

Presses  
Accessories  
Controls  
Press Force Monitoring  
Special machines  
Service



**Feel the Performance**  
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## Service and Contact

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

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### Your local representatives:

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[www.goertler-hv.de](http://www.goertler-hv.de)



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.

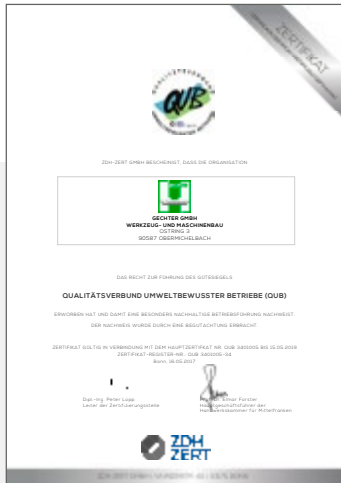


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**You need to assemble or process components and you are wondering which type of connection best fits your needs? Bonding, brazing, welding or screwing are excluded due to safety or cost considerations?**

Simply produce the best.

We offer solutions!

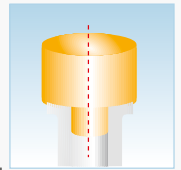
Our experts will help you to find the best approach to meet your specific requirements. Our strength is providing solutions. These range from standard solutions to customized ones that involve construction services.

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.

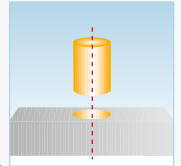


Flaring, press inserting, forming, calibrating, marking, mounting, riveting, cutting, punching, and crimping? What are your requirements? We will provide the perfect solution for the production of your component part.

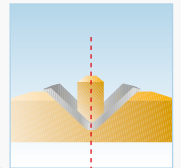
Flaring



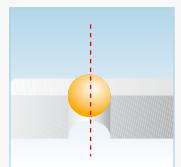
Press inserting



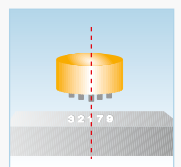
Forming



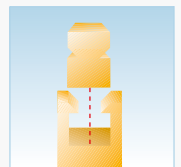
Calibrating



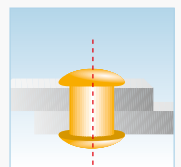
Marking



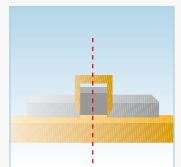
Mounting



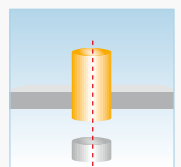
Riveting



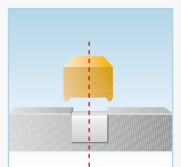
Cutting



Punching



Crimping



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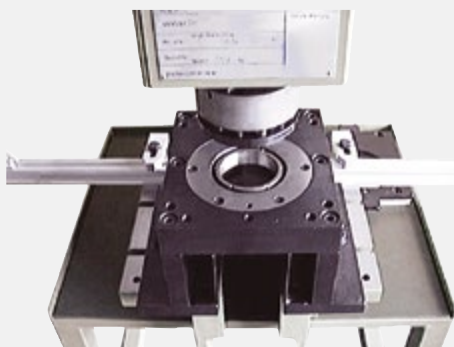
Simply produce the best

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



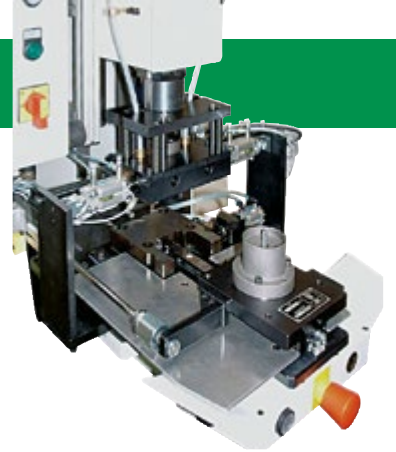
Press inserting device



Cutting device



Press inserting device



Press inserting device



Crimping device



Punching device with punched part



Punching device



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

Pay attention to this label in the catalog!

## Technical Characteristics of the **GECHTER** Presses

**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 performed 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.

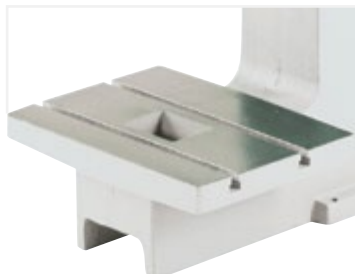


# Technical Characteristics



## **Pull lever**

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

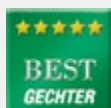


## **Clamping surface**

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**



Crimp Presses  
page 10

Manual Toggle  
Presses  
page 14-15

Rack-and-Pinion Presses  
page 12-13

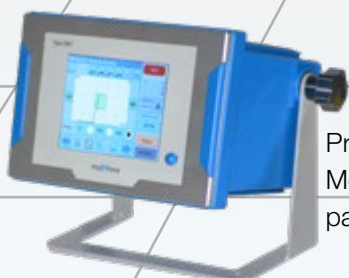
Pneumatic-Aided  
Manual Presses  
**NEW** DS with defined start  
of the power stroke  
page 16-17

Linear acting  
Pneumatic-Aided  
Presses  
page 18-19

Linear acting  
Pneumatic Presses  
page 20-21

Pneumatic Toggle  
Presses  
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The illustrations are not to scale



Press Force  
Monitoring  
page 32

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# All-in-one solutions from a single supplier

**Construction**

**Manufacturing**

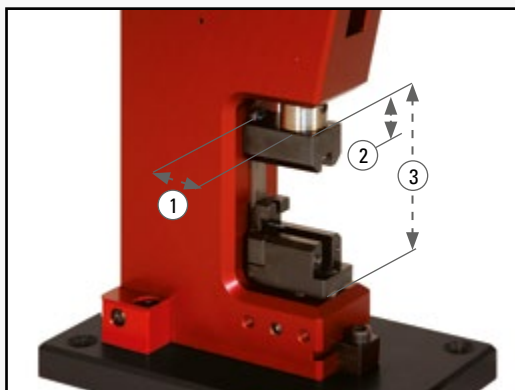
**Tools**

Hydro-Pneumatic  
C-Frame Presses  
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Hydro-Pneumatic  
H-Frame Presses  
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Presses with Light Curtain or  
with Electro-Pneumatic Rotary  
Indexing Tables  
page 39

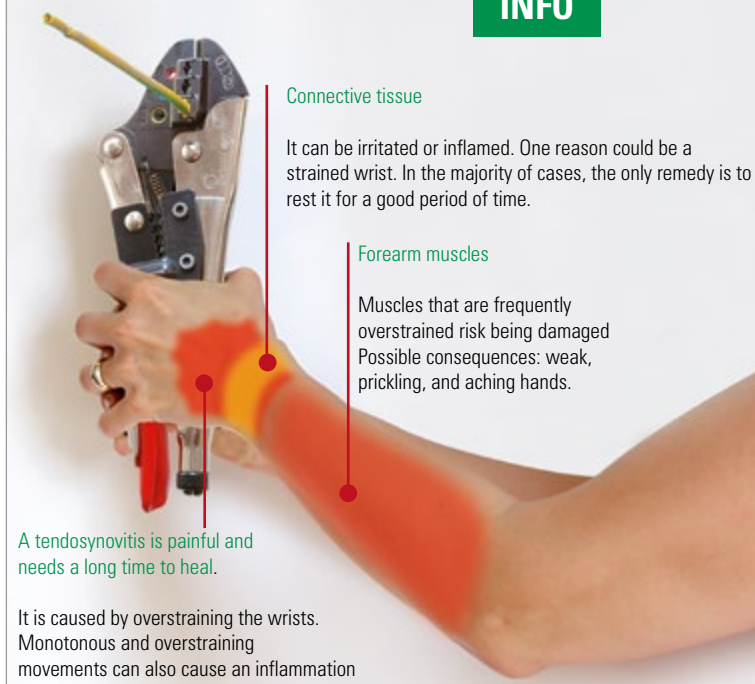




	CR10	CR10/H50
① throat	22 mm	22 mm
② Stroke length, adjustable	17mm	17 mm
③ daylight	76 mm	126 mm
weight	3 kg	3.2 kg

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

CR10



Holex

CR10



Pressmaster



Adapter bottom part\*



Adapter upper part



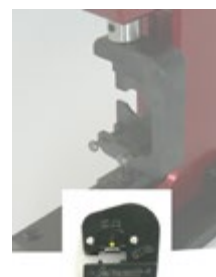
Crimp tool insert

CR10



AMP/Knipex/Tyco

CR10/H50



WEZAG

CR10/H50



WEZAG

# Manual Toggle Presses with Circular Guide

**The muscles and sin-  
ews of the hands and  
arms are not designed  
for frequent, repeated  
strain.**

**Avoid production loss-  
es, schedule difficul-  
ties and quality deteriora-  
tion.**



Dimension	Type 2.5 HKP/E
Force at BDC with permitted lever operating force	max. <b>5 kN</b> 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 work-pieces 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)










Accessories for your press		Options	Your selection	<div style="border: 1px solid black; padding: 2px;">1</div> Type 2,5 HKP/E
1	Standard press without accessories		<input checked="" type="checkbox"/>	X
2	Precision depth adjustment PTE (adapter)		<input checked="" type="checkbox"/>	X
3	Ergonomic handle	select any	<input checked="" type="checkbox"/>	X
4	Centering plate with center bore		<input checked="" type="checkbox"/>	X
5	Highly stressable sliding table, mechanical	select one	<input checked="" type="checkbox"/>	
	Highly stressable sliding table, mechanical with locking bolt		<input type="checkbox"/>	
6	Clamping pivot without collar	select one	<input checked="" type="checkbox"/>	X
	Clamping pivot with collar		<input checked="" type="checkbox"/>	X

X = available

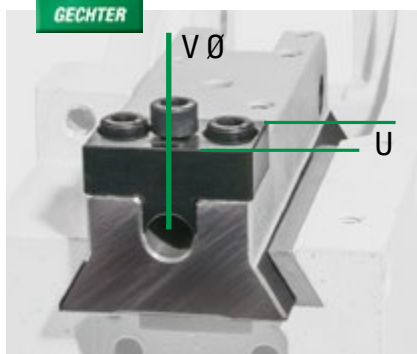


**Please note** that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.



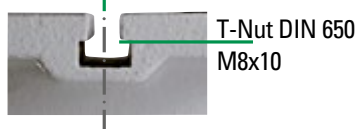
On the following pages, you will find detailed descriptions and further illustrations on each topic:

Press force monitoring	Page	32
Lever operating forces and press forces	Page	41
Accessories	Page	42



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 32**



**maXYmos**



1



2



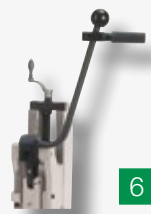
3



4



5



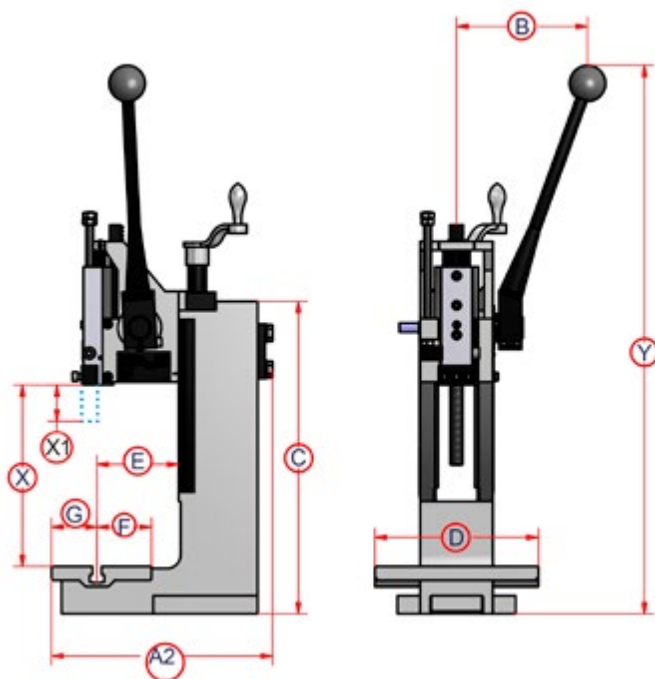
6



7



8



Dimension	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	2
				Type 2 HZP	Type 4 HZP
1	Standard press without accessories	select one	<input checked="" type="checkbox"/>	X	X
2	Extended throat up to 200 mm		<input type="checkbox"/>		X
3	Extended daylight + 100 mm		<input type="checkbox"/>		X
4	Return stroke blocking mechanism	select any	<input checked="" type="checkbox"/>	X	X
5	Precision depth adjustment PTE (adapter)		<input checked="" type="checkbox"/>	X	X
6	Ergonomic handle		<input checked="" type="checkbox"/>	X	X
7	Centering plate with center bore	select one	<input checked="" type="checkbox"/>	X	X
8	Highly stressable sliding table, mechanical		<input type="checkbox"/>		X
	Highly stressable sliding table, mechanical with locking bolt		<input type="checkbox"/>		X
9	Clamping pivot without collar	select one	<input checked="" type="checkbox"/>	X	X
	Clamping pivot with collar		<input checked="" type="checkbox"/>	X	X

X = available



9



Force/stroke table

Dimension	8/12 HKPV	8/16 HKPV
x1 at <F. max	0-45	0-58
x2 at F. max	0-23	0-25
KForce at BDC with short stroke	20 kN	32 kN
Force at BDC with long stroke	16 kN	24 kN

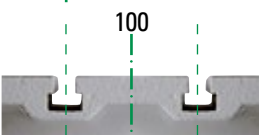
Subject to technical modifications.

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

Press force monitoring	Page	32
Lever operating forces and press forces	Page	41
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With type 2.5 - 8/12  
1 x DIN 650 M8x10

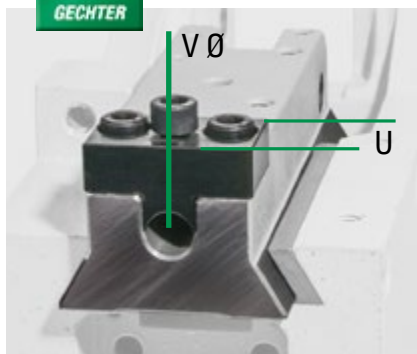


With type 8/16 2 x DIN 650 M8x1  
With type 50 2 x DIN 650 M10x12

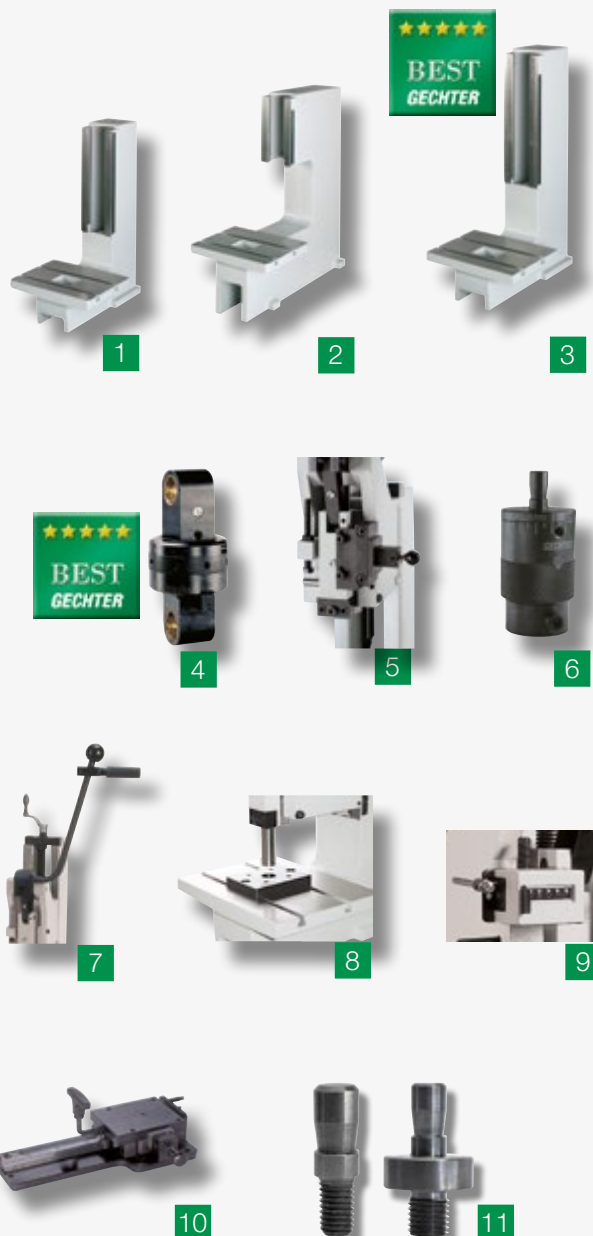
With press force  
monitoring  
Page 32



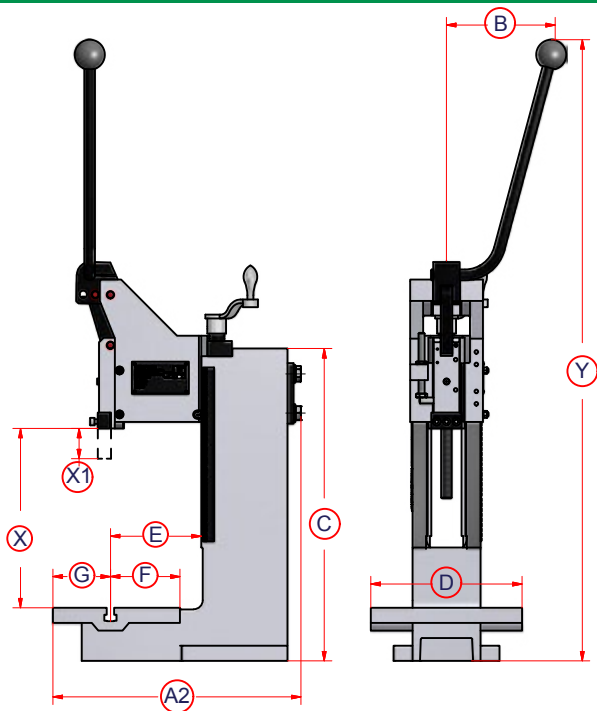
maXYmos



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.







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. <b>8 kN</b> max. 280 N	max. <b>14 kN</b> max. 320 N	see table below max. 350 N	max. 420 N	max. <b>55 kN</b> 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	0-58	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	select one		X	X	X
10	Highly stressable sliding table, mechanical			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

X = available

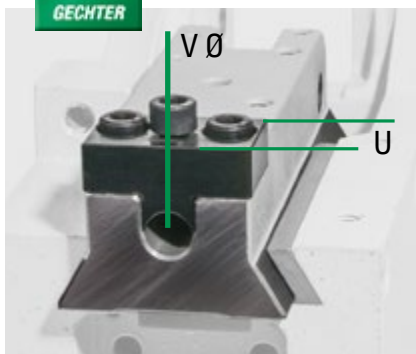


**NEW**

## Defined start HKP/L DS

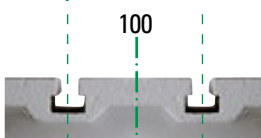
### Functional description DS-handle

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.



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 32

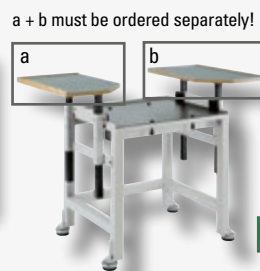


**maXYmos**

	HKP/L-DS 4/8/12 kN	HKP/L-DS 13/20 kN	HKP/L-DS 33/45/56 kN
Operating pressure	2-7 bar	2-7 bar	2-6 bar
Press force kN	4/8/12	13/20	33/45/56
at X bar approx.	7.7 bar	7 bar	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

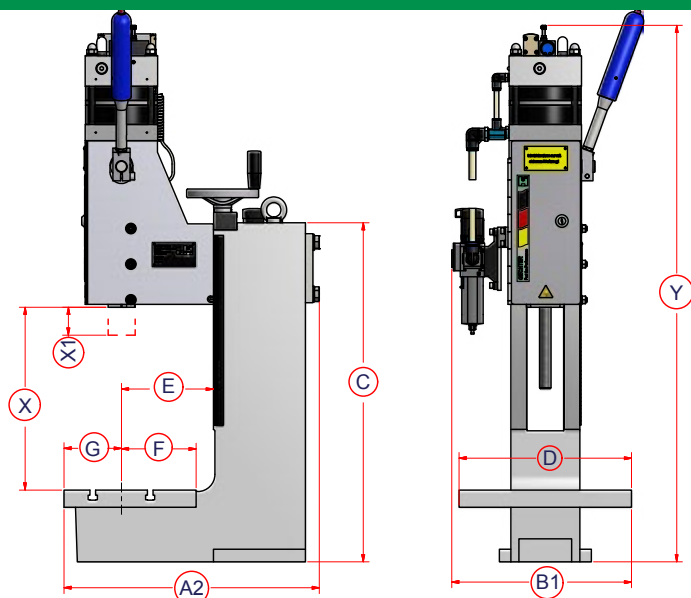
Subject to technical modifications.

With definable  
force shut-off  
mechanism  
Page 37



a + b must be ordered separately!





Dimension	HKP/L-DS 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	678/697/729	955/988	1170/1216/1262

\* Special stroke length on request

Subject to technical modifications.

Accessories for your press		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			XX	XX	XX

X = available

XX = page 32-33



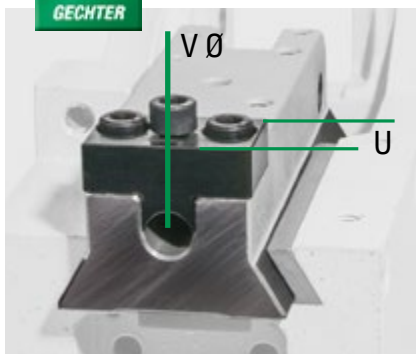
**Please note** that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.



**NEW**

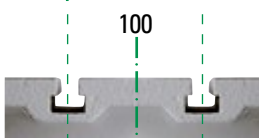
## Functional description

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



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 32



**maXYmos**

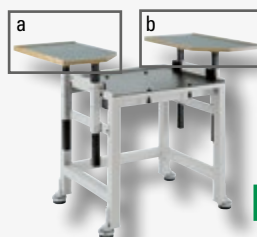
	LPL 4/8/12 kN	LPL 13/20 kN	LPL 33/45/56 kN
Operating pressure	2-7 bar	2-7 bar	2-6 bar
Press force kN	4/8/12	13/20	33/45/56
at X bar approx.	7.7 bar	7 bar	6.5 bar
Air-consumption, max. per stroke	0.07/0.11/0.14 L x bar	0.19/0.25 L x bar	0.45/0.56/0.67 L x bar
Pneumatic connection hose	1/4"	1/4"	1/2"
Weight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

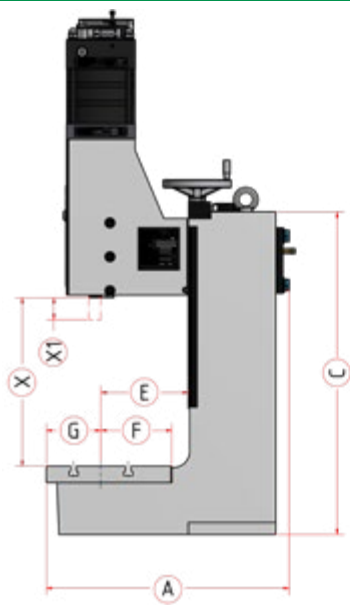
Subject to technical modifications.

With definable  
force shut-off  
mechanism  
(stroke 5.9 mm)  
Page 37



a + b must be ordered separately!





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	Type 1 4 kN LPL 8 kN LPL 12 kN LPL	Type 2 13 kN LPL 20 kN LPL	Type 3 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
	Highly stressable sliding table, mechanical		select one		X	X	X
8	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 SpiceFlex				X	X	X

X = available

XX = Page 32-33



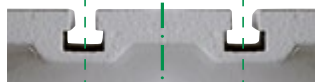
**Please note** that we will respond to your individual production requirements and that our **special machines experts** are at your disposal.



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



100

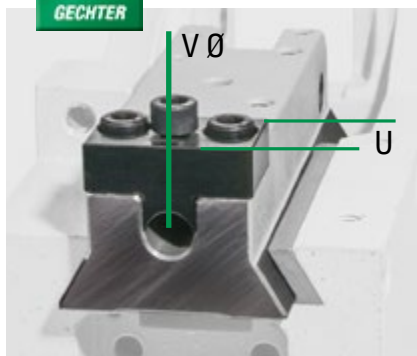


With type 13, 20 LP 2 x DIN 650 M8x10  
With type 33, 45, 56 LP 2 x DIN 650 M10x12

With press force  
monitoring  
[Page 32](#)



maXYmos



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.

	LP 2 kN	LP 4/8/12 kN	LP 13/20 kN	LP 33/45/56 kN
Operating pressure	3-7 bar	3-7 bar	3-7 bar	3-6 bar
Press force kN	2	4/8/12	13/20	33/45/56
at X bar approx.	6 bar	7,8 bar	7 bar	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	1/4"	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

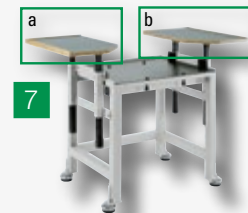
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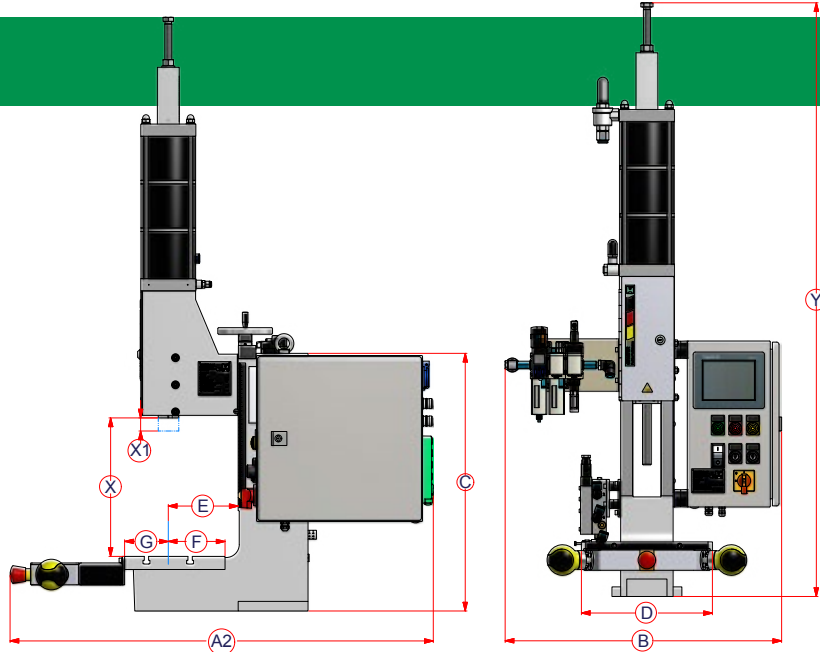


**GECHTER LP or LHP**  
presses from 4kN up-  
ward come equipped  
with a ram fine-adjust-  
ment mechanism as  
standard (scaling  
0.05 mm)



a + b must be ordered separately!





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		Options	Your selection	Type 2 kN LP	Type 4 kN LP 8 kN LP 12 kN LP	Type 13 kN LP 20 kN LP	Type 33 kN LP 45 kN LP 56 kN LP
1	Standard press, 40 mm stroke	select one		X	X	X	X
	Stroke length 60 mm				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
Detailed description of the controls, see Page 38	Two-hand safety controls	select one			X	X	X
	ES06				X	X	X
	ZS06 SpiceFlex modular				X	X	X
4	Rotary table adjustable to segmentations of 2-24, suitable for presses with SpiceFlex control systems	select one			X	X	X
5	Highly stressable sliding table, mechanical				X	X	X
	Highly stressable sliding table, mechanical with locking bolt				X	X	X
	Highly stressable sliding table with electro-pneumatic control				X	X	X
7	Press foundation H approx. 700 x W 690 x D 565 mm, adjustable with machine bearing elements	select one			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	select any			X	X	X
	Deposit table for lateral attachment to the press foundation on the right side (b), height adjustable				X	X	X
	Modulator valve for stroke speed regulation (no image available)				X	X	X
	Fall protection HGL for tools heavier than 15 kg (no image available)				X	X	X
	Rotary table changing plate with bores only with RT.				X	X	X
8	Footswitch, connected to plug-in connection for SpiceFlex	select one			X	X	X
9	Clamping pivot without collar				X	X	X
	Clamping pivot with collar				X	X	X



X = available



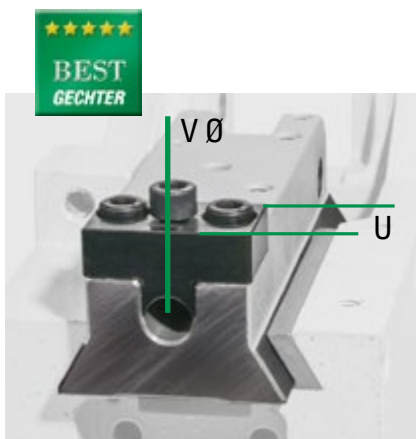


On the following pages, you will find detailed descriptions and further illustrations on each topic:

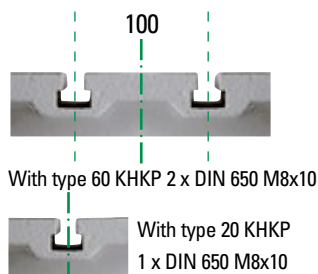
Press force monitoring	Page	32
Lever operating forces and press forces	Page	41
Accessories	Page	42

	KHKP 20 kN	KHKP 60 kN
Operating pressure	3-6 bar	3-6 bar
Press force kN at X bar approx.	20 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.



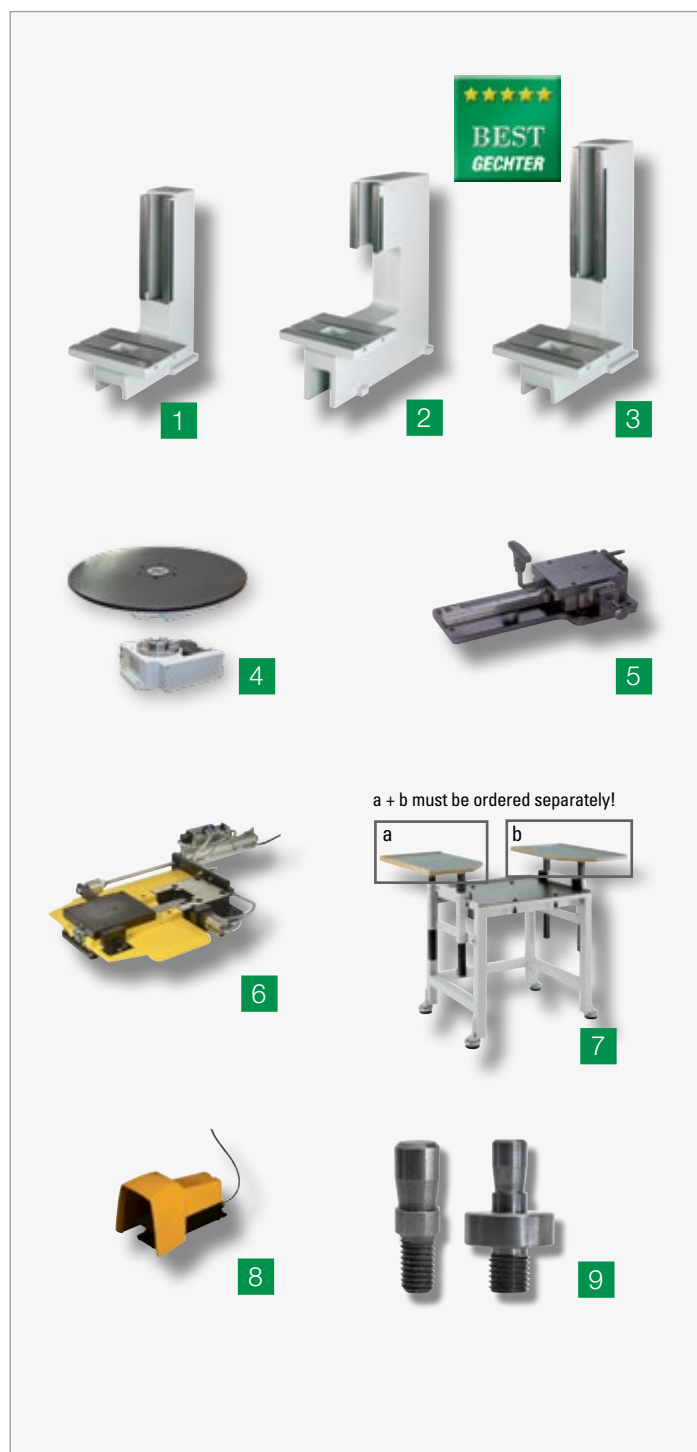
Unique **GECHTER** quality  
No-play adjustable prism guide.  
The clamping device can be removed towards the front, so that the clamping pivot is not damaged.

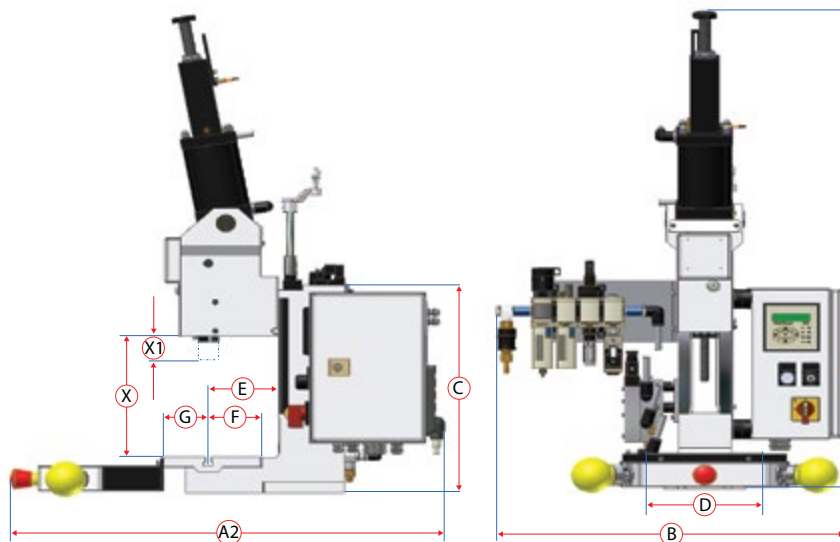


With press force monitoring  
Page 32



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Dimension	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		Options	Your selection	1 Type 20 kN KHKP	2 Type 60 kN KHKP
1	Standard press without accessories			X	X
2	Extended throat up to 300 mm	select one		X	X
3	Extended daylight + 100 mm			X	X
	Two-hand safety controls	ES06		X	X
	Detailed description of the controls, see Page 38	ZS06			
		SpiceFlex modular		X	X
4	Rotary table adjustable to segmentations of 2-24, suitable for presses with SpiceFlex control systems			X	X
	Highly stressable sliding table, mechanical			X	X
5	Highly stressable sliding table, mechanical with locking bolt	select one		X	X
6	Highly stressable sliding table with electro-pneumatic control			X	X
	Press foundation H approx. 700 x W 690 x D 565 mm, adjustable with machine bearing elements			X	X
7	Press foundation H approx. 800 x W 690 x D 565 mm, adjustable with machine bearing elements	select one		X	X
	Deposit table for lateral attachment to the press foundation on the left side (a), height adjustable			X	X
7	Deposit table for lateral attachment to the press foundation on the right side (b), height adjustable			X	X
	Rotary table changing plate with bores only with RT.	select any		X	X
8	Footswitch, connected to plug-in connection for SpiceFlex			X	X
	Clamping pivot without collar			X	X
9	Clamping pivot with collar	select one		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.

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

Press force monitoring	Page	32
Lever operating forces and press forces	Page	41
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	KHP 20/30 kN	KHP 50/70/100 kN
Operating pressure	3-6 bar	3-6 bar
Press force kN at X bar approx.	20/30 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

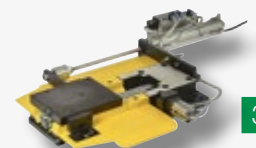
Subject to technical modifications



1

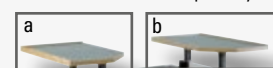


2



3

a + b must be ordered separately!

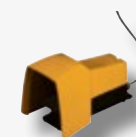


4



Feed Accuracy: 0.1 mm

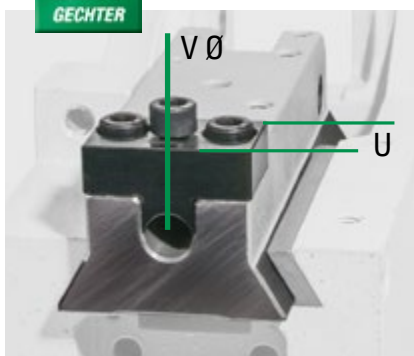
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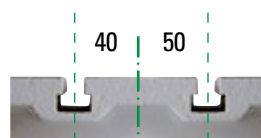
6



7



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.



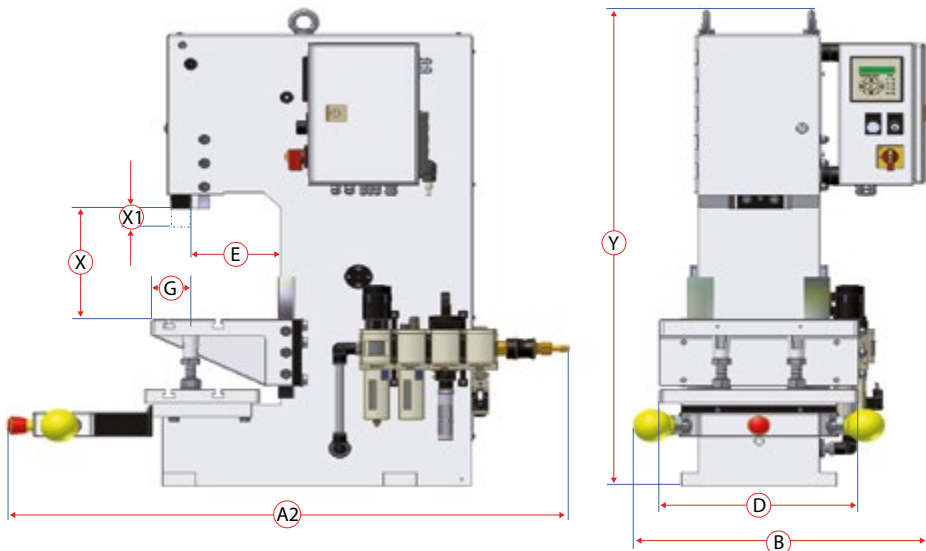
With type 20, 30 KHP  
2 x DIN 650 M8x10  
With type 50, 70, 100 KHP  
2 x DIN 650 M10x12

With press force  
monitoring  
Page 32



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		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	ZS06	select one		X	X	X
Detailed description of the controls, see Page 38	SpiceFlex modular			X	X	X
1 Rotary table adjustable to segmentations of 2-24, suitable for presses with SpiceFlex control systems		select one		X	X	X
Highly stressable sliding table, mechanical				X	X	X
2 Highly stressable sliding table, mechanical with locking bolt				X	X	X
3 Highly stressable sliding table with electro-pneumatic control		select one		X	X	X
Press foundation H approx. 700 x W 690 x D 565 mm, adjustable with machine bearing elements				X	X	X
4 Press foundation H approx. 800 x W 690 x D 565 mm, adjustable with machine bearing elements		select any		X	X	X
4 Deposit table for lateral attachment to the press foundation on the left side (a), height adjustable				X	X	X
4 Deposit table for lateral attachment to the press foundation on the right side (b), height adjustable				X	X	X
5 Adjustable round part, ram fine adjustment				X	X	X
Clamping plate with T-slot, lower support				X	X	X
6 Footswitch, connected to plug-in connection for SpiceFlex		select one		X	X	X
7 Clamping pivot without collar					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.

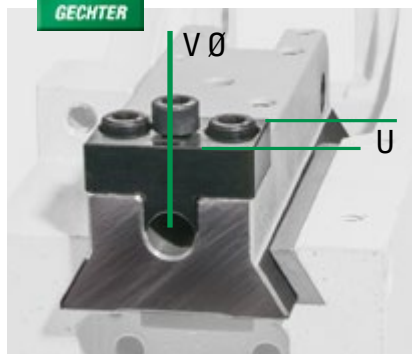




60 kN LHP	
Operating pressure	3-6 bar
Press force kN at X bar approx.	60 6 bar
Air-consumption, max. per stroke	15 1 x L pro bar
Approach stroke force kN at X bar	5.4 6 bar
Return stroke force kN at X bar approx.	4,1 6 bar
Working stroke, thereof power stroke	50 mm 6 mm
Pneumatic connecting hose	1/2"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

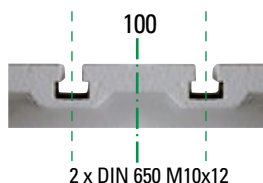
Subject to technical modifications.

**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.

With press force monitoring  
**Page 32**



**maXYmos**

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

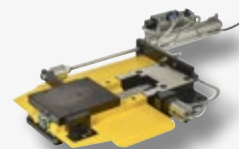
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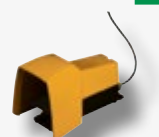
1



3



5

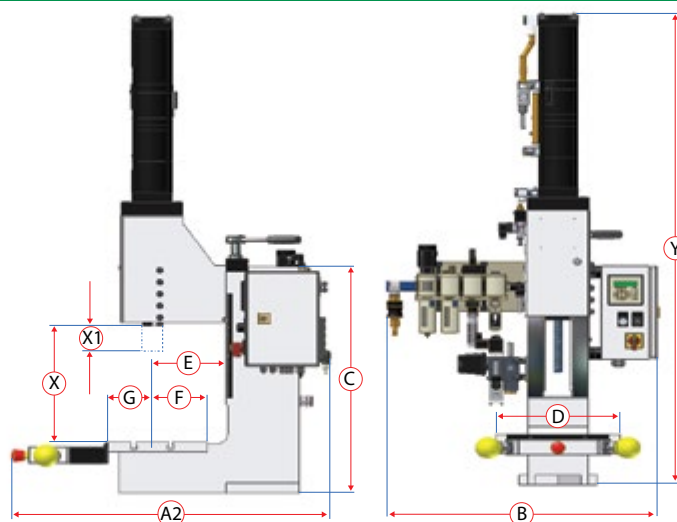


7

# table Guide Unit

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

Press force monitoring	Page	32
Lever operating forces and press forces	Page	41
Accessories	Page	42



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.

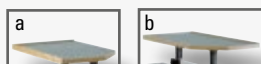


2



4

a + b must be ordered separately!



6



8

Accessories for your press		CE	Options	Your selection	1 Type 60 kN LHP
X1 = Stroke 50 mm, thereof power stroke 6 mm		select one	<input type="checkbox"/>	X	
X1 = Stroke 100 mm, thereof power stroke 6 mm			<input type="checkbox"/>	X	
X1 = Stroke 50 mm, thereof power stroke 12 mm			<input type="checkbox"/>	X	
X1 = Stroke 100 mm, thereof power stroke 12 mm Special stroke length on request			<input type="checkbox"/>	X	
1	Extended throat	select one	<input type="checkbox"/>	X	
2	Extended daylight		<input type="checkbox"/>	X	
Two-hand safety controls		select one	<input type="checkbox"/>	X	
ES06			<input type="checkbox"/>		
ZS06			<input type="checkbox"/>		
Detailed description of the controls, see Page 38		select one	<input type="checkbox"/>	X	
SpiceFlex modular			<input type="checkbox"/>	X	
3	Rotary table adjustable to segmentations of 2-24, suitable for presses with SpiceFlex control systems	select one	<input type="checkbox"/>	X	
Highly stressable sliding table, mechanical			<input type="checkbox"/>	X	
4	Highly stressable sliding table, mechanical with locking bolt		<input type="checkbox"/>	X	
5	Highly stressable sliding table with electro-pneumatic control		<input type="checkbox"/>	X	
Press foundation H approx. 700 x W 690 x D 565 mm, adjustable with machine bearing elements		select one	<input type="checkbox"/>	X	
Press foundation H approx. 800 x W 690 x D 565 mm, adjustable with machine bearing elements			<input type="checkbox"/>	X	
6	Deposit table for lateral attachment to the press foundation on the left side (a), height adjustable	select any	<input type="checkbox"/>	X	
	Deposit table for lateral attachment to the press foundation on the right side (b), height adjustable		<input type="checkbox"/>	X	
	Rotary table changing plate with bores only with RT.		<input type="checkbox"/>	X	
7	Footswitch, connected to plug-in connection for SpiceFlex	select one	<input type="checkbox"/>	X	
8	Clamping pivot without collar		<input type="checkbox"/>	X	
Clamping pivot with collar		select one	<input type="checkbox"/>	X	
			<input type="checkbox"/>	X	

X = available



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

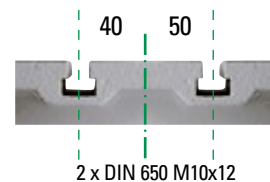


	110 kN HPC
Operating pressure	3-6 bar
Press force at 6 bar	110 kN
Approach stroke force at 6 bar	8.4 kN
Return stroke force at 6 bar	6.7 kN
Working stroke, thereof power stroke	50 mm 6 mm
Air-consumption, max. per stroke	26 ltr.
Pneumatic connecting hose	1/2"
Mains supply	90-240 V AC 3A
Control voltage	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 32**

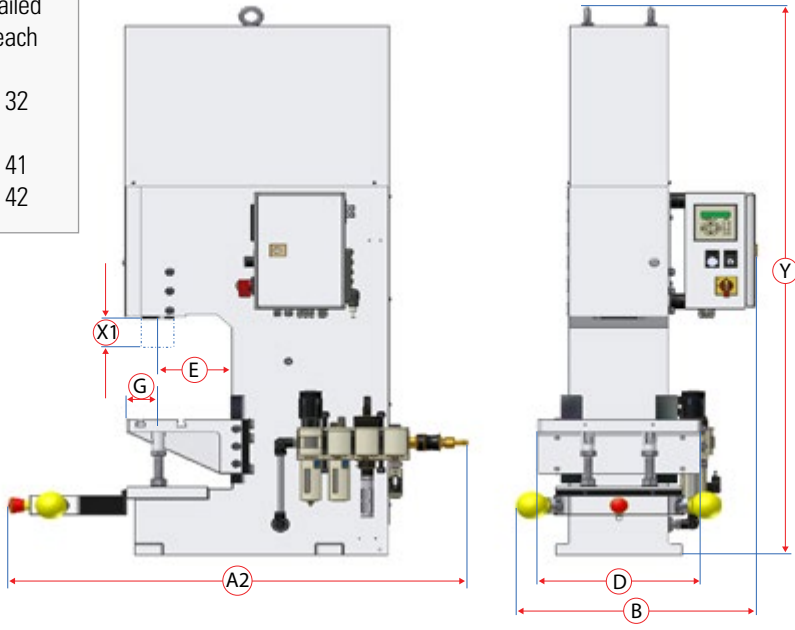


**maXYmos**

table Table

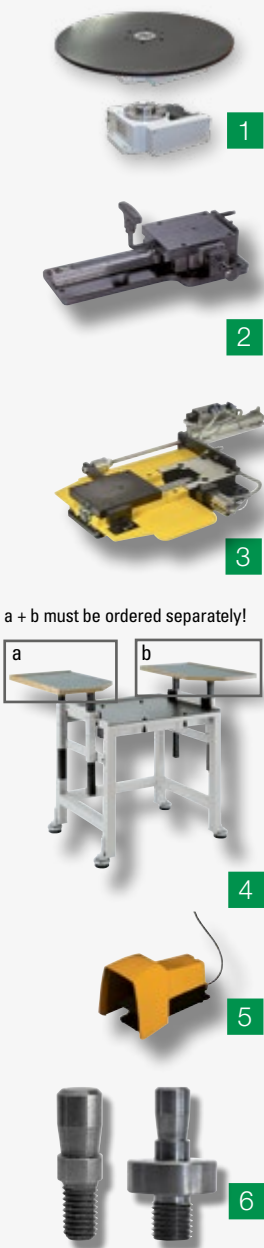
On the following pages, you will find detailed descriptions and further illustrations on each topic:

Press force monitoring	Page	32
Lever operating forces and press forces	Page	41
Accessories	Page	42



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.



a + b must be ordered separately!

Accessories for your press		CE	Options	Your selection	1 Type 110 kN HPC
X1 = Stroke 50 mm, thereof power stroke 6 mm			select one	<input type="checkbox"/>	X
X1 = Stroke 100 mm, thereof power stroke 6 mm				<input type="checkbox"/>	X
X1 = Stroke 50 mm, thereof power stroke 12 mm				<input type="checkbox"/>	X
X1 = Stroke 100 mm, thereof power stroke 12 mm Special stroke length on request				<input type="checkbox"/>	X
Two-hand safety controls		ZS06	select one	<input type="checkbox"/>	X
Detailed description of the controls, see Page 38		SpiceFlex modular		<input type="checkbox"/>	
1	Rotary table adjustable to segmentations of 2-24, suitable for presses with SpiceFlex control systems		select one	<input type="checkbox"/>	X
Highly stressable sliding table, mechanical				<input type="checkbox"/>	X
2	Highly stressable sliding table, mechanical with locking bolt			<input type="checkbox"/>	X
3	Highly stressable sliding table with electric control		select one	<input type="checkbox"/>	X
Press foundation H approx. 700 x W 690 x D 565 mm, adjustable with machine bearing elements				<input type="checkbox"/>	X
4	Press foundation H approx. 800 x W 690 x D 565 mm, adjustable with machine bearing elements			<input type="checkbox"/>	X
Deposit table for lateral attachment to the press foundation on the left side (a), height adjustable			select any	<input type="checkbox"/>	X
4	Deposit table for lateral attachment to the press foundation on the right side (b), height adjustable			<input type="checkbox"/>	X
Rotary table changing plate with bores only with RT.				<input type="checkbox"/>	X
5	Footswitch, connected to plug-in connector for SpiceFlex		select one	<input type="checkbox"/>	X
Clamping pivot without collar				<input type="checkbox"/>	X
6	Clamping pivot with collar			<input type="checkbox"/>	X

X = available







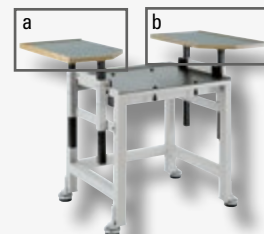
	HPPV/HPPS 150 kN	HPPV/HPPS 300 kN	HPPV/HPPS 500 kN
Operating pressure	3-6 bar	3-6 bar	3-6 bar
Press force at 6 bar	150 kN	300 kN	500 kN
Approach stroke force at 6 bar	6.5 kN	11 kN	14 kN
Return stroke force at 6 bar	6.2 kN	10.3 kN	13 kN
Pneumatic connecting hose	1/2"	1/2"	1/2"
Mains supply	90-240 V AC	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.

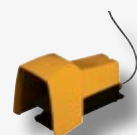
## INFO

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

a + b must be ordered separately!



1



2

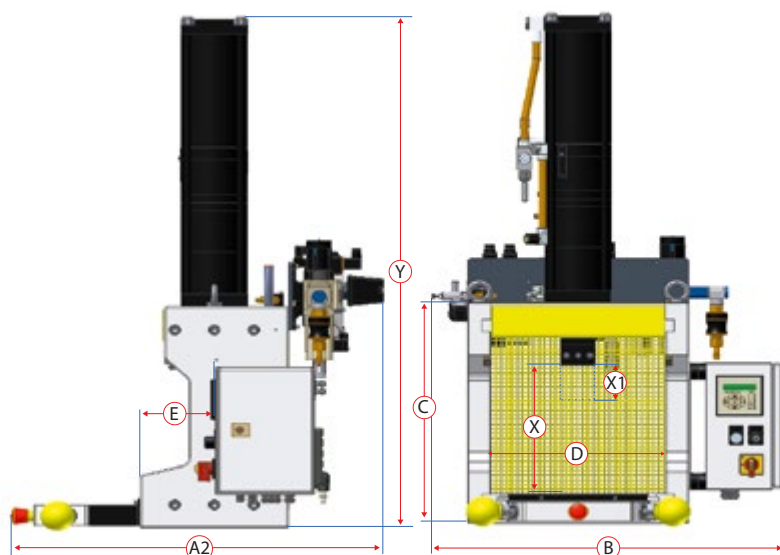
With press force monitoring  
Page 32



maXYmos

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

Press force monitoring	Page	32
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Accessories	Page	42



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		ES06	select one		X	X	
Detailed description of the controls, see Page 38		ZS06					
		SpiceFlex modular			X	X	
Press foundation H approx. 700 x W 690 x D 565 mm, adjustable with machine bearing elements			select one		X	X	
Press foundation H approx. 800 x W 690 x D 565 mm, adjustable with machine bearing elements					X	X	
1	Deposit table for lateral attachment to the press foundation on the left side (a), height adjustable			select any		X	X
	Deposit table for lateral attachment to the press foundation on the right side (b), height adjustable					X	X
2	Footswitch, connected to plug-in connection for Spice Flex					X	X
	Placement requirement are according to customer's needs. (dimension D + X)					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.

## 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  $\pm 10$  V
- Sensor for channel Y: piezo or strain gage and  $\pm 10$  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:**

- 8 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,  $\pm 10$  V, LVDT, incremental, SSI
- Channel Y: Strain gauge,  $\pm 10$  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



- 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.
- 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 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**

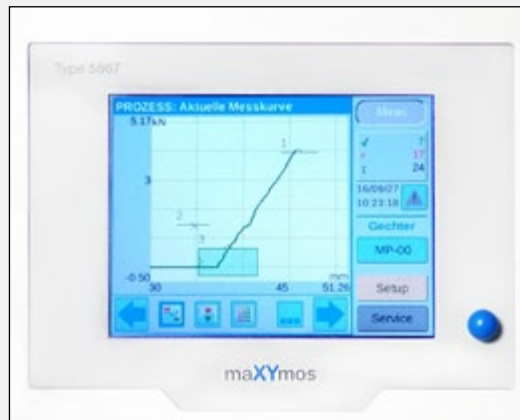
# Force shut-off mechanism

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 continues to build up force until the threshold is exceeded)

### 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-criterion, e.g. the timeout or a defined displacement (e.g. tool closed). If e.g. the component is jammed in the tool and so the force is reached before the measuring-stop-criterion is reached, the press starts automatically the return stroke to avoid damage of the components or of the tool. The measurement then signals NOK (force exceeded). If the force has not been reached before reaching the measuring-stop-criterion, the press opens and the component is declared OK.



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

## SpiceFlex 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!"

SpiceFlex modular offers you, thanks to its expansion modules, the possibility of doing justice to all these new requirements.

### Standard Scope Press Control System

#### SpiceFlex 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 98/37/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).



Control panel with integrated control

Maintenance unit

Valve block

### ZS CONTROL according to the machinery directive 98/37/EG

Based on a safety plc, it adds the following functions to the ES control:

#### 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 EN 13736 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 piece counter with backlight



ZS06 Control

Each press stroke is counted, the counter can be equipped with or without resetting facility.

For usage with a closed tool, the control is also available with a footswitch instead of the two-hand operation panel.

#### d) 5 additional inputs

For example to assemble a light curtain, protective housing, force-displacement measuring system, additional sensors... The acknowledgement is done via an additional external 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 SpiceFlex 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:

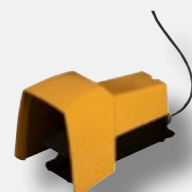
- Set-up operation
- Rotary table or sliding table operation
- Foot operation
- Continuous-stroke operation
- Automatic work-sequence
- Customer-specific work-sequence



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



**GECHTER** rotary indexing table (see description)



Electric footswitch

## 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: $\pm 30''$ Stop 16-24: $\pm 45''$ (Increased pitch accuracy on request)
Pitch accuracy (arc length):	Stop 2-12: $\pm 0.011$ mm (for 150-mm diameter) Stop 16-24: $\pm 0.016$ mm (for 150-mm diameter)
max. axial run-out of the plate:	0.01 mm (for $\varnothing$ 150 mm)
max. eccentricity:	0.01 mm
Max. plane parallelism of the table surface to the housing surface	0.03 mm (for $\varnothing$ 150 mm)



Type LP/SpiceFlex pro with TC150

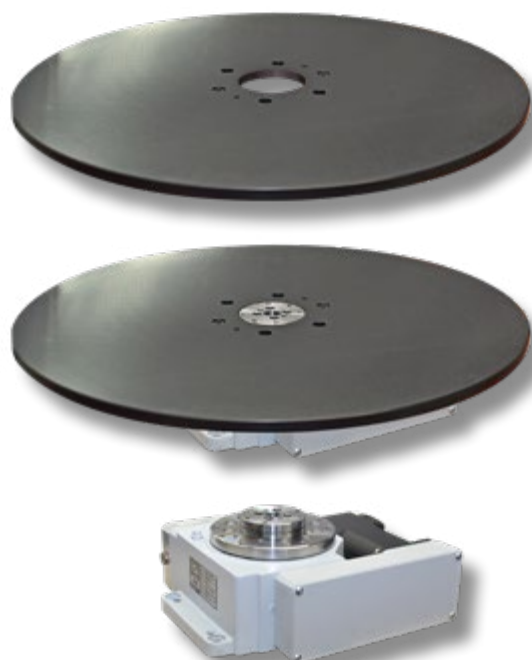
## NC rotary indexing table NC 150 T

### 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:	$i_{\text{Total}} = 144.545$
Max. MTM:	15 kgm <sup>2</sup>
Weight:	25 kg
Mounting position:	Any
Positioning precision:	$\pm 45''$
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 SpiceFlex 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		Thread	Tightening torque
			Standard	(200) or (300) mm		
<b>Crimp press</b>						
<b>CR10</b>	200 N = 20 kg	12 kN	0.1	—	—	—
<b>Manual toggle presses</b>						
<b>2.5 HKP/E</b>	120 N = 12 kg 190 N = 19 kg	2.5 kN 5 kN	0.17 0.28	— —	1 x M12	70 Nm
<b>2.5 HKPV</b>	120 N = 12 kg 190 N = 19 kg 280 N = 28 kg	2.5 kN 5 kN 8 kN	0.17 0.28 0.45	— — —	1 x M12	70 Nm
<b>5 HKPV (200)</b>	120 N = 12 kg 210 N = 21 kg 320 N = 32 kg	5 kN 10 kN 14 kN	0.10 0.22 0.30	0.30 0.60 0.90	2 x M10	60 Nm
<b>8/12 HKPV (300) adjustable stroke 23 mm</b>	180 N = 18 kg 260 N = 26 kg 350 N = 35 kg	12 kN 16 kN 20 kN	0.30 0.40 0.55	0.45 0.52 0.65	2 x M12	90 Nm
<b>8/12 HKPV (300) adjustable stroke 45 mm</b>	120 N = 12 kg 250 N = 25 kg 350 N = 35 kg	8 kN 12 kN 16 kN	0.20 0.30 0.45	0.25 0.45 0.52	2 x M12	90 Nm
<b>8/16 HKPV (300) adjustable stroke 25 mm</b>	200 N = 20 kg 260 N = 26 kg 420 N = 42 kg	16 kN 20 kN 32 kN	0.30 0.40 0.55	0.30 0.45 0.70	3 x M14	120 Nm
<b>8/16 HKPV (300) adjustable stroke 58 mm</b>	140 N = 14 kg 280 N = 28 kg 420 N = 42 kg	8 kN 16 kN 24 kN	0.15 0.30 0.45	0.18 0.30 0.50	3 x M14	120 Nm
<b>50 HKP</b>	330 N = 33 kg	max. 55 kN	0.55	0.40	4 x M16	170 Nm
<b>Pneumatic presses HKP/L-DS and LP</b>						
	<b>Operating pressure in bar</b>					
<b>2 kN</b>	6 bar	2 kN	0.14	—	1 x M12	70 Nm
<b>4 kN (300)</b>	7 bar	4 kN	0.10	0.15	2 x M12	90 Nm
<b>8 kN (300)</b>	7 bar	8 kN	0.25	0.30		
<b>12 kN (300)</b>	7 bar	12 kN	0.40	0.45		
<b>13 kN (300)</b>	7 bar	13 kN	0.15	0.30	3 x M14	120 Nm
<b>20 kN (300)</b>	7 bar	20 kN	0.25	0.45		
<b>33 kN (300)</b>	6 bar	33 kN	0.40	0.20	4 x M16	170 Nm
<b>45 kN (300)</b>	6 bar	45 kN	0.50	0.35		
<b>56 kN (300)</b>	6 bar	56 kN	0.55	0.40		
<b>Pneumatic toggle presses</b>						
<b>20 kN KHKP (300)</b>	6 bar	20 kN	1.00	1.00	2 x M12	90 Nm
<b>60 kN KHKP (300)</b>	6 bar	60 kN	1.00	1.10	4 x M16	170 Nm
<b>20 kN KHP</b>	6 bar	>20 kN	0.20	—	—	—
<b>30 kN KHP</b>	6 bar	>30 kN	0.25	—	—	—
<b>50 kN KHP</b>	6 bar	>50 kN	0.15	—	—	—
<b>70 kN KHP</b>	6 bar	>70 kN	0.25	—	—	—
<b>100 kN KHP</b>	6 bar	>100 kN	0.35	—	—	—
<b>Hydro-pneumatic presses</b>						
<b>60 kN LHP (300)</b>	6 bar	60 kN	0.55	0.45	4 x M16	170 Nm
<b>110 kN HPC</b>	6 bar	110 kN	0.40	—	—	—
<b>150 kN HPPV</b>	6.5 bar	148 kN	0.15	—	—	—
<b>300 kN HPPV</b>	6.5 bar	314 kN	0.75	—	—	—
<b>500 kN HPPV</b>	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).



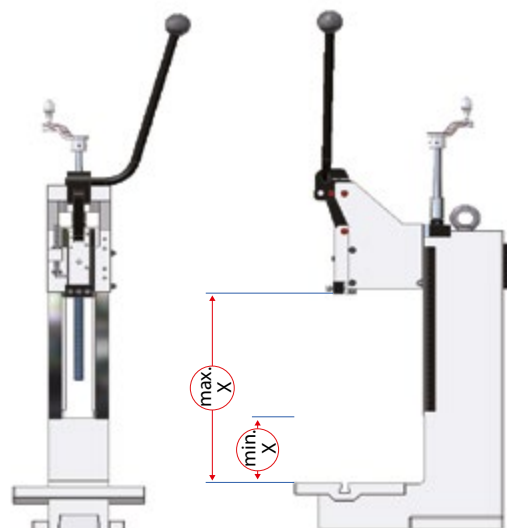
The optimal equipment of your press depends on your application!



**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	115	300
		8/12	110	335
		8/16	150	420
		50	210	470
Pneumatic aided manual press	HKP/L-DS	4, 8 and 12 kN	130	340
		13 and 20 kN	150	420
		33,45 and 56 kN	225	470
Pneumatic toggle press with adjustable guide unit	KHKP	20 kN	130	340
		60 kN	225	470
Linear acting pneumatic press	LP	4, 8 and 12 kN	130	340
		13 and 20 kN	150	420
		33, 45 and 56 kN	225	470
Linear acting hydro-pneumatic press	LHP	60 kN	130	340
			150	420
			225	470

\* for dimensional alterations, see page 35

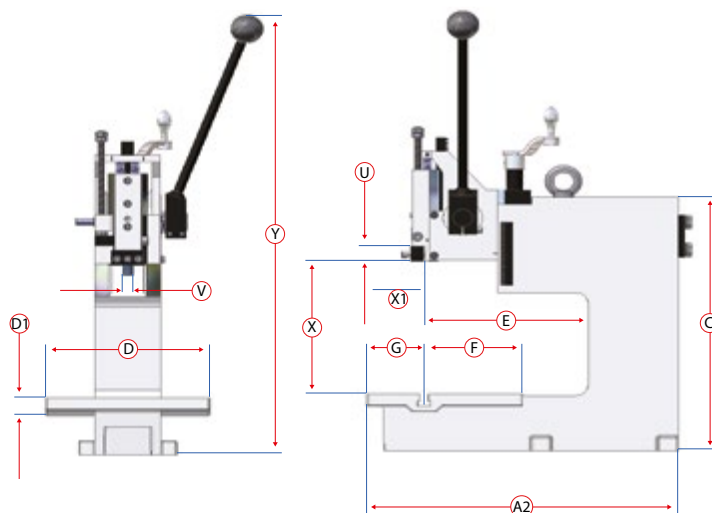
# Efficient Production Requires Flexibility



Extended daylight



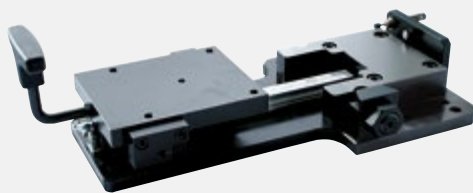
Extended throat



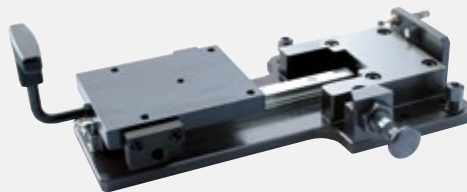
## Extended throat

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

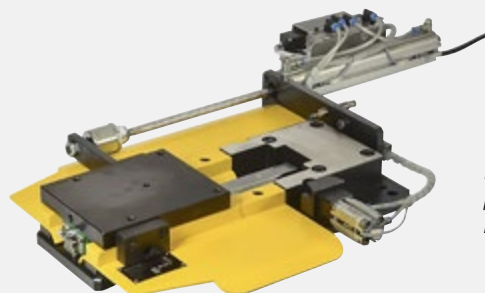
\* for dimensional alterations, see page 35



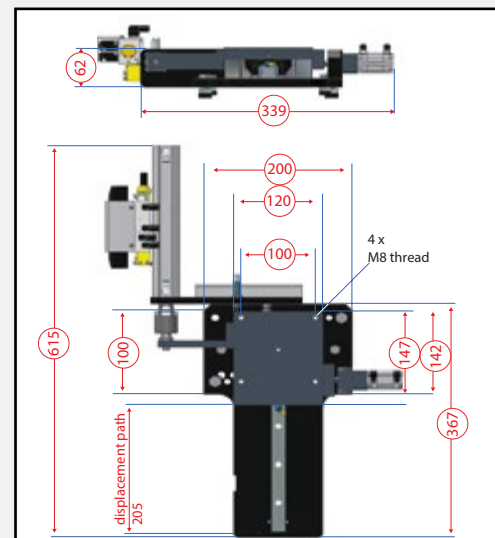
HST 150 in mounting position



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 SpiceFlex 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



**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

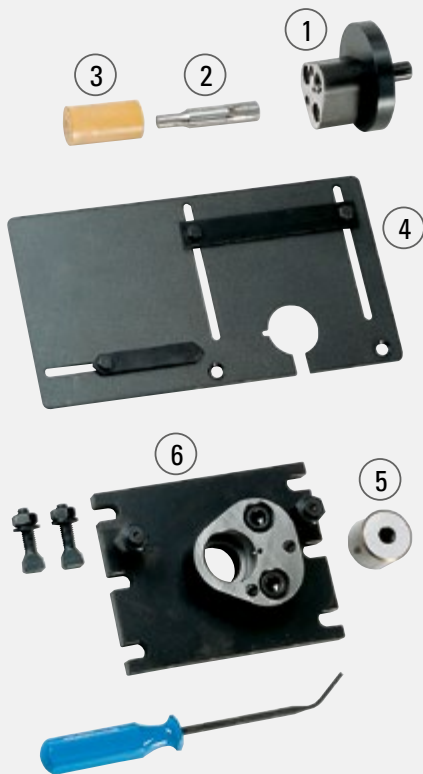
All **GECHTER** presses are equipped with a no-play adjustable inverted prism guide. The high-precision guide method makes it possible to operate the **GECHTER** presses with free-cutting tools in every shape, without any problems.

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

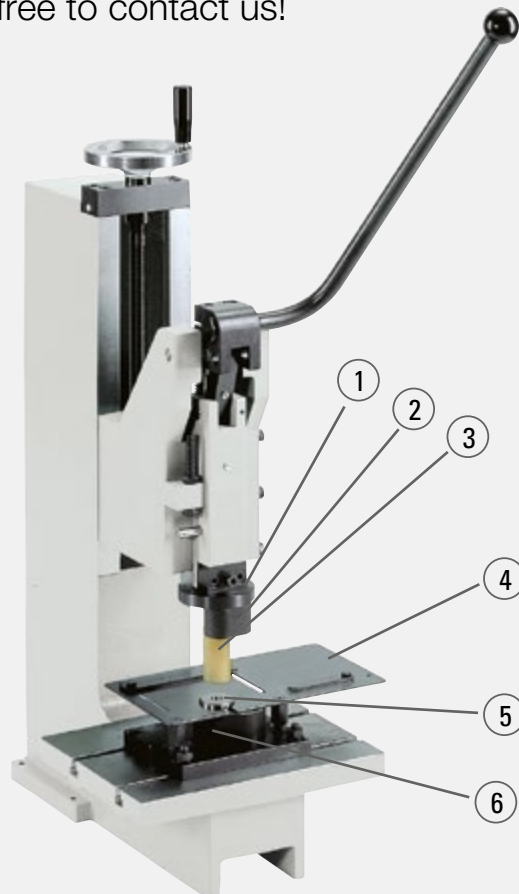


for our standard diameters  
Ø10H7, Ø15H7 and Ø25H7



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

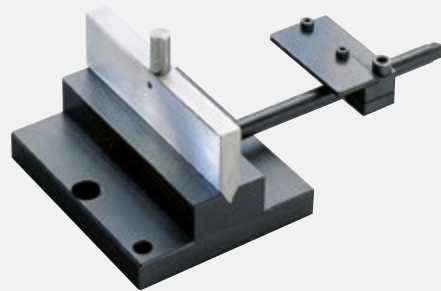
If you are interested in this product,  
feel free to contact us!



## 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

# Feel the Performance

## Simply produce the best



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