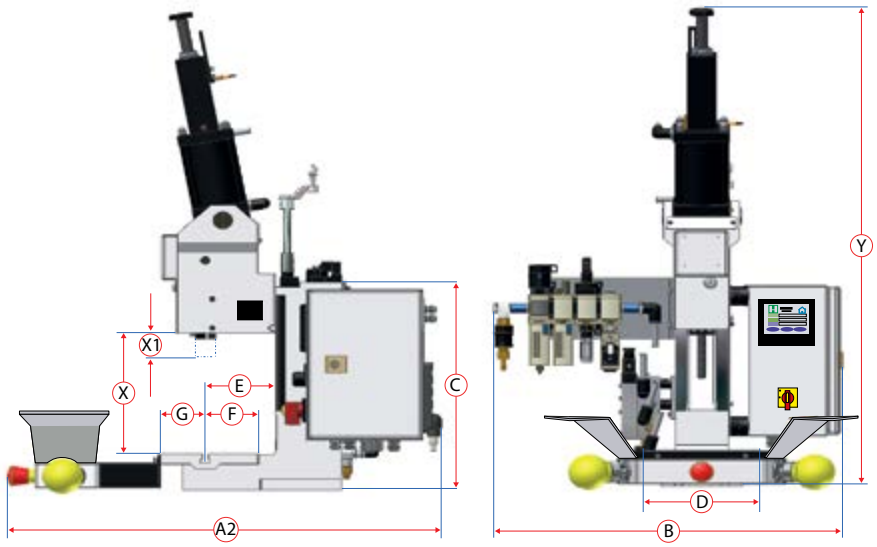
With press force monitoring
Page 34

maXYmos



Substructure for protective housing

ide Unit



Dimen-sion	KHKP 20 kN	KHKP 60 kN
A2	800	820
B	580	760
C	415	715
D	200	340
E	120	200
F	92	150
G	75	120
U	21	44
V	Ø 10 H7	Ø 25 H7
X	60-225	115-370
X1	0-60	0-60
Ymax	890	1492

Subject to technical modifications.

	Accessories for your press CE	Options	Your selection	1 Type 20 kN KHKP	2 Type 60 kN KHKP
1	Standard press without accessories	select one		X	X
2	Extended throat up to 300 mm			X	X
3	Extended daylight + 100 mm			X	X
	Two-hand safety controls ES	select one		X	X
	ZS			X	X
	SPICE Flex modular			X	X
4	3-sided protective housing SE according to EN 16092-1 see page 42/43			X	X
5	Rotary table adjustable to segmentations of 2-24, suitable for presses with SPICE Flex control systems	select one		X	X
	Highly stressable sliding table, mechanical			X	X
6	Highly stressable sliding table, mechanical with locking bolt			X	X
7	Highly stressable sliding table with electro-pneumatic control			X	X
8	Substructure for protective housing SE U see page 42/43	select one		X	X
9	Footswitch, connected to plug-in connection for SPICE Flex	select one		X	X
	Clamping pivot without collar	select one		X	X
10	Clamping pivot with collar			X	X

Detailed description of the controls, see Page 40

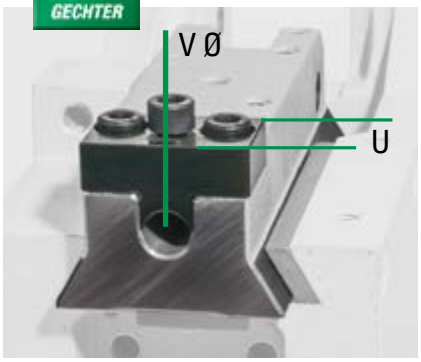
X = available

Please note that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.

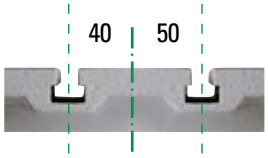
GECHTER Pneumatic Toggle Presses, Stable Design, with

	KHP 20/30 kN	KHP 50/70/100 kN
Operating pressure Press force kN at X bar approx.	3-6 bar 20/30 6 bar	3-6 bar 50/70/100 6 bar
Air-consumption, max. per stroke	1.0 L x bar	2.8/3.6/3.6 L x bar
Pneumatic connecting hose	1/2"	1/2"
Mains supply	90-240 V AC 3A	90-240 V AC 3A
Control voltage	24 V DC	24 V DC
No. of strokes/min.	100/90	90/80/80
Weight of lower support	12.5 kg	15.0 kg
Weight	150 kg	354 kg

Subject to technical modifications



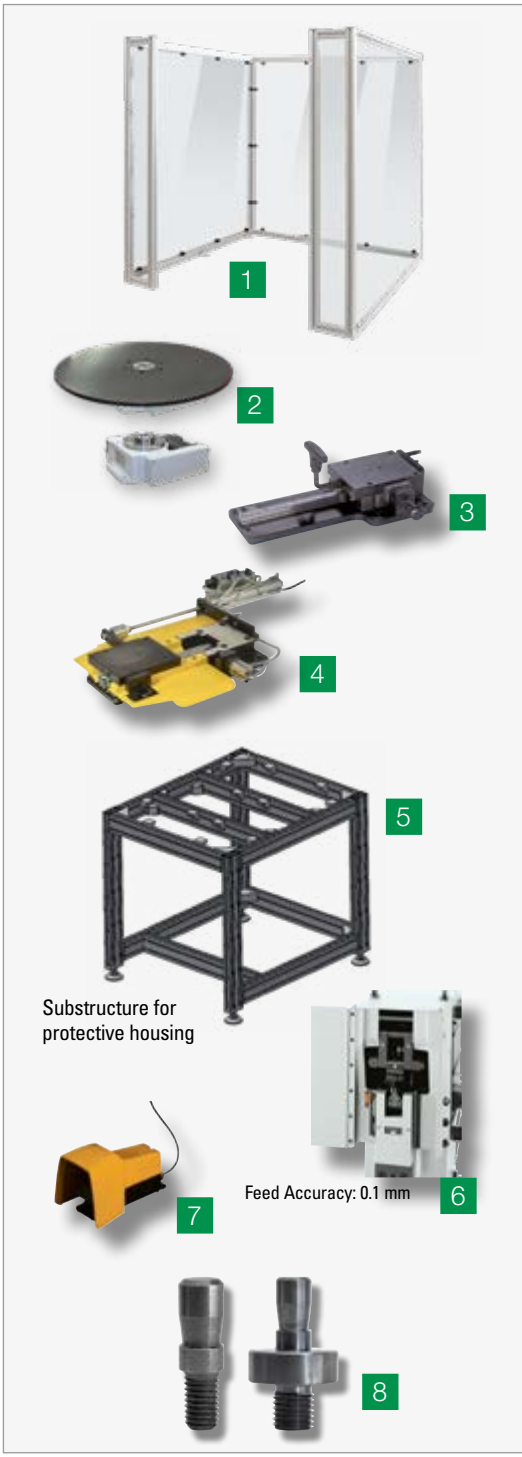
Unique ***GECHTER*** quality
No-play adjustable prism guide.
The clamping device can be removed towards the front, so that the clamping pivot is not damaged.



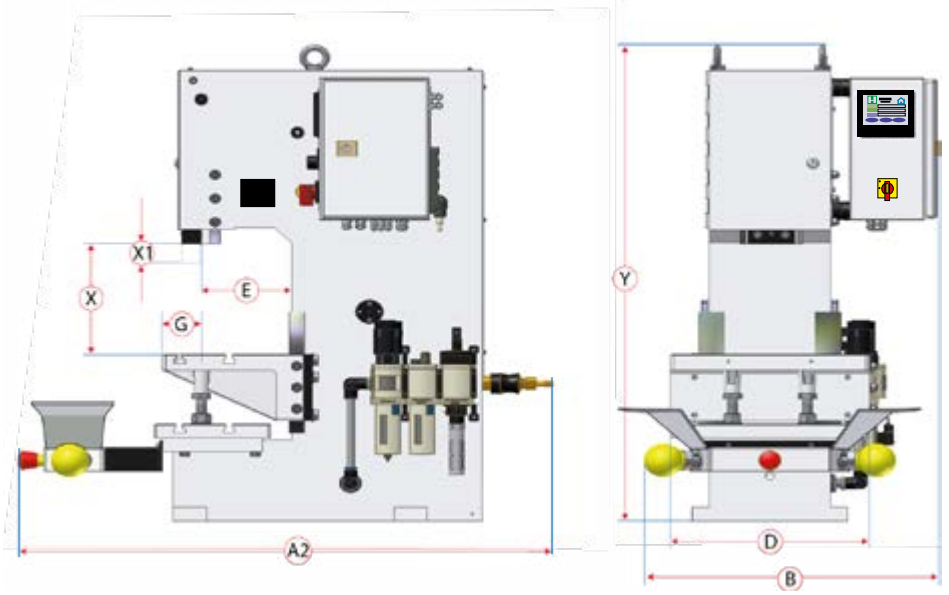
With type 20, 30 KHP
2 x DIN 650 M8x10
With type 50, 70, 100 KHP
2 x DIN 650 M10x12

With press force monitoring
Page 34

maXYmos



C-Shaped Press Frame and Adjustable Table



Dimension	KHP 20/30 kN	KHP 50/70/100 kN
A2	760	1010
B	520	540
D	300	360
E	120	160
G	70	71
U	0-40	44
V	Ø 20 H7	Ø 25 H7
Xmin	120	160/160/140
Xmax	250	295/295/275
X1	0-40	0-62/0-62/0-40
Y	815	1001

Subject to technical modifications.

	Accessories for your press CE	Options	Your selection	1 Type 20 kN KHP 30 kN KHP	2 Type 50 kN KHP 70 kN KHP	3 Type 100 kN KHP
	Two-hand safety controls ZS	select one		X	X	X
	Detailed description of the controls, see Page 40 — SPICE Flex modular			X	X	X
1	3-sided protective housing SE according to EN 16092-1 see page 42/43			X	X	X
2	Rotary table adjustable to segmentations of 2-24, suitable for presses with SPICE Flex control systems	select one		X	X	X
3	Highly stressable sliding table, mechanical			X	X	X
	Highly stressable sliding table, mechanical with locking bolt			X	X	X
4	Highly stressable sliding table with electro-pneumatic control			X	X	X
5	Substructure for protective housing SE U see page 42/43	select one		X	X	X
6	Adjustable round part, ram fine adjustment	select any		X	X	X
	Clamping plate with T-slot, lower support			X	X	X
7	Footswitch, connected to plug-in connection for SPICE Flex			X	X	X
8	Clamping pivot without collar	select one			X	X
	Clamping pivot with collar				X	X

X = available

Please note that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.

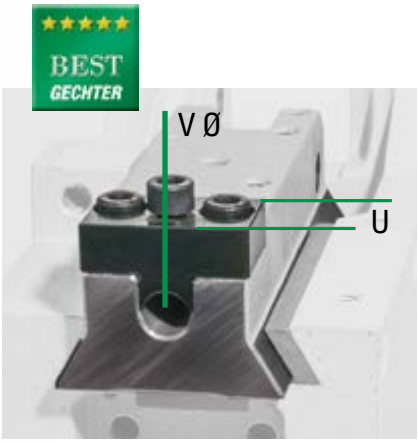
	60 kN LHP
Operating pressure Press force kN at X bar approx.	3-6 bar 60 6 bar
Air-consumption, max. per stroke	15 1 x L pro bar
Approach stroke force kN at X bar	5.4 6 bar
Return stroke force kN at X bar approx.	4,1 6 bar
Working stroke, thereof power stroke	50 mm 6 mm
Pneumatic connecting hose	1/2"
Mains supply	90-240 V AC
Control voltage	24 V DC
No. of strokes/min.	35
Weight	218 kg

Subject to technical modifications.

GECHTER LHP presses come equipped with a ram fine-adjustment mechanism as standard (scaling 0.05 mm)

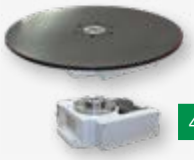
INFO

Please note that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.



Unique ***GECHTER*** quality
No-play adjustable prism guide.
The clamping device can be removed towards the front, so that the clamping pivot is not damaged.

1



4

5

Substructure for protective housing

7

With press force monitoring
Page 34

maXYmos

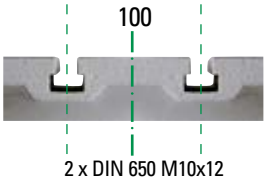
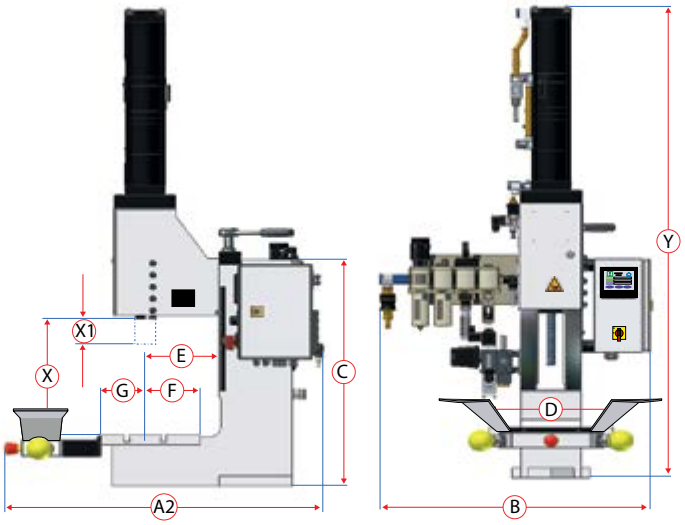


table Guide Unit

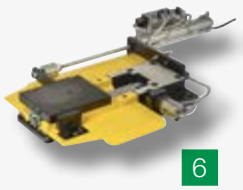


Dimension	60 kN LHP
A2	820
B	760
C	715
D	340
E	200
F	150
G	120
U	44
V	Ø 25 H7
X	115-370
Y	1250-1505

Subject to technical modifications.


2


3


6


8


9

	Accessories for your press CE	Options	Your selection	1 Type 60 kN LHP
	X1 = Stroke 50 mm, thereof power stroke 6 mm	select one		X
	X1 = Stroke 100 mm, thereof power stroke 6 mm			X
	X1 = Stroke 50 mm, thereof power stroke 12 mm			X
	X1 = Stroke 100 mm, thereof power stroke 12 mm Special stroke length on request			X
1	Extended throat	select one		X
2	Extended daylight			X
	Two-hand safety controls ES	select one		X
	ZS			
	SPICE Flex modular			X
3	3-sided protective housing SE according to EN 16092-1 see page 42/433			X
4	Rotary table adjustable to segmentations of 2-24, suitable for presses with SPICE Flex control systems	select one		X
	Highly stressable sliding table, mechanical			X
5	Highly stressable sliding table, mechanical with locking bolt			X
6	Highly stressable sliding table with electro-pneumatic control			X
7	Substructure for protective housing SE U see page 42/43	select one		X
8	Footswitch, connected to plug-in connection for SPICE Flex	select one		X
9	Clamping pivot without collar	select one		X
	Clamping pivot with collar			X

Detailed description of the controls, see Page 40

X = available


1

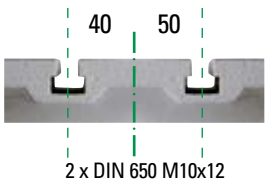
Please note that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.

	110 kN HPC
Operating pressure	3-6 bar
Press force at 6 bar	110 kN
Approach stroke force at 6 bar	8.4 kN
Return stroke force at 6 bar	6.7 kN
Working stroke, thereof power stroke	50 mm 6 mm
Air-consumption, max. per stroke	26 ltr.
Pneumatic connecting hose	1/2"
Mains supply	90-240 V AC 3A
Control voltage	24 V DC
No. of strokes/min.	30
Weight of lower support	15 kg
Weight	320 kg

Subject to technical modifications.

INFO

Adjustable toggle joint for precise adjustment of the press ram (scaling 0.1 mm)

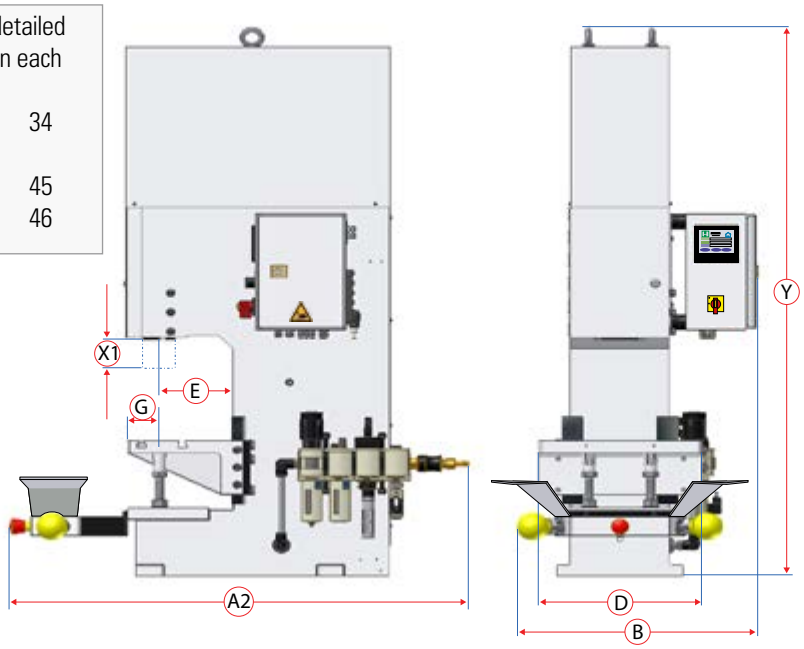


With press force monitoring
Page 34

maXYmos

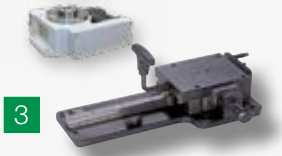
table Table

On the following pages, you will find detailed descriptions and further illustrations on each topic:

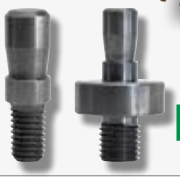


Dimension	110 kN HPC
A2	1010
B	540
D	360
E	160
G	71
Xmax	295
Y	1420
Clamping pivot Ø	Ø 25 H7
Clamping pivot length	45

Subject to technical modifications.



Substructure for protective housing



	Accessories for your press CE	Options	Your selection	1 Type 110 kN HPC
	X1 = Stroke 50 mm, thereof power stroke 6 mm	select one		X
	X1 = Stroke 100 mm, thereof power stroke 6 mm			X
	X1 = Stroke 50 mm, thereof power stroke 12 mm			X
	X1 = Stroke 100 mm, thereof power stroke 12 mm Special stroke length on request			X
	Two-hand safety controls ZS	select one		X
	Detailed description of the controls, see Page 40 SPICE Flex modular			
1	3-sided protective housing SE according to EN 16092-1 see page 42/433			X
2	Rotary table adjustable to segmentations of 2-24, suitable for presses with SPICE Flex control systems	select one		X
3	Highly stressable sliding table, mechanical			X
	Highly stressable sliding table, mechanical with locking bolt			X
4	Highly stressable sliding table with electric control			X
5	Substructure for protective housing SE U see page 42/43	select one		X
6	Footswitch, connected to plug-in connector for SPICE Flex	select one		X
7	Clamping pivot without collar	select one		X
	Clamping pivot with collar			X

X = available

GECHTER Hydro-Pneumatic H-Frame Presses

	HPPV/HPPS 150 kN	HPPV/HPPS 300 kN	HPPV/HPPS 500 kN
Operating pressure	3-6 bar	3-6 bar	3-6 bar
Press force at 6 bar	150 kN	300 kN	500 kN
Approach stroke force at 6 bar	6.5 kN	11 kN	14 kN
Return stroke force at 6 bar	6.2 kN	10.3 kN	13 kN
Pneumatic connecting hose	1/2"	1/2"	1/2"
Mains supply	90-240 V AC	90-240 V AC	90-240 V AC
Control voltage	24 V DC	24 V DC	24 V DC
No. of strokes/min.	40	35	15
Weight	320 kg	420 kg	520 kg

Subject to technical modifications.

INFO

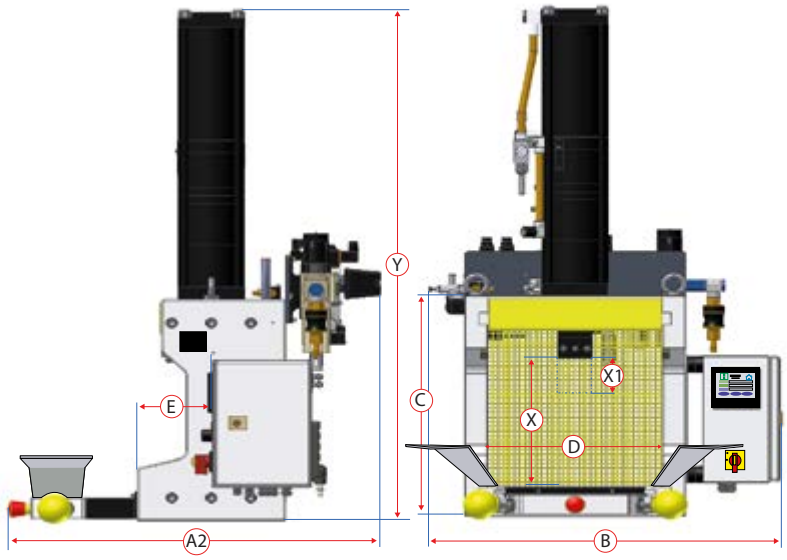
Table is for special use, according to customer requirements as for the H-Frame and defined stroke length.

Substructure for protective housing

With press force monitoring
Page 34

maXYmos

On the following pages, you will find detailed descriptions and further illustrations on each topic:



Dimension	HPPV/HPPS 150 kN	HPPV/HPPS 300 kN	HPPV/HPPS 500 kN
A2*	756	786	826
B*	720	786	871
C	522	601	670
D	353	380	450
E	150	165	185
X	303	338	360
Y	1207	1486	1660
Dimension X1 see table on the left			
	Clamping pivot Ø		
	Ø 25 H7	Ø 32 H7	Ø 40 H7
	Clamping pivot length		
	48	60	70

* Special H-Frames and strokes on request

Subject to technical modifications.

Accessories for your press CE	Options	Your selection	Type 1: 150 kN HPPV / 300 kN HPPV / 500 kN HPPV	Type 2: 150 kN HPPS / 300 kN HPPS / 500 kN HPPS
X1= Stroke 50 mm, thereof power stroke 6 mm	select one		X	X
X1 = Stroke 100 mm, thereof power stroke 6 mm			X	X
X1 = Stroke 50 mm, thereof power stroke 12 mm			X	X
X1 = Stroke 100 mm, thereof power stroke 12 mm Special stroke length on request			X	X
Extended fitting width possible on request	select any		X	X
Extended fitting depth possible on request			X	X
Extended daylight possible on request			X	X
Two-hand safety controls ZS	select one		X	X
SPICE Flex modular			X	X
1 3-sided protective housing SE according to EN 16092-1 see page 42/43	select one		X	X
2 Substructure for protective housing SE U see page 42/43	select one		X	X
3 Footswitch, connected to plug-in connection for Spice Flex	select any		X	X
Placement requirement are according to customer's needs. (dimension D + X)			X	X

Detailed description of the controls, see Page 40

X = available

Please note that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.

Press force monitoring system
Force-displacement measurement system
maXYmos BL
und **maXYmos TL**

The newly-developed system can be used with all manual and pneumatic *GECHTER* presses, and is, of course, also compatible with all third-party manual toggle presses generally available on the market.

The maXYmos process monitoring system can use a profile to monitor and assess the quality of a product or a production step. To achieve this, the system interrelates all the measurands: those captured via the Y channel with force pressure sensors and those acquired via the X channel with displacement sensors.

maXYmos uses defined evaluation objects (EOs) to analyze quality-relevant sections of the measured curves that are captured by the measuring functions. To do this, the maXYmos monitoring system verifies whether the curves pass through the evaluation objects in the predefined manner. If so, maXYmos generates an “OK” result; otherwise, the result is “Not OK” (NOK).

Technical data of maXYmos

The maXYmos BL is a modern 3.5“ color touch screen monitor which guides you quickly and simply with the menu through the process information.

- 4 evaluation objects per curve
- 16 measurement programs for 16 different types of parts
- Ethernet TCP/IP for measurement data and remote maintenance
- PROFIBUS DP, EtherNet/IP, EtherCAT, PROFINET or CC-Link for process values and control*
- Dig. IO (24 V) for control and results
- 2 switching signals in real time for X- and Y-threshold*
- USB for notebook (PC program: maXYmos PC)
- Sensor for channel X: potentiometer and ±10 V
- Sensor for channel Y: piezo or strain gage and ±10 V
- Desktop or wall-mounting
- Information pages for NOK cause diagnosis
- Freely allocatable warning messages and alarms
- Access protection for different user groups
- 3.5” color touch screen display
- 24 VDC power supply
- Sequencer mode (optional)

* Functionality changes with maXYmos BL sequencer mode

The functions of this XY monitor range from simple, single-channel force-displacement monitoring to complex multi-channel applications for use in assembly and product testing.

Operation via the 10.4” color touch screen monitor and the front-mounted USB slot.

Additional features compared to maXYmos BL:

- 10 evaluation objects per curve
- 128 measurement programs for 128 part types
- Multiple data export formats, e.g. Q-DAS, QDA-9, IPM 5.0, XML, CSV, PDF
- Informative NOK cause diagnosis, process value trend patterns, etc.
- Process value table with free choice of contents
- Access protection with various levels of access
- Display module (DIM) with 10,4” color touch screen and front-mounted USB slot
- 16 measurement programs

Technical data of maXYmos TL

- Dynamic referencing of evaluation objects in X and Y directions
- Measurement curve with up to 8 000 XY value pairs
- Short evaluation time
- EtherNet TCP/IP for measurement data, remote maintenance and channel cascading
- Choice of bus types available via menu: PROFIBUS DP, EtherNet/IP, PROFINET, EtherCAT, CC-Link
- Dig-IO (24 V) for control and results
- 2 switching signals on X or Y threshold
- 2+1 USB for USB stick and notebook
- Channel X: Pot, ± 10 V, LVDT, incremental, SSI
- Channel Y: Strain gauge, ± 10 V or piezoelectric sensors
- Multiple data export formats, e.g. Q-DAS, QDA-9, IPM 5.0, XML, CSV, PDF
- Desktop, wall or front panel mounting; can be repositioned in a few easy steps
- Informative NOK cause diagnosis, process value trend patterns, etc.
- Process value table with free choice of contents
- Selected process values for the curve graph
- Warning and alarm messages, e.g., NOK in series
- Access protection with various levels of access
- Display module (DIM) with 10,4” color touch screen and front-mounted USB slot

The following components can be, optionally or in accordance with the expressed wish of the customer, added on, as packages, to the basic machines so as to create a press of the HMS, HKP-L-DS MS/MC or LP-MS type:

- a digital display device maXYmos with adjustable displacement and force thresholds in an attachment housing with support foot
- a force sensor (measuring range corresponding to press force) integrated into the press ram
- a PFE fine tuning device (optional)
- a PC software (starter version)
- **optional** a displacement sensor for additional displacement measurement

HMS

I. In the case of the HMS types, there results from the integration of the force sensor a centre-offset eccentricity, toward the front, of the holding fixture bore in the press ram in the middle of the table.

II. The height of installation is lower as compared to the types belonging to the HKPV series.

See table below

	HMS		
	Type 5 HKPV max. force 14 kN	**Type 8/12 HKPV max. force 20 kN**	**Type 8/16 HKPV max. force 32 kN**
	Possible strain gage force sensors		
	2 kN Sensor Measurement range 0.3-2 kN	10 kN Sensor Measurement range 1-10 kN	
	or	or	or
	5 kN Sensor Measurement range 0.5-5 kN	20 kN Sensor* Measurement range 2-20 kN	50 kN Sensor Measurement range 5-50 kN
	or		
	10 kN Sensor * Measurement range 1-10 kN		
Centre-offset eccentricity, toward the front, of the holding fixture bore in the press ram. Dimension E	+7 mm		0 mm
Lowering of installation height Dimension X	58 mm	41 mm	46 mm
Maximum deviation Nominal range in %		2,50 %	

* Standard Sensor

HKP/L-DS-MS

LP MS

Force sensor

Force sensor integrated into the ram so that during the measuring process it is resistant to laterally affecting forces

	HKP/L-DS-MS/MC and LP-MS							
	Type 4 kN	**Type 8 kN**	**Type 12 kN**	**Type 13 kN**	**Type 20 kN**	**Type 33 kN**	**Type 45 kN**	**Type 56 kN**
	Possible strain gage force sensors							
	2 kN Sensor Measurement range 0.3-2 kN	10 kN Sensor Measurement range 1-10 kN	20 kN Sensor Measurement range 2-20 kN	50 kN Sensor Measurement range 5-50 kN	50 kN Sensor Measurement range 5-50 kN	50 kN Sensor Measurement range 5-50 kN	50 kN Sensor Measurement range 5-50 kN	50 kN Sensor Measurement range 5-50 kN
	or							
	5 kN Sensor Measurement range 0.5-5 kN							
Centre-offset eccentricity, toward the front, of the holding fixture bore in the press ram. Dimension E	+7 mm					0 mm		
Lowering of installation height Dimension X	41 mm			46 mm		66 mm		
Maximum deviation Nominal range in %	2.50 %							

The force and displacement measurement system for retrofitting all presses

NEW

Thanks to solution packages from *GECHTER*, quality control using force-displacement monitoring can now be integrated for manually or pneumatically operated presses.

Evaluation of the resultant force-displacement curve then provides the basis for good/bad assessment, making it is a key factor in achieving zero-defect production.

maXYmos

Measurement system BL
Basic Level

Measurement system TL
Top Level

The **Platform force sensor** is mounted onto the press table and measures the pressure forces between the contact areas of the sensor surface and the press subtool (bottom side).

Advantages
– Simple assembly and disassembly
– Dirt- and dust-resistant

Platform force sensor
0 - 20 kN or 21-60 kN

The **Clamping force sensor** measures the pressure forces between the contact areas of the sensor surface and the press subtool (bottom side).

– Measurement range 500N to 100kN
– With mechanical overload protection
– Simple assembly at the press ram
– Compact and robust
– Compatible with all generally-available manual toggle presses

Clamping
force sensors
500 N - 1000 kN

The **Displacement sensor** of the series SPI18 is very robust and the housing corresponds to the industrial standard.

– Different measurement lengths possible
– Type of Protection IP40 (IP54 optional on request)
– Machine compatible design
– Compatible with all generally-available manual toggle presses

Displacement
sensor

Solution packages for manual presses

Force shut-off mechanism

There serves as a basis here our proven HKP/L-DS-MS system of presses! This system, however, has now been thoroughly modified, so that we can offer a very interesting alternative to screw presses / servo-presses / join-up modular presses. Furthermore, it also forms a good alternative in terms of value for money.

NEW

HKP/L-DS-MS

LP-MS

Positioning on the Market/Competition

Function
By the establishing of a force threshold it is signalled to the press that:
– the force threshold must be reached (the press shuts down when threshold is reached)
or
– the force threshold must be exceeded (the press con-tinues to build up force until the threshold is exceed-ed)

Reproducibility of the results
By setting the press during the set-up process, the degree of deviation is determined and stored within the monitoring system. This means that the process can always be repeated with extreme precision. (< 3% deviation, depending on stroke-speed)

This option is available for all HKP/L-DS-MS systems:

Advantages at a Glance:
– Cost-saving in comparison to join-up modular presses
– Quickly available
– Safe process
– High quality
– Takes up little space
– 100% control and supervision possible
– Several programmes can be stored
– Stroke speed adjustable
– No expensive control system necessary

The function of the Force shut-off mechanism

Together with the maXYmos force-displacement measuring system, the user can trigger the return stroke of the press once a defined force threshold has been reached. It can be defined what should happen on reaching this pre-defined force-level.

Option 1:
The pre-defined force must be reached, then the press should change to return stroke and the component is declared OK. If the force has not been reached within a pre-defined timeout, the press also changes to return stroke until the start position, but the component is declared NOK (force not reached).

Option 2:
The pre-defined force may not be reached. In this case the function of the force shut-off mechanism serves as security function. Therefore it is necessary to set a measuring-stop-cri-terion, e.g. the timeout or a defined dislacement (e.g. tool closed). If e.g. the component is jammed in the tool and so the force is reached before the measuring-stop-criterium is reached, the press starts automatically the return stroke to avoid damage of the components or of the tool. The measure-ment then signals NOK (force exceeded). Il the force has not been reached before reaching the measuring-stop-criterion, the press opens and the component is declared OK.

CE compliant control palette for all pneumatic and hydro-pneumatic *GECHTER* presses

SPICE Flex modular – the new generation of press control systems

Our new control system expands to meet each new task assigned to it and adjusts to fit your requirements. "Today you need a smaller range of options. The order right after this one will require additional parameter-retrieval, handling devices, or an altered work sequence!"
SPICE Flex modular offers you, thanks to its expansion modules, the possibility of doing justice to all these new requirements.

Standard Scope Press Control System
SPICE Flex Basic:
- Two-handed operation – Triggering must be activated within 0.5 sec.
- Set-up operation – after triggering, the ram descends to Bottom Dead Centre and remains there; when activated again, the ram rises to its end-position at Top Dead Centre and remains there.
- Touch display – several structural levels for setting of press, with malfunction signal displayed in clear text
- Counter function
- Adjustable stopping-time for remaining at rest position
- Retrieval of external start-release

These expansion levels can also be selected:
SPICE Flex safety
- for light curtain or safety-door operation – the press is released for activation only after the retrieval of safety-related information (e.g. "safety-door closed" etc.). This expansion also places the "automatic continuous stroke" function at your disposal. Two-handed triggering is not required. Triggering can be effected either by foot switch or by Nagara switch.

SPICE Flex MS
- The control system interacts with the force-displacement measurement system (optional). In the case of a "not OK" part, production is halted. The error must be documented.

SPICE Flex advanced
- The control system can be expanded to include additional inputs and outputs, so that your handling devices or sensors etc. interact with the control system and can themselves be controlled. There can also be implemented, at this expansion level, a change in the work-sequence cycle.

SPICE FlexPro
- Here you have the possibility of controlling also a sliding table or a NC rotary indexing table.

The expansion levels are combinable, or extensible in modular form.

Programming occurs specifically for the desired work-sequence of the unit.

ES + ZS control

ES CONTROL according to the machinery directive 2006/42/EG
This is a simple two-hand safety control and the only operating mode that it allows is two-hand operation. This means that the press only moves downwards as long as both two-hand switches are pushed simultaneously (0.5 sec.). As soon as one of the two-hand switches is released, the press immediately moves upwards again. The control is operational immediately after connecting to the operating voltage (110 - 230 V AC) and the air supply (6 bar).


ES Control
Control panel with integrated control


Maintenance unit


Valve block

ZS CONTROL according to the machinery directive 2006/42/EG
Based on a safety plc, it adds the following functions to the ES control and operation completely via HMI:
a) Setup operation:
If the two-hand switches are pushed simultaneously (0.5 sec), the press will move downwards. The press will stop at the bottom dead center and stay there until the two-hand switches are pushed again.
b) Two-hand operation with hold time
If the two-hand switches are pushed simultaneously (0.5 sec), the press will move downwards. The two-hand switches can be released after the bottom dead center has been reached, when a sensor for „tool closed" is assembled. The press will stay there until the adjustable hold time has elapsed, and then move upwards automatically. A sensor for "tool closed" according to EN16092 is supplied. It has to be mounted by the customer in a way that it is activated when the tool is closed. The sensor is monitored dynamically.
c) Electronic preset counter with backlight
Each press stroke is counted, the counter can be equipped with or without resetting facility.


ZS06 Control

For usage with a closed tool, the control is also available with a footswitch instead of the two-hand operation panel. Error messages are shown on the display as text.
d) 8 additional inputs/1 additional output
For example to assemble a light curtain, protective housing, force-displacement measuring system, additional sensors... The acknowledgement is done via an additional graphic button. OK and NOK signals can be evaluated in the production process.

Presses with Light Curtain

SPICE Flex safety for light curtain or safety-door operation

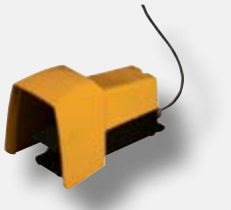
Gechter presses can, if the customer wishes it, be equipped with light curtains. In this case, there is applied the Gechter SPICE Flex modular control system in its “Safety” expansion level, with corresponding extensions especially for the work-process desired by the customer.

The types of operation are then, among others:

- Set-up operation
- Rotary table or sliding table operation
- Foot operation
- Continuous-stroke operation
- Automatic work-sequence
- Customer-specific work-sequence

Adjustable joint for press ram fine tuning.
Adjustable range:
16 mm

GECHTER rotary indexing table (see description)



Electric footswitch

GECHTER Protective housing SE

The machine tool safety standard series DIN EN ISO 16092 requires in addition to a two-hand release a protective housing closed on three sides to prevent accidental intervention by other operators.

All Gechter presses with two-hand control will in future be delivered with the protective housing SE, optionally for customer self-assembly, mounted on a base plate or as a complete work-station with substructure.

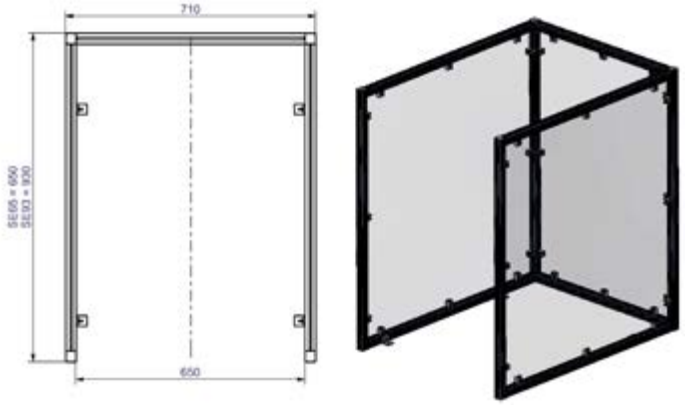
Dimensions: SE65 and SE93

Dimensions: SE105 and SE120

Your direct way to the new protective housings including more information and drawings:

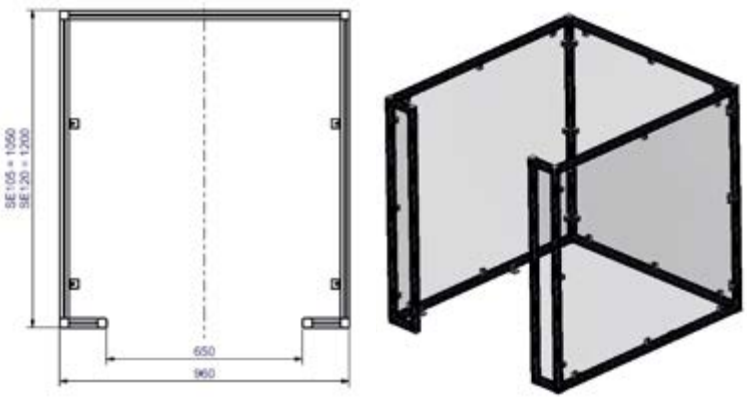
Example protective housing SE

Dimensions: SE65 and SE93



Height: 1000 mm

Dimensions: SE105 and SE120



Height: 1000 mm

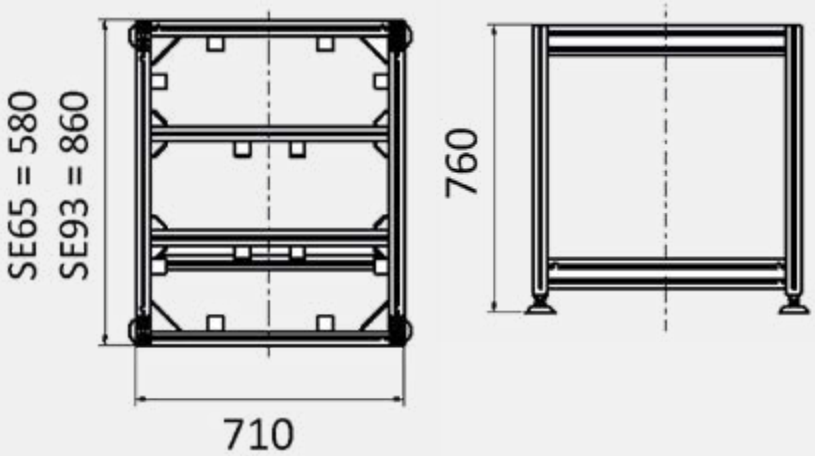
Table is only valid for standard press frames not customized frames

The housing for the LP presses also fits for KHKP and LHP with equal control.
The housing for the KHP presses also fits for the HPC with equal control.
HPPV/HPPS: Protective housing available on request.

Protective housing SE, for presses with two-hand control

Press +	Control	SE 65	SE 93	SE 105	SE 120
LP 04-08-12kN G400+	ES07	X			
LP 04-08-12kN G400+	ZS08		X		
LP 04-08-12kN G400+	SPICE Flex		X		
LP 04-08-12kN G401+	ES07		X		
LP 04-08-12kN G401+	ZS08			X	
LP 04-08-12kN G401+	SPICE Flex				X
LP 04-08-12kN G402+	ES07	X			
LP 04-08-12kN G402+	ZS08		X		
LP 04-08-12kN G402+	SPICE Flex		X		
LP 13-20kN G500+	ES07		X		
LP 13-20kN G500+	ZS08		X		
LP 13-20kN G500+	SPICE Flex			X	
LP 13-20kN G501+	ES07			X	
LP 13-20kN G501+	ZS08				X
LP 13-20kN G501+	SPICE Flex				X
LP 13-20kN G502+	ES07		X		
LP 13-20kN G502+	ZS08		X		
LP 13-20kN G502+	SPICE Flex			X	
LP 33-45-56kN G600+	ES07			X	
LP 33-45-56kN G600+	ZS08			X	
LP 33-45-56kN G600+	SPICE Flex				X
LP 33-45-56kN G601+	ES07			X	
LP 33-45-56kN G601+	ZS08				X
LP 33-45-56kN G601+	SPICE Flex				X
LP 33-45-56kN G602+	ES07			X	
LP 33-45-56kN G602+	ZS08			X	
LP 33-45-56kN G602+	SPICE Flex				X
KHP 20/30kN G700+	ZS08			X	
KHP 20/30kN G700+	SPICE Flex			X	
KHP 50/70/100kN G800+	ZS08			X	
KHP 50/70/100kN G800+	SPICE Flex			X	

We also offer for the protective housings new precisely matched substructures.



Substructure for protective housing

Fixed-station rotary indexing table TC150

Recomm. max. structural diameter:	Approx. 800 mm
Table diameter:	150 mm
Direction of rotation:	left, right or alternating
Number of stops:	2, 3, 4, 6, 8, 10, 12, 16, 20, 24 (Alternative numbers of stops available on request.)
Switching frequency	Up to 210 cycles/min, dependent on the moment of inertia and the angle of rotation
Voltage:	230 / 400 V 50 Hz, special voltage on request
Drive power:	0.045 – 0.12 kW; BG 56
Weight:	23 kg
Pitch accuracy (arc seconds):	Stop 2-12: ± 30” Stop 16-24: ± 45” (Increased pitch accuracy on request)
Pitch accuracy (arc length):	Stop 2-12; ± 0.011 mm (for 150-mm diameter) Stop 16-24: ± 0.016 mm (for 150-mm diameter)
max. axial run-out of the plate:	0.01 mm (for ø 150 mm)
max. excentricity:	0.01 mm
Max. plane parallelism of the table surface to the housing surface	0.03 mm (for ø 150 mm)

Type LP/SPICE Flex pro with TC150

NC rotary indexing table NC 150 T

Technical data:

Model:	NC 150T
Dial plate diameter:	150 mm
Tool plate diameter:	800 mm
Direction of rotation:	Freely programmable
Max. table speed:	31 rpm
Transmission ratio:	i_{Total} = 144.545
Max. MTM:	15 kgm²
Weight:	25 kg
Mounting position:	Any
Positioning precision:	± 45”
Max. axial run-out of dial plate:	0.01 mm
Max. concentricity:	0.01 mm
Max. parallelism of rotating plate surface to bottom housing surface:	0.03 mm

Advantages overview

- User-programmable
- High level of torque
- Absolute position encoder
- High-precision, rigid rotating plate bearing mounting
- Various sizes
- Mechanical interfaces for connecting customer-specific servo motors
- High degree of synchronism
- High degree of repeat accuracy

For all ***GECHTER*** presses with SPICE Flex Pro control

Lever operating and press forces

Press types	Lever operating forces, allowed maximum	Press forces at Bottom Dead Center	Maximum press bending in mm		Tightening torque of the mounting screws of the guide component	
			At throat			
			Standard	(200) or (300) mm	Thread	Tightening torque
Crimp press						
CR10	200 N = 20 kg	12 kN	0.1	——	——	——
Manual toggle presses						
2.5 HKP/E	120 N = 12 kg	2.5 kN	0.17	——	1 x M12	70 Nm
	190 N = 19 kg	5 kN	0.28	——		
2.5 HKPV	120 N = 12 kg	2.5 kN	0.17	——	1 x M12	70 Nm
	190 N = 19 kg	5 kN	0.28	——		
	280 N = 28 kg	8 kN	0.45	——		
5 HKPV (200)	120 N = 12 kg	5 kN	0.10	0.30	2 x M10	60 Nm
	210 N = 21 kg	10 kN	0.22	0.60		
	320 N = 32 kg	14 kN	0.30	0.90		
8/12 HKPV (300)	180 N = 18 kg	12 kN	0.30	0.45	2 x M12	90 Nm
adjustable	260 N = 26 kg	16 kN	0.40	0.52		
stroke 23 mm	350 N = 35 kg	20 kN	0.55	0.65		
8/12 HKPV (300)	120 N = 12 kg	8 kN	0.20	0.25	2 x M12	90 Nm
adjustable	250 N = 25 kg	12 kN	0.30	0.45		
stroke 45 mm	350 N = 35 kg	16 kN	0.45	0.52		
8/16 HKPV (300)	200 N = 20 kg	16 kN	0.30	0.30	3 x M14	120 Nm
adjustable	260 N = 26 kg	20 kN	0.40	0.45		
stroke 25 mm	420 N = 42 kg	32 kN	0.55	0.70		
8/16 HKPV (300)	140 N = 14 kg	8 kN	0.15	0.18	3 x M14	120 Nm
adjustable	280 N = 28 kg	16 kN	0.30	0.30		
stroke 58 mm	420 N = 42 kg	24 kN	0.45	0.50		
50 HKP	330 N = 33 kg	max. 55 kN	0.55	0.40	4 x M16	170 Nm
Pneumatic presses HKP/L-DS and LP	**Operating pressure in bar**					
2 kN	6 bar	2 kN	0.14	——	1 x M12	70 Nm
4 kN (300)	7 bar	4 kN	0.10	0.15	2 x M12	90 Nm
8 kN (300)	7 bar	8 kN	0.25	0.30		
12 kN (300)	7 bar	12 kN	0.40	0.45		
13 kN (300)	7 bar	13 kN	0.15	0.30	3 x M14	120 Nm
20 kN (300)	7 bar	20 kN	0.25	0.45		
33 kN (300)	6 bar	33 kN	0.40	0.20	4 x M16	170 Nm
45 kN (300)	6 bar	45 kN	0.50	0.35		
56 kN (300)	6 bar	56 kN	0.55	0.40		
Pneumatic toggle presses						
20 kN KHKP (300)	6 bar	20 kN	1.00	1.00	2 x M12	90 Nm
60 kN KHKP (300)	6 bar	60 kN	1.00	1.10	4 x M16	170 Nm
20 kN KHP	6 bar	>20 kN	0.20	——	——	——
30 kN KHP	6 bar	>30 kN	0.25	——	——	——
50 kN KHP	6 bar	>50 kN	0.15	——	——	——
70 kN KHP	6 bar	>70 kN	0.25	——	——	——
100 kN KHP	6 bar	>100 kN	0.35	——	——	——
Hydro-pneumatic presses						
60 kN LHP (300)	6 bar	60 kN	0.55	0.45	4 x M16	170 Nm
110 kN HPC	6 bar	110 kN	0.40	——	——	——
150 kN HPPV	6.5 bar	148 kN	0.15	——	——	——
300 kN HPPV	6.5 bar	314 kN	0.75	——	——	——
500 kN HPPV	6.5 bar	509 kN	——	——	——	——

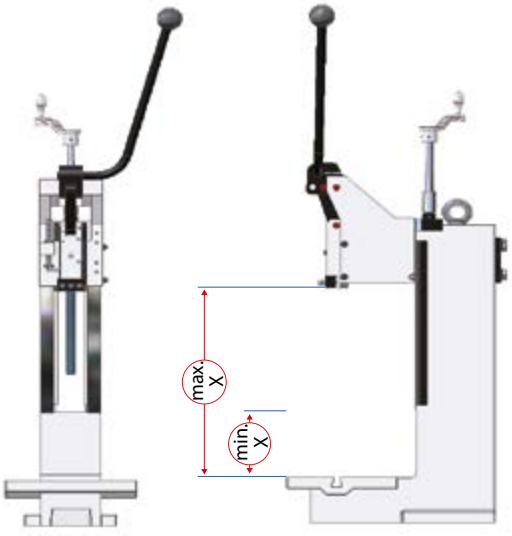
For comparison:
The given nominal forces of our lever machines are already reached with a lever operating force of between 120 and 140 N (12-14 kg).

The optimal equipment of your press depends on your application!

There is no standard solution for all jobs, but for each job, there is the right *GECHTER* press. This could be our smallest press or a special machine. Proper equipment makes the difference.

The following detailed descriptions of ***GECHTER*** press-specific accessories will give you an initial overview. Of course our service team at ***GECHTER*** will be pleased to advise and support you.

All accessories are shown on the individual machine pages.



Extended daylight

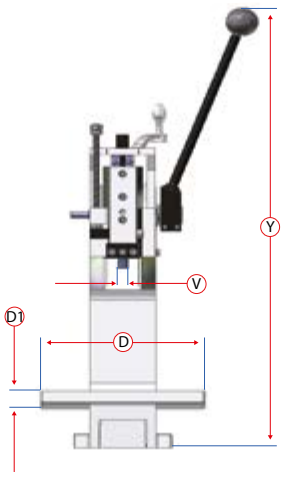
Press Type	Code designation	Type	X min* in mm	X max* in mm
Manual rack and pinion press	HZP	4	115	300
Manual toggle press	HKPV	5 8/12 8/16 50	115 110 150 210	300 335 420 470
Pneumatic aided manual press	HKP/L-DS	4, 8 and 12 kN 13 and 20 kN 33,45 and 56 kN	130 150 225	340 420 470
Pneumatic toggle press with adjustable guide unit	KHKP	20 kN 60 kN	130 225	340 470
Linear acting pneumatic press	LP	4, 8 and 12 kN 13 and 20 kN 33, 45 and 56 kN	130 150 225	340 420 470
Linear acting hydro-pneumatic press	LHP	60 kN	130 150 225	340 420 470

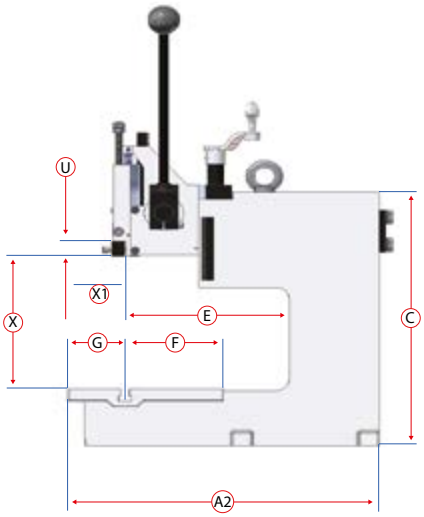
* for dimensional alterations, see page 37

Efficient Production Requires Flexibility

Extended daylight

Extended throat





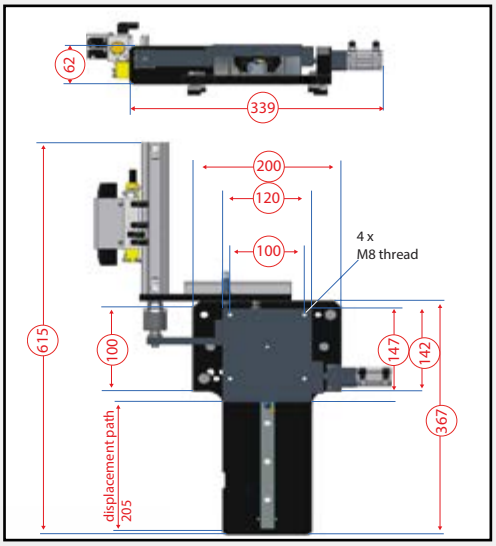
Extended throat

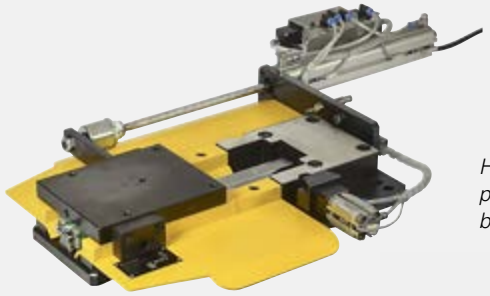
Dimension	HZP 4	HKPV 5	HKPV 8/12	HKP/L-DS 12 kN	LP 12 kN	HKPV 8/16	HKP/L-DS 20 kN	LP 20 kN	HKP 50	HKP/L-DS 56 kN	LP 56 kN	LHP 60 kN
A2	380		548			600			670	670	670	522
C	360		507			670			769			
D	200		300			300			340			
D1	17		25			30			31			
E*	200		300			300			300			
F	120		120			130			150			
G	70		85			100			120			
U	21		21			29			49			
V	Ø 10 H7		Ø 10 H7			Ø 15 H7			Ø 25 H7			
X*	130-187		180-245			220-320			230-370			
X1	100	40	45	46	40	58	58	40	15	59	40	50
Ymax	625	748	920	830	1005	1230	1053	1177	1560	1320	1590	1555

* for dimensional alterations, see page 37

HST 150 in mounting position

HST 150 RB in mounting position



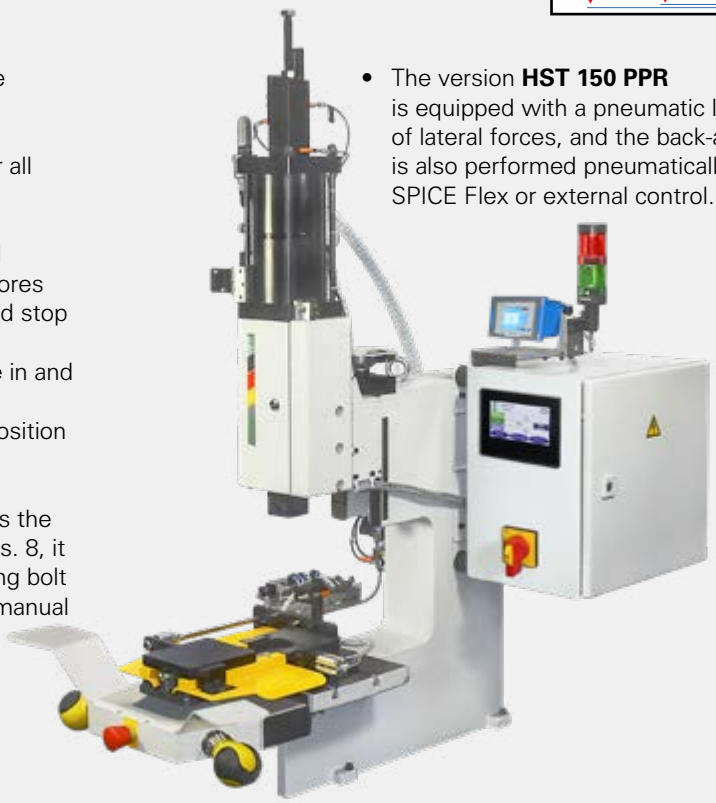


HST 150 PPR in operating position with pneumatic locking bolt and pneumatic back-and-forth motion

- The basic version of the sliding table **HST 150** with a ball locking bolt consists of:

1) a baseplate with mounting bores for all ***GECHTER*** presses
2) a ball-bearing guide with carriage
3) a hardened and ground formed anvil
4) a mounting plate with 4 mounting bores
5) a stopping plate with adjustable fixed stop
6) an oil shock absorber
7) a handle for moving the sliding table in and out
8) a ball catch for adjusting the work position

- The version **HST 150 RB** consists of the same components as the basic version from pos. 1 to 7. In pos. 8, it is equipped with a mechanical locking bolt for the absorption of lateral forces (manual operation).



- The version **HST 150 PPR** is equipped with a pneumatic locking bolt for the absorption of lateral forces, and the back-and-forth motion of the table is also performed pneumatically. Can only be operated via SPICE Flex or external control.

- Extensions (special accessories):

1) position end switch at the front and at the back for the back-and-forth motion cylinder and the locking cylinder

2) extension for the mechanical locking bolt

3) Development, construction and manufacturing of special devices, tools or completely automated work processes by ***GECHTER***.

BEST GECHTER

Precision fine adjustment PFE for the presses HKPV and HKP/L-DS
Adjustment range: 3 mm
Scaling 0.02 mm

The **PFE** is fitted in a space-saving way between the cylinder and the ram or between the joint and the ram in the press head. Thus the overall space requirement of the press remains the same. The advantages of the inverted V guide and the removable clamping piece at the press ram remain unchanged.

If precise bending, embossing, riveting and cutting operations are required, the **PFE** ensures the accurate and smooth depth adjustment of the clamped tool.

Adjustment is carried out with the chuck adjustment via a fine thread spindle. The scale of the chuck adjustment consists of 75 marks, each one marking a change of 0.02 mm. The adjustment can be locked with a threaded pin.

Pressing Process Monitoring with Manual Toggle Presses

Process and quality monitoring of safety-relevant components, control of the operator's motion sequence with utmost efficiency

Return stroke blocking mechanism for manual toggle press type 2 to 4 kN HZP, type 2.5 HKPV to 8/16 HKPV

- If precise embossing, bending, riveting, and cutting operations are required, the return stroke blocking mechanism ensures that the press ram reaches exactly the bottom dead center.
- The return stroke blocking mechanism is activated when the ram has reached a position of approx. 8 mm over the bottom dead center.
- After the working stroke has been completed, a return stroke of only approx. 18 mm - corresponding to a lever return stroke of approx. 60° - is required to carry out the next working stroke.
- The blocking mechanism can simply be latched or unlatched if required.
- Subsequent installation is not a problem.

High-precision depth adjustment adapter for all types

- If precise embossing, bending and riveting operations are required, the **PTE** (precision depth adjustment) guarantees the precise depth adjustment of the clamped tool.
- The **PTE** has two interior hardened guides, which prevent the clamped tool from disadjustment.
- If required, the **PTE** can be clamped and unclamped like a tool.
- If the **PTE** is adjusted, the tool's position remains the same, except for its depth adjustment.
- Due to its compact design, the **PTE**'s adjustment mechanism, fine thread spindle, and precise guides are safe from damage and fouling.
- Owing to the **PTE**'s precise and stable guiding, accurate work is also possible when tools without a guide are used.
- All **PTE** components are surface-hardened.
- Adjustment is carried out via a fine thread spindle by twisting the chuck adjustment. Turning the chuck adjustment by one mark will result in a change of 0.02 mm.

Technical data	PTE 10/10	PTE 15/15	PTE 25/25
Ø clamping pivot	Ø 10 mm	Ø 15 mm	Ø 25 mm
Ø holding fixture bore	Ø 10 mm	Ø 15 mm	Ø 25 mm
Ø chuck adjustment	Ø 40 mm	Ø 40 mm	Ø 65 mm
scaling	60	60	100
change per mark	0.025 mm	0.025 mm	0.02 mm
adjustable range	6 mm	6 mm	6 mm
daylight	65 mm	65 mm	90 mm

Below is a selection from our wide range of special accessories:

- Special paint colors
  All our presses and control systems are also available in different special colors of paint. Our standard color is RAL 7035
- Intermediate adapters
  If the press does not have the holding fixture bore that is needed, there are also here various different adapters in the standard Gechter dimensions.
- Special ram working
  It is possible to arrange smaller or larger holding fixture bores here, or measures to secure against torsion.
- Presses designed for left-hand operation can also be provided.
- "Clean room" design
  Our presses can be chemically nickel-plated and lubricated with "Molykote" if required.
- Stroke lengthening
  Almost every type of press has a special stroke-lengthening facility
- Special designs of press frames
  If the height or the radius of the standard press frame is not sufficient for your needs, there are also many other possibilities here.
- Protective housing and light curtain
  If you need to solve any special safety problem, there is certainly a solution to it via one of several types of protective housing or light barrier.

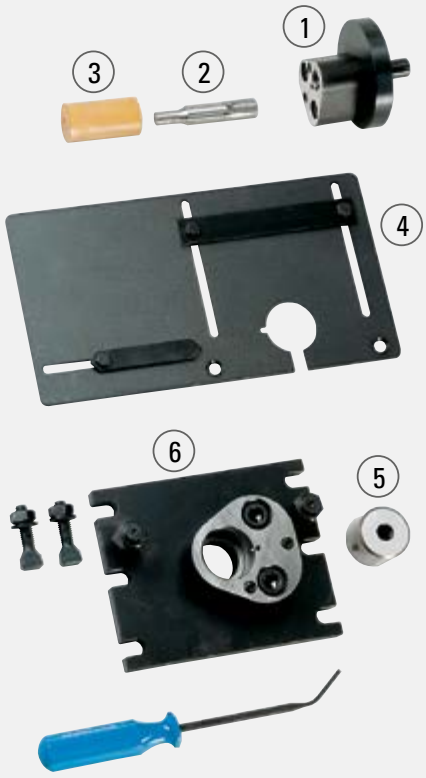
Quick-Change Punching Systems

All ***GECHTER*** presses are equipped with a no-play adjustable inverted prism guide. The high-precision guide method makes it possible to operate the ***GECHTER*** presses with free-cutting tools in every shape, without any problems.

Due to our tool making and fixture construction facilities with state of the art equipment, we are able to construct and manufacture tools, fixtures, and special machinery anytime according to our customers' requirements. If necessary, we can also design and produce special control devices for the relevant workflow.

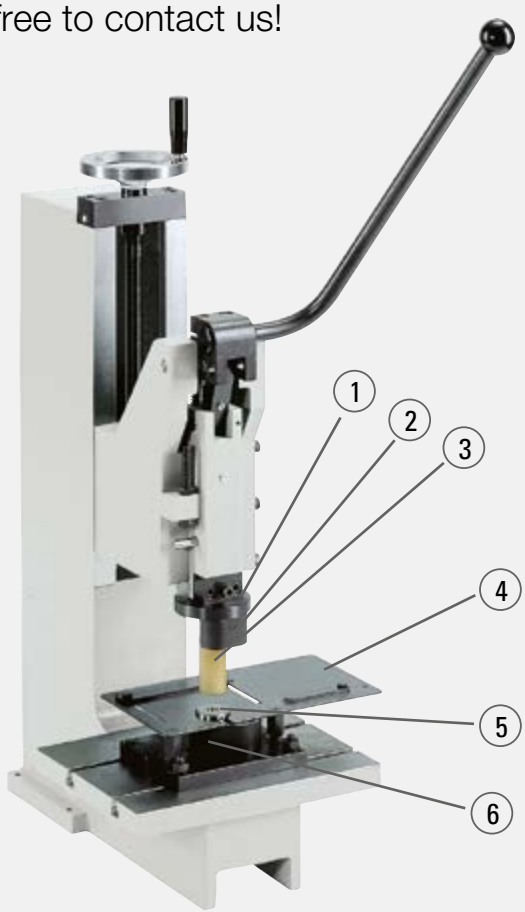
Clamping pivot with and without collar

for our standard diameters
Ø10H7, Ø15H7 and Ø25H7



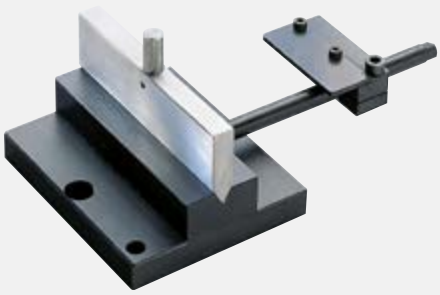
1. quick change ram adapter
2. ram
3. stripper
4. support with adjustable stops
5. quick change cutting bushing
6. quick change cutting bushings adapter

If you are interested in this product, feel free to contact us!



Tooling

Cut-off tool, width < 80 mm, with adjustable length stop of up to 300 mm



Bending tools for 90° or 60° with adjustable length stop of up to 130 mm and a width of 120 mm

Notching tool with adjustable lateral stops of up to 25 mm

Small radius cutter with end stop and radii of 3, 5, 6 and 8 mm

Column guided radius cutter with interchangeable punch/die set from R5 to R40

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www.gerotools.ro

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www.techpro.com.sg

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