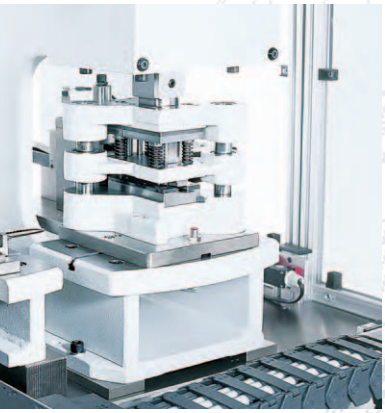
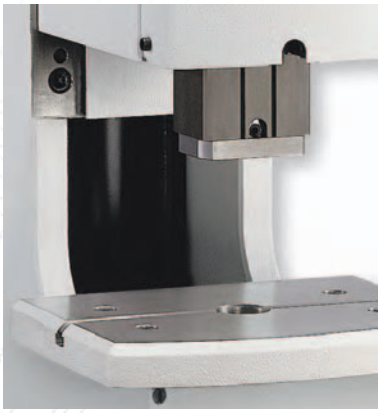
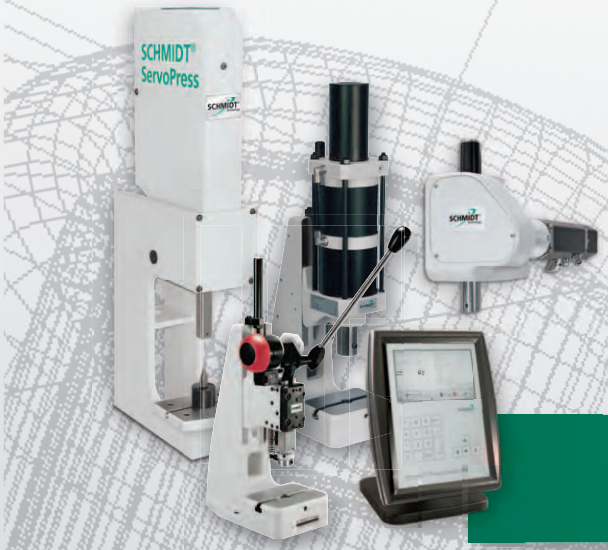
SCHMIDT® Technology

SCHMIDT® Presses

Simply the best!







Presses, Control Units, Safety & more

Complete solutions from a single source

Table of Contents

Family-Run Company
As internationally accepted Technology Leader

SCHMIDT Technology is a family-run, medium-sized enterprise at the highest technological level. The success speaks for itself: Today, products and services from **SCHMIDT Technology** are exported to over 80 countries of the world.

The safety and quality of **SCHMIDT Technology** products make them unique on the global market and thus sought after for decades. The international orientation of the company and the combination of creative and intelligent solutions, together with economic and efficient manufacturing in Germany, lay the groundwork for the successful future-oriented position of the enterprise.

Because of this, **SCHMIDT Technology** is valued internationally as a solid, dependable and competent partner. The outstanding characteristics of a successful company must include a strong visionary innovation potential.

SCHMIDT Technology recognized this at an early stage and invested ardently in the fields of research and development. At the same time, the company traditionally keeps in close contact with external research institutes and universities.

As a result, the name **SCHMIDT Technology** is associated with highest quality standards worldwide. In keeping with this, **SCHMIDT Technology** holds all relevant quality certificates such as DIN EN ISO 9001:2008.

Your profitability
Is our top priority

Anyone who has to assemble two or more components must decide which assembly technology he wants to use. Traditional techniques such as screwing, welding, soldering and bond are being replaced, more and more, by cost-effective and rational pressing and joining operations for economic reasons.

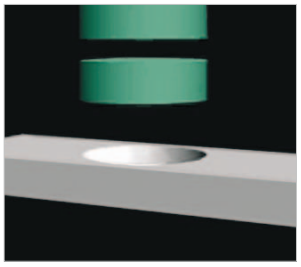
These are exactly our strengths.

Use our knowledge for your application

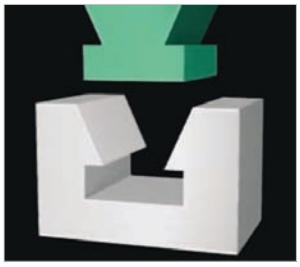
The right press type can be chosen depending on the application. Today, **SCHMIDT® Presses** stand for first-class assembly technology worldwide. This applies both for stand-alone machines and for assembly modules integrated in complex automation lines.

SCHMIDT Technology a leader in intelligent joining technology, has the widest product range of all producers. From **SCHMIDT®** ServoPress and **SCHMIDT®** HydroPneumaticPress or **SCHMIDT®** PneumaticPress and **SCHMIDT®** ElectricPress up to our **SCHMIDT®** ManualPress range, our solutions are tailored to meet all of your process requirements. Apart from the presses, the safety and control technology of the **SCHMIDT® PressesControl** sets standards due to its system philosophy, force/stroke monitoring and integrated measurement technology. A continuous process control and the essential ISO-conforming documentation are the tools for high productivity in today's efficient assembly. These performance features make **SCHMIDT Technology** the undisputed technological leader in the field of precision joining technology today.

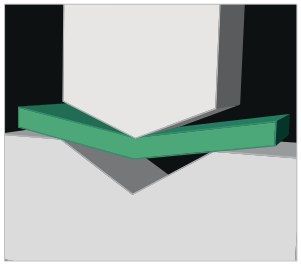
This is the basis for the excellent reputation of **SCHMIDT Technology**, specifically in the key sectors such as automobile technology, aerospace technology, electrics/electronics, micromechanics and medical technology.



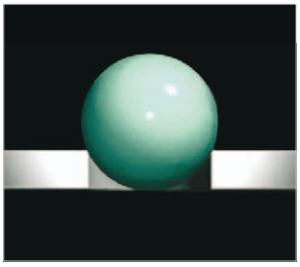
Pressing



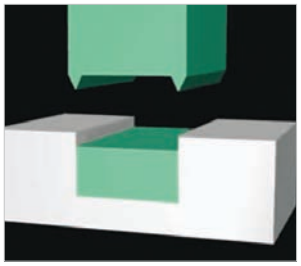
Snap Fitting



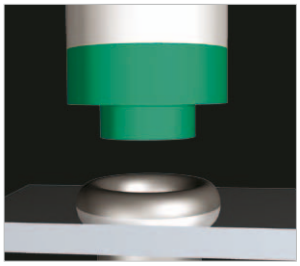
Forming



Forming Calibrating / Sizing



Crimping



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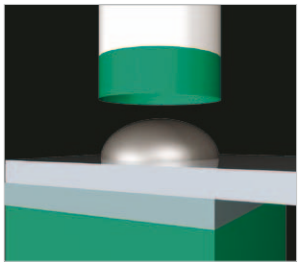
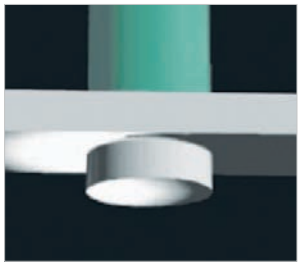
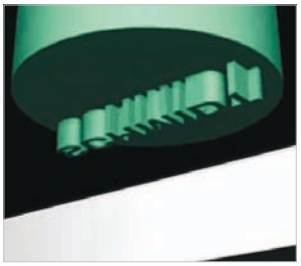


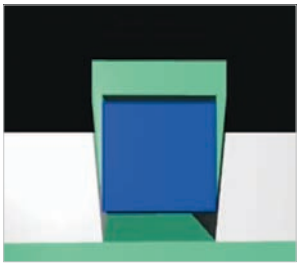
Riveting



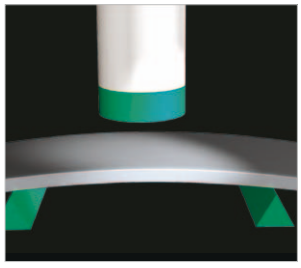
Punching



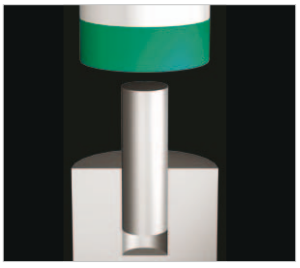
Marking



Cutting



Bending



Joining

In Partnership
To success

A global market requires linked processes. Thanks to the OPC connection via Ethernet technology, you can access your process data at any time. Furthermore, local representation and rapid response are essential. Our worldwide distribution network of subsidiaries and trained sales & support partners ensure that our customers will receive full support for all their requirements. All our representatives' support teams have been trained specifically on our products.

Deciding in favour of our technology is the first step to a successful partnership.

The economic success is then shown in daily production. High-quality products optimized for assembly processes are as important as an efficient after-sales service. Our name is your guarantee.

Safety without compromise

In 2006, the EC Machine Directives became national law in the EU member states. The articles of this agreement were the determining factors for the design of safety controls for assembly and press technology. Furthermore, a EC type approval became necessary for applications with manual workstations.

Even before the most recent regulations became legally binding, **SCHMIDT Technology** had delivered all press systems in compliance with this new law to all its customers (even to countries where these regulations are not implemented).

Our philosophy does not allow making compromises with regard to safety and health of the user.

Skills to your advantage

All our training centers provide machinery and full expertise to assist our customers with their applications.

On this basis, a team of skilled engineers plan economic solutions from the simple manual workstation to the fully automated assembly line.

Competent technical customer service is our strength. We offer training courses and seminars in our **SCHMIDT® TrainingCenters**. Your employees will achieve sustainable knowledge of the presses and their practical use resulting in a benefit for your products.


CERTIFICATE

This is to certify that

SCHMIDT Technology GmbH
Feldbergstraße 1
78112 St. Georgen

has implemented and maintains a **Quality Management System**.

Scope:
Development, production and sales of welding instrument techniques, machines and sensors

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2008

Certificate registration no. 052/836 QM08
Date of certification 2012-11-12
Valid until 2015-11-12

DQSG mbH

Michael Dreckel
Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main

SCHMIDT® ManualPress
From 1.6 kN to 22 kN

Efficient manufacturing requires appropriate means of production – not always automation. In particular, with small production runs, manual presses are often the most cost effective solutions.

We are continually developing the range of manual presses so that you can achieve your production targets. The expertise we have gained from our exposure to numerous production applications has been implemented in our new models. Therefore, we can offer a wide range of manual presses to suit all requirements.

Features

- Flexibility
  - Rapid changeover due to the easy and secure adjustment of the working height
  - Table tops with precision T-slot and precise alignment between the ram and table bores allow for accurate and repeatable set ups which reduces set-up times
  - The original position of the hand lever can be varied by 360°
  - Horizontal Pull (111/113)
  - Available for left-handed and right-handed use
  - The return stroke force of the ram can be adapted to different tool weights
- Precision
  - Alignment < 0.05 mm between upper and lower tool
- Maintenance-free
  - No lubrication necessary
- Long service life

Depending on the application, there is a wide selection of rack-and-pinion presses and toggle presses to choose from. Furthermore, a modular product design gives you the opportunity to choose the appropriate press for your application.

SCHMIDT® Rack-and-Pinion Presses
Constant force over the entire stroke

Do you need a long stroke and a constant force progression for assembly processes? Then, **SCHMIDT® Rack-and-Pinion Presses** are just the right choice.

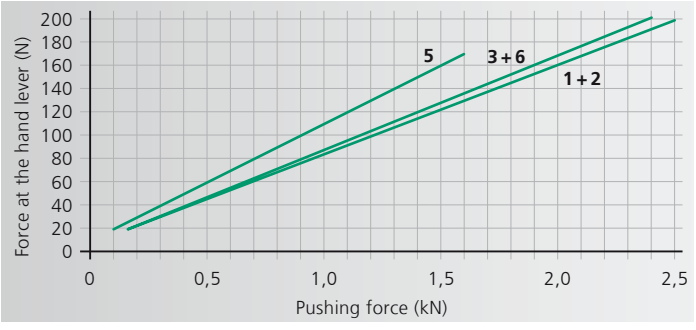
Features
- Long stroke
- Linear force progression
- Precise adjustment of the press depth via hardened lower stop
- Honed ram guiding and ground rams provide a long service life and a precise guidance

Press Type 5

Press Type 3/6

Press Type 1/2

Press Head
No.1 and No. 2 have a ground guidance plate and teflon-coated adjustable gibs for precise and torsion-proof guidance.



From 1.6 kN to 2.5 kN

Press Type			5	5R	3	3R	6	6R	1	1R	2	2R
Press head type			5	5R	3	3R	3	3R	1	1R	1	1R
Nominal force		kN	1.6	1.6	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.5
Working stroke	**A**	mm	0-40	17-40	0-70	18-70	0-70	18-70	0-80	26-80	0-80	26-80
Special strokes					0-160	18-100	0-160	18-100	0-100	26-100	0-100	26-100
Throat depth	**C**	mm	65	65	86	86	86	86	86	86	86	86
Press head height	**S**	mm	240	240	350	350	350	350	400	400	400	400
Ram bore	Ø	mm	10H7	10H7	10H7	10H7	10H7	10H7				
Collet (standard Ø10)	Ø	mm							1-17	1-17	1-17	1-17
Hand lever left			○	○	○	○	○	○	●	●	●	●
Angle of rotation/mm stroke			4.1°	4.1°	3.2°	3.2°	3.2°	3.2°	2.2°	2.2°	2.2°	2.2°
Max. weight of the upper tool [2]		kg	1.5	1.0	2.5	2.0	2.5	2.0	1.0	1.0	1.0	1.0
Return stroke lock [1]												
Locked position 1	mm bef. BDC			11.5		13		13		19.5		19.5
Locked position 2	mm bef. BDC			3.5		4.5		4.5		7		7
Disengaging accuracy		mm		0.06		0.07		0.07		0.08		0.08
Working height [3]	**F**											
Frame No. 13		mm	55-200	55-200								
Frame No. 3		mm			75-220	75-220			120-260	120-260		
Frame No. 2		mm					100-355	100-355			145-360	145-360
Frame No. 2-600 ○		mm			200-600	200-600	200-600	200-600	245-650	245-650	245-650	245-650
Frame No. 2-1000 ○		mm			330-1030	330-1030	330-1030	330-1030	380-1080	380-1080	380-1080	380-1080
Weight	approx. kg		11	11	22	22	30	30	23	23	31	31

Accessories	5	5R	3	3R	6	6R	1	1R	2	2R
Mechanical counter	○	○	○	○	○	○	○	○	○	○
Throat depth frame (total depth) 111 mm, 131 mm, 160 mm, 200 mm			○	○	○	○	○	○	○	○
Additional fixture mounting plate suitable for throat depth frame			○	○	○	○	○	○	○	○
Micrometer stop	○	○	○	○	○	○				

Frame Overview	Press Type	Frame Height M without height adj. (mm)	Table Size B x T (mm)	Table Bore D (Ø mm)	Table Height K (mm)	Mounting Surface B x L (mm)
No. 13	5	330	110 x 80	20H7	46	110 x 185
No. 3	3, 1	400	150 x 110	20H7	60	150 x 260
No. 2	6, 2	536	185 x 110	20H7	60	185 x 280
No. 2-600	3, 6, 1, 2	810	200 x 160	20H7	98	200 x 290
No. 2-1000	3, 6, 1, 2	1250	200 x 160	20H7	98	200 x 290

Options

● Series with no additional charge ○ Additional charge applies

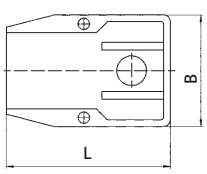
[1] Adjustment of locking position on request

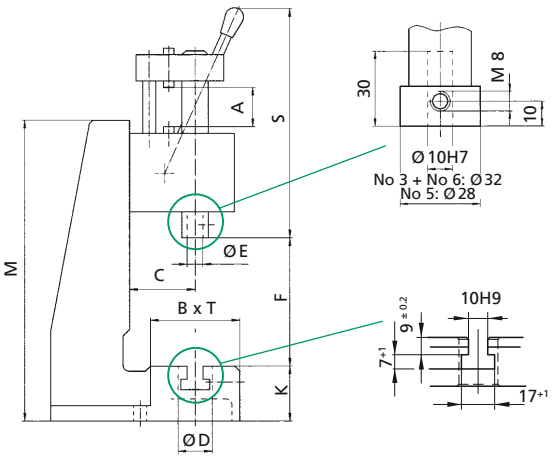
[2] The weight was determined with hand lever position 45° forward (guidelines)

[3] Typical values; can vary ± 3 mm due to cast and production tolerances

Other available options

- Nickel plated - Cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint - Press and column can be painted to customer's color specification
- Bores for Adapting Tooling - Customer specific sizes can be supplied





Please consult our Sales Department or Representative.
Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® Toggle Presses

The high force at the end of stroke, just where it is important

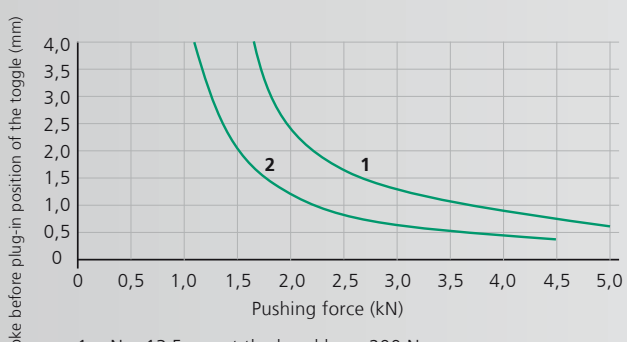
Do you need a high force at the end of stroke for materialtransforming processes? Then, **SCHMIDT® Toggle Presses** are just the right choice.

Features

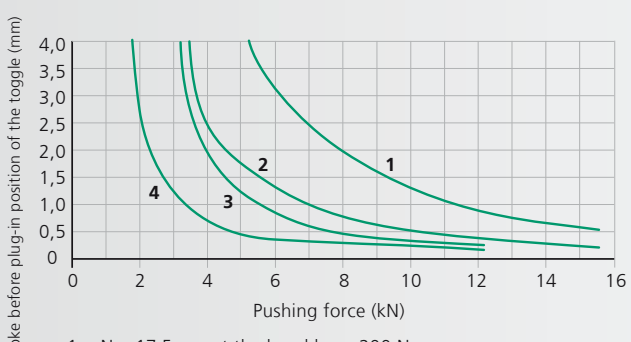
- High force at the end of stroke (see diagramm below)
- Honed bores and ground rams provide a long service life and a precise guidance

Press Type 13RFZ

Press Type 11 / 14 -17R



1 = No. 13 Force at the hand lever 200 N
2 = No. 13 Force at the hand lever 120 N



1 = No. 17 Force at the hand lever 200 N
2 = No. 17 Force at the hand lever 120 N
3 = No. 11, 14, 15, 16 Force at the hand lever 200 N
4 = No. 11, 14, 15, 16 Force at the hand lever 120 N

Maximum force will be reached just before extended position

From 5 kN to 15 kN

Press Type			13 13F	13R 13RF	11 11F	11R 11RF	15 15F	15R 15RF	14 14F	14R 14RF	16 16F	16R 16RF	17 17F
Press head type			13 - 40 13F - 35	13R - 40 13RF - 35	11 - 45 11F - 35	11R - 45 11RF - 35	11R - 45 11F - 35	11R - 45 11RF - 35	11 - 60 11F - 50	11R - 60 11RF - 50	11 - 60 11F - 50	11R - 60 11RF - 50	11 - 20 11F - 20
Nominal force		kN	5	5	12	12	12	12	12	12	12	12	15
Working stroke	**A**	mm	25 - 40 25 - 35	40 35	0 - 45 0 - 35	20 - 45 20 - 35	0 - 45 0 - 35	20 - 45 20 - 35	60 50	24 - 60 24 - 50	60 50	24 - 60 24 - 50	0 - 20 0 - 20
Throat depth	**C**	mm	65	65	86	86	86	86	86	86	86	86	86
Press head height	**S**	mm	385 400	385 400	520 540	520 540	520 540	520 540	500 520	500 520	500 520	500 520	620 640
Ram bore	Ø	mm	10H7	10H7	10H7	10H7	10H7	10H7	10H7	10H7	10H7	10H7	10H7
Hand lever left			○		○		○		○		○		
Angle of rotation			95°	95°	110°	110°	110°	110°	125°	125°	125°	125°	90°
Max. weight upper tool [3]		kg	1.2/3.5 1.5/3	1.2/3.5 1.5/3	2/4.5 2.5/6	2/4 2/6	2/4.5 2.5/6	2/4 2/6	1.5/2.5 2/5	1.5/2.5 1.5/4	1.5/2.5 2/5	1.5/2.5 1.5/4	2.5/- 2.5/-
Return stroke lock [1]													
Locked position 1	mm bef.DC			13.5		12		12		14		14	
Locked position 2	mm bef.DC			1.5		1.5		1.5		1.5		1.5	
Disengaging accuracy		mm		0.03		0.03		0.03		0.04		0.04	
Working height [4]	**F**												
Frame No. 13		mm	65 - 180 40 - 155	65 - 180 40 - 155									
Frame No. 3		mm			75 - 210 50 - 185	75 - 210 50 - 185			90 - 220 65 - 195	90 - 220 65 - 195			65 - 200 50 - 185
Frame No. 2		mm					100 - 345 80 - 325	100 - 345 80 - 325			110 - 360 85 - 335	110 - 365 85 - 335	
Frame No. 2-600 ○		mm			200 - 585 175 - 560	200 - 585 175 - 560	200 - 585 175 - 560	200 - 585 175 - 560	210 - 595 185 - 570	210 - 595 185 - 570	210 - 595 185 - 570	210 - 595 185 - 570	200 - 585 175 - 560
Frame No. 2-1000 ○		mm			330 - 1020 305 - 1000	330 - 1020 305 - 1000	330 - 1020 305 - 1000	330 - 1020 305 - 1000	340 - 1030 315 - 1010	340 - 1030 315 - 1010	340 - 1030 315 - 1010	340 - 1030 315 - 1010	330 - 1020 305 - 1000
Weight	approx. kg		12	12	23	24	29	29	24	24	29	29	23

Accessories	13 13F	13R 13RF	11 11F	11R 11RF	15 15F	15R 15RF	14 14F	14R 14RF	16 16F	16R 16RF	17 17F
Mechanical counter	○	○	○	○	○	○	○	○	○	○	○
Throat depth frame (total depth) 111 mm, 131 mm			○	○	○	○	○	○	○	○	
Additional fixture mounting plate suitable for throat depth frame	○	○	○	○	○	○	○	○	○		
Block clamping piece [2]	○ ○	○ ○	● ●	● ●	● ●	● ●	○ ○	○ ○	○ ○	○ ○	● ○

Frame Overview	Press Type	Frame Height M without height adj. (mm)	Table Size B x T (mm)	Table Bore D (Ø mm)	Table Height K (mm)	Mounting Surface B x L (mm)
No. 13	13	475	110 x 80	20H7	46	110 x 185
No. 3	11, 14, 17	540	150 x 110	20H7	60	150 x 260
No. 2	15, 16	700	185 x 110	20H7	60	185 x 280
No. 2-600	11, 14, 15, 16, 17	974	200 x 160	20H7	98	200 x 290
No. 2-1000	11, 14, 15, 16, 17	1410	200 x 160	20H7	98	200 x 290

Options

● Series with no additional charge ○ Additional charge applies

[1] Adjustment of locking position on request

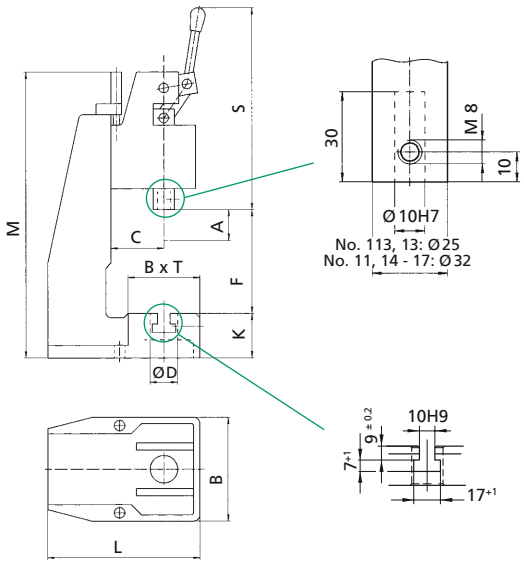
[2] Stroke reduction about 10 mm by version with additional charge

[3] The weight was determined with hand lever position 45° forward (guidelines)

[4] Typical values; can vary ± 3 mm due to cast and production tolerances

Other available Options

- Nickel plated – Cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint – Press and column can be painted to customer's color specification
- Bores for Adapting Tooling – Customer specific sizes can be supplied



Please consult our Sales Department or Representative.
Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® Toggle Presses with Horizontal Pull

The high force at the end of stroke, just where it is important

Do you need a high force at the end of stroke for material-transforming processes? Then, **SCHMIDT® Toggle Presses** are just the right choice.

Features

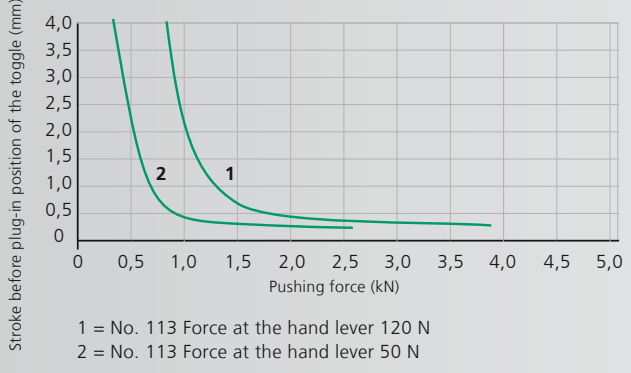
- High force at end of the stroke (see diagramm below)
- Honed bores and ground rams provide a long service life and a precise guidance

Press Type 113RFZ

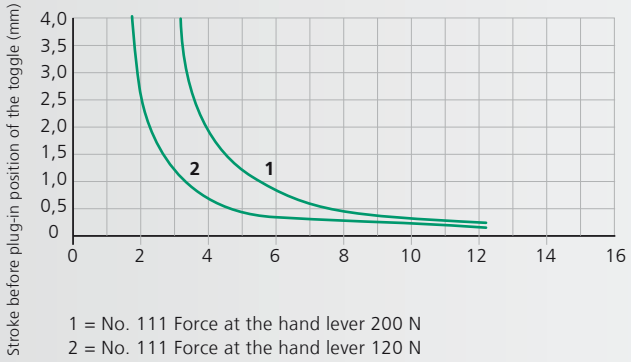
Press Type 111RF

Ergonomic Press with horizontal pull

With press No. 113 and No. 111 the manual force is applied by pulling the lever towards the body. This press is especially suitable for rapid production at small forces. We supply press No. 111 including the ergonomic handle (standard scope of supply).



1 = No. 113 Force at the hand lever 120 N
2 = No. 113 Force at the hand lever 50 N



1 = No. 111 Force at the hand lever 200 N
2 = No. 111 Force at the hand lever 120 N

Maximum force will be reached just before extended position

From 2.5 kN to 12 kN

Press Type			113 113F	113R 113RF	111 111F	111R 111RF
Press head type			113 113F	113R 113RF	111 - 45 111F - 50	111R - 45 111RF - 50
Nominal force		kN	2.5	2.5	12	12
Working stroke	**A**	mm	0 - 28 0 - 28	22 - 28 22 - 28	0 - 45 50	24 - 45 24 - 50
Throat depth	**C**	mm	65	65	86	86
Press head height	**S**	mm	170 180	190 200	215 225	240 250
Ram bore	Ø	mm	10H7	10H7	10H7	10H7
Hand lever left			-	-	-	-
Angle of rotation			80°	80°	90°	90°
Max. weight upper tool [3]		kg	1/3 0.6/3	0.5/2.5 0.6/3	2.5/- 3/-	2.5/- 3/-
Return stroke lock [1]						
Locked position 1	mm bef. BDC			12		14
Locked position 2	mm bef. BDC			0.5		1.5
Disengaging accuracy		mm		0.03		0.07
Working height [4]	**F**					
Frame No. 13		mm	50 - 165 40 - 155	50 - 165 40 - 155		
Frame No. 3		mm			120 - 205 105 - 195	120 - 205 105 - 195
Frame No. 2		mm			120 - 345 105 - 335	120 - 345 105 - 335
Frame No. 2-600 ○		mm			200 - 580 185 - 570	200 - 580 185 - 570
Frame No. 2-1000 ○		mm			330 - 1020 310 - 1000	330 - 1020 310 - 1000
Weight	approx. kg		11	11	28	28

Accessories	113 113F	113R 113RF	111 111F	111R 111RF
Mechanical counter	○	○	○	○
Throat depth frame (total depth) 111 mm, 131 mm			○	○
Additional fixture mounting plate suitable for throat depth frame			○	○
Block clamping piece [2]	● ○	● ○	● ○	● ○

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D (Ø mm)	Table Height K (mm)	Mounting Surface B x L (mm)
No. 13	113	475	110 x 80	20H7	46	110 x 185
No. 3	111	540	150 x 110	20H7	60	150 x 260
No. 2	111	700	185 x 110	20H7	60	185 x 280
No. 2-600	111	974	200 x 160	20H7	98	200 x 290
No. 2-1000	111	1410	200 x 160	20H7	98	200 x 290

Options

● Series with no additional charge ○ Additional charge applies

[1] Adjustment of locking position on request

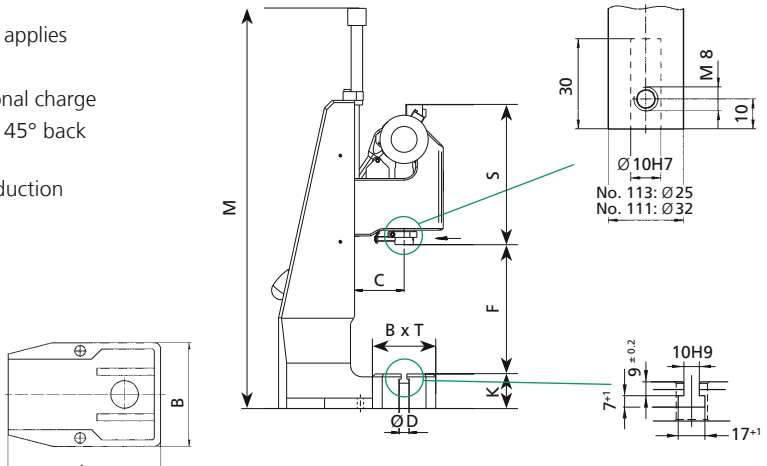
[2] Stroke reduction about 10 mm by version with additional charge

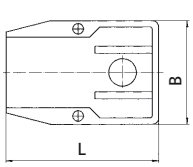
[3] The weight was determined with hand lever position 45° back (guidelines)

[4] Typical values; can vary ± 3 mm due to cast and production tolerances

Other available Options

- Nickel plated – Cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint – Press and column can be painted to customer's color specification
- Bores for Adapting Tooling – Customer specific sizes





Please consult our Sales Department or Representative.
Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® Toggle Presses with Square Ram

Optimum guidance and anti-rotation

Do you need a high force at the end of stroke for material-transforming processes? Then, **SCHMIDT® Toggle Presses** are just the right choice.

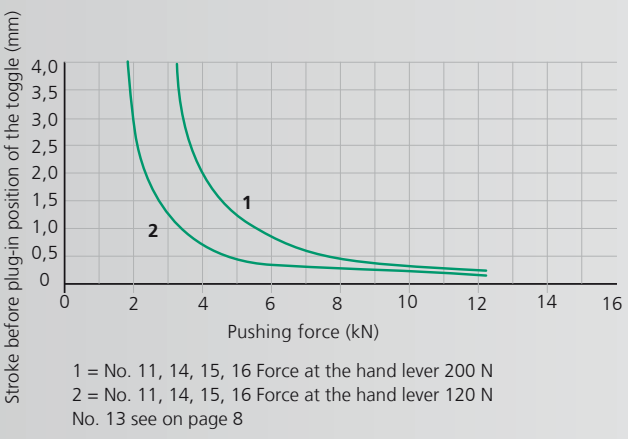
Features

- High force at the end of stroke
- Square ram is anti-rotational (no die sets required)
- Fully adjustable, play-free teflon-lined gibs

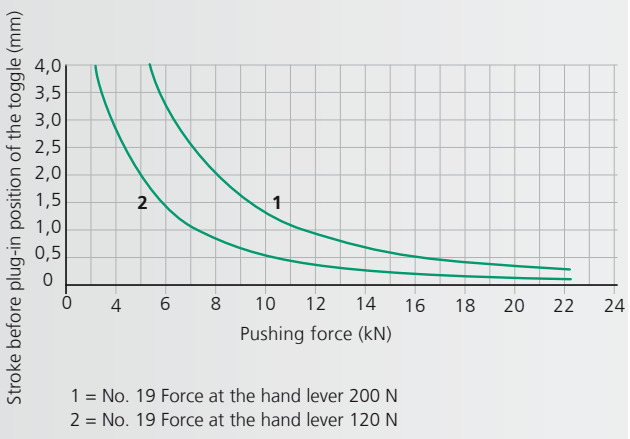
Press Type 11 VRFZ
13 VRFZ
14 VRFZ

Press Type 15 VF
16 VF

Press Type 19 VF



1 = No. 11, 14, 15, 16 Force at the hand lever 200 N
2 = No. 11, 14, 15, 16 Force at the hand lever 120 N
No. 13 see on page 8



1 = No. 19 Force at the hand lever 200 N
2 = No. 19 Force at the hand lever 120 N

Maximum force will be reached just before extended position

From 5 kN to 22 kN

Press Type			13 V 13 VF	13 VR 13 VRF	11 V 11 VF	15 V 15 VF	11 VR 11 VRF	15 VR 15 VRF	14 V 14 VF	16 V 16 VF	14 VR 14 VRF	16 VR 16 VRF	19 V 19 VF	19 VR 19 VRF
Press head type			13V-40 13VF-40	13VR-40 13VRF-40	11V-45 11VF-45	11V-45 11VF-45	11VR-45 11VRF-45	11VR-45 11VF-45	11V-60 11VF-60	11V-60 11VF-60	11VR-60 11VRF-60	11VR-60 11VRF-60	19V-40 [1]	19VR-40 [1]
Nominal force		kN	5	5	12	12	12	12	12	12	12	12	22	22
Working stroke	**A**	mm	0-40 15-40	26-40 26-40	0-45 25-45	0-45 0-45	20-45 25-45	20-45 25-45	0-60 0-60	0-60 0-60	28-60 30-60	28-60 30-60	0-40 0-40	10-40 10-40
Throat depth	**C**	mm	65	65	86	86	86	86	86	86	86	86	131	131
Press head height	**S**	mm	385 400	385 400	510 530	510 530	510 530	510 530	510 530	510 530	510 530	510 530	620 620	620 620
Ram bore	Ø	mm	10H7	10H7	10H7	10H7	10H7	10H7	10H7	10H7	10H7	10H7	20H7	20H7
Hand lever left			○		○	○			○	○			●	●
Angle of rotation			95°	95°	110°	110°	110°	110°	125°	125°	125°	125°	175°	175°
Max. weight top tool [3]		kg	1.2/4 2/3.5	1.2/4 2/3.5	1.6/4.2 2/5	1.6/4.2 2/5	1.6/4.2 2/5	1.6/4.2 2/5	1/3.5 1/3.5	1/3.5 1/3.5	1/3.5 1/3.5	1/3.5 1/3.5	2/- 2/-	2/- 2/-
Return stroke lock [2]														
Locked position 1	mm	bef. BDC		14.5			12	12			14	14	4.5	4.5
Locked position 2	mm	bef. BDC		1.5			1.5	1.5			1.5	1.5	0.9	0.9
Disengaging accuracy		mm		0.03			0.03	0.03			0.04	0.04	0.02	0.02
Working height [4]	**F**													
Frame No. 13		mm	65-180 50-165	65-180 50-165										
Frame No. 3		mm			80-210 60-190		80-210 60-190		80-210 60-190		80-210 60-190			
Frame No. 2		mm				105-350 85-330		105-350 85-330		105-350 85-330		105-350 85-330		
Frame No. 2-600 ○		mm				200-585 185-570		200-585 185 - 570		210-590 195-575		210-590 195 - 575		
Frame No. 2-1000 ○		mm				330-1020 315-1000		330-1020 315-1000		340-1030 325-1015		340-1030 325-1015		
Frame No. 19		mm											90-220	90-220
Frame No. 19-400 ○		mm											160-400	160-400
Frame No. 19-500 ○		mm											260-550	260-550
Weight	approx.	kg	12	12	24	32	24	32	24	32	24	32	85	85

Accessories	13 V 13 VF	13 VR 13 VRF	11 V 11 VF	15 V 15 VF	11 VR 11 VRF	15 VR 15 VRF	14 V 14 VF	16 V 16 VF	14 VR 14 VRF	16 VR 16 VRF	19 V 19 VF	19 VR 19 VRF
Mechanical counter	○	○	○	○	○	○	○	○	○	○	○	○
Throat depth frame 111 mm, 131 mm		○	○	○	○	○	○	○	○			
Throat depth frame 151 mm											○	○
Additional fixture mounting plate suitable for throat depth frame			○	○	○	○	○	○	○	○	○	○

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D (Ø mm)	Table Height K (mm)	Mounting Surface B x L (mm)
No. 13	13	475	110 x 80	20H7	46	110 x 85
No. 3	11, 14	540	150 x 110	20H7	60	150 x 260
No. 2	15, 16	700	185 x 110	20H7	60	185 x 280
No. 2-600 ○	15, 16	974	200 x 160	20H7	98	200 x 290
No. 2-1000 ○	15, 16	1410	200 x 160	20H7	98	200 x 290
No. 19	19	640	200 x 160	25H7	112	200 x 370
No. 19-400 ○	19	840	250 x 200	40H7	145	250 x 460
No. 19-500 ○	19	1000	250 x 200	40H7	145	250 x 480

Options

● Series with no additional charge ○ Additional charge applies

[1] Special strokes 12 mm and 50 mm on request

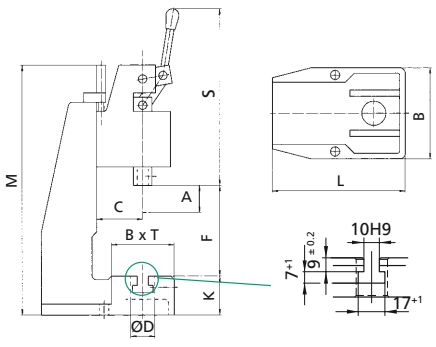
[2] Adjustment of locking position on request

[3] The weight was determined with hand lever position 45° forward (guidelines)

[4] Typical values; can vary ± 3 mm due to cast and production tolerances

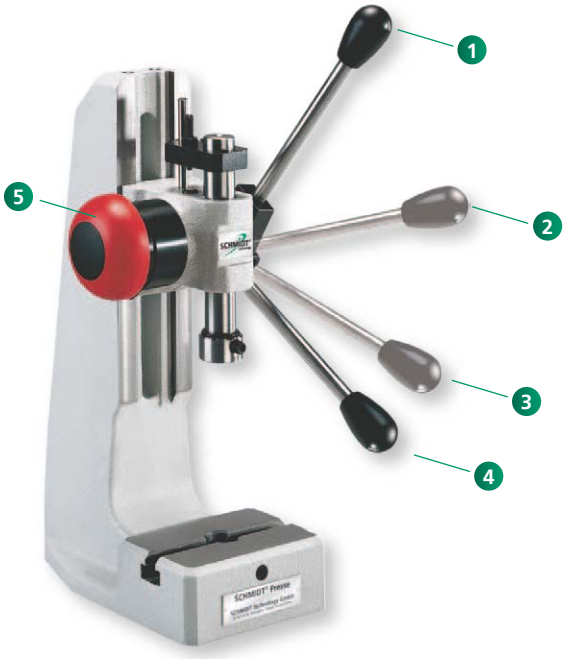
Other available options

- Nickel plated – Cast parts are electroless nickel plated, steel com ponents black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint – Press and column can be painted to customer's color specification
- Bores for Adapting Tooling – Customer specific sizes



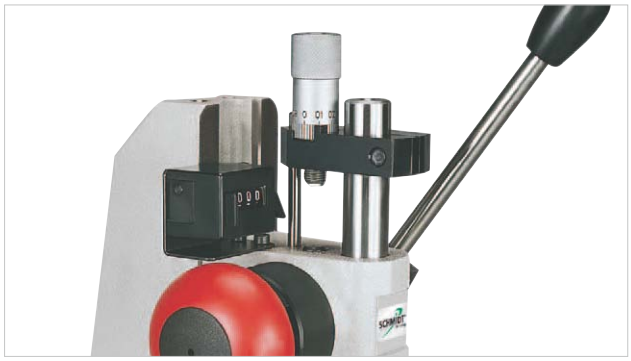
Please consult our Sales Department or Representative.
Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® ManualPress
Options suitable for your application



The return stroke lock guarantees reaching the required pressing depth with every stroke

1. TDC (Top Dead Center) position
2. First locking position: Loose tools can still be aligned
3. Second locking position before BDC (Bottom Dead Center). From here you can only continue to BDC.
4. After reaching BDC (Bottom Dead Center) by completing the stroke the return stroke lock is released. This guarantees a repeatable BDC and thus a constant press depth
5. The emergency button releases the locking function in any position



The micrometer screw serves as stop for the rack and pinion presses

A micrometer adjustable stop specially developed for presses for the fine adjustment of the BDC. The robust and precise design ensures the repeatability of the stop, no matter how many strokes are taken.

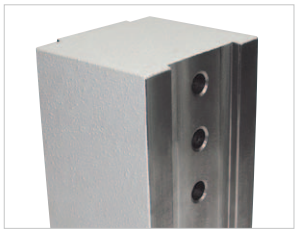
Fine adjustment with micrometer scale for Toggle Presses

By loosening the tensioning screw 1 and turning the adjusting nut 2 with the same tool, the setting of the BDC can be adjusted infinitely. Graduation is in the 0.02 mm line to line range and is reached rapidly and precisely.

SCHMIDT® ManualPress
Options suitable for your application

Mechanical counter
A four digit counter monitors the number of pieces produced. The counter is provided with a reset function.

Collet
For the rack-and-pinion presses No. 1 and No. 2, collet bore diameter of 1 to 17 mm.



Throat extension block
We offer various sizes for extended throat depths.

Special fixture mounting plates
Special fixture tabletops, designed in conjunction with throat extension blocks, provide ram to table bore alignment when spacer is used.

Ergonomic left-handed design
With most press types, lefthanded or left-/right-handed design is an available option.

Upper tooling adapter
Adapter for tools with a diameter of 5 - 20 mm.

Nickel plated design
Press frames and cast parts are electroless nickel-plated, steel components are black oxide finished, aluminum parts are anodized, precision steel surfaces are untreated.

Ergonomic handle
Swivelling handle for discharge of the wrist; easy and flexible assembly on the hand lever.

Press base
Plastic (250 x 340 mm), including fasteners.

Stop clamp
For Toggle Presses.

How to order

Order key for press options

R = incl. return stroke lock with emergency release
F = incl. fine adjustment (for toggle presses)
Z = incl. mechanical counter
M = micrometer screw (for rack-and-pinion presses)
RF = incl. return stroke lock with emergency release and fine adjustment

Order example

No. 3 R = **SCHMIDT®** Rack-and-Pinion Press No. 3
incl. return stroke lock with emergency release

or

No. 13 RFZ = **SCHMIDT®** Toggle Press No. 13
incl. return stroke lock with emergency release, fine adjustment and mechanical counter

SCHMIDT® ManualPress 300 Series
Manual Presses with Process Monitoring

Process reliability, force/stroke monitoring of the joining process and EN ISO-compatible documentation of the results are becoming the major factors for small and medium production within the manual workplace.

The **SCHMIDT® ManualPress 300 Series** system with **SCHMIDT® PressControl 600** includes:

- Integrated reliable measuring technology
- High resolution of the obtained process data
- Graphical and numerical output of the processing results
- Quality monitoring using freely selectable tolerances

Process reliability – not just a slogan
The system software allows easy setup of quality control criterea for 100 % in-process monitoring.

Assembly system with patented return stroke lock and progammable clutch.

SCHMIDT® ManualPress 300 Series

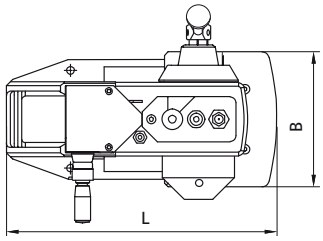
Process reliability for manual workplaces, force range 0.4 kN to 12 kN

Features

- Linear force progression for No. 305 and No. 307
- High force at the end of stroke for No. 311
- Precise adjustment of the press depth via micrometer fine adjustment
- Guides require little maintenance, have little wear and are locked against anti-rotation. This results in precise working and a long service life
- Optimum fit and form closure due to dovetail guide on the press head
- Quick set-up
  - Exact alignment of ram bore to the table of 0.05 mm
  - Height adjustment using a crank
  - Precision bores in ram and column base plate

Functional components

- Electronic stroke lock
- Integrated transducer
  - Force sensor
  - Incremental encoder
- Integrated signal amplifier
- Programmable overload coupling



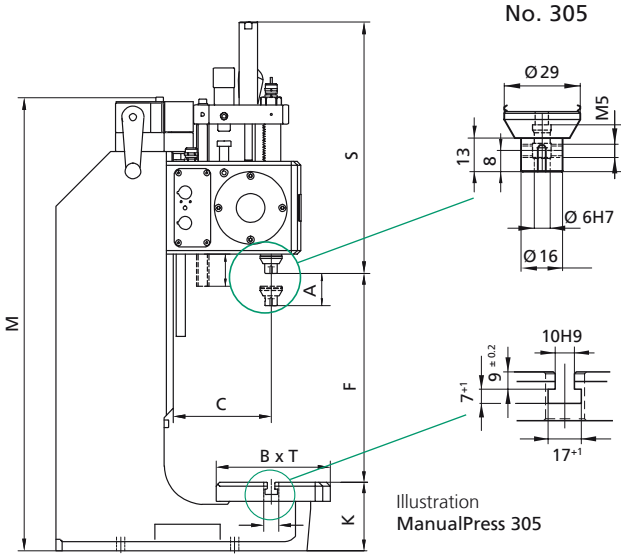
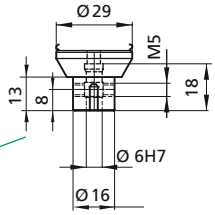
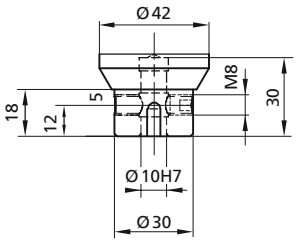


Illustration
ManualPress 305

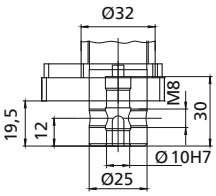
No. 305



No. 307

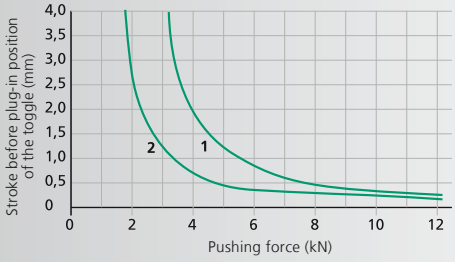


No. 311



Press Type			305	307	311
Nominal force		kN	0.4	4	12
Force at the hand lever		approx. N	50	200	200
Working stroke	**A**	mm	0 - 42	0 - 54	0 - 50 [1]
Throat depth	**C**	mm	129	129	129
Press head height	**S**	mm	310	417	555
Ram bore	Ø	mm	6H7	10H7	10H7
Stroke fine adjustment		mm	0.02	0.02	0.02
Stroke resolution		mm	0.005	0.005	0.005
Angle of rotation/mm stroke			3.3°	4.8°	non linear
Resolution, process data acquisition	stroke force	µm/inc N/inc	5 0.125	5 1.25	5 3.5
Working height [5]	**F**				
Frame No. 7		mm	60-270	50-260	50-140
Frame No. 7-600 [3]		mm	90-600	80-600	80-480
Max. Weight upper tool [4]		kg	0.6	1	1.3
Weight		approx. kg	41	41	60
Protection type			IP 54	IP 54	IP 54

ManualPress 311



1 = Force at the hand lever 200 N
2 = Force at the hand lever 120 N

Maximum force will be reached just before extended position

Accessories			
Stronger return assist spring	o	o	
Speed control	o	o	
Throat depth frame [2] [3] (total depth) 169, 209, 249 mm	o	o	

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table bore D Ø mm	Table Height K (mm)	Mounting Surface B x L (mm)
No. 7	305, 307, 311	600	180 x 150	20H7	90	330 x 361
No. 7-600 o	305, 307, 311	960	180 x 280	20H7	110	330 x 465 - 505

Options

o Additional charge applies

[1] The fine adjustment increases the working stroke by 0.12 inch

[2] Throat depth frame only available with frame No. 7-600

[3] Increased throat and higher frame lead to smaler nominal forces for No. 311

[4] The weight was determined with hand lever position 45° forward (guidelines)

[5] Typical values; can vary ± 3 mm due to cast and production tolerances

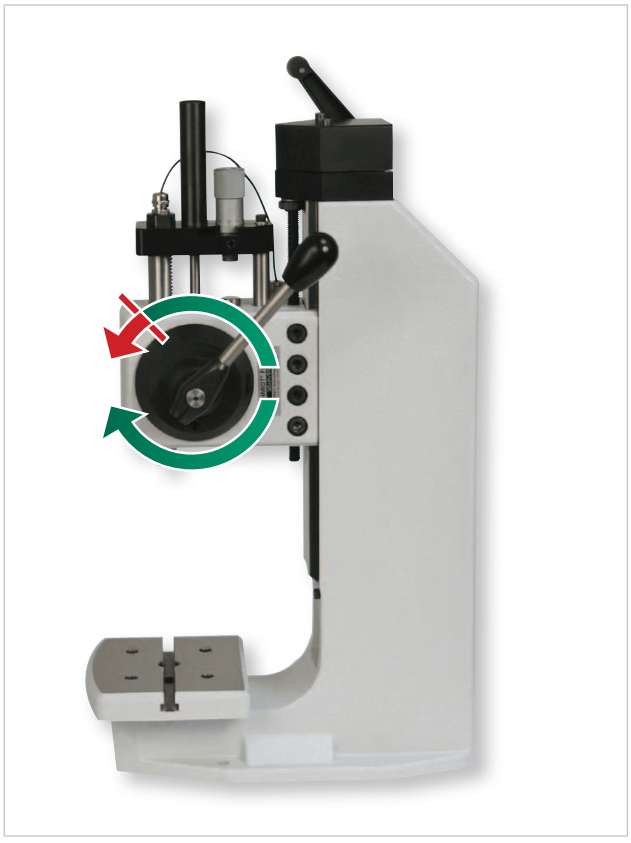
Other available Options:

- Nickel plated – cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom paint – press and column can be painted to customer's color specification
- Bores for adapting tooling – customer specific sizes can be supplied

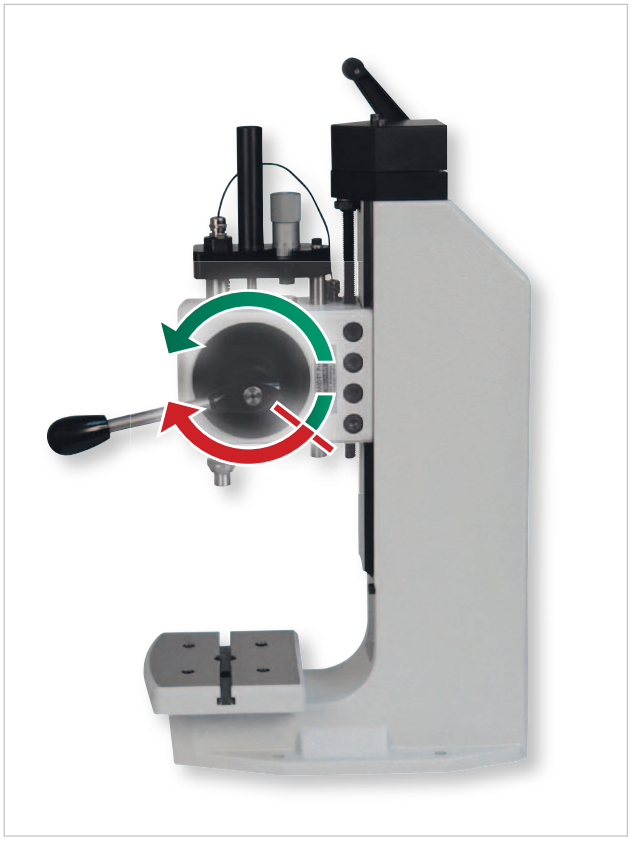
SCHMIDT® ManualPress 300 Series
Process reliability for Manual Workplaces

ManualPress 300 Series included with the control unit **SCHMIDT® PressControl 600**

- Force/stroke monitoring of the entire pressing operation
  - Allows for extensive error analysis
- Process reliability:
  - Separation of the power flow
  - Utilizing the interface of external sensors and actuators, the clutch is engaged once the workpieces are placed properly.
  - Locking of the press with failed parts
  - Secure separation and acknowledgement of Pass and Fail ("Poka Yoke")
- Freely programmable positioning, stopping and braking in forward and return stroke and end position.
  - Process intervention
  - Quality monitoring
  - Reduction of error costs and elimination of errors
- Short changeover times due to preselection of stored working profiles



Forward Stroke Lock Mode (the return Stroke is released)
For protecting the produced parts and the force sensor of the press the press blocked/restricts the force flow in forward stroke when reaching a defined force or when reaching the stroke.



Return Stroke Lock Mode (the forward Stroke is released)
Press blocks the return stroke when the necessary force has not been reached or the required stroke has not been reached. This ensures that the user always completes the operation.

SCHMIDT® ManualPress 300 Series
Examples of verified process workplaces

Both examples below can be combined arbitrarily when taking into account the maximum available inputs and outputs.

In addition, the functions of the different operating modes are available, which can be freely parameterized or programmed for special functions.

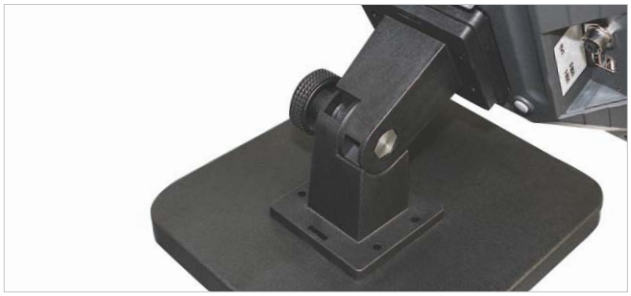
SCHMIDT® ManualPress 307

- The control unit **SCHMIDT® PressControl 600** analyses the force/stroke signals of the **SCHMIDT® ManualPress** using windows
- Depending on the analyses, the PLC actuates a flap. Thus, the parts are securely separated into pass/fail bins
- The light barrier generates an acknowledgement signal
- This releases the press again

SCHMIDT® ManualPress 311

- The control unit **SCHMIDT® PressControl 600** does not release the press until all parts are completely and correctly positioned
- This avoids erroneous pressing

SCHMIDT® ManualPress 300 Series
Options suitable for your application



Control mounting bracket
Used for fastening the **SCHMIDT® PressControl 600,** either mounted to the table or to the wall. The mounting bracket permits the unit to swivel 70° (included with control).

External reset button
We recommend an external reset button in rough production environments.

Calibration tool
The calibration tool is a clamping device with which a constantly defined force is applied to the load cell of the **SCHMIDT® ManualPress Serie 300** Series. In order to complete calibration, either a **SCHMIDT® LoadCheck** or a customer supplied calibration device is required. Photo on left side shows the device for the **SCHMIDT® ManualPress 305**. The right side is for **SCHMIDT® ManualPress 307**. The **SCHMIDT® ManualPress 311** is being calibrated by using the fine adjustment mechanism in BDC.

CANopen Compact box
With this add-on up to 16 digital combination in-/outputs (8 in- and 8 outputs) are provided, useable optionally as in- or output.

Speed control
To reach a very high repeatability by pressing on force and stroke, a speed control can be inserted optionally instead of the micrometer screw, which brakes the pressing process shortly before achievement of the end position.

Ergonomic handle
Swivelling handle for discharge of the wrist; easy and flexible assembly on the hand lever.

Press base
Plastic (250 x 340 mm), incl. fasteners.

SCHMIDT® PneumaticPress
Maximum pressing force from 1.6 kN to 60 kN

The **SCHMIDT® PneumaticPress** range consists of a modular system suitable for transforming, joining and assembling operations optimally within the pressing capacities of 1.6 – 60 kN.

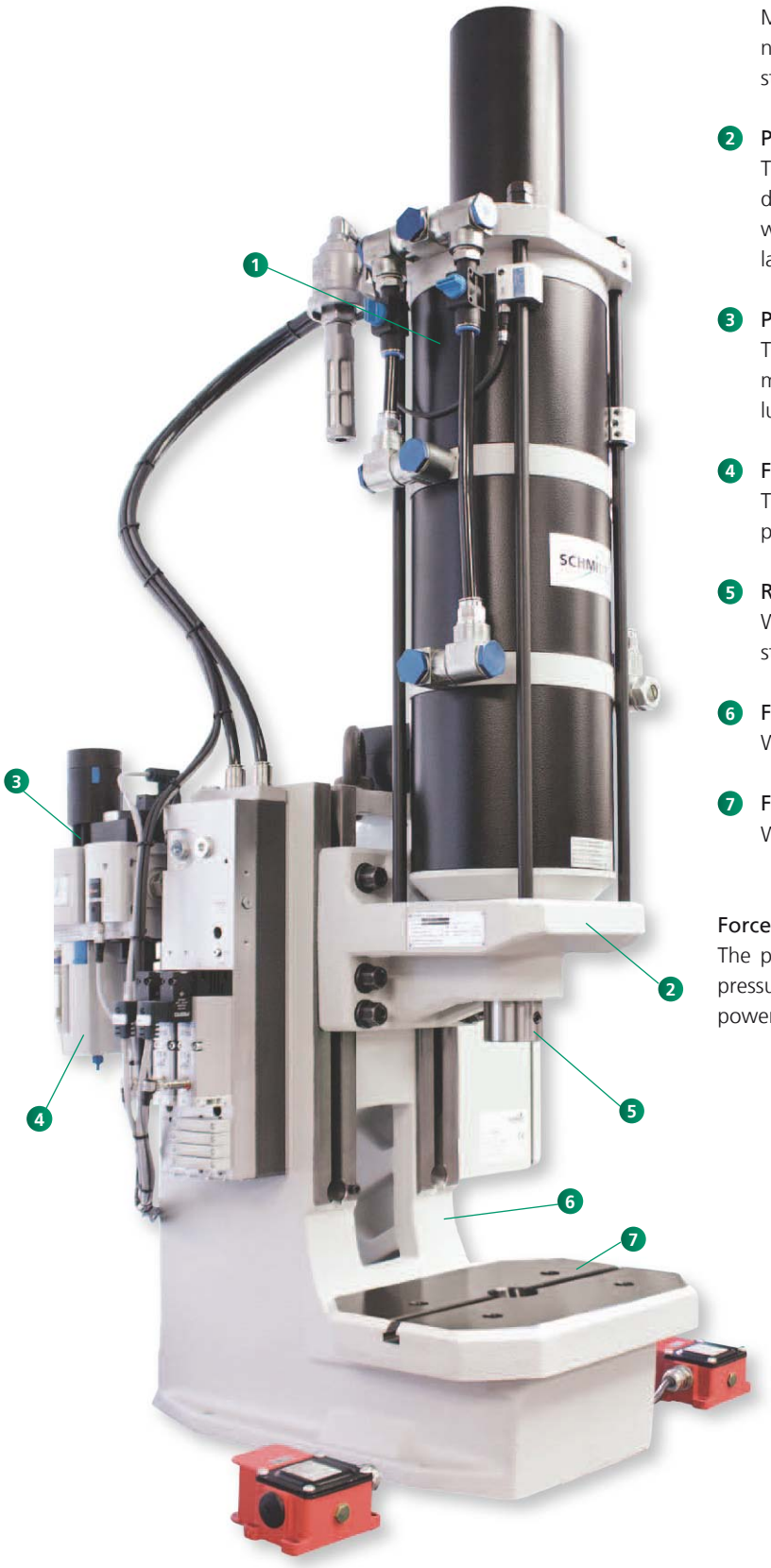
With the addition of the **SCHMIDT® PressControl 75** or **600** and the optional process monitoring, these presses become EC type-approved, CE-conformed workstations. Therefore these press systems can be used in either single cycle mode or automatic mode.

The application determines the selection of the press system. Consideration is given to the flexible design of the assembly location taking into account the ergonomic and safety aspects. These characteristics are achieved by means of a finely adjusted, modular type product range. The efficiency and increased process reliability of these press systems have been proven many thousands of times, in single applications, semi-automated assembly systems and have been integrated into automated production lines.

Safety Concepts see page 72

SCHMIDT® PneumaticPress

Example of a system design with a direct acting press



1 Cylinder unit
Maintenance-free specially developed for the assembly technology; with flow control for speed regulation of the downstroke.

2 Press Head unit
The working height can be rapidly and accurately adjusted due to the height adjustment's ease of use. Can be used without the frame as processing station in automated installations.

3 Pneumatic control package
Two-channel pneumatic package (as shown) is based on a modular valve block, designed to operate with filtered, non-lubricated air, supply pressure range of 3 – 6 bar.

4 Force control
The press force output can easily be controlled via a separate pressure regulator and pressure gauge (not shown).

5 Ram
With precision bore for tool holding and built-in adjustable stop.

6 Frame
With precision machined press head guide rails.

7 Fixture mounting plate
With precision T-slot and bore for tool location.

Force output preselector (optional)
The press force output can easily be controlled via a separate pressure regulator and pressure gauge. The pressure for the power stroke can be reduced to 1 bar

SCHMIDT® PneumaticPress
Principle of operation

Functional description considering the example of a 3-chamber pneumatic cylinder

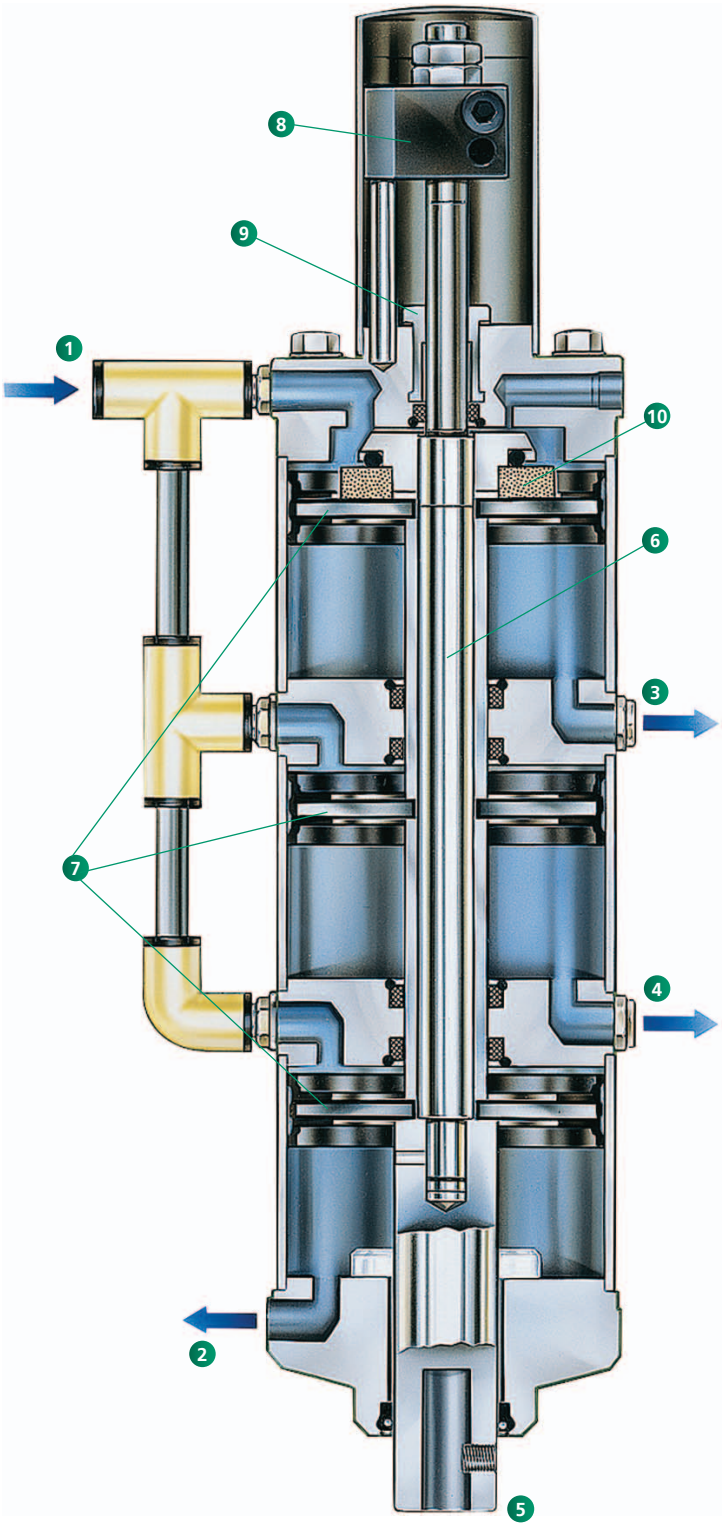
In working stroke, three pistons 7 connected by the piston rod 6 are pressurized with compressed air via the air connection 1 and move downward. The air below the pistons exhausts from the cylinder chambers via the depressurized connection 2 and the breather vents 3 and 4. The ram 5 extends up to the maximum working stroke.

In return stroke, the upper cylinder chambers are depressurized via the connection 1 and only the bottom piston is pressurized with compressed air via the air connection 2. Ambient air enters in both remaining cylinder chambers via the breather vents 3 and 4. The ram with the three pistons moves upward.

This construction has the same effect as a parallel connection of three cylinders. Thus, a powerful working stroke is achieved with a compact design as well as an economic use due to the low air consumption in the return stroke.

The stroke can be limited by setting the Stroke Limit Block 8 to an approximate, desired position. The gap between Stroke Limit Block and Stroke Fine Adjustment 9 now determines the maximum stroke that the ram can travel. In order to fine-tune this stroke, the stop screw 9 can be adjusted.

All direct acting presses have a built-in permanent magnet 10. This magnet facilitates sensing of the ram position via tie rod mounted sensors.



Features

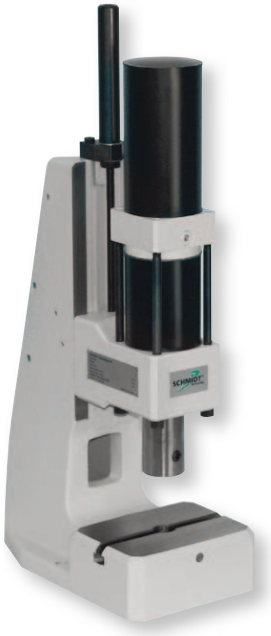
- Optimally adapted to individual requirements due to its modular design
- Process optimization by means of adjustable parameters (stroke, force, speed)
- Easy adaptation to different tool and part heights because of simplistic stroke and height adjustment
- Additional safety measures when using heavy tools due to the optional device for retention of ram in home position
- Endposition control via cylinder switches as signal transmitter for peripheral processes
- Low noise level (< 75 dBA)
- Double-acting, wear-resistant cylinders with low air consumption for the return stroke
- High flexibility due to short changeover time
- Long service life and high precision due to wear-resistant Teflon coated bushings at top and bottom of cylinder
- Precision ground ram
- Precision double ram guides

SCHMIDT® PneumaticPress

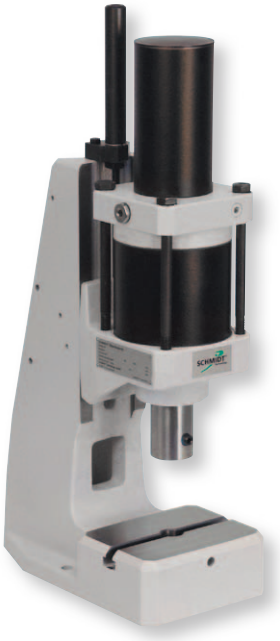
Direct acting with constant force over the entire stroke

Features

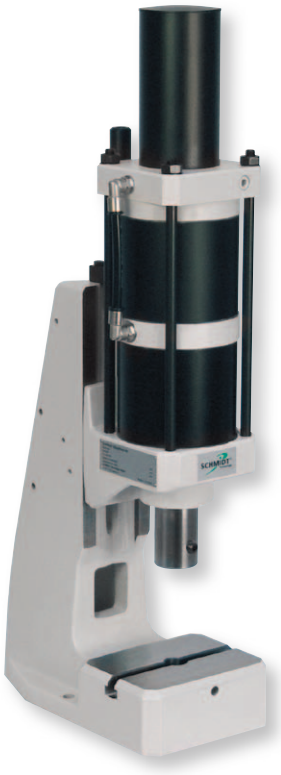
- Round anti-rotational ram
- Adjustable ram position in BDC by means of precision lower stop (1 division line = 0.05 mm) on scale
- T-slot with locking set screw in fixture mounting plate



Press Type 20



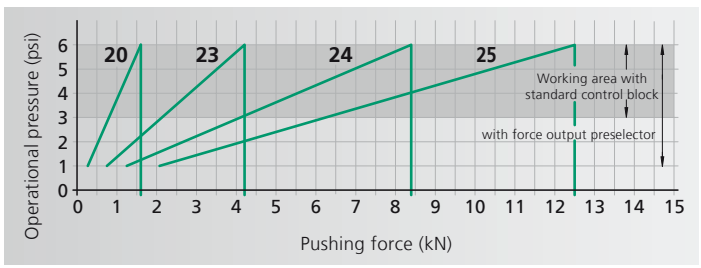
Press Type 23



Press Type 24

Press Type 25

Pneumatic cylinder
with piston and magnet kit for ram position via cylinder switch.



From 1.6 kN to 12.5 kN

Press Type			20	23	24	25
Working stroke	**A**	mm	50, 75 100, 125 160, 200 250, 300	50, 75 100, 125 160, 200 250, 300	50, 75 100, 125 160	50, 75 100
Nominal force at 6 bar		kN	1.6	4.2	8.4	12.5
Throat depth	**C**	mm	86	86	86	86
Throat depth frame ○		mm	111, 131 160, 200	111, 131 160, 200	111, 131 160, 200	111, 131
Additional fixture mounting plate suitable for throat depth frame			○	○	○	○
Ram bore	Ø	mm	20H7	20H7	20H7	20H7
Ram diameter	Ø	mm	40	40	40	40
Working height [1]	**F**					
Frame No. 3		mm	80-220	90-210	90-210	90-210
Frame No. 2 ○		mm	110-360	120-350	120-350	120-350
Frame No. 2-600 ○		mm	200-600	210-580	210-580	210-580
Frame No. 2-1000 ○		mm	330-1040	335-1020	335-1020	335-1020
Weight		approx. kg	30	35	40	45
Flange model			20-FL	23-FL	24-FL	25-FL
Cylinder	**Z**	Ø mm	69	106	106	106
Flange	**FL**	Ø mm	110	140	140	140
Width across flats	**SW**	mm	80	112	112	112
Centering shoulder	**ZA**	Ø mm	60	68	68	68

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D Ø mm	Table Height K (mm)	Mounting Surface B x L (mm)
No. 3	20, 23, 24, 25	540	150 x 110	20H7	60	150 x 260
No. 2	20, 23, 24, 25	700	185 x 110	20H7	60	185 x 280
No. 2-600 ○	20, 23, 24, 25	974	200 x 160	20H7	98	200 x 290
No. 2-1000 ○	20, 23, 24, 25	1410	200 x 160	20H7	98	200 x 290

Options

○ Additional charge applies

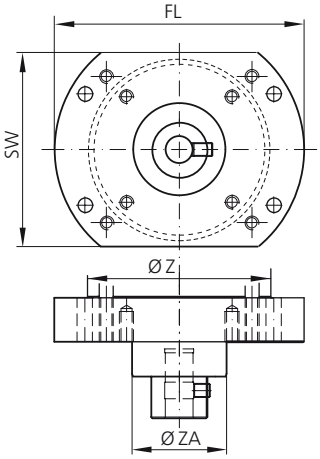
[1] Typical values; can vary ± 3 mm due to cast and production tolerances

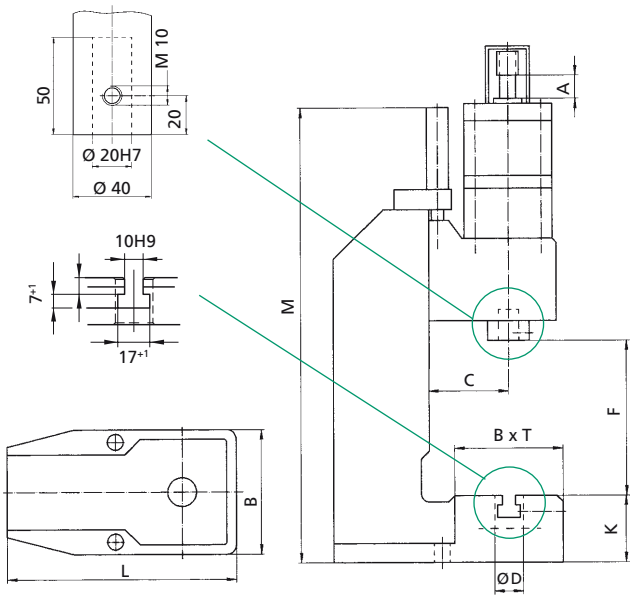
Other available options

- Nickel plated – cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint – press and column can be painted to customer's color specification
- Bores for adapting tooling – customer specific sizes can be supplied

Bottom View of the Press Head, Flange Model

Mounting drill pattern flange/ram





Please consult our Sales Department or Representative.
Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® PneumaticPress

Direct acting with constant force over the entire stroke

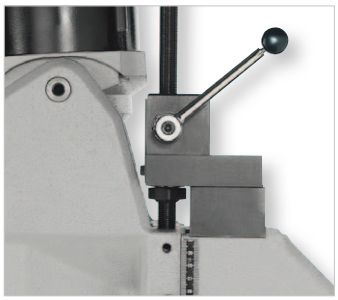
Features

- Round anti-rotational ram
- Adjustable ram position in BDC by means of precision lower stop (1 division line = 0.05 mm) on scale

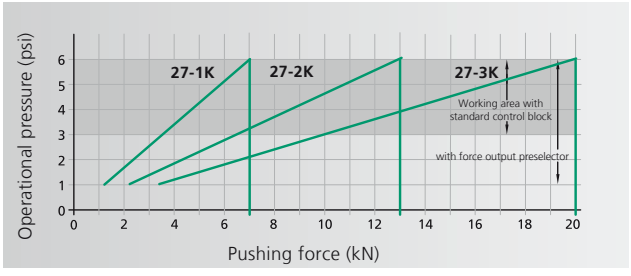
Press Type 27

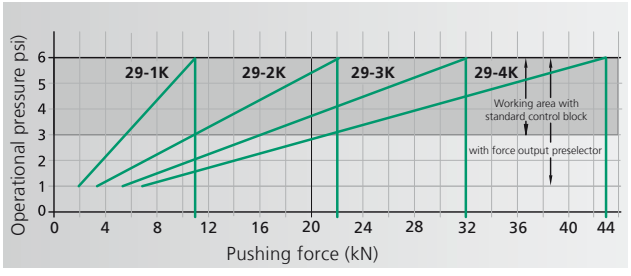
Press Type 29

Precision lower stop



Height adjustment
Fast, accurate setting of the work height.





From 7 kN to 43 kN

Press Type			27-1K	27-2K	27-3K	29-1K	29-2K	29-3K	29-4K
Working stroke	**A**	mm	50, 75, 100 160, 200 250, 300	50, 75 100, 125 160, 200	50, 75 100, 125 160	50, 75 100, 160 200, 300	50, 75 100, 125 160, 200	50, 75 100, 125 160	50, 75 100
Nominal force at 6 bar		kN	7	13	20	11	22	32	43
Throat depth	**C**	mm	131	131	131	140	140	140	140
Throat depth frame ○		mm	151	151	151	160, 185	160, 185	160, 185	160
Additional fixture mounting plate suitable for throat depth frame			○	○	○	○	○	○	○
Ram bore	Ø	mm	20H7	20H7	20H7	20H7	20H7	20H7	20H7
Ram diameter	Ø	mm	40	40	40	50	50	50	50
Working height [1]	**F**								
Frame No. 34		mm	90-270	90-270	90-270				
Frame No. 301 ○		mm	160-400	160-400	160-400				
Frame No. 301-500 ○		mm	310-550	310-550	310-550				
Frame No. 29		mm				80-290	80-290	80-290	80 – 290
Frame No. 29-500 ○		mm				150-500	150-500	150-500	150 – 500
Frame No. 29-600 ○		mm				250-600	250-600	250-600	250 – 600
Weight (standard)	approx. kg		85	85	85	120	120	120	120
Flange model			27-1K-FL	27-2K-FL	27-3K-FL	29-1K-FL	29-2K-FL	29-3K-FL	29-4K-FL
Cylinder	**Z**	Ømm	132	132	132	170	170	170	170
Flange	**FL**	Ømm	180	180	180	220	220	220	220
Width across flats	**SW**	mm	140	140	140	180	180	180	180
Centering shoulder	**ZA**	Ømm	68	68	68	80	80	80	80

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D Ø mm	Table Height K (mm)	Mounting Surface B x L (mm)
No. 34	27	630	200 x 160	25H7	111	200 x 370
No. 301	27	830	250 x 200	40H7	145	250 x 460
Frame No. 301-500 ○	27	990	250 x 200	40H7	145	250 x 480
Special fixture mounting plate with 3 longitudinal slots ○			300 x 220 400 x 230	40H7 40H7		
Frame No. 29	29	690	300 x 220	40H7	141	300 x 460
Frame No. 29-500 ○	29	990	300 x 220	40H7	166	300 x 540
Frame No. 29-600 ○	29	1110	300 x 220	40H7	166	300 x 565
Special fixture mounting plate with 3 longitudinal slots ○			355 x 225 400 x 230	40H7 40H7		

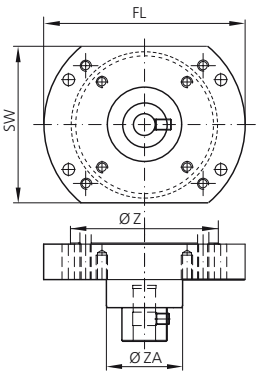
[1] Typical values; can vary ± 3 mm due to cast and production tolerances

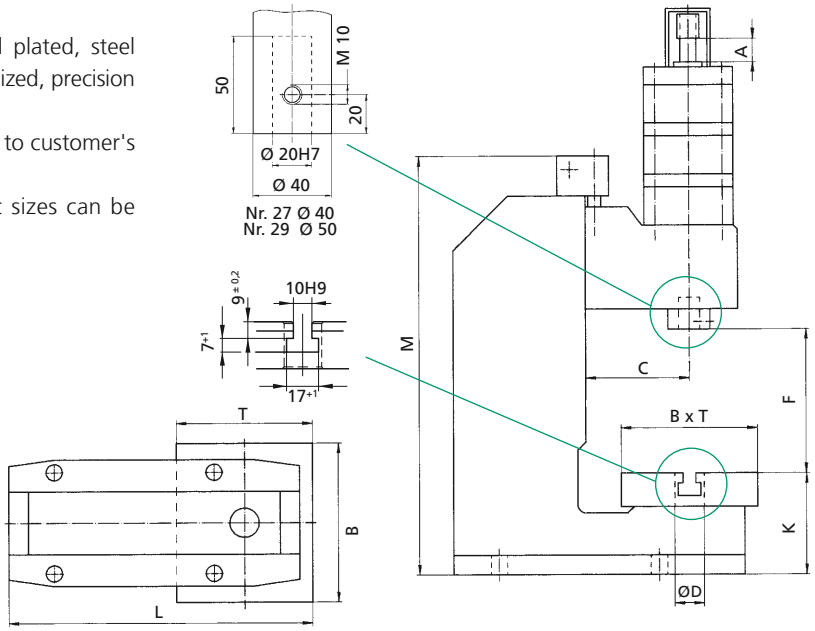
Options

○ Additional charge applies

Other available options

- Nickel plated – cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint – press and column can be painted to customer's color specification
- Bores for adapting tooling – customer specific sizes can be supplied





Please consult our Sales Department or Representative.
Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® PneumaticPress

Pneumatic Toggle Presses with maximum force at the end of stroke

Features

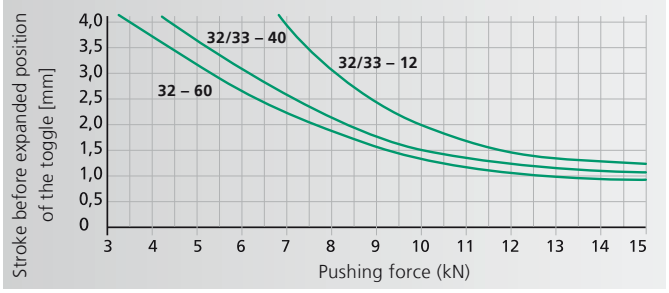
- Cross hole with locking screw in the press table for safe fixture of tool
- Accurate adjustable ram position via fine adjustment (type 33)
- T-slot with set screw in fixture mounting plate to secure bottom tool

Press Type 32

Press Type 33

Fine adjustment
for press No. 33 with scale
1 division line = 0.02 mm.

Flexible stroke adjustment
reduces the air consumption
for shorter strokes.



Up to 15 kN

Press Type			32	33
Working stroke	**A**	mm	0 - 12 4 - 40 6 - 60	0 - 12 4 - 40
Nominal force at 6 bar		kN	15	15
Throat depth	**C**	mm	86	86
Throat depth frame ○		mm	111, 131	111, 131
Additional fixture mounting plate suitable for throat depth frame			○	○
Ram bore	Ø	mm	20H7	20H7
External ram dimensions	Ø	mm	40	40
Fine adjustment				●
Working height [1]	**F**			
Frame No. 3		mm	90 - 210	
Frame No. 2		mm	120 - 340	70 - 290
Frame No. 2-600 ○		mm	210 - 580	160 - 530
Frame No. 2-1000 ○		mm	340 - 1020	290 - 970
Weight		approx. kg	45	50

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D Ø (mm)	Table Height K (mm)	Mounting Surface B x L (mm)
No. 3	32	540	150 x 110	20H7	60	150 x 260
No. 2	32, 33	700	185 x 110	20H7	60	185 x 280
Frame No. 2-600 ○	32, 33	810	200 x 160	20H7	98	200 x 290
Frame No. 2-1000 ○	32, 33	1248	200 x 160	20H7	98	200 x 290

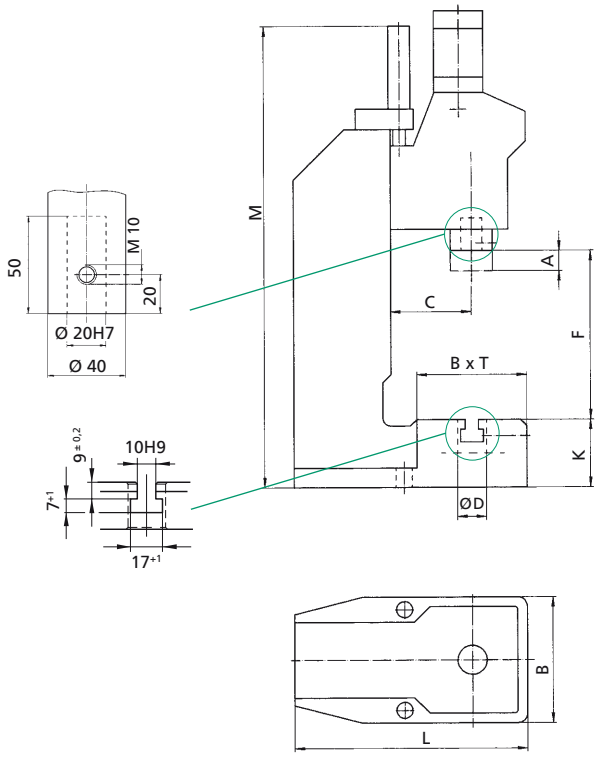
Options

- ● Series standard with no additional charge
- ○ Additional charge applies

[1] Typical values; can vary ± 3 mm due to cast and production tolerances

Other available options

- Nickel plated – cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint – press and column can be painted to customer's color specification
- Bores for adapting tooling – customer specific sizes can be supplied



Please consult our Sales Department or Representative.
Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® PneumaticPress

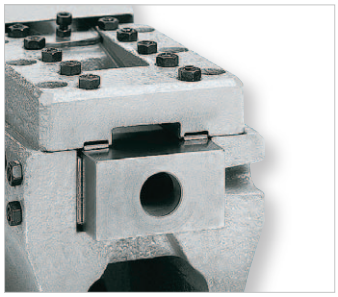
Pneumatic Toggle Presses with maximum force at the end of stroke

Features

- Anti-rotational square ram with fully adjustable, Teflon lined gibs for precise travel, no die set required
- Exact positioning due to fine adjustment scale (1 division line = 0.05 mm)

Press Type 34

Press Type 36

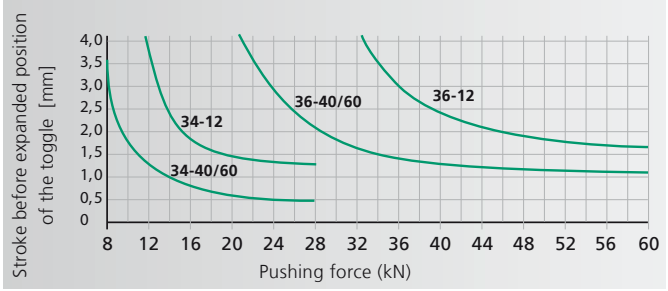


Square ram

Fine adjustment

Pushing Force Diagram

Operational pressure: 6 bar



From 28 kN to 60 kN

Press Type			34	36
Working stroke	**A**	mm	0 - 12 4 - 40 6 - 60	0 - 12 4 - 40 6 - 60
Nominal force at 6 bar		kN	28	60
Throat depth	**C**	mm	131	160
Throat depth frame ○		mm	151, 170	185
Fixture mounting plate suitable for throat depth frame			○	○
Ram bore	Ø	mm	20H7	20H7
External ram dimensions	**G x H**	mm	36 x 63	46 x 86
Working height [1]	**F**			
Frame No. 34		mm	100 - 250	
Frame No. 301		mm	160 - 400	
Frame No. 301 - 500		mm	310 - 550	
Frame No. 35		mm		100 - 250
Frame No. 35 - 500		mm		150 - 500
Frame No. 35 - 600		mm		250 - 600
Weight		approx. kg	90	150

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D Ø mm	Table Height K (mm)	Mounting Surface B x L (mm)
No. 34	34	630	200 x 160	25H7	111	200 x 370
No. 301	34	830	250 x 200	40H7	145	250 x 460
No. 301 - 500	34	990	250 x 200	40H7	145	250 x 480
Special fixture mounting plate with 3 longitudinal slots ○			300 x 220 400 x 230	40H7		
No. 35	36	700	300 x 220	40H7	141	300 x 480
No. 35 - 500	36	990	300 x 220	40H7	166	300 x 560
No. 35 - 600	36	1110	300 x 220	40H7	166	300 x 585
Special fixture mounting plate with 3 longitudinal slots ○			355 x 225 400 x 280	40H7		

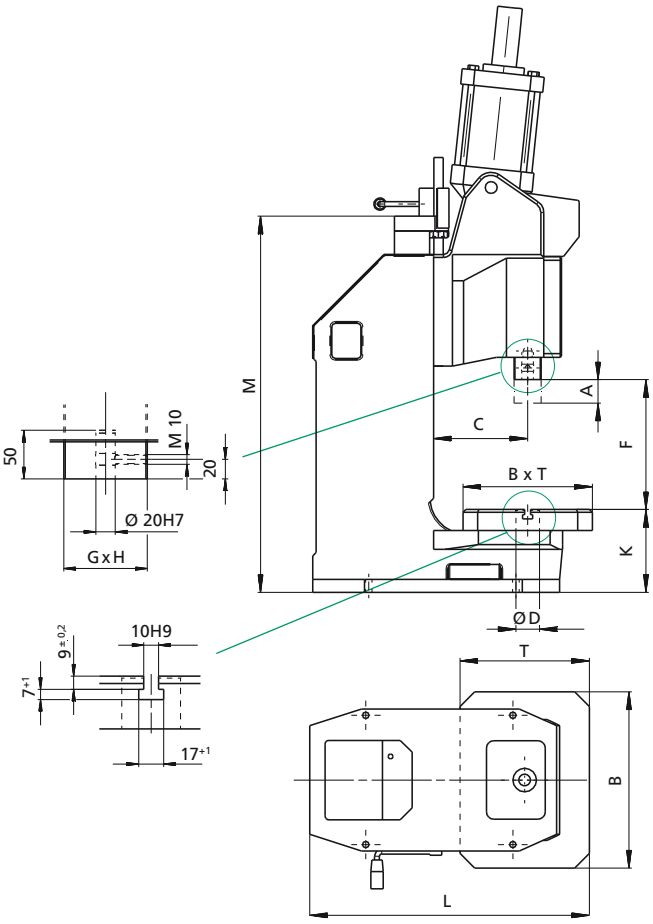
Options

○ Additional charge applies

[1] Typical values; can vary ± 3 mm due to cast and production tolerances

Other available options

- Nickel plated – cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint – press and column can be painted to customer's color specification
- Bores for adapting tooling – customer specific sizes can be supplied



Please consult our Sales Department or Representative.
Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® PneumaticPress

Direct acting Pneumatic Presses with force/stroke monitoring

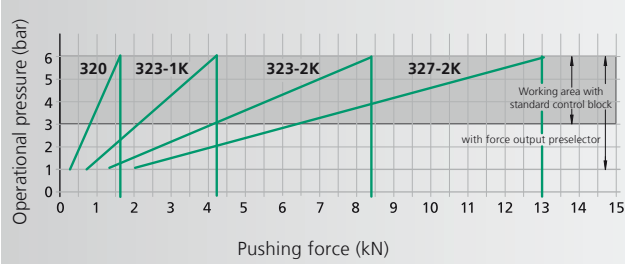
SCHMIDT® PneumaticPresses with force/stroke monitoring are offered as complete system with control unit **SCHMIDT® Press-Control 600**. These systems are characterized by sensors and signal amplification integrated in the press head. These signals are evaluated in real time.

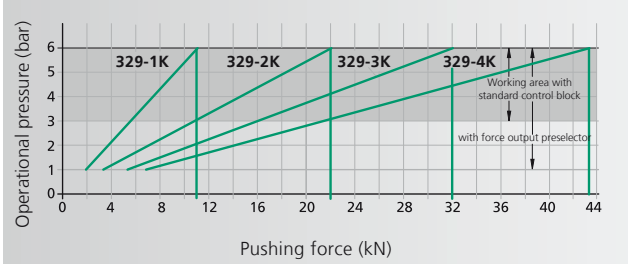
Features

- Direct forces are measured due to the force sensor integrated in the ram. Insensitive against side loads
- Force and displacement sensors are immune to EMI and environ-mental conterminaton
- A measuring data amplification integrated in the press head provides short transmission paths of unamplified signals
- Anti-rotational square ram with two fully adjustable guiding gibs for precise work, also with tools without guide (not for **type 320**, here special anti-twist protection in the roller-guided round ram)

Press Type 323, 327, 329

Press Type 320





From 1.6 kN to 43 kN

Press Type			320	323-1K	323-2K	327-2K	327-3K	329-2K	329-3K	329-4K
Working stroke	**A**	mm	100	50, 75, 100, 125, 150	50, 75, 100	50, 75, 100, 125, 150	50, 75, 100	50, 75, 100, 150	50, 75, 100, 125, 150	50, 75, 100
Nominal force at 6 bar		kN	1.6	4.2	8.4	13	20	22	32	43
Resolution, process data acquisition										
- stroke		µm/inc	5	5	5	5	5	5	5	5
- force		N/inc	0.5	1.25	2.5	4	6.25	6.25	10	12.5
Throat depth	**C**	mm	129	131	131	131	131	160	160	160
Throat depth frame ○		mm		151	151	151	151			
Fixture mounting plate suitable for throat depth frame				○	○	○	○			
Ram bore	Ø	mm	20H7	20H7	20H7	20H7	20H7	20H7	20H7	20H7
External ram dimensions	**G x H**	mm	Ø 40	70 x 50	70 x 50	70 x 50	70 x 50	90 x 60	90 x 60	90 x 60
Working height [1]	**F**									
Frame No. 7		mm	50-270							
Frame No. 7-600 ○		mm	85-600							
Frame No. 301		mm		140-350	140-350	140-350	140-350			
Frame No. 301-500 ○		mm		310-500	310-500	310-500	310-500			
Frame No. 329		mm						130-300	130-300	130-300
Frame No. 329-460 ○		mm						190-460	190-460	190-460
Weight (standard)		approx. kg	70	170	170	170	170	320	325	330

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D Ø mm	Table Height K (mm)	Mounting Surface B x L (mm)
No. 7	320	600	180 x 150	20H7	90	330 x 361
No. 7-600	320	960	180 x 280	20H7	110	330 x 465-505
No. 301	323, 327	830	250 x 200	40H7	145	250 x 460
No. 301-500	323, 327	990	250 x 200	40H7	145	250 x 480
Special fixture mounting plate with 3 longitudinal slots [2] ○			300 x 220 400 x 230	40H7		
No. 329	329	810	300 x 230	40H7	147	300 x 550
No. 329-460	329	990	300 x 230	40H7	147	300 x 620
Special fixture mounting plate with 3 longitudinal slots [2] ○			400 x 280 500 x 280	40H7		

Options

○ Additional charge applies

[1] Typical values; can vary ± 3 mm due to cast and production tolerances

[2] With Press type **320** only in combination with frame type No. **7-600** with 168 mm, 208 mm or 248 mm

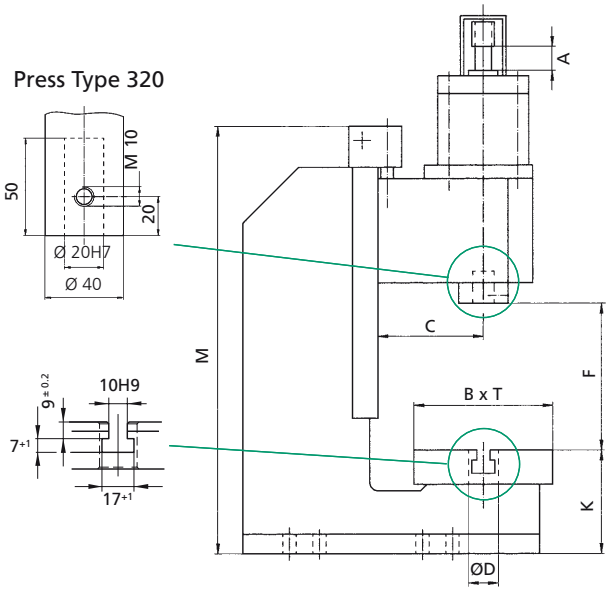
Other available options

- Nickel plated – cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint – press and column can be painted to customer's color specification
- Bores for adapting tooling – customer specific sizes can be supplied

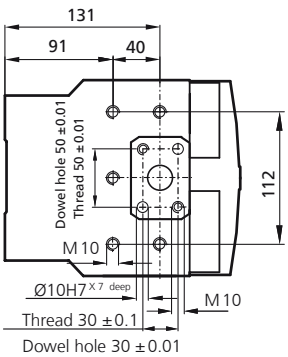
Bottom view of the press head

Fastening drill pattern flange/ram

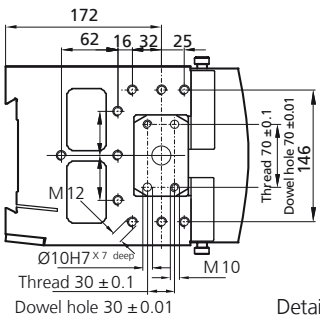
Press Type 320

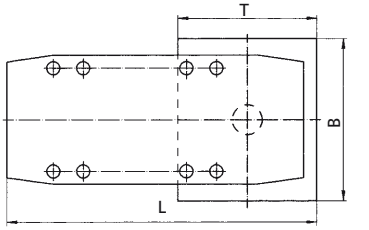


Press Type 323/327



Press Type 329





Please consult our Sales Department or Representative.

Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

Calculation of the air consumption

The air consumption per stroke is calculated in normal litres (NL)[1] at a working pressure of 6 bar.

The entire consumption consists of a constant and a variable part that depends on the stroke.

SCHMIDT® PneumaticPress air consumption per stroke
At 6 bar in normal litres (NL)

Press Type	Constant	Variable (per mm Stroke)[4]	Air Connection[3]
20	= max. stroke / 50 mm x 1 NL	0.02 NL	G 1/4"
23	= max. stroke / 50 mm x 2.5 NL	0.05 NL	G 1/4"
24	= max. stroke / 50 mm x 2.5 NL	0.1 NL	G 1/4"
25	= max. stroke / 50 mm x 2.5 NL	0.15 NL	G 1/4"
27-1K	= max. stroke / 50 mm x 4 NL	0.08 NL	G 3/8"
27-2K	= max. stroke / 50 mm x 4 NL	0.16 NL	G 3/8"
27-3K	= max. stroke / 50 mm x 4 NL	0.24 NL	G 3/8"
29-1K	= max. stroke / 50 mm x 6.5 NL	0.13 NL	G 1/2"
29-2K	= max. stroke / 50 mm x 6.5 NL	0.26 NL	G 1/2"
29-3K	= max. stroke / 50 mm x 6.5 NL	0.39 NL	G 1/2"
29-4K	= max. stroke / 50 mm x 6.5 NL	0.52 NL	G 1/2"
320	= max. stroke / 50 mm x 1 NL	0.02 NL	G 1/4"
323-1K	= max. stroke / 50 mm x 2.5 NL	0.05 NL	G 1/4"3)
323-2K	= max. stroke / 50 mm x 2.5 NL	0.1 NL	G 1/4"3)
327-2K	= max. stroke / 50 mm x 4 NL	0.16 NL	G 1/2"3)
327-3K	= max. stroke / 50 mm x 4 NL	0.32 NL	G 1/2"3)
329-2K	= (max. stroke +25 mm) / 50 mm x 6.5 NL	0.26 NL	G 1/2"3)
329-3K	= (max. stroke +25 mm) / 50 mm x 6.5 NL	0.39 NL	G 1/2"3)
329-4K	= (max. stroke +25 mm) / 50 mm x 6.5 NL	0.52 NL	G 1/2"3)
32-12	1 NL	0.09 NL	G 1/4"
32-40	1.5 NL	0.045 NL	G 1/4"
32-60	2 NL	0.035 NL	G 1/4"
33-12	1 NL	0.09 NL	G 1/4"
33-40	1.5 NL	0.045 NL	G 1/4"
34-12	1.5 NL	0.12 NL	G 1/4"
34-40	2.2 NL	0.08 NL	G 1/4"
34-60	3 NL	0.06 NL	G 1/4"
36-12	4 NL	0.36 NL	G 3/8"
36-40	6 NL	0.2 NL	G 3/8"
36-60	8 NL	0.18 NL	G 3/8"

Total consumption = constant consumption (liter)[2] + variable consumption (liter)

Variable consumption = air consumption per mm of stroke (liter/mm)[2] X working stroke (mm)

SCHMIDT® HydroPneumaticPress air consumption per stroke
At 6 bar in normal litres (NL)

Press Type Standard	Rapid Stroke / Return Stroke (constant)	Power Stroke per mm (variabel)	Air Connection[3]
61-50-6 / 361-50-6	2 NL	1.25 NL	G 1/4"
61-100-12 / 361-100-12	4 NL	1.9 NL	G 1/4"
62-50-6 / 362-50-6	3 NL	1.85 NL	G 1/4"
62-100-12 / 362-100-12	6 NL	2.6 NL	G 1/4"
65-50-6 / 365-50-6	5 NL	2.1 NL	G 1/4"
65-100-12 / 365-100-12	10 NL	3.1 NL	G 1/4"
64-50-6 / 364-50-6	8 NL	4 NL	G 1/2"
64-100-12 / 364-100-12	16 NL	6 NL	G 1/2"
68-50-6 / 368-50-6	8 NL	3.2 NL	G 1/2"
68-100-12 / 368-100-12	16 NL	5.2 NL	G 1/2"
74-50-6 / 374-50-6	8 NL	4 NL	G 1/2"
74-100-12 / 374-100-12	16 NL	6 NL	G 1/2"
76-100-12 / 376-100-12	26 NL	10 NL	G 1/2"

Total consumption = constant consumption (liter)[2] + variable consumption (liter)

Variable consumption = air consumption per mm of stroke (liter/mm)[2] X working stroke (mm)

[1] The air volume is measured under standard conditions ($1.013 \cdot 10^5$ pascal = 1 atm and a temperature of 25 °Celsius [298 Kelvin])
[2] Value according to table [3] For presses with force/stroke monitoring , the air connection refers to the two-channel control block used by us
[4] For the determination of the consumption, the single stroke is used, the return stroke is automatically contained in the result

SCHMIDT® HydroPneumaticPress
Maximum force range from 15 kN to 220 kN

The **SCHMIDT® HydroPneumaticPress** range consists of a modular system suitable for transforming, joining and assembling optimally within the pressing force range 15 – 220 kN.

With the addition of the **SCHMIDT® PressControl 75** or **600** and the optional process monitoring, these presses become EC type-approved, CE-conformed workstations. Therefore these press systems can be used in either single cycle mode or automatic mode.

The application determines selection of the press system. Consideration is given to the flexible design of the assembly location taking into account the ergonomic and safety aspects. These characteristics are achieved by means of a finely adjusted, modular type product range. The efficiency and increased process reliability of these press systems have been proven many thousands of times, in single applications, semi-automated assembly systems and have been integrated into automated production lines.

Safety Concepts see page 72

SCHMIDT® HydroPneumaticPress
System design

1 **Cylinder unit**
Hydro pneumatic

2 **Air throttle rapid approach stroke**
For speed control of the downstroke

3 **Press head unit**
The working height can be rapidly and accurately adjusted due to the height adjustment's ease of use. Can be used without the frame as processing station in automated installations

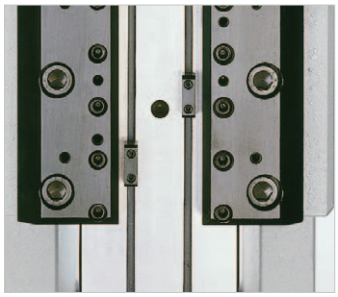
4 **Pneumatic control package**
Two-channel pneumatic package (as shown) is based on a modular valve block

5 **Force output preselector**
The press force output can easily be controlled via a separate pressure regulator and pressure gauge. The pressure for the power stroke can be reduced to 1 bar

6 **Square ram**
Square ram with fully adjustable, Teflon lined gibs for precise travel, precision machined bore

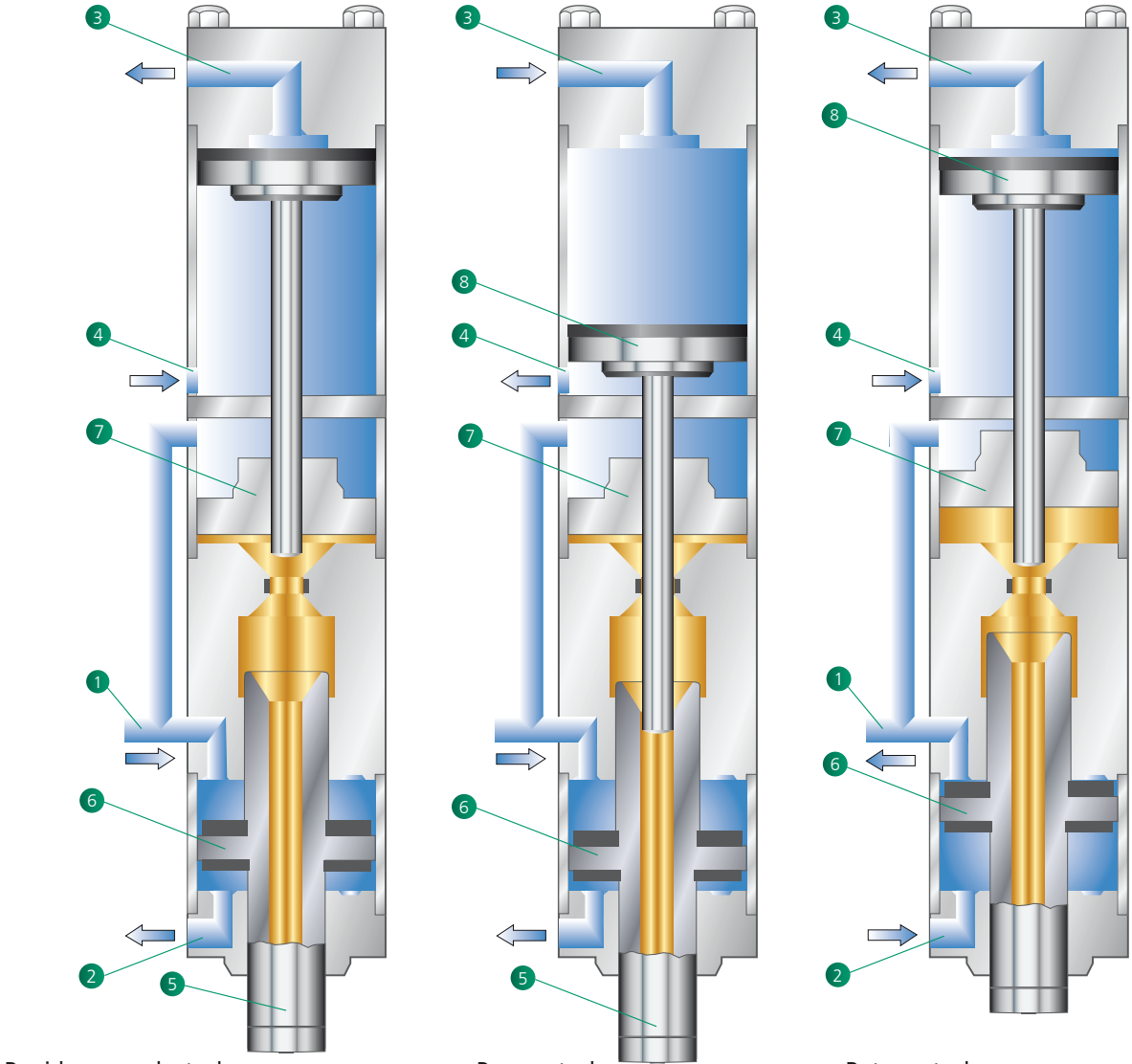
7 **Frame**
With precision machined press head guide rails (for **No. 68** and **368** designed as dovetail guide)

8 **Fixture mounting plate**
With precision T-slot and bore for tool location



Stroke feedback
Ram with key-ways for switch target pieces for an inductive position feedback. Optional: Stroke-dependent activation of the power stroke by means of the proximity switch.

SCHMIDT® HydroPneumaticPress
Principle of operation



Rapid approach stroke | Power stroke | Return stroke

Rapid approach stroke
In rapid approach stroke, the air connections 1 and 4 are pressurized with compressed air. The air connections 2 and 3 are depressurized. The approach stroke piston 6 and the reservoir piston 7 are moving with low force until the ram 5 encounters resistance.

Power Stroke
If the ram 5 encounters resistance, a valve switches the compressed air from 4 to connection 3, and the power stroke piston 8 moves downwards. A rod enters the high pressure cylinder, separating the hydraulic oil between reservoir piston 7 and approach stroke piston 6. The ram 5 moves out with boosted force.

Return Stroke
For the return stroke, the connections 1 and 3 are depressurized, and the connections 2 and 4 are pressurized. Approach stroke 6 and power stroke piston 8 move back simultaneously. After the hydraulic connection between approach 6 and reservoir piston 7 oil flows back into the reservoir, moving the reservoir piston into its home position.

Features
- Optimally adapted to individual requirements due to its modular design
- High flexibility and economic efficiency due to short changeover times
- Easy and accurate positioning of tools due to the precise alignment between ram bore and the ground fixture mounting plate.
- The force output preselector allows reducing the pressure for the power stroke to 1 bar. This reduces the nominal press force to 1/6 of the maximum force.
- The end positions of the ram can be sensed via the inductive proximity switches.
- No mechanical compression spring in the cylinder of the hydropneumatic system, providing a long service life
- Low maintenance resulting in high productivity
- Long service life and precision due to maintenance-free guides
- Tool protection due to smooth switchover from rapid approach stroke to power stroke
- Additional safety when using heavy tools due to the optional ram drift lock device for retention of ram in home position.
- Low noise level (< 75 dBA)

SCHMIDT® HydroPneumaticPress
C-Frame design

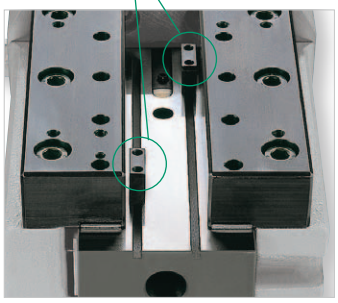
Features

- The C-Frame design offers full accessibility when manually inserting and removing parts
- Easy adaptation to different tool and part heights because of simplistic height adjustment with angular gear
- Anti-rotational square ram with fully adjustable, Teflon lined gibs for precise travel. No die set required
- High precision due to long precise guides of the square ram

Press type 61/62

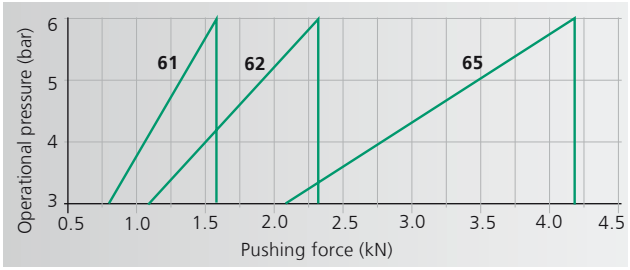
Press type 65

Adjustable switch target pieces for position detection via an inductive position sensor

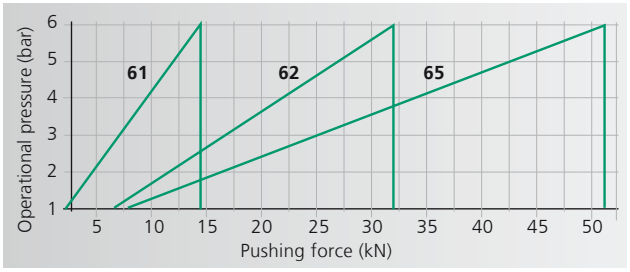


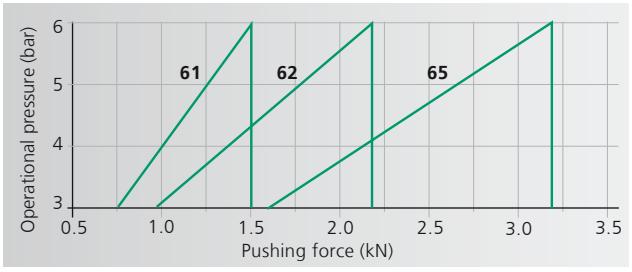
Square ram
with bilaterally adjustable, play-free gibs, precision machined bore with set screw for mounting of tooling.

Rapid approach stroke



Power stroke





Operational pressure < 3 bar: can only be operated with press force preselector!

From 15 kN to 52 kN in Power Stroke

Press Type			61	62	65
Total stroke - Power stroke [1]		mm	50-6, 100-12	50-6, 100-12	50-6, 100-12
Nominal force at 6 bar		kN	15	30	52
Throat depth	**C**	mm	131	131	160
Throat depth frame ○		mm	151	151	185
Fixture mounting plate suitable for throat depth frame			○	○	○
Ram bore	Ø	mm	20H7	20H7	20H7
External ram dimensions	**G x H**	mm	36 x 63	36 x 63	46 x 86
Working height [2]	**F**				
Frame No. 34		mm	100-250	100-250	
Frame No. 301 ○		mm	160-400	160-400	
Frame No. 301-500 ○		mm	310-550	310-550	
Frame No. 35		mm			80-235
Frame No. 35-500 ○		mm			150-500
Frame No. 35-600 ○		mm			250-600
Weight (standard)		approx. kg	95	110	160

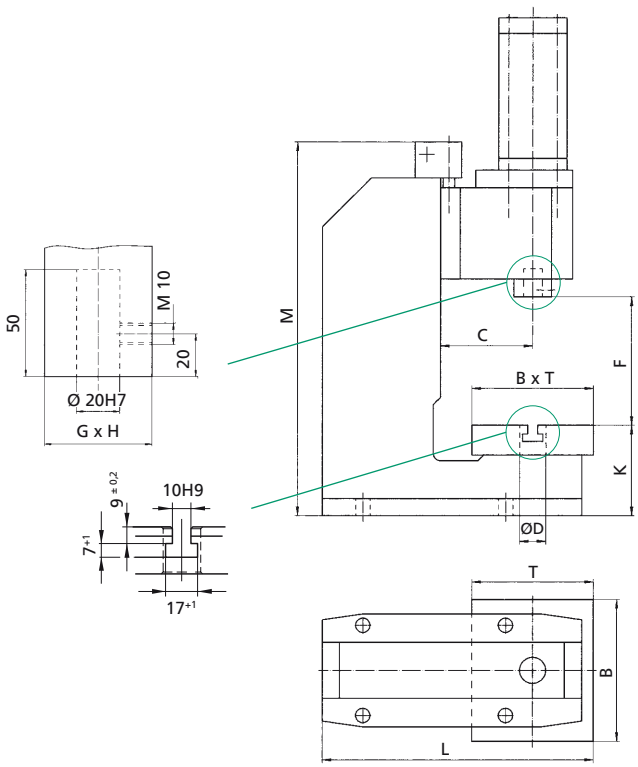
Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D Ø mm	Table Height K (mm)	Mounting Surface B x L (mm)
No. 34	61, 62	630	200 x 160	25H7	111	200 x 370
No. 301	61, 62	830	250 x 200	40H7	145	250 x 460
No. 301-500	61, 62	990	250 x 200	40H7	145	250 x 480
Special fixture mounting plate with 3 longitudinal slots ○			300 x 220 400 x 230	40H7		
No. 35	65	700	300 x 220	40H7	141	300 x 480
No. 35-500	65	990	300 x 220	40H7	166	300 x 560
No. 35-600	65	1110	300 x 220	40H7	166	300 x 585
Special fixture mounting plate with 3 longitudinal slots ○			355 x 225 400 x 280	40H7		

Options

○ Additional charge applies

[1] Special models total stroke/power stroke on request

[2] Typical values; can vary ± 3 mm due to cast and production tolerances



Please consult our Sales Department or Representative.

Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

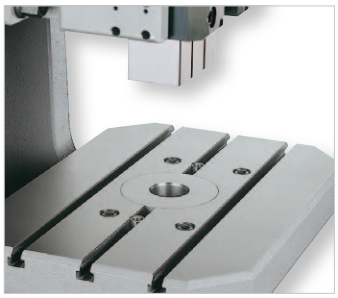
SCHMIDT® HydroPneumaticPress
C-Frame design with welded press frame

Features
- The welded press frame offers highest stability
- Space-saving and compact due to separate working cylinder for press No. 68

Press type 68

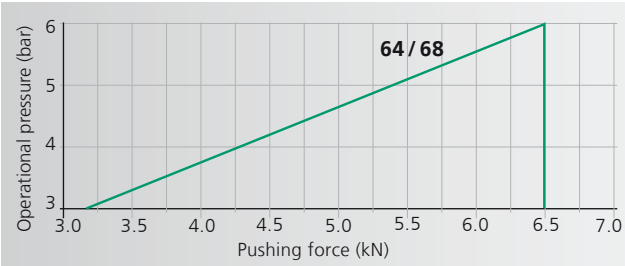
Press type 64

Square ram
with bilaterally adjustable, play-free gibs, precision machined bore with set screw for mounting of tooling. Some models feature additional provisions for tooling adaption.

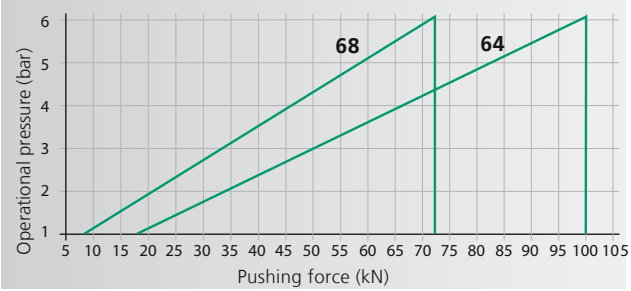


Fixture mounting plate
(for Press No. 64)
with 3 T-slots and precision machined bore for tool location.

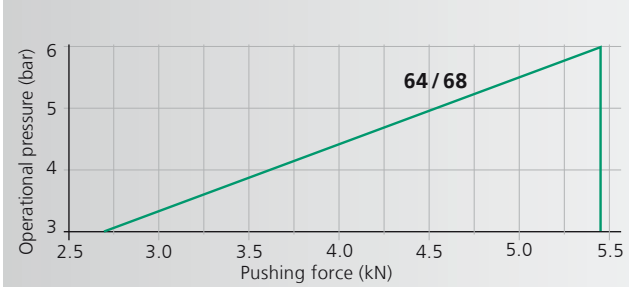
Rapid approach stroke



Power stroke



Return stroke



Operational pressure < 3 bar: can only be operated with press force preselector!

From 72 kN to 100 kN in power stroke

Press Type			64	68
Total stroke - Power stroke [1]		mm	50-6, 100-12	50-6, 100-12
Nominal force at 6 bar		kN	100	72
Throat depth	**C**	mm	160	160
Ram bore	**E**	Ø mm	25H7	20H7
External ram dimensions	**G x H**	mm	60 x 90	60 x 90
Working height [3]	**F**			
Frame No. 64		mm	180-350	
Frame No. 64-600 ○		mm	430-600	
Frame No. 68 [2]		mm		130-300
Frame No. 68/5 [2] ○		mm		190-460
Weight (standard)		approx. kg	420	350

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D Ø mm	Table Height K (mm)	Mounting Surface B x L (mm)
No. 64	64	940	400 x 290	40H7	185	400 x 625
No. 64-600 ○	64	1200	400 x 290	40H7	185	400 x 685
No. 68 [2]	68	810	300 x 230	40H7	147	300 x 550
No. 68/5 [2] ○	68	990	300 x 230	40H7	147	300 x 620
Special fixture mounting plate with 3 longitudinal slots ○			400 x 280 500 x 280	40H7		

Options

○ Additional charge applies

[1] Special models total stroke/power stroke on request

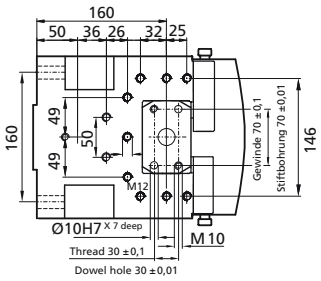
[2] Frame 68/5 required for 30 mm power stroke

[3] Typical values; can vary ± 3 mm due to cast and production tolerances

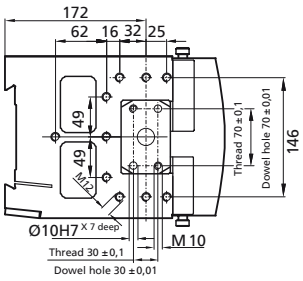
Bottom view of the press head

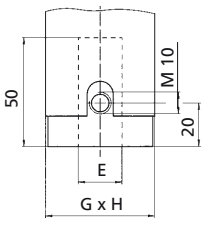
Mounting drill pattern flange/ram

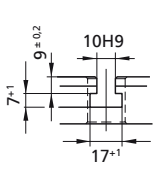
Press type 64

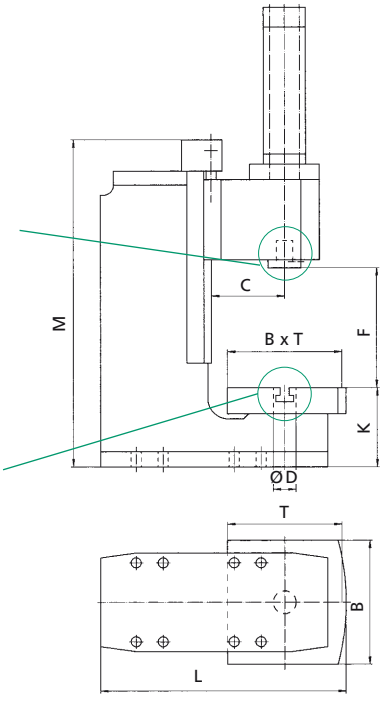


Press type 68









Please consult our Sales Department or Representative.

Detailed dimensional drawings can be dowanloaded: www.schmidttechnology.de

SCHMIDT® HydroPneumaticPress
C-Frame design with force/stroke monitoring

SCHMIDT® HydroPneumaticPresses with force / stroke monitoring are offered as complete system with control unit **SCHMIDT® PressControl 600**. These systems are characterized by sensors and signal amplification integrated in the press head. These signals are evaluated in real time.

Features

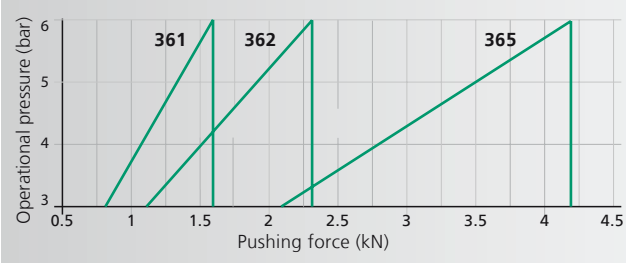
- Direct forces are measured due to the force sensor integrated in the ram. Insensitive against side forces
- Signal readings are not affected by outside interference
- A measuring data amplification integrated in the press head provides short transmission paths of unamplified signals
- Precision guide rails for precise working. Bilaterally adjustable, play-free gibs, precision machined bore for tool location. No die-set required

Press type 361

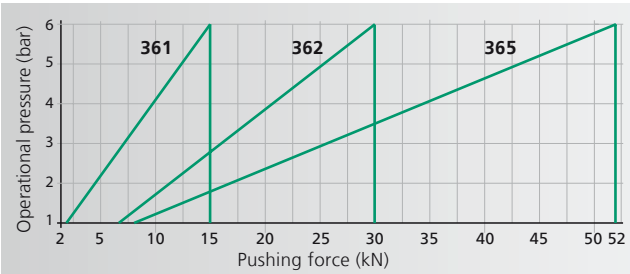
Press type 362

Press type 365

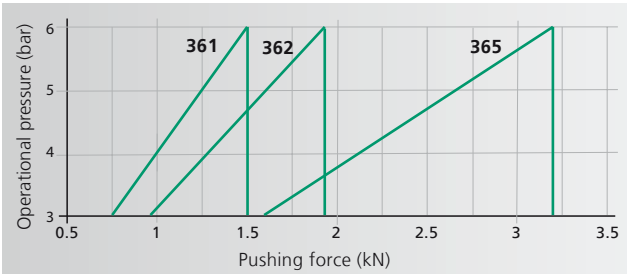
Rapid approach stroke



Power stroke



Return stroke



Operational pressure < 3 bar: can only be operated with press force preselector!

From 15 kN to 52 kN in power stroke

Press Type			361	362	365
Total stroke - Power stroke [1]		mm	50-6, 100-12	50-6, 100-12	50-6, 100-12
Nominal force at 6 bar		kN	15	30	52
Process data acquisition stroke force		 µm/inc N/inc	 5 4.5	 5 9	 5 15
Throat depth	**C**	mm	131	160	160
Throat depth frame ○			151		
Fixture mounting plate suitable for throat depth frame			○		
Ram bore	Ø	mm	20H7	20H7	20H7
External ram dimensions	**G x H**	mm	70 x 50	90 x 60	90 x 60
Working height [2]	**F**				
Frame No. 301		mm	160-355		
Frame No. 301-500 ○		mm	310-500		
Frame No. 329		mm		130-300	130-300
Frame No. 329-460 ○		mm		190-460	190-460
Weight (standard)		approx. kg	170	320	330

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D Ø mm	Table Height K (mm)	Mounting Surface B x L (mm)
No. 301	361	830	250 x 200	40H7	145	250 x 460
No. 301-500 ○	361	990	250 x 200	40H7	145	250 x 480
Special fixture mounting plate with 3 longitudinal slots ○			300 x 220 400 x 230	40H7		
No. 329	362, 365	810	300 x 230	40H7	147	300 x 550
No. 329-460 ○	362, 365	990	300 x 230	40H7	147	300 x 620
Special fixture mounting plate with 3 longitudinal slots ○			400 x 280 500 x 280	40H7		

Options

○ Additional charge applies

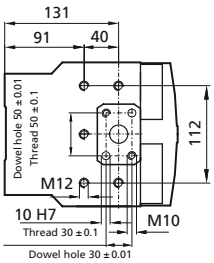
[1] Special models total stroke/power stroke on request

[2] Typical values; can vary ± 3 mm due to cast and production tolerances

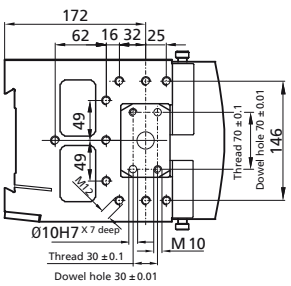
Bottom view of the press head

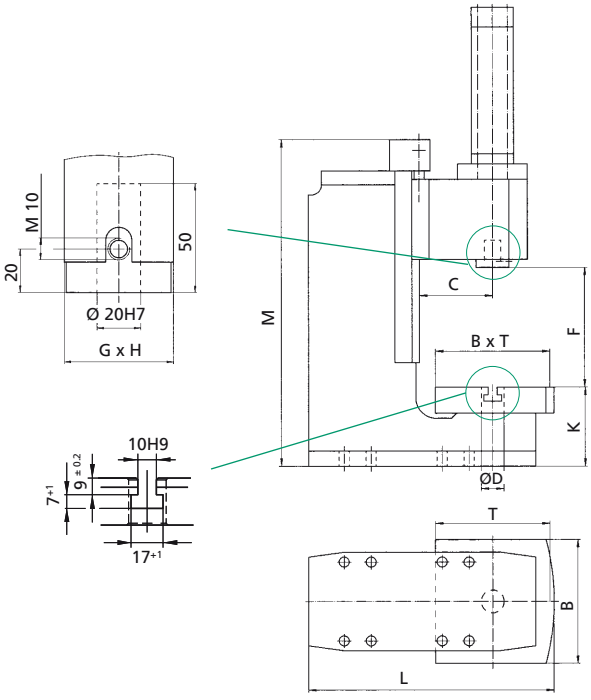
Mounting drill pattern flange/ram

Press Type 361



Press Type 362/365





Please consult our Sales Department or Representative.

Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® HydroPneumaticPress
In C-Frame design with force/stroke Monitoring

SCHMIDT® HydroPneumaticPress with force/stroke monitoring are offered as complete system with control unit **SCHMIDT® PressControl 600**. These systems are characterized by sensors and signal amplification integrated in the press head. These signals are evaluated in real time.

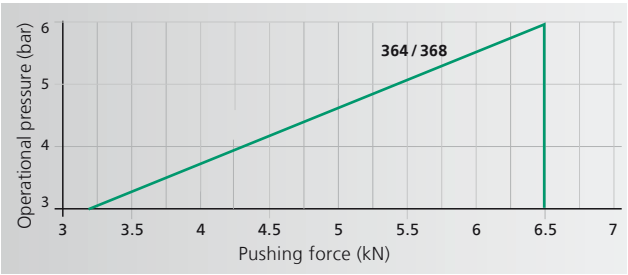
Features

- Direct forces are measured due to the force sensor integrated in the ram. Insensitive against side forces
- Signal readings are not affected by outside interference
- A measuring data amplification integrated in the press head provides short transmission paths of unamplified signals
- Precision bilaterally adjustable, play-free gibs, precision ground bore for tool location. No die-set required

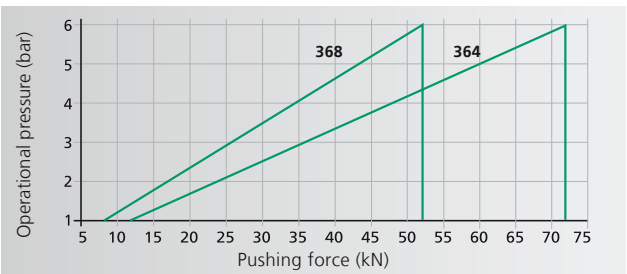
Press type 364

Press type 368

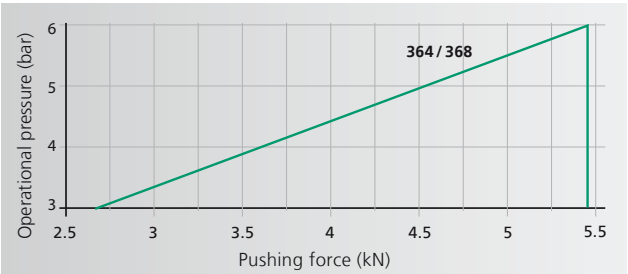
Rapid approach stroke



Power stroke



Return stroke



From 72 kN to 100 kN in power stroke

Press Type			364	368
Total stroke - Power stroke [1]		mm	50-6, 100-12	50-6, 100-12
Nominal force at 6 bar		kN	100	72
Process data acquisition Stroke Force		 µm/inc N/inc	 5 32	 5 20
Throat depth	**C**	mm	160	160
Ram bore	**E**	Ø mm	25H7	20H7
External ram dimensions	**G x H**	Ø mm	90 x 60	90 x 60
Working height [3]	**F**			
Frame No. 64		mm	180-350	
Frame No. 64-600 ○		mm	430-600	
Frame No. 68 [2]		mm		130-300
Frame No. 68/5 [2] ○		mm		190-460
Weight (standard)		approx. kg	420	350

Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D Ø mm	Table Height K (mm)	Mounting Surface B x L (mm)
No. 64	364	940	400 x 290	40H7	185	400 x 625
No. 64-600 ○	364	1200	400 x 290	40H7	185	400 x 685
No. 68 [2]	368	810	300 x 230	40H7	147	300 x 550
No. 68/5 [2] ○	368	990	300 x 230	40H7	147	300 x 620
Special fixture mounting plate with 3 longitudinal slots ○			400 x 280 500 x 280	40H7		

Options

○ Additional charge applies

[1] Special models total stroke/power stroke on request

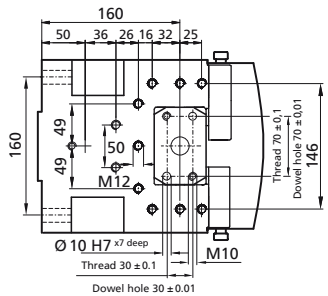
[2] Frame 68/5 required for 30 mm power stroke

[3] Typical values; can vary ± 3 mm due to cast and production tolerances

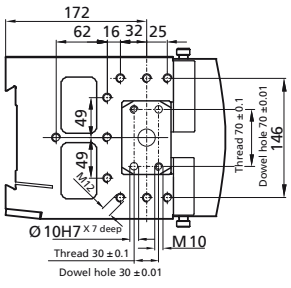
Bottom View of the Press Head

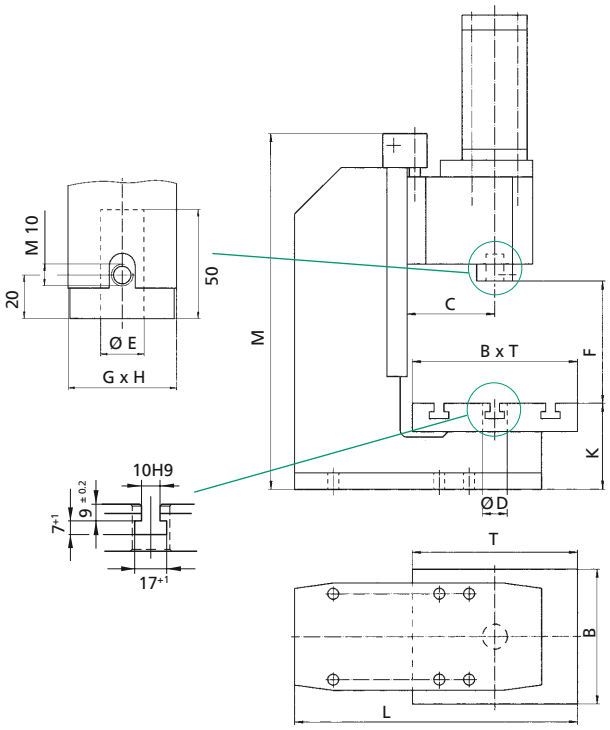
Mounting drill pattern flange/ram

Press Type 364



Press Type 368





Please consult our Sales Department or Representative.

Detailed dimensional drawings can be downloaded: www.schmidttechnology.de

SCHMIDT® HydroPneumaticPress

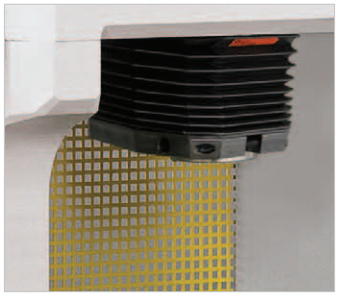
H-Frame design with and without force/stroke monitoring

Features

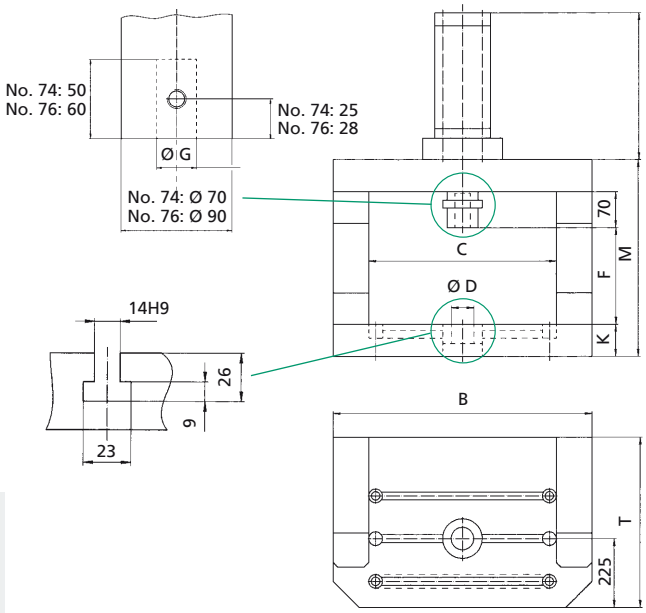
- Stable frame with low bending for the absorption of high forces
- Flexible tool location in the fixture mounting plate due to replaceable centering bushing with precision bore
- The large working area offers sufficient space for large tools
- The force is determined via a pressure transducer with force/stroke monitored presses

Press type 74/76

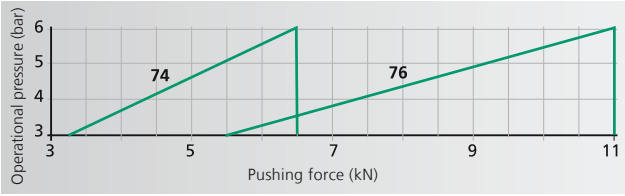
374/376 (with force/stroke monitoring)



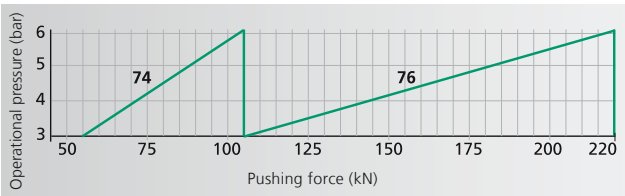
Round ram locked against Rotation with TDC switch (74/76) or position measuring system (374/376) on the rotational guide rod.



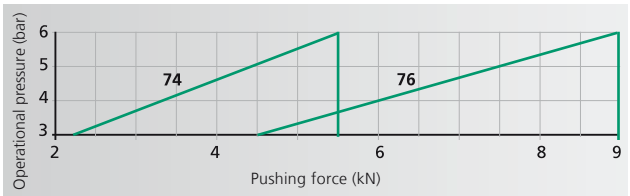
Rapid approach stroke



Power stroke



Return stroke



From 100 kN to 220 kN in power stroke

Press Type			74	76
Total stroke - Power stroke [1]		mm	100 - 12	100 - 12
Nominal force at 6 bar		kN	100	220
Ram bore	**G**	Ø mm	25H7	32H7
External ram dimensions		Ø mm	70	90
Working height [2]	**F**		350	350
Table height	**K**	mm	95	95
Frame hight	**M**	mm	640	640
Table size	**B x T**	mm	640 x 480	640 x 480
Table bore	**D**	Ø mm	40H7	40H7
Clearance	**C**	mm	420	420
Clearance ○		mm	520	520
Weight (standard)		approx. kg	730	760

Press Type			374	376
Total stroke - Power stroke [1]		mm	**100 - 12**	**100 - 12**
Nominal force at 6 bar		kN	100	220
Process data acquisition Stroke Force		 µm/inc N/inc	 5 32	 5 62.5
Ram bore	**G**	Ø mm	25H7	32H7
External ram dimensions		Ø mm	70	90
Working height [2]	**F**		350	350
Table height	**K**	mm	95	95
Frame height	**M**	mm	640	640
Table size	**B x T**	mm	640 x 480	640 x 480
Table bore	**D**	Ø mm	40H7	40H7
Clearance	**C**	mm	420	420
Clearance ○		mm	520	520
Weight (standard)		approx. kg	730	760

Options

○ Additional charge applies

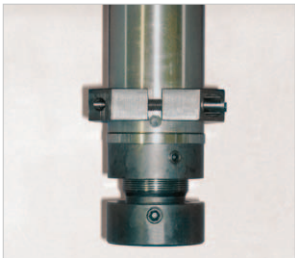
[1] Special models total stroke/power stroke on request

[2] Typical values; can vary ± 3 mm due to cast and production tolerances

Accessories

High-pressure switch

After switching from rapid approach stroke to power stroke, the oil pressure rises in the hydraulic chamber of the cylinder. The high-pressure switch can be adjusted to reach a determined press force through the output generated by the oil pressure in the press.



Adjustment bushing for **SCHMIDT®** HydroPneumatic-Press No. **74** and **76**

For a simplistic adjustment of the working height with a setting range of 100 mm. This greatly reduces the need for spacers to accommodate different working heights during setup changes.

Oil pump

For an air-free refilling of the **SCHMIDT®** HydroPneumatic-Press with hydraulic oil., including 1 liter Hydraulic oil.

SCHMIDT® Cylinder Units
For flexible use

SCHMIDT® Double-acting **cylinder units** are useful components for the construction of special machines. They can be mounted independently and are equipped with a magnet kit for detecting the corresponding end position using a cylinder switch. As flange or side-mount model, with toggle transmission or as hydropneumatic cylinder unit in the force range up to 100 kN.

Press head (side-mount) model

Flange model

Technical Data	SCHMIDT® Cylinder Units	
Typ No.	**Press head model**	**Flange model**
20 - 29	•	•
32 - 36	•	
61 - 68	•	• (not for No. **61**, **62**, **65**)
323 - 368	•	•

For the performance data, please refer to the chapters **SCHMIDT**® PneumaticPress and **SCHMIDT**® HydroPneumaticPress, optional with force/stroke monitoring.

Order indications
Key for design options

Cylinder Unit / Stroke / Design

Order Example 65 - 50 - 6
Press no.
Total stroke
Power stroke

= **SCHMIDT**® Cylinder Unit No. 65
with total stroke 50 mm and power stroke 6 mm as press head model

Cylinder unit / stroke / design

Order Example 20 - 50 - FL
Press no.
Stroke
Model

= **SCHMIDT**® Cylinder Unit no. 20
with stroke 50 mm as flange model

SCHMIDT® ElectricPress
A new approach to assembly technology

To use electric drives instead of pneumatic or hydropneumatic driven cylinders, is a modern advancement in assembly technology. **SCHMIDT Technology** combined its proven rugged mechanics with the latest electric drive technology to create assembly presses for industrial production applications. The high efficiency of electric drives may not be the only reason to choose them. The individual process, the infrastructure and the quality of the compressed air should also have a bearing on that decision.

The key advantages of the **SCHMIDT**® **ElectricPress**:

- Easy programming of parameters reduces set-up time
- Stored press ram motion profiles allow for quick changeover
- Enhanced flexibility
- Reduced tooling costs and wear due to precise positioning
- The stick-slip effect does not occur due to our design. As a result the assembly process will be optimized compared to pneumatic drives, especially at low speeds
- Low noise level reduces operator fatigue and stress

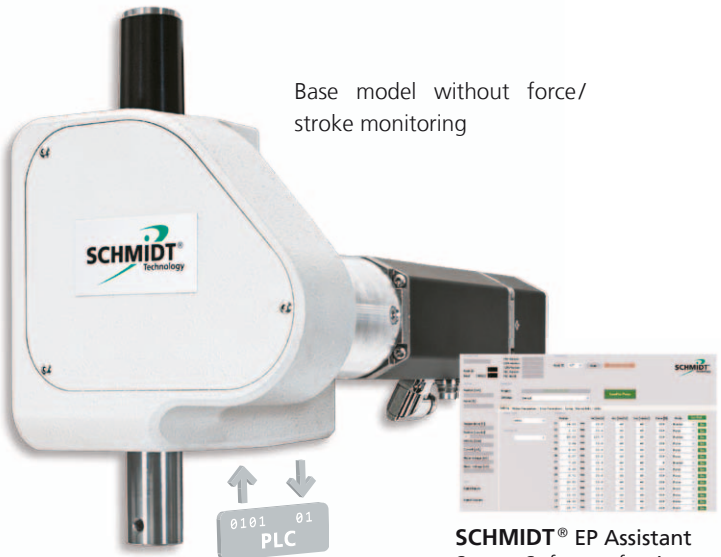
SCHMIDT® ElectricPress 43 with **PressControl 75** and **SafetyModule**
Manual workstation with EC type approved safety technology

SCHMIDT® **PressControl 75** for quick set-up or rapid changeover and easy programming of press parameters; stores up to 24 datasets.

Safety Concepts see page 72

SCHMIDT® **ElectricPress** manual workstation with **SafetyModule** on PU 20

SCHMIDT® ElectricPress 43 Automation
Simple, efficient solution for complex assembly automation



Base model without force/ stroke monitoring

Standard PLC

SCHMIDT® EP Assistant
Set-up Software for Automation Version

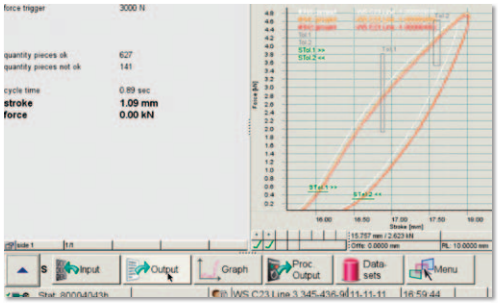
Features:

- Reproducible values for position, velocity, acceleration and deceleration
- Storage of complete NC-sets in the **EP Assistant** software
- Combination of up to 14 individual ram motion profiles into one complete profile by using a standard PLC
- Press to exact position (closed loop control stroke)
- Press to force (determined by motor current) to
  - press to final force
  - press to position but interrupt if force is exceeded
  - touch force to determine position of workpiece

SCHMIDT® ElectricPress 343 with PressControl 600 and SafetyModule
Complete workstation with EC type approved safety technology

Rigorous life-cycle test of the **SCHMIDT**® ElectricPress
To meet the highest quality standards expected of a **SCHMIDT**® **Press**, the EP 343 press system underwent a rigorous press-stroke test cycle over a 4 months period at a maximum force of 4 kN stroke. All mechanical, electrical and motor elements have passed that stress test with flying colours.

Safety Concepts see page 72



Process visualization

SCHMIDT® ElectricPress 343 Automation with PressControl 600
Latest assembly technology

An efficient and reliable assembly process is key to the success of your products in an increasingly competitive market.
The all-new **SCHMIDT**® **ElectricPress 343** with **SCHMIDT**® **PressControl 600** is your most economical solution, combining a cost effective fully programmable assembly press, using innovative electrical drive technology, with closed loop position and force control to provide flexibility and precision to even the most complex assembly tasks. The system also uses integrated sensor technology to provide precise process monitoring, ensuring quality control on every part.

SCHMIDT®'s state-of-the-art assembly technology monitors and controls the entire manufacturing process rather than individual assembly steps. The proprietary **SCHMIDT**® **DataBase** software maps the process data of all individual assembly steps into a data bank, including historic data. CAN-bus technology communication compatible with all established field CAN-bus systems is standard on all **SCHMIDT**® monitored presses. And with the **SCHMIDT**® **PRC OPC** software available on these models, data exchange will now become the automation standard.

SCHMIDT® PRC DataBase

OPC FOUNDATION

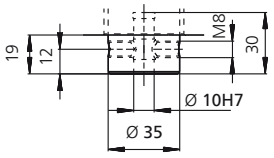
Optional:
Integrated remote hand-wheel for set-up of
- stroke control
- force control

Press Type			43	343
Force F max. *		kN	4	4
Force F at 100 % duty cycle**		kN	2.5	2.5
Ram stroke	**A**	mm	100	100
Ram speed max.		mm/s	150	150
Drive resolution		µm	< 1	< 1
Resolution PDA - Stroke - Force		 µm/inc N/inc		 2.42 1.25
Throat depth	**C**	mm	129	129
Decibel level		dB A	60	60
Power supply - Motor power - Logic unit			 42 V DC / 13 A (22 A max.) 24 V DC / 0.5 A	 42 V DC / 13 A (22 A max.) 24 V DC / 0.5 A
Working height frame 7 [1)] Working height frame 7-600 [1)]	**F**	mm	62 – 274 100 – 610	62 – 274 100 – 610
S-H x S-B x S-T		mm	333 x 207 x 362	368 x 242 x 362
Weight		kg	35	35
PRC Gateway, number of I/O's				16 inputs / 16 outputs
Mounting surface with Frame - No. 7 - No. 7-600	**W x L**	mm	 292 x 366 292 x 468	 292 x 366 292 x 468

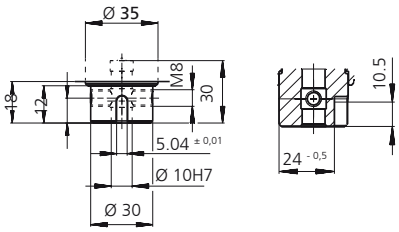
Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Height K (mm)
No. 7	43, 343	600	180 x 150	90
No. 7-600	43, 343	960	180 x 280	110

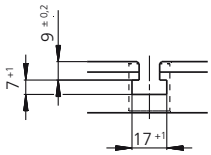
[1)] Typical values; can vary ± 3 mm due to cast and production tolerances
* Temporary peak load
** Nominal power in continuous operation

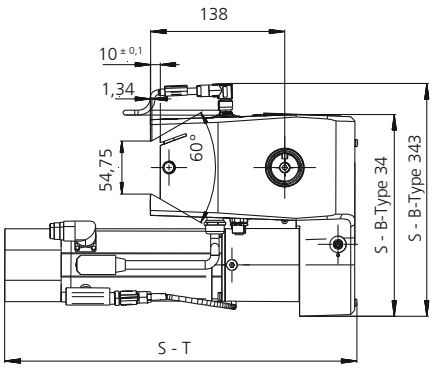
Press Type 43

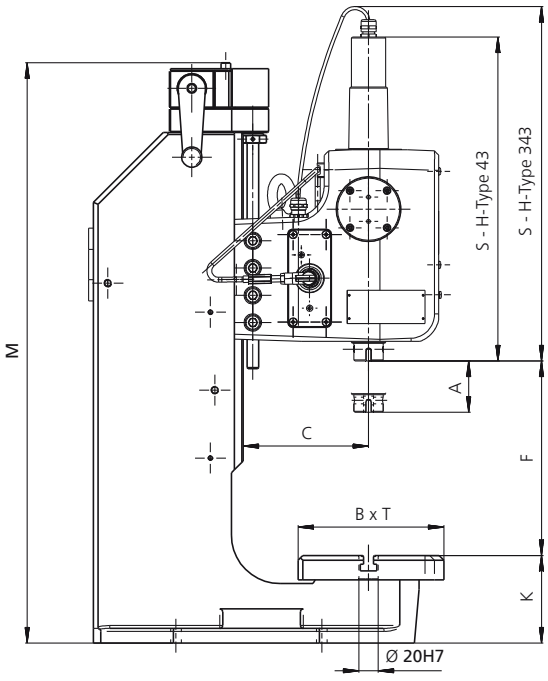


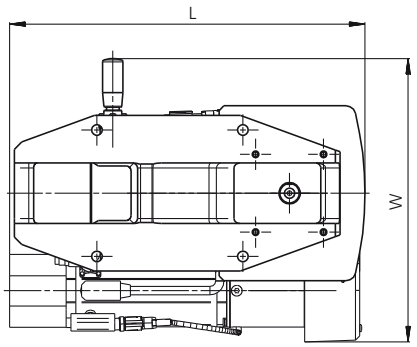
Press Type 343











SCHMIDT® ServoPress / TorquePress
The reference for precise assembly

An economic and high quality assembly is the key to the success of your product. The aim is to join together precise assemblies from low-cost individual components with different tolerances. Electrically driven spindle presses, servo presses, are ideal for such tasks. **SCHMIDT® ServoPress** systems offer an integrated solution of **SCHMIDT® PressControl 600** or **5000** control unit and **SCHMIDT® ServoPress** modules. They meet the most complex requirements, as stand- alone machines or in automatic production lines.

The very high torque of the **SCHMIDT® TorquePress 200** allows very high forces without additional mechanical transmissions. The considerably higher speed constancy compared to conventional drives entails a higher machine precision.

In comparison to high ratio electric motor driven spindle presses the **SCHMIDT® TorquePress 200** has an essential lower self moment of inertia and thereby a high dynamic. For this reason the run-up time from zero to working speed is very short. The noise remains remarkably low with all load conditions.

Technical Data	TorquePress 200
Force F max.*	230 kN
Force F at 100 % ED **	200 kN
Ram stroke	500 mm
Resolution (drive control)	< 0.1 µm
Process data acquisition - Force - Stroke	 8 µm/inc. 100 N/inc.
Ram speed (max.)	200 mm/s
Overload protection	mechanical
Service life of the cycles acc. to standard operating profile	1×10^7
Drive	Planetary roller screw drive
Power supply	400 V 3~ / 32 A, 400 V power socket CEE
Weight / height resp. length - Module (approx.) - H-frame (approx.) - Press base	 770 kg / 2300 mm (upright resp. horizontal) 980 kg / 850 mm (upright resp. horizontal) approx. 125 kg / height flexible
Control unit	**SCHMIDT® PressControl 5000 / 600**

* Temporary peak load
** Nominal power in continuous operation

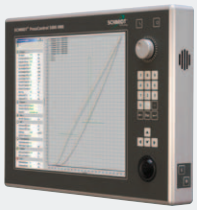
SCHMIDT® ServoPress/TorquePress
Ergonomic manual workstations with light curtain

SCHMIDT® ServoPress/TorquePress manual workstations are delivered ready for operation with press base, transparent protective guarding and light curtain. These systems are single workstations, which can be delivered with all **SCHMIDT® ServoPress/TorquePress** modules.

Included in the scope of delivery are:

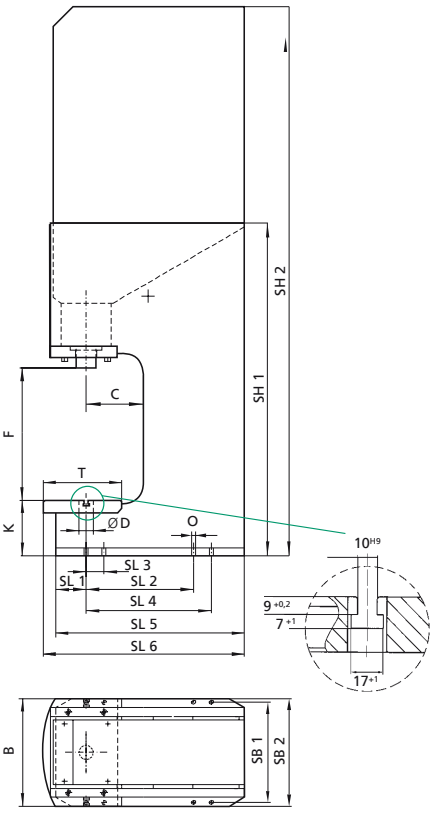
- Module **SCHMIDT® ServoPress/TorquePress** mounted on a frame
- **SCHMIDT® PressControl 600** or **PressControl 5000** with pendant arm system
- Press base PU 20/PU 40 (in fixed or height-adjustable design)
- Transparent protective guarding with light curtain and workplace illumination
- Distance light curtain adjustable in order to ensure a safe distance to the tool

All systems are EC type-approved!

with  or 

From 15 N to 150 kN

ServoPress Type			405	415/416	417	420	450	460
Frame								
Throat depth	**C**	mm	130	130	150	160	160	160
Table bore	**D**	Ø mm	20H7	20H7	40H7	40H7	40H7	40H7
Working height	**F**	mm	246	300	387	518	612	602
Table height	**K**	mm	93	113	128	155	190	220
Table size	**B x T**	mm	160 x 140	220 x 175	250 x 200	300 x 220	370 x 230	370 x 230
Mounting surface	**B x SL 6**	mm	160 x 345	220 x 405	250 x 460	300 x 563	370 x 635	370 x 760
	O	Ø mm	9	11	11	13	13	13
	SL 1	mm	50	80	80	85	95	95
	SL 2	mm	220	250	250	300	350	350
	SL 3	mm				50	50	50
	SL 4	mm				350	400	400
	SL 5	mm	325	390	430	528	600	725
	SL 6	mm	345	405	460	563	635	760
	SH 1	mm	510	630	780	1080	1150	1192
	SH 2	mm	1016	1100	1430	1835	2150	2170
	SB 1	mm	140	200	220	280	350	370
	SB 2	mm	160	220	250	300	370	390

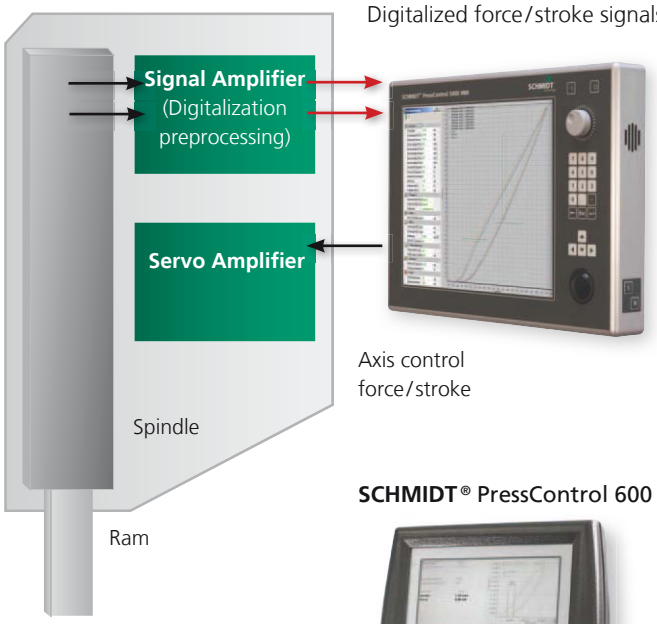


Detailed dimensional drawings can be downloaded:
www.schmidttechnology.de

SCHMIDT® ServoPress/TorquePress
Superior controlled behavior

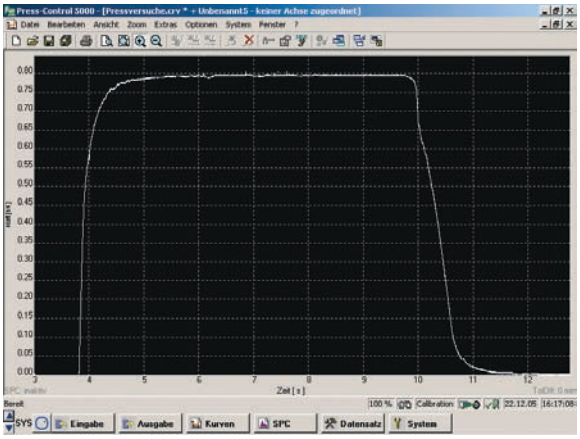
The combination of a spindle with a servo drive is not sufficient to achieve optimum joining results. The key for intelligent assembly is quick and exact controlled behavior of the press. This requires an integrated system consisting of drive unit, process measurement technology and control unit. These requirements have been taken into account in the system architecture of a **SCHMIDT®** ServoPress/TorquePress.

SCHMIDT® ServoPress Module

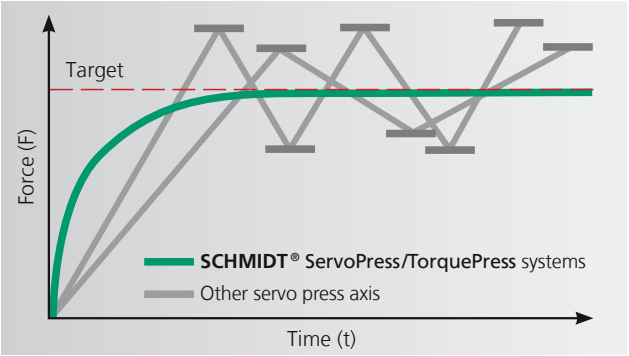


SCHMIDT® PressControl 5000
Digitalized force/stroke signals

Axis control
force/stroke



SCHMIDT® PressControl 600



SCHMIDT® ServoPress/TorquePress work with real force controllers, unlike the simple switching controllers used by other manufacturers*. That means:

- Quickly reaching the nominal values
- No overtravelling of the target values
- Precise positioning in the 1/100 mm range, even with dynamically changing force outputs
- High precision force control
- The control parameters can be adjusted.
  - Optimum adaptation to your application
  - No PLC programming necessary
  - The system works with predefined optimum acceleration values (no incorrect entries possible)
- Optimization of the processing times is possible due to an additional graphical display force/time [F/t], stroke/time [s/t] for an analysis of the behaviour of the process. The classic force/stroke [F/s] display of conventional electronic axis cannot be compared to the reliable recording and visualization possibilities of the **SCHMIDT®** ServoPress/TorquePress

These characteristics are achieved exclusively by combining the following features:

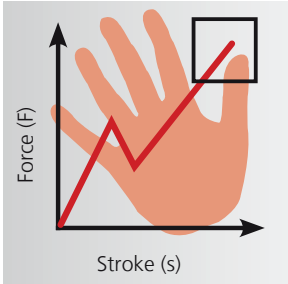
- Integrated measurement technology [scanning rate 2000 Hz]
  - Free-of-play distance measurement, force measurement without lateral forces
- Amplification of the process signals on the **SCHMIDT®** ServoPress/TorquePress module
  - Insensitive against electromagnetic interferences (EMC)
- The system is completed by using **SCHMIDT®** PressControl 600 or **5000** (PC-based system), i. e. servo amplifier and motor receive nominal values from the control unit
  - Optimized PLC control algorithm
  - Force [F], stroke [s] or other external control inputs are simultaneously processed
  - The control input can be freely selected
- Quick signal processing on software-based PLC with integrated CNC
- CNC with extended command set, in particular for controlling force-regulated positioning tasks

* Regulation exclusively by position controller

Dynamic Bending Compensation
Patented feature

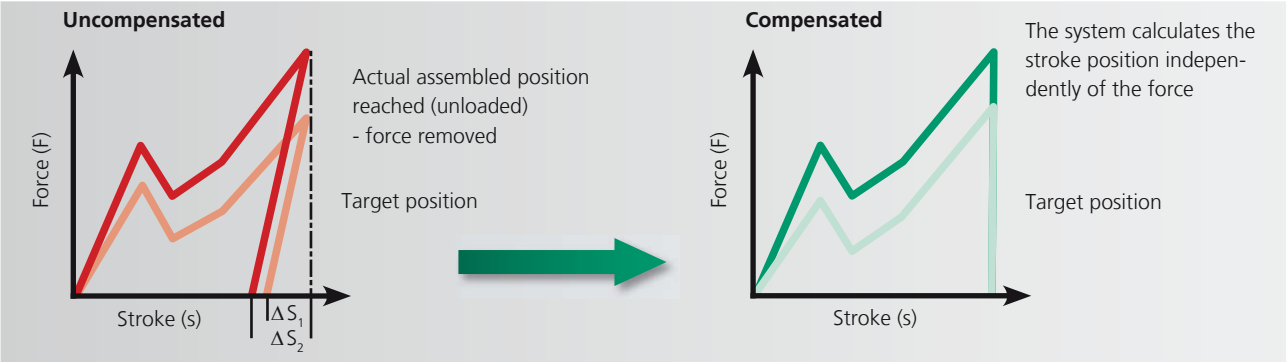
In order to achieve assembly requirements in the 1/100 mm range, compensation of the system yield is required. Work piece, tooling and machine are elastically deformed by the varying forces induced during the pressing process. Once the operation is complete and the press force is removed, this deformation disappears. The result is that the assemblies are not joined to their programmed dimensions. This yielding effect makes it impossible to produce high precision joints regardless of a systems positioning accuracy.

First, a complete process representation of the force characteristic in loaded and unloaded state is necessary so that the system can carry out the required compensation.



Conventional procedures end in the block position – but the process is not finished yet. The system is under force.

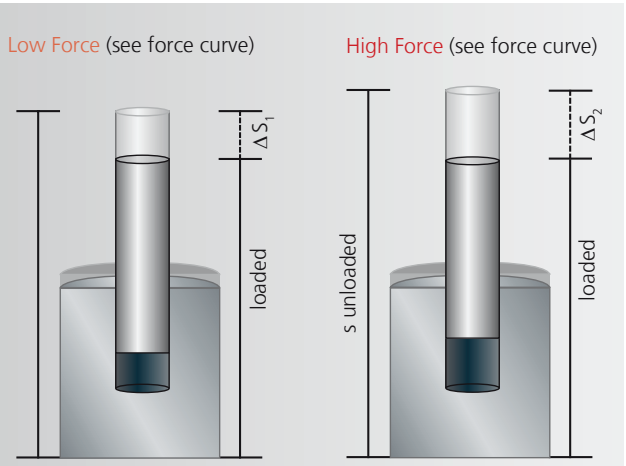
Patented Dynamic Bending Compensation by **SCHMIDT Technology**



In typical applications, the force required to complete an assembly varies up to 40 % from part to part. When freely positioning, such as without a positive stop, the press ram extends to the same target position, regardless of load. But a closer inspection of the completed assembly and the force/distance curve generated, shows that the final pressed position will vary due to the forces in the operation. (figure 1) In order to overcome this effect, **SCHMIDT® ServoPress/TorquePress** systems compensate dynamically to the changing forces. This compensation allows for the assembly to be pressed to the target position, regardless of force (figure 2)

Example: Press in a Pin in a Bushing
The elasticity of an assembly depends on the equipment, process and the component geometries. This effect becomes significant for assemblies with which the assembly forces of the individual components differ strongly from one another. This can particularly be seen in the example shown.

- The **SCHMIDT®** ServoPress/TorquePress system determines easily and precisely the system elasticity and compensates it dynamically in real time
- Only with dynamic bending compensation, the end position can be reached to an accuracy of the 1/100 mm range
- Free positioning with compensation of the system elasticity is more accurate than pressing on effect tool stop
- Dynamic bending compensation does not reduce the process speed
- Dynamic bending compensation in connection with other intelligent functions, such as offset of tolerance data, has been patented



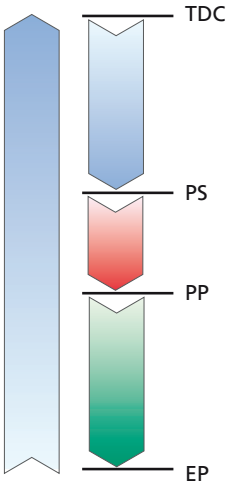
„ΔS" changes proportionally to the force output, that means, the components have different dimensions depending on the force requirement of each component

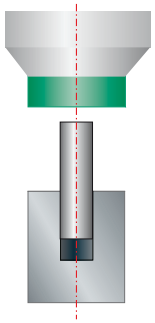
SCHMIDT® ServoPress / TorquePress
Operating Profiles and Applications

SCHMIDT® ServoPress / TorquePress allow a simple setup of the operating profiles. Different standard operating profiles are provided for a quick set-up. According to experience, these standard operating profiles and the combinations of them cover most applications.

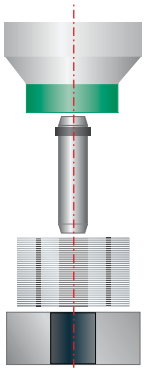
TDC = top dead center of the process [1)]
PS = Pressing start, start of the process data recording1) [1)]
PP = Probing position (depending on the component geometry)
IP = Intermediate position [1)] (is required for monitoring purposes)
EP = End position [1)]

Target is "Stroke"
Normal operating profile, is typically combined with bending compensation.

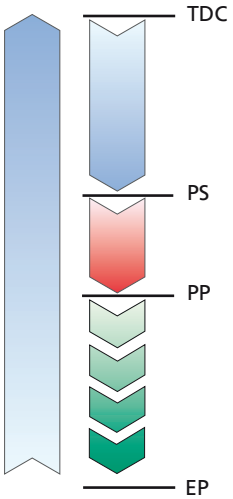


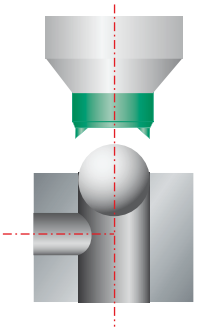


Pressing until reaching a specified position leads to precise results in connection with bending compensation.

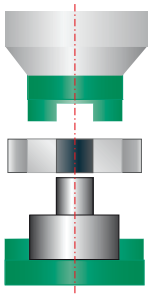


Target is "Force"
For processes in which the force reached is a measure for the process quality e. g. material compression.

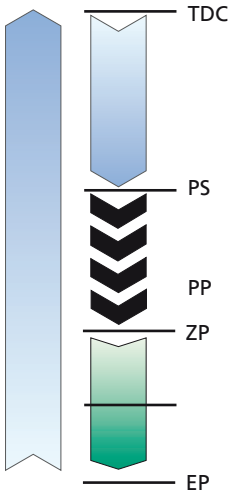


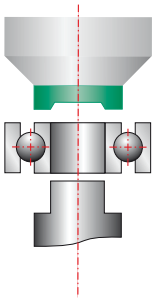


Plugging blind bores – a sphere is pressed in and crimped. Force output correlates to material displacement to determine density and retain force independent of stroke.

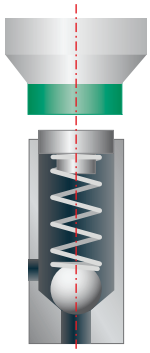


Target is "Delta Stroke" with probing Force
For processes in which component tolerances must be detected. The press detects the surface and presses from this point to a programmed distance.

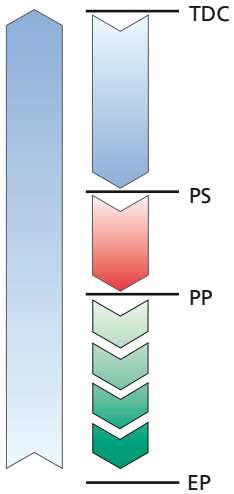


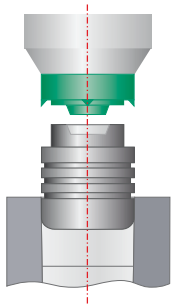


Pressing to a predetermined force which identifies a target feature with which the final pressing distance is measured and pressed.

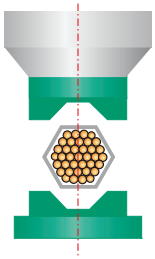


Target is "Force Increase"
The return stroke is triggered by detecting a customer defined force slope.





Pressing of "Beta" plugs or „König" expanders. Sealing and retaining function depend on a force increase that is the return stroke criterion for the press.



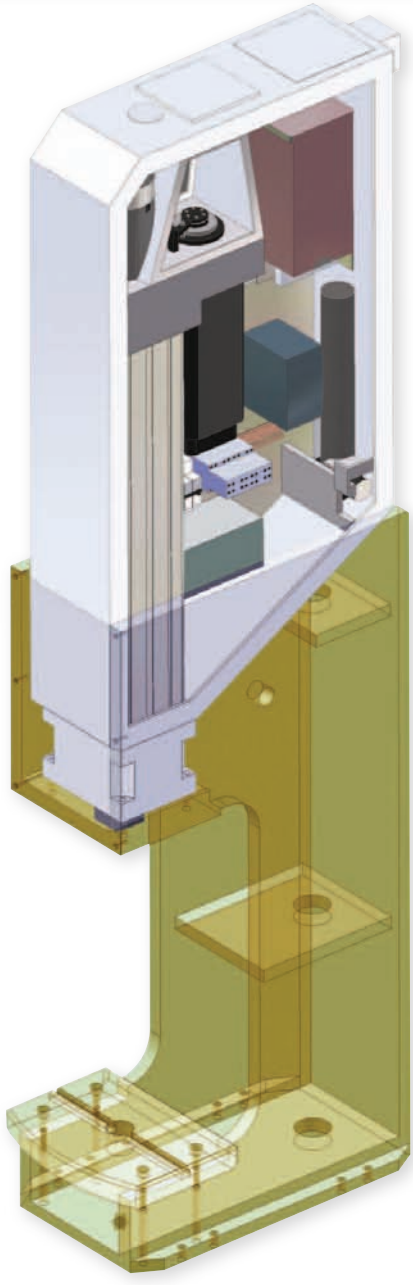
SCHMIDT® ServoPress/TorquePress
Uncompromising quality

The solid, unique mechanics of the **SCHMIDT® ServoPress/TorquePress** is essential for precise joining results, even in the toughest industry environments.

Test Bench

Before a new model is released, modules are endurance tested under the most severe operating conditions.
The rigorous testing helps identify limitations. Improvements are implemented, which ultimately benefit you.

- Test duration is 3 months
- 20 million loading cycles over the entire working stroke with nominal force and lateral forces components at full trave speed
- Cycle time approx. 2 seconds



Continuous full load capable modules

- Over the entire ram stroke
- With rapid process times
- Via exact roller guiding of the ram with little play
- Square ram benefits
  - Insensitive to lateral forces
  - Locked against rotation (without additional friction such as with slot guidance)

Built-in auto-protection and maintenance

- Fully automated spindle lubrication
- Mechanical clutch as overload protection for motor and load cell
- Cooling and thermal monitoring of mechanical and electronic system
- Current limitation if exceeding admissible load
- Machine safeguarded against operator error

Service-friendly

- Low maintenance
- Easy module change possible. The control unit recognizes the new module. No modifications of the data sets are necessary. This is achieved due to a high-precision ram position in the reference point with relation to the supporting surface

Built-in safety in LV system EC type-approved

- Two-channel safety circuit, PLe

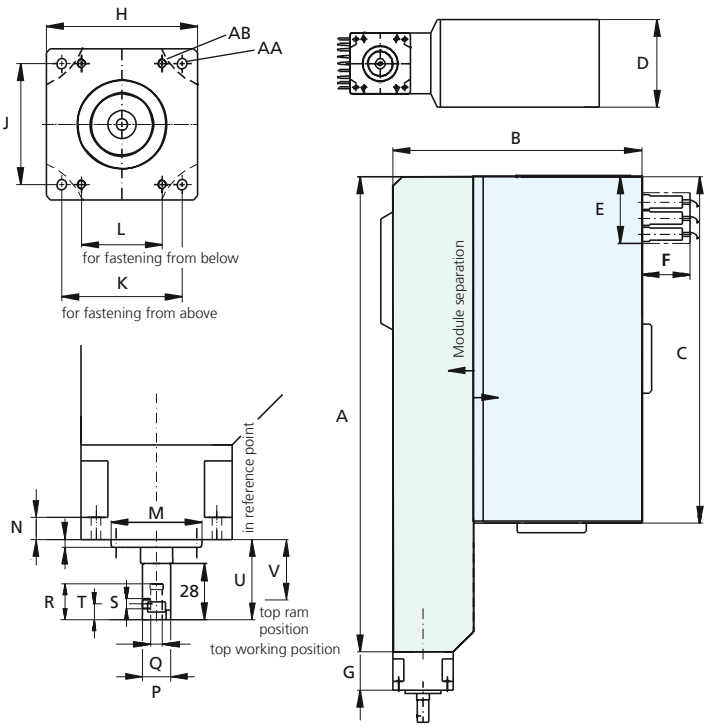
As a result, this means the following for your application:

✓Excellent efficiency
✓Maximum capacity
✓High production safety

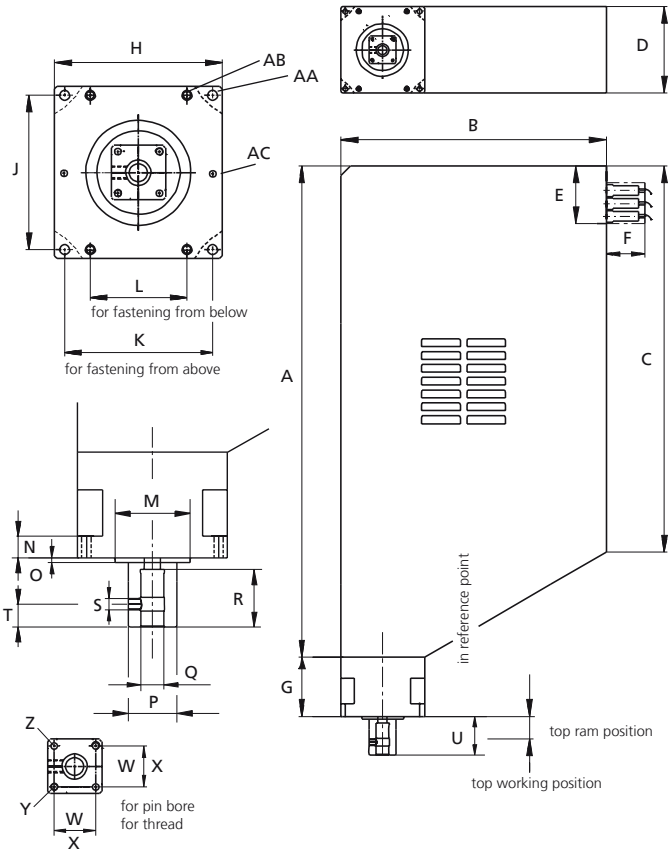
SCHMIDT® ServoPress
Modules with large application range

Press type 405 | Press type 415/416 | Press type 417 | Press type 420 | Press type 450/460

ServoPress 405



ServoPress 415 to 460



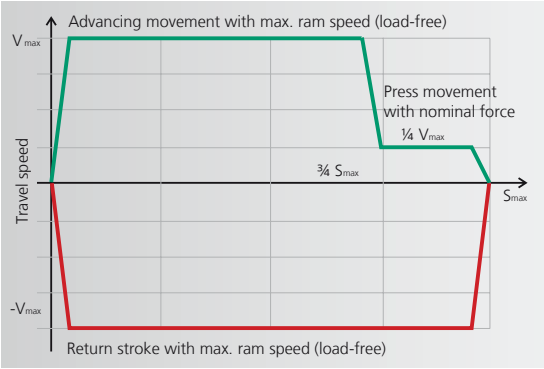
Modules
With force outputs of 15 N to 150 kN

ServoPress Type			405	415	416	417	420	450	460
Force F	F	max. kN	0.8	4.5	5	14	35	75	150
Force F at 100% duty cycle	F	kN	0.5	1.5	3	7.5	20	50	100
Ram stroke		mm	150	200	200	300	400	500	500
Resolution (drive control)		µm	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Resolution data acquisition									
Stroke		µm/inc	2.4	4	4	5	6	8	8
Force		N/inc	0.25	1	1	3.75	10	24	48
Ram speed		mm/s	0 - 300	0 - 200	0 - 200	0 - 200	0 - 200	0 - 200	0 - 100
Overload protection			-	Mech. clutch	Mech. clutch	Mech. clutch	Mech. clutch	Mech. clutch	Mech. clutch
Service life of the cycles acc. to standard operating profile			2 x 10^7	2 x 10^7	2 x 10^7	2 x 10^7	2 x 10^7	2 x 10^7	1 x 10^7
Drive			ball screw	ball screw	ball screw	ball screw	roller screw	roller screw	roller screw
Power supply			230 V 1~/6.3 A (208 V 3~/6.3 A)	230 V 1~/6.3 A (208 V 3~/6.3 A)	230 V 1~/6.3 A (208 V 3~/6.3 A)	230 V 1~/16 A	400 V 3~/16 A	400 V 3~/35 A	400 V 3~/35 A
Weight (standard)		approx. kg	20	27	27	70	120	240	240

Module Dimensions

ServoPress Type			405	415 / 416	417	420	450 / 460
Housing							
	A	mm	590	560	762	978	1166
	B	mm	309	330	412	535	677
	C	mm	440	434	600	763	992
	D	mm	109	109	134	180	236
Cable connection							
	E	mm	~ 75	~ 75	~ 90	~ 100	~ 90
	F	mm	~ 60	~ 60	~ 60	~ 60	~ 60
Flange							
	G	mm	47	77	92	122	120
	H	mm	75	75	130	140	150
	J	mm ±0.1	60	88	120	160	210
	K	mm ±0.1	60	63	115	120	130
	L	mm ±0.1	40	59.4 x 59.4	75		
	M	Ø mm	45h6	45h6	65h6	90h6	100h6
	N	mm	11	11	19	32	33
	O	mm	4	4	4	5	5
	AA	Ø mm	5.3	6.3	8.4	10.1 / M12	12.0 / M14
	AB	Ø mm	M5	M6	M8		
	AC	Ø mm					12.0 / M14
Ram							
External ram dimensions	**P**	mm	Ø 14	32 x 32	42 x 42	55 x 55	65 x 65
Ram bore (with bushing)	**Q**	Ø mm	6H7	10H7	20H7	20H7	20H7
	R	mm	18	30	50	40	50
	S		M5	M8	M10	M10	M10
	T	mm	8	10	20	20	20
Top working position	**U**	mm	40	50	60	60	60
Top ram position	**V**	mm	30	39	33	45	45
for pin bore	**W**	mm ±0.02		22	32	40	40
for thread	**X**	mm ±0.1		22	32	40	40
	Y			M5	M6	M8	M8
	Z	Ø mm		5H7	5H7	8H7	8H7

Standard Operating Profile



SCHMIDT® PressControl
Machine control units

SCHMIDT® PressControl **75, 600** and **5000** are control units of the latest generation, which allow the design of modern production processes – from the single workstation to complete automation. You benefit from our competence in:

- Safety technology – type-approved devices
- Process measurement technology – simultaneous measuring during the process
- Process documentation

SCHMIDT® PressControl control units have the following features:

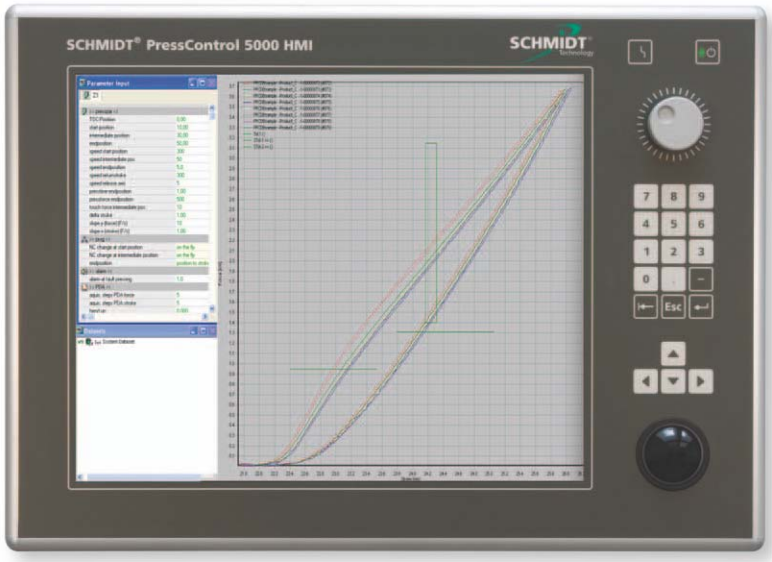
- Efficiency due to intuitive user interfaces
- Quick and secure process set-up e. g. thanks to the touchscreen and additional handwheel ram control function with **SCHMIDT®** PressControl **600** and **5000** in combination with the **ServoPress/TorquePress**
- The integrated PLC allows programming of additional inputs/outputs or sensors/actuators and the application-specific design of the workstation or the line
- The integrated measurement data processing is insensitive against interferences (EMC). This results in a high measurement security of the entire system
- With integrated safety technology, the entire system becomes a type-approved single workstation
- Service functions such as "Firmware Update" ensure the liability in the future
- Guaranteed complete process documentation with full traceability

SCHMIDT® PressControl 75

SCHMIDT® PressControl 5000 RT

SCHMIDT® PressControl 600

SCHMIDT® PressControl 5000 HMI



SCHMIDT® PressControl 75

Compact functionality

Highly compact yet multifunctional **SCHMIDT®** PressControl 75 available for these press systems:

- **SCHMIDT®** ElectricPress
- **SCHMIDT®** PneumaticPress
- **SCHMIDT®** HydroPneumaticPress

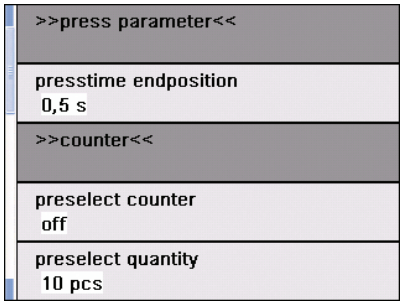
Its easy and intuitive touchscreen allows for quick and efficient process set-up or change-over. Process specific data can be stored in up to 24 datasets.

The **SCHMIDT®** SafetyModule allows the design of manual workstations with safety technology that meets the latest global standards for two-hand cycle initiation, guarding or light-curtain protection.

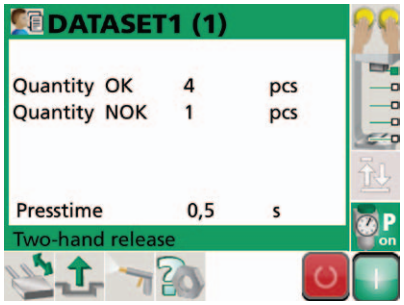
Technical Data

Supply voltage	24 V DC
Current	< 3 A
Operating temperature	0 – 40 °C
Protection class	IP 54
Interfaces	■ RK512 protocol ■ CANopen for PRC-Gateway or CANopen Compact Box IP 2401
Electrical connections	All connections are pluggable
Display	■ 2.8" TouchScreen ■ Process information
Operation	■ 4 function keys ■ 3 languages
Modes of operation	■ Two-hand release with SafetyModule ■ Light curtain with SafetyModule ■ Start button for operation without SafetyModule ■ Workpiece control ■ Activation of sliding table ■ Return stroke initation with external signal ■ Blow-out/blow-off
Operating functions	■ Piece- or preselection counter ■ Set-up mode ■ BDC dwell time ■ User Management
Dimensions	90x120x60 (hxwxd)
Mounting	Fastening screws, optional magnet holder

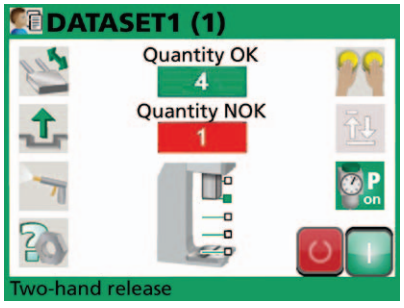
Data input



Data output



Data output



SCHMIDT® PressControl 600
with integrated PLC and Process Data Management

The **SCHMIDT® PressControl 600** with integrated PLC and process data management is made for intelligent process control of force/stroke monitored **SCHMIDT® ManualPress**, **SCHMIDT® (Hydro)PneumaticPress**, **SCHMIDT® ElectricPress** or **SCHMIDT® ServoPress/TorquePress**. Additional automation tasks around the press process can also be realized by the **SCHMIDT® PressControl 600**.

Control Unit

All process integrated system elements and data are controlled and managed centrally by the **SCHMIDT® PressControl 600**. The standard system configuration already includes a basic programming, special applications can be programmed as well.

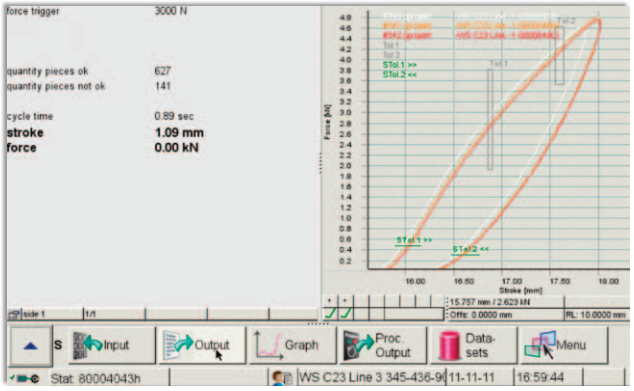
Integrated Operator Panel

The integrated operator panel of **SCHMIDT® PressControl 600** with complete operating interface is made for parametrizing and operating the control as well as for visualization, administration, and documentation of process data (dataset management).

Features

- User-friendly, intuitive menu navigation by touchscreen
- Individual design of user interface
- Keypad with integrated membrane for the input of numerical values and choice of functions
- Softkeys have different functions on different levels and simplify the handling
- Quality evaluation on the basis of force/stroke tolerances, and thus a reliable detection of NOK parts with process monitored presses
- Handwheel software for setup mode for **SCHMIDT® ElectricPress** (force/stroke monitored) or **SCHMIDT® ServoPress/TorquePress**, external handwheel as a handheld as an option (connection via **SCHMIDT® PRC Gateway**)
- Industrial strength, even in harsh environments
- Protection class IP 54

SCHMIDT® DataBase software maps the process data of all individual assembly steps into a data bank, including historic data. And with the **SCHMIDT® PRC OPC** software available on these models, data exchange will now become the automation standard.



Technical Data

Industry PC with	■ Integrated PLC ■ Integrated CNC (with **SCHMIDT® ServoPress/TorquePress**) ■ Intelligent process control ■ Diagnosis and service functions ■ Linux operating system
Drive	Solid State Drive
Field bus	■ CANopen with possibility to connect: - 1 force/stroke monitored **SCHMIDT® ManualPress 3xx**, 1 **SCHMIDT® (Hydro)PneumaticPress**, 1 **SCHMIDT® ElectricPress** or 1 **SCHMIDT® ServoPress/TorquePress** - **SCHMIDT® PRC Gateway** - CANopen Compact box ■ EtherNet TCP/IP ■ PROFIBUS (optionally via external CANopen/PROFIBUS-Gateway) 16 Byte input/output data ■ PROFINET (optionally via external CANopen/PROFINET-Gateway) 16 Byte input/output data ■ EtherCAT (optionally via external CANopen/EtherCAT-Gateway) 16 Byte input/output data
Interfaces	■ EtherNet (10 / 100 MBit) ■ 2 x USB
Panel with	■ Intuitive user interface ■ Diagnosis and service functions
Screen	■ Integrated 7" widescreen TFT display (800 x 480) with touchscreen
Power supply	■ 24 V DC with integrated UPS
Assembly	■ Mech. adaption VESA 75 for optional table or wall fixture as well as fixture for housing

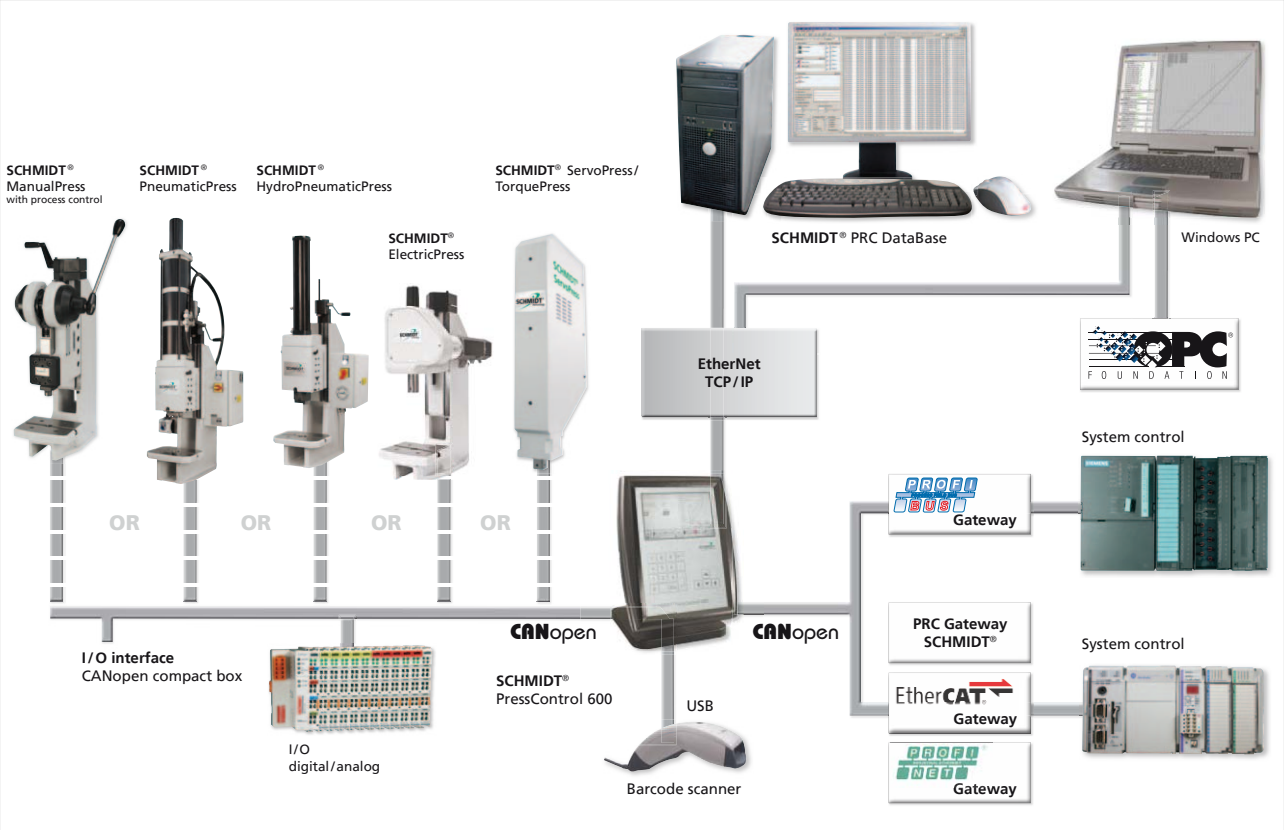
SCHMIDT® PRC DataBase

OPC FOUNDATION

SCHMIDT® PressControl 600
System architecture

SCHMIDT® PressControl 600 does work as a system control and takes over the process monitoring. The hard- and software components forming a system concept with real time characteristics. This is guaranteed by a system architecture with CANopen fieldbus. Press force monitored **SCHMIDT® ManualPress**, **SCHMIDT® (Hydro-)PneumaticPress**, **SCHMIDT® ElectricPress** or **SCHMIDT® ServoPress/TorquePress** will be activated via fieldbus. The collected measuring data as well as in-/output data will be exchanged by the fieldbus.

Communication with other systems can be realized via:
- CANopen
- EtherNet (OPC server)
- PROFIBUS (optional via external CANopen/PROFIBUS-Gateway)
- PROFINET (optional via external CANopen/PROFINET-Gateway)
- EtherCAT (optional via external CANopen/EtherCAT-Gateway)



SCHMIDT® PRC Gateway
- 2 CANopen connections for control (master) and PDA (Slave), with 24 V power supply
- 24 V interface with 16 inputs and 16 outputs
- Short-circuit-proof and overload-proof
- Status LED´s for CAN bus and I/O´s
- Encoder interface for external handwheel as handheld
- Supply voltage 24 V DC
- Top hat rail mounting

SCHMIDT® PressControl 5000

Compact system control for intelligent process control

Control 5000 RT

All system elements and data involved in the process are centrally controlled and administrated by the control unit **SCHMIDT® PressControl 5000 RT**. The integrated PROFIBUS interface permits integration of the press system as an intelligent Profibus slave into existing PROFIBUS networks. Parametrization, operation and programming will be effected by using software components which are installed on the operating panel **SCHMIDT® PressControl 5000 HMI** or on a user PC. The standard system configuration already includes a basic programming for different operating profiles; special applications can be additionally programmed.

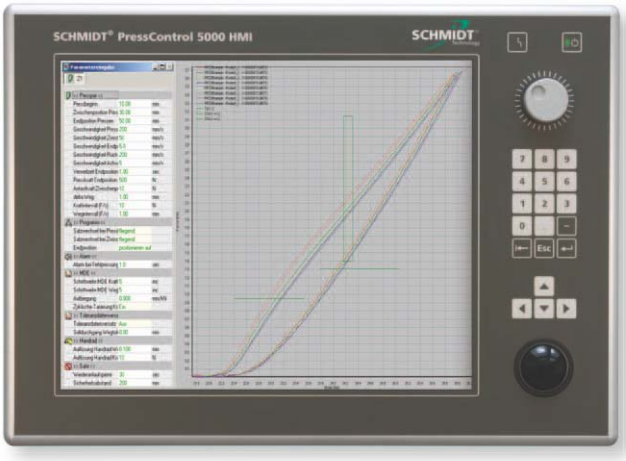
SCHMIDT® PRC DataBase

OPC FOUNDATION

SCHMIDT® DataBase software maps the process data of all individual assembly steps into a data bank, including historic data. And with the **SCHMIDT® PRC OPC** software available on these models, data exchange will now become the automation standard.

Operating panel 5000 HMI

SCHMIDT® PressControl 5000 HMI can be parametrized and operated via operator panel **SCHMIDT® PressControl 5000 RT** with its complete operating interface. Furthermore visualization, administration and documentation of process data (dataset management) can be effected as well by this instrument.



Technical Data 5000 RT

Industry PC with	■ Integrated PLC ■ Integrated CNC with all-digital drive control (integrated force-, position- and speed control loop) for up to 6 axis ■ Intelligent process control ■ Diagnosis and service functions ■ Linux operating system ■ Assembly on DIN rail (TS 35) according to EN 50022 (35 mm x 7.5 mm)
Drive	■ Integrated hard disk 30 GB
Field bus	■ CANopen with possibility to connect: - up to 6 (application-dependent) controlled NC axis e.g. **SCHMIDT® Servo-Press-/Torque-Press** as well as press force monitored **SCHMIDT® ManualPress**, **SCHMIDT® (Hydro)-PneumaticPress** and **SCHMIDT® ElectricPress** - **SCHMIDT® PRC Gateway** - more than 2000 I/O's ■ EtherNet TCP/IP ■ PROFIBUS: - PPROFIBUS Slave interface - 48 Byte input/output data ■ PROFINET (optionally via external CANopen/ PROFINET-Gateway) 16 Byte input/output data ■ EtherCAT (optionally via external CANopen/ EtherCAT-Gateway) 16 Byte input/output data
Interfaces	■ EtherNet (10/100 Bit) ■ 6 x USB ■ 2 x RS 232 (COM 1/COM 2) for diagnosis purposes ■ 4 digital inputs (24 V) galvanically isolated ■ 4 digital outputs (24 V) galvanically isolated
EMC	Acc. to requirements of EMC law
Power supply	24 V DC with integrated UPS
Ambient temperature	0 – 40 °C

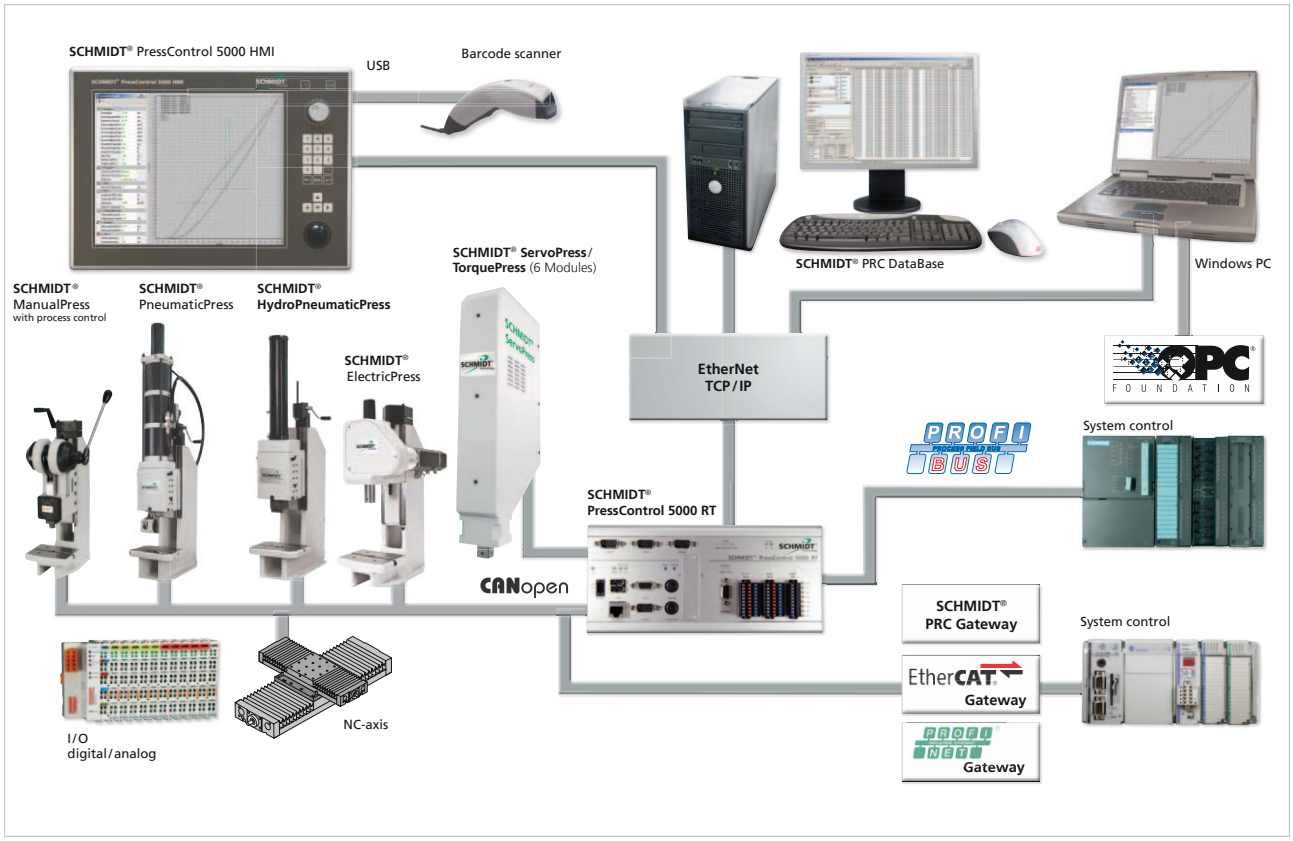
Technical Data 5000 HMI

Operating panel with	■ Intuitive user interface ■ Diagnosis and service functions ■ Microsoft Windows 7 operating system
Screen	■ Integrated 19" TFT display (SXGA resolution) with touchscreen
Drive	■ Integrated hard disk 80 GB
Interfaces	■ 1 x PS/2 keyboard ■ 1 x VGA ■ 3 x USB ■ 1 x RS232 ■ 2 x Ethernet (10/100 MBit)
EMC	■ Acc. to requirements of EMC law
Power supply	■ 24 V DC
Current consumption	■ 4 A
Ambient temperature	■ 0 – 40 °C
Protection class	■ IP 54
Weight	■ Approx. 15 kg

SCHMIDT® PressControl 5000
System architecture

SCHMIDT® PressControl 5000 does work as a system control and takes over the process monitoring. The hard- and software components forming a system concept with real time characteristics. This is guaranteed by a system architecture with CANopen field bus. The **SCHMIDT® ServoPress-/TorquePress** modules or other NC-axis will be controlled by the CANopen fieldbus and measuring data can be exchanged as well as I/O data. Furthermore, there is the possibility of connecting press force monitored **SCHMIDT® ManualPress, SCHMIDT® ElectricPress** or **SCHMIDT® (Hydro)PneumaticPress** on safety technology **SCHMIDT® SafetyModule** for CANopen.

Communication with other systems can be realized via:
- CANopen
- EtherNet (OPC server)
- PROFIBUS
- PROFINET (optional via external CANopen/PROFINET-Gateway)
- EtherCAT (optional via external CANopen/EtherCAT-Gateway)



External Handwheel as Handheld
for **SCHMIDT® PressControl 600** and **5000 RT** in conjunction with press force monitored **SCHMIDT® ElectricPress** or **SCHMIDT® ServoPress/TorquePress**, connection via **SCHMIDT® PRC Gateway.**

CANopen Compact Box
- 16 digital combination inputs/outputs (8 inputs and 8 outputs), useable optionally as input and output (24 V)
- Plug 4-pins M8 screw type

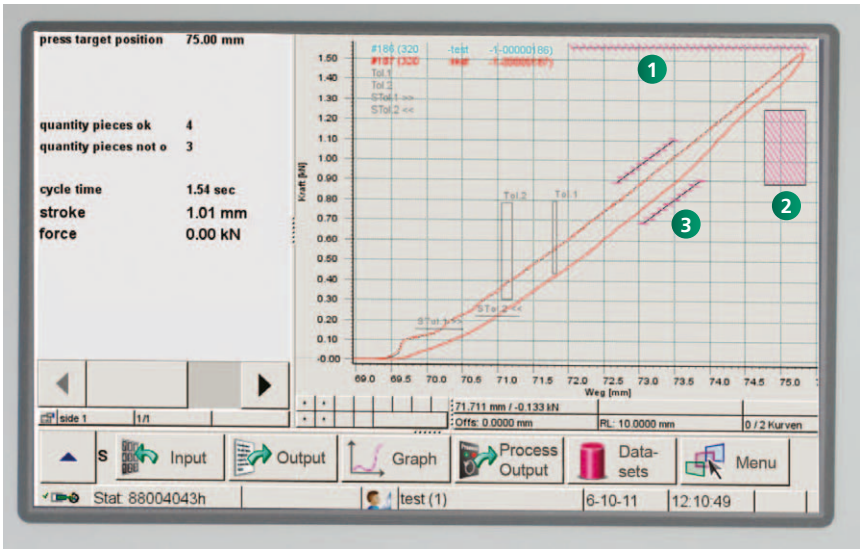
User interface for professional assembly
For **PressControl 600** and **5000**

The user interface for professional assembly is installed in the **SCHMIDT® PressControl 600** and **5000**. The functionality has been developed especially for assembly operations with direct intervention in the process.

The following functions are available
- Process visualization
- Process data management
- Development tool (PLC editor)
- **SCHMIDT® PRC DataBase** as an option

Features
- Easy and quick setup of the processes
- Definition of the data sets and operating profiles by parameters
- Process optimization due to switchover of the process display (F/s, F/t, s/t)
- Easy and quick definition and evaluation of the processes using the quality monitor
- 12 free definable process observers (F/s-windows or stroke tolerances)
- Guaranteed detection of "failed" parts
- Unambiguous documentation and component assignment
- Software PLC for freely programming processes
- Service functions for diagnosis and system updates

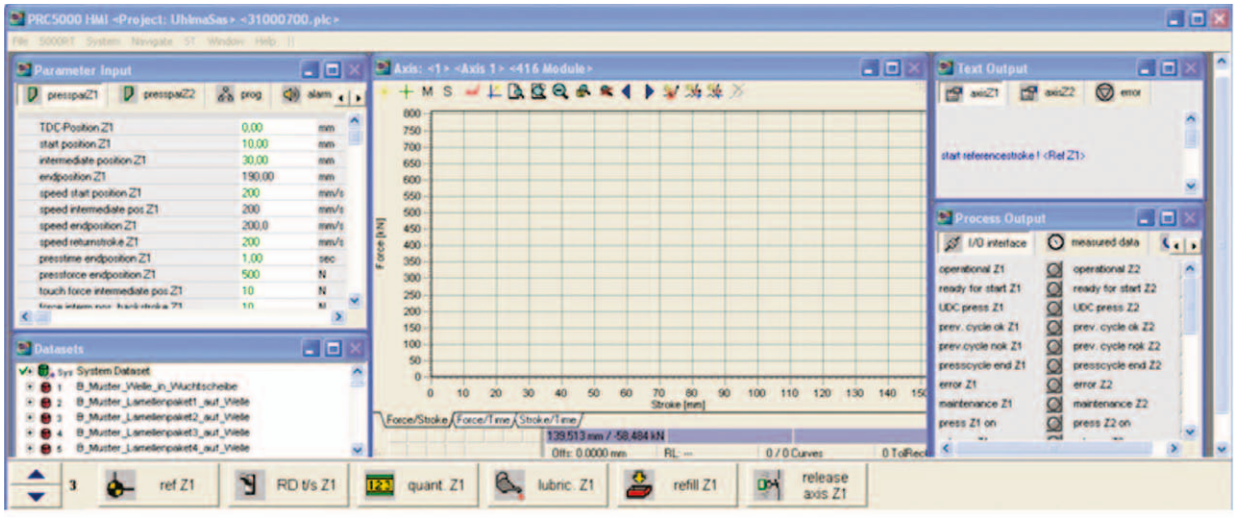
User Interface **SCHMIDT®** PRC 600



1 + 2 Each tolerance can be inverted, creating a do-not pass-through area or line.

3 Stroke tolerance can be positioned at any angle from horizontal to vertical.

User Interface **SCHMIDT®** PRC 5000



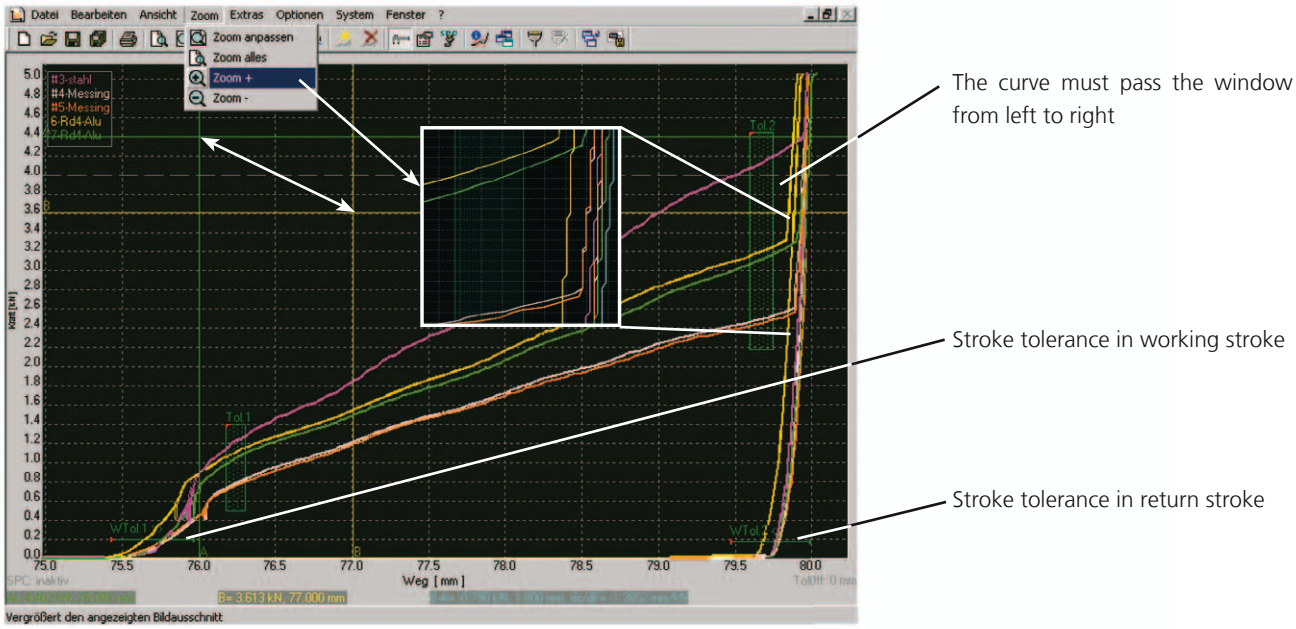
Visualization and process analysis
For **PressControl 600** and **5000**

Visualized Display

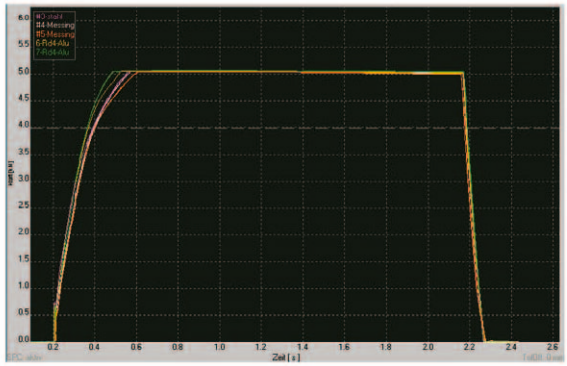
Force output and press stroke are important parameters for evaluating the quality of pressed assemblies. The data of these measurements are recorded during the process and displayed by the software as force/stroke behaviour curve F/s, F/t or s/t.

Freely definable tolerances in the form of force/stroke windows and stroke tolerances are provided for quality assurance of the assembly process. With the help of these criteria, quality critical areas can be monitored selectively. If the tolerances in the monitored curve areas are not met, application-specific interventions can be carried out (e. g. selection measures).

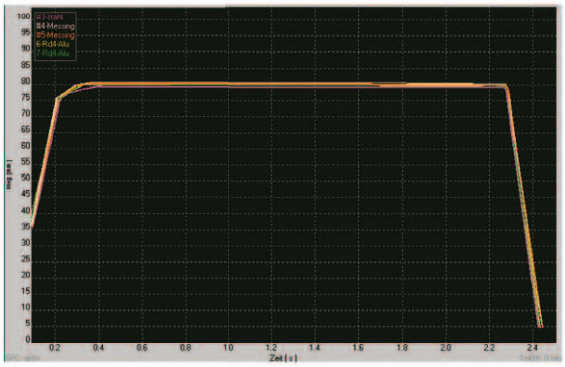
It is easy to create tolerance criteria and to display curve behaviour exactly. For an evaluation of the behaviour, the working stroke and the return stroke are important. The high resolution of our measurement systems allows a large number of measuring points that are required for a process-safe evaluation. Zoom and measuring functions allowing detailed documentation about the assembly processes.



Process analysis – graphic display force over stroke



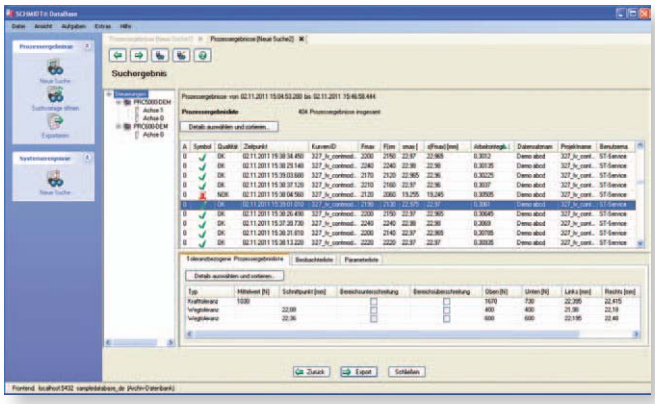
Process analysis – graphic display force over time

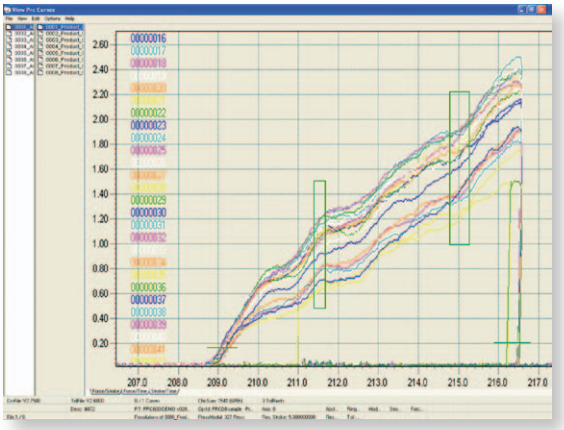


Process analysis – graphic display stroke over time

Database Software **SCHMIDT®** PRC DataBase
For **PressControl 600** and **5000**

SCHMIDT® PRC DataBase is an optional software for the modular control system **SCHMIDT® PressControl 5000** or **SCHMIDT® PressControl 600**. The database software is used for storing and analysing the data of the control system – process specifications and process results – particularly under quality assurance aspects.





Features

- Documentation
- Analysis
- Quality assurance
- Traceability
- Data export in CSV format
- Q-DAS interface with certification

SCHMIDT® PRC OPC
Data exchange via the de facto automation standard

In the field of automation, the data communication, using co-ordinated systems and the reference level, is becoming increasingly important. OPC defines a manufacturer-independent interface.

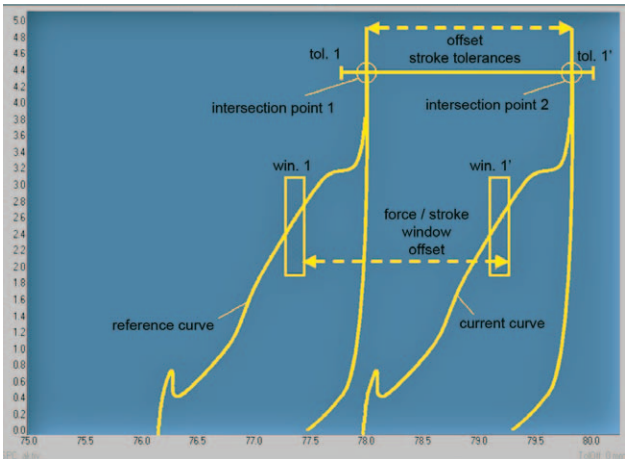
All parties participating in the communication must only support this interface. The OPC-capable components can be combined just like elements of a construction kit.

OPC FOUNDATION

SCHMIDT® MoveTol
Patented offset of tolerance, data software for **PressControl 600** and **5000**

Assembled parts are subject to certain manufacturing tolerances. Altitude deviations of the parts result in an offset of the curves in the curve window. The curves of the parts with higher tolerance deviations may then be situated outside of the defined tolerance limits and are classified as “failed” part.

Using the function “Offset of tolerance data”, the altitude tolerances of parts can be taken into account. The defined tolerance windows and stroke tolerances are offset by the distance of a reference position. After that, the pass/fail evaluation is carried out.



Offset of tolerance data in Relation to freely selectable reference

SCHMIDT® Automation

Modularity, standardized communication and scalability are main drivers for automation solutions of **SCHMIDT Technology**. Are characterized by modularity, standardized communication and scalability.

A high level of compatibility and thus a good integrability will be reached by using open and easily adaptable interfaces. The operation of the presses with various controls and other components can be realized in the data management system of the automation environment.

Therefore the systems provide the ideal basis for integration into automation systems and modern industrial applications up to the ERP or quality management.

ServoPress
ElectricPress
PneumaticPress
HydroPneumaticPress

CANopen

PROFIBUS PROCESS FIELD BUS

PROFINET INDUSTRIAL ETHERNET

EtherCAT Conformance tested

SCHMIDT® Interface Software/Hardware

The communication with co-ordinated control system is realized via a standardized interface program with **SCHMIDT® PressControl 600** and **5000**.

All relevant system states as well as "failed" productions are transferred from one control to another via a simple signal transfer. The production data stored in datasets are recallable via the SPS program. If e. g. tools are equipped with an explicit identification code, the production data automatically adapt themselves to the specific process.

All standard physical interfaces, such as
- I/O interface
- CANopen
- EtherNet
- PROFIBUS
- PROFINET (via CANopen/PROFINET-Gateway)
- EtherCAT (via CANopen/EtherCAT-Gateway)
- USB

can be used for signal transfer with the automation environment.

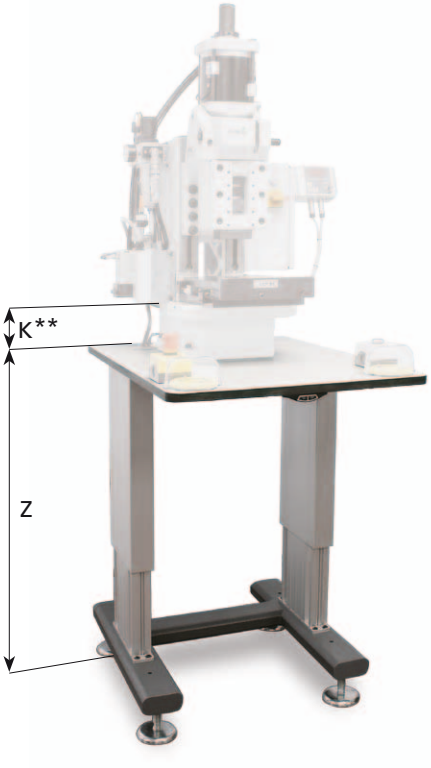
CANopen PROFIBUS PROFINET EtherCAT

SCHMIDT® Press Bases
Ergonomic in focus

SCHMIDT® Press Base PU 20 and **PU 40** for a safe and vibration-proof installation of all **SCHMIDT® Press Systems**.

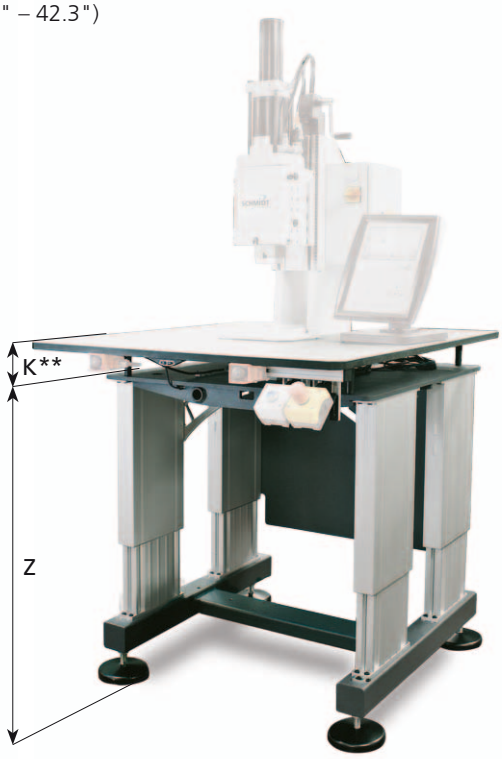
Both press bases are available in two versions:

- Fixed columns with height adjustable in 10 mm (0.4") increments from 780 to 1080 mm (30.7" – 42.5")
- Infinitely variable motorized height adjustment from 725 to 1075 mm (28.5" – 42.3")



PU 20 with two variable columns

PU 40 with four fixed columns



PU 40 with four variable columns

Technical Data			PU 20 (2 columns)	PU 40 (4 columns)
Fixed columns	**H**	individually	780 mm - 1080 mm	780 mm - 1080 mm
Motorized variable columns	**Z**	stepless	725 mm - 1075 mm	725 mm - 1075 mm
Lifting capacity		kg	600	1200
Width x depth		mm	598 x 841	870 x 797
Weight: fix height adjustable		kg	 36 55	 131 164
Foot rest		kg		16

* Height **H** measured from floor space to press table top

** Fixing dimension **Z** frame on press base, resulting height of the press table depends on frame type. (See dimension **K** in the press chapters)

Example

Frame type No 29

K = 141 mm

PU (725 mm to 1075 mm) and press table 141 mm

total height of press table infinitely adjustable from 866 mm to 1216 mm

SCHMIDT® Four-column Gantry

SCHMIDT® Four-column gantries used in manual workstations, and automated assembly lines, are suitable for all **SCHMIDT® Presses** with extraordinary requirements in all working area.

In order to consider the large number of applications and cases, the design is adapted specifically to your requirements. All individual requirements can be taken into account. Short delivery times are realized because of in-house production. Contact us with dimensions (see table), and we can supply you with a proposal.

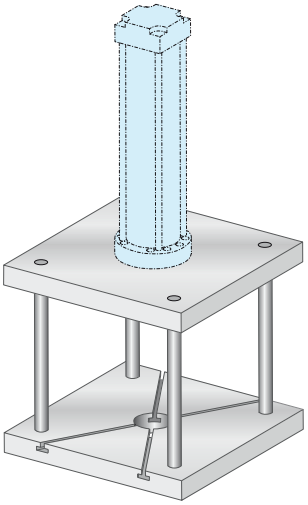
Features

Base-plate

- Coated: RAL 7035 (light-grey)
- Cross T-slot 45° 14^{H7}
- Central bore 40^{H7}, other bores on request

Cover plate

- Coated: RAL 7035 (light-grey)
- Connection drill pattern for the required press
- Chromium-plated columns



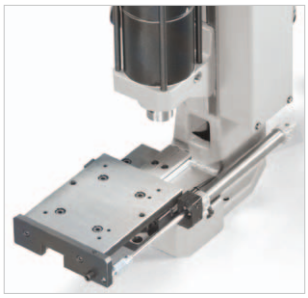
SCHMIDT® Slide Tables
For efficient production

SCHMIDT® Slide Tables are specially designed for the high forces of press systems and where a position requires high precision against an adjustable stop. It is an economic solution for tall parts and for placement of parts outside of the danger area. They can be mounted, depending on the type, both in longitudinal and lateral positions, and can be adapted for automated processes.

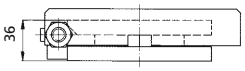
Features

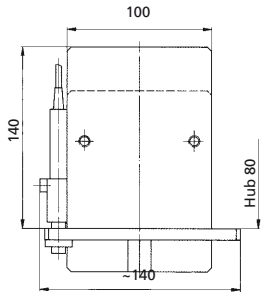
- Cross roller bearings for high-precision guidance
- Play-free adjustment of the table guidance is possible
- Maintains its working position via pneumatic cylinders
- Position detection of the slide table via integrated sensors
- Integrated shock absorbers cushion impact at end positions
- Positioning via pneumatic cylinders in automatic mode
- The press stroke is activated only when the slide is in its proper position

SCHMIDT® Slide Table
ST 45 P longitudinal

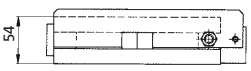


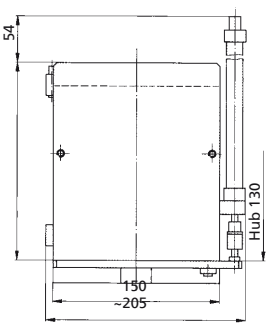
ST 10/ST 10 P
(stroke 80 mm)



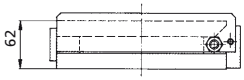


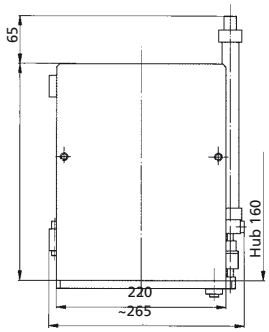
ST 45 P
(stroke 130 mm)



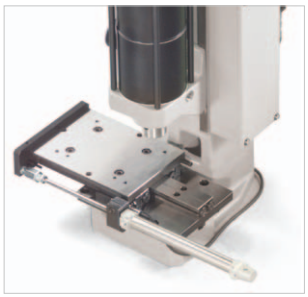


ST 140 P
(stroke 160 mm)





SCHMIDT® Slide Table
ST 45 P lateral
with adapter plate for fastening on the fixture mounting plate



Type		ST 10	ST 10 P	ST 45	ST 45 P	ST 140 P
Pressure load	kN	10	10	45	45	140
Stroke	mm	80, 160	80, 160	130, 200 250	130, 200 250	160, 200, 250, 300
Suitable for press type		20, 23, 24, 320, 323,*	20, 23, 24, 320, 323	20, 23, 24, 25, 27, 32, 33, 34, 61, 62, 65, 320, 323, 327, 361**	20, 23, 24, 25, 27, 32, 33, 34, 61, 62, 65, 320 323, 327, 361	29, 36, 65, 68, 74, 76, 329, 362, 365, 368, 374, 376
Manual presses		till 10 kN	till 10 kN	all	all	
ServoPresses		405, 415, 416	405, 415, 416	420 max.	420 max.	all
Shock absorber			•		•	•
Bow-type handle		•		•		
Operating mode		manual	pneumatic	manual	pneumatic	pneumatic

Mounting holes available upon request
• Standard
* all **ManualPress** < 10 kN
** all **ManualPress**

Special designs for very long strokes on request
manual = without cylinder, without sensors, without shock absorber

SCHMIDT® Slide Table ST 45
with bow-type handle, manual

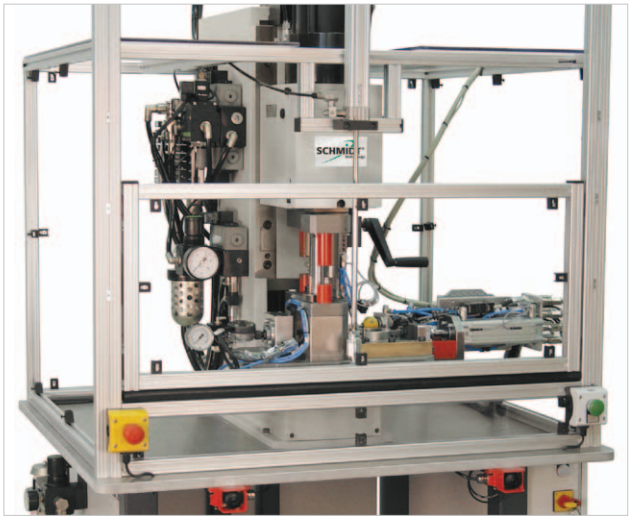
SCHMIDT® Single Workstations
Safety concepts

Two-hand and automatic operation can be carried out using the press control unit **SCHMIDT® PressControl 75** or **600**.

SCHMIDT® Single Workstations are EC type-approved. Safety devices including pneumatic system exist twice in all models.

Two-hand safety technology
In basic design, **SCHMIDT® PneumaticPress**, **SCHMIDT® HydroPneumaticPress** as well as **SCHMIDT® ElectricPress** are operated with **two-hand safety technology**. The user must keep both switches in release position. If one switch is released ahead of time, the press stroke is interrupted. This applies to all positions above the automatic stroke takeover that is started from the point where the dangerous closing movement is finished. From the stroke takeover, the stroke is continued automatically.

Light curtain with transparent protective housing
The light curtain control provides optimum safety to the user. The danger area is protected with macrolon windows against contact. A light curtain protects the access to the danger area on the side of insertion. The working process is immediately interrupted and the press is stopped when intervening. The cycle can be continued automatically after leaving the danger area. In combination with **SCHMIDT® ServoPress**, the light curtain control is the basic version. The press can be activated via the light curtain. Depending on the application, it can be selected between 1-cycle and 2-cycle activation.



Transparent protective housing with pneumatic sliding door
The version with pneumatically operated safety door is completely protected with macrolon windows. First, the safety door is closed and locked via hand or foot switch. This is two-channel monitored. As soon as the door is locked, the press process is automatically started.

SCHMIDT® Customer-Specific Solutions

Standard 'out of the catalog' products, customized or complete turn key solutions. **SCHMIDT Technology** is an invaluable source for your assembly needs, with the center point being a press. We welcome the opportunity to evaluate your application, perform feasibility studies, process sample parts to determine process capability from a control, as well as monitoring standpoint.

We can take your applications from process development and manufacturing of prototype tooling to provide you with custom designed, turn-key solutions.

SCHMIDT® engineers and sales force have gained a wealth of experience while working on a wide array of applications.

SCHMIDT Technology products are suitable for a broad variety of industries and can be tailored to the specific requirements and challenges that applications present, from very basic and simple pressing operations to intelligent, precise and complex processes, combined with monitoring.

The ever rising need to log and exchange process data with third party systems can easily be addressed by the various ways our control systems can be interfaced.

Your need is our challenge. We look forward to the opportunity to be of service.

SCHMIDT® ElectricPress 43/343 Automation
Integrates easily and quickly into an automated system; ideal for new design concepts, integration or as a replacement in an existing production line.

SCHMIDT® PressControl 5000 RT
controlling a 6 axis system consisting of:

- ServoPress 420
- ServoPress 416
- NC Axis for the tooling shuttle
- NC Gripper with NC X/Y positioning axis

SCHMIDT® Customer-Specific Solutions

„Compliant Pin" application
SCHMIDT® ServoPress Systems are the ideal tool for press-fit applications. Their integrated process data and closed-loop force control is perfect for the assembly and disassembly of electronic components. In contrast to soldering, press-fit contacts on a circuit board requires precisely defined and closely monitored assembly processes at very slow speeds. A **SCHMIDT® Press** can be the solution.

All **SCHMIDT® Press Types** can be integrated in a rotary indexing system. Depending on the requirements of the customer, an individual design is planned.

Hybrid Assembly Cell Configuration with
- a monitored PneumaticPress
- a monitored ServoPress
- a conventional HydroPneumaticPress

A single **SCHMIDT® PressControl 5000 RT** can control all of these presses as well as an indexing table. It acquires all stroke/force process data, which can then be transmitted to the **SCHMIDT® DataBase** software for storage and analysis.

SCHMIDT® Service / Support
Close to the customer thanks to a perfect service

In order to meet the high quality standards of modern production, to comply with legal requirements periodic calibrations and safety tests of the press systems according to DIN ISO 9000, safety measures are required.

SCHMIDT Technology assists you by means of a strong service package in meeting these requirements.

SCHMIDT® Calibration
for force-monitored press systems

SCHMIDT® PressControl
- Checking the measurement system
- Calibration
- Issue of a test certificate incl. test report
- Calibration sticker on the machine

SCHMIDT® SafetyCheck
for all **SCHMIDT® PressSystems** with type approval
- Test according to the relevant standards
- Measurement and test of the two-hand switching
- Follow-up measurement
- Functional safety check
- General functional check
- Issue of a test report
- Test sticker on the machine

For Light Curtain Systems
- Additional test according to the relevant standards

Telephone Support
Telephone support is available from 7h30 to 16h30 (GMT +1) on workdays. If any technical queries cannot be resolved by telephone, we can provide our engineer on site within 24 hours. This service at your site reduces your production downtime to a minimum.

You can reach our service department by phone on
+49 (7724) 89 90.

SCHMIDT® CompetenceCenter
We have a large number of presses and press systems in our exhibition and testing area at your disposal. Visitors are welcome to our Competence Center to discuss at first hand their specific requirements with our team of experts, who will be pleased to conduct trials on their tools and offer advice and best solutions for all applications.

SCHMIDT® TrainingCenter
Our training packages prepare the participants fully in theory and practice for their daily work with **SCHMIDT® Press Systems**, by offering comprehensive user training courses and seminars on complex technological products. These training courses deal with the handling of the products as well as the correct use of the control and process software. **SCHMIDT Technology** stands for high quality products and their efficient use on site.

SCHMIDT® DemoBus
Our press technology will come to your premises. The **SCHMIDT® DemoBus** contains a selection of fully functional presses and accessories.

- See the innovative news and trends
- Get a wide overview over our products
- Do not lose time and save travel costs
- Discuss your assembly applications with our experts
- Conduct trials (by prior arrangements)

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