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
  - Ground platen 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
- **Ergonomic design**
  - The original position of the hand lever can be varied by 360°
  - Available for left-handed and right-handed use
  - Clamp bearings and serrations provide a secure fit of the hand lever
  - 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

5

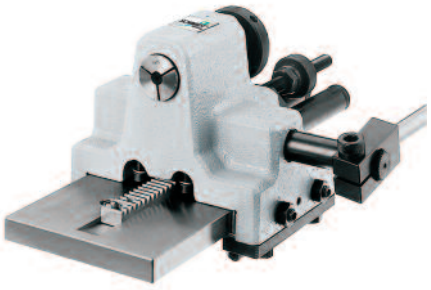
3 / 6

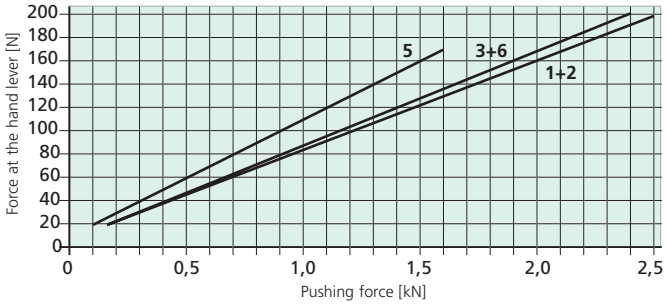
1 / 2

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 bores and ground rams provide a long service life and a precise guidance

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**	**6**	**3R**	**6R**	**1**	**2**	**1R**	**2R**
Press head type			5	5	3	3	3R	3R	1	1	1R	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	0 - 70	18 - 70	18 - 70	0 - 80	0 - 80	26 - 80	26 - 80
Special strokes					0 - 160	0 - 160	18 - 100	18 - 100	0 - 100	0 - 100	26 - 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 Ø 10)		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°
Spring restoring force		N	15	15	30	30	30	30	10	10	10	10
Return stroke lock[1)]												
Locked position 1		mm before BDC		11.5			13	13			19.5	19.5
Locked position 2		mm before BDC		3.5			4.5	4.5			7	7
Disengaging accuracy		mm		0.06			0.07	0.07			0.08	0.08
Working height	**F**											
Frame No. **13**		mm	60 - 180	60 - 180								
Frame No. **3**		mm			80 - 210		80 - 210		120 - 260		120 - 260	
Frame No. **2**		mm				120 - 360		120 - 360		145 - 380		145 - 380
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	12	12	22	30	22	30	23	31	23	31

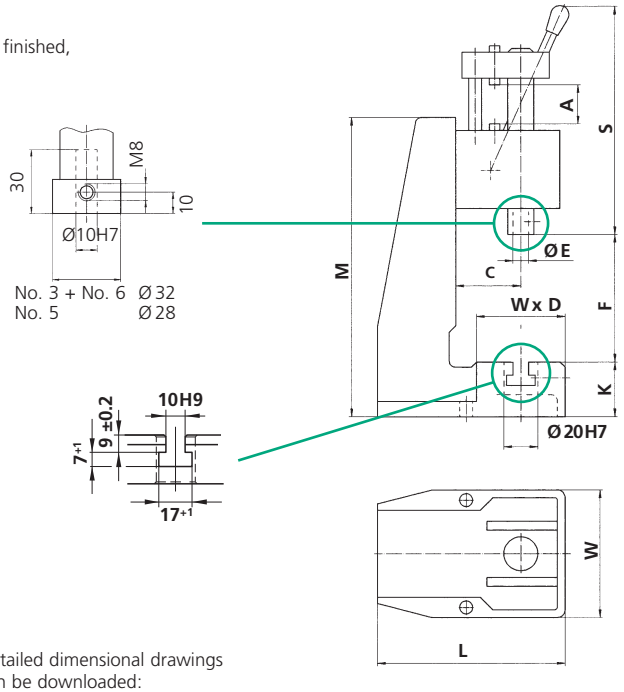
Accessories											
Mechanical counter	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Throat depth frame (total depth) 111 mm, 131 mm, 160 mm, 200 mm			❍	❍	❍	❍	❍	❍	❍	❍	❍
Additional fixture mounting plate suitable for throat depth frame			❍	❍	❍	❍	❍	❍	❍	❍	❍
Micrometer stop	❍	❍	❍	❍	❍	❍					

Frame overview						
Frame type	**Press type**	**Frame height M**	**Table size W x D**	**Table bore**	**Table height K**	**Mounting surface W x L**
		mm	mm	Ø mm	mm	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** ❍	6, 2	810	200 x 160	20H7	98	200 x 290
No. **2-1000** ❍	6, 2	1250	200 x 160	20H7	98	200 x 290

Options
● = Series standard with no additional charge
❍ = Additional charge applies
[1)] = Adjustment of locking position on request

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

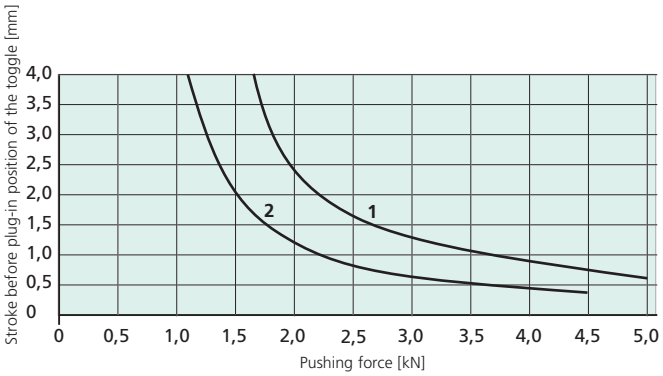
13

11 / 14 – 17

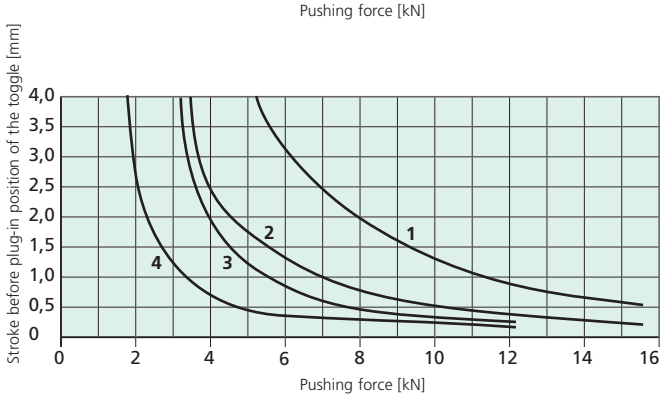
Do you need a high force at the end of stroke for material-transforming processes? Then, **SCHMIDT® Toggle Presses** are just the right choice.

Features:

- High force at end of stroke
- Honed bores and ground rams provide a long service life and a precise guidance



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

From 5 kN to 15 kN

Press type			13 13F	13R 13RF	11 11F	15 15F	11R 11RF	15R 15RF	14 14F	16 16F	14R 14RF	16R 16RF	17 17F
Press head type			13-40 13F-35	13R-40 13RF-35	11-45 11F-35	11-45 11F-35	11R-45 11RF-35	11R-45 11RF-35	11-60 11F-50	11-60 11F-50	11R-60 11RF-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	40 35	25-40 25-35	0 - 45 0 - 35	0 - 45 0 - 35	20 - 45 20 - 35	20 - 45 20 - 35	60 50	60 50	24-60 24-50	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°
Spring restoring force standard/enhanced		N	15/35 22/30	13/35 22/30	30/50 30/70	30/50 30/70	30/50 30/70	30/50 30/70	22/30 30/50	22/30 30/50	22/30 30/50	22/30 30/50	25/- 25/-
Return stroke lock[1]													
Locked position 1		mm before BDC			14.5			12	12			14	14
Locked position 2		mm before BDC			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	**F**												
Frame No. **13**		mm	65 - 180 50 - 155	65 - 180 50 - 155									
Frame No. **3**		mm			80 - 210 60 - 180		80 - 210 60 - 180		90 - 225 70 - 190		90 - 225 70 - 190		70 - 200 60 - 185
Frame No. **2**		mm				110 - 350 80 - 325		110 - 350 80 - 325		120 - 360 90 - 335		120 - 360 90 - 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	
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	
Weight		approx. kg	12	12	23	31	23	31	23	23	23	31	24

Accessories													
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

Frame type	Press type	Frame height M mm	Table size W x D mm	Table bore Ø mm	Table height K mm	Mounting surface W x L mm
No. **13**	13	330	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	810	200 x 160	20H7	98	200 x 290
No. **2-1000** ❍	11, 14, 15, 16, 17	1248	200 x 160	20H7	98	200 x 290

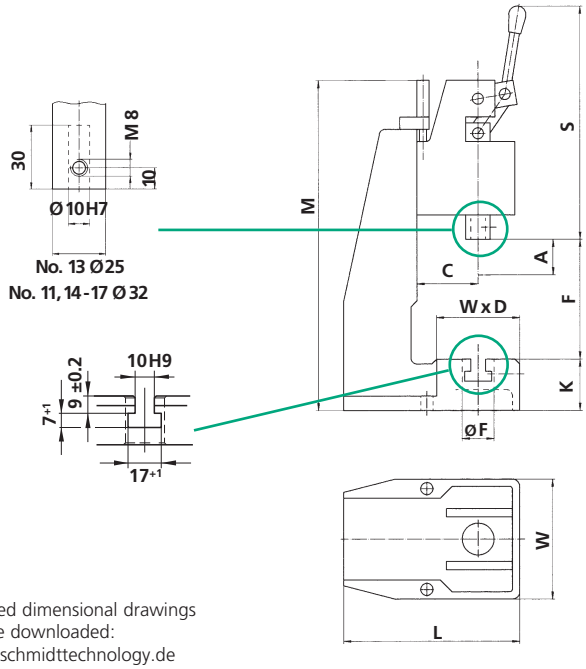
Options

● = Series standard 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

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

113

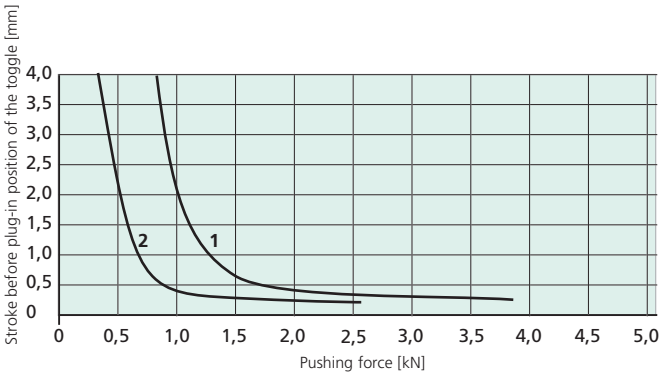
111

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

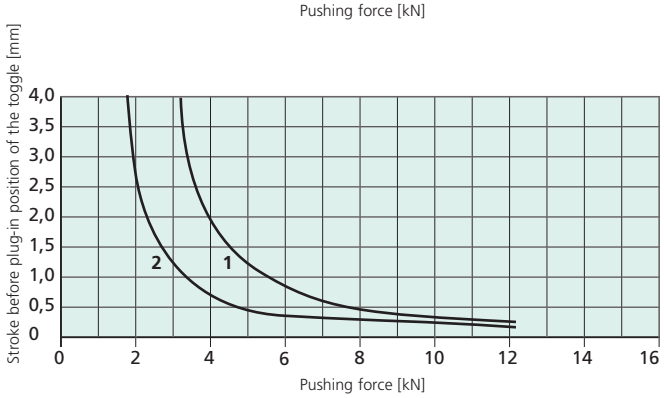
Features:

- High force at end of stroke
- Honed bores and ground rams provide a long service life and a precise guidance

With press No. 113 and 111, the manual force is applied by pulling the lever towards the body. This press is especially suitable for rapid production at small forces.



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

From 2,5 kN to 12 kN

Press type			113 113F	113R 113RF	111 111F	111R 111RF
Press head type			113	113R	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 50
Throat depth	**C**	mm	65	65	86	86
Press head height	**S**	mm	250	250	360 360	360 360
Ram bore		Ø mm	10H7	10H7	10H7	10H7
Hand lever left			-	-	-	-
Angle of rotation			80°	80°	90°	90°
Spring restoring force standard/enhanced		N	15/30 6/30	15/30 6/30	15/- 20/-	15/- 20/-
Return stroke lock[1]						
Locked position 1		mm before BDC		11,6		14
Locked position 2		mm before BDC		0,6		1,5
Disengaging accuracy		mm		0,03		0,07
Working height	**F**					
Frame No. **13**		mm	50 - 165 40 - 155	50 - 165 40 - 155		
Frame No. **3**		mm			130 - 205 115 - 195	130 - 205 115 - 195
Frame No. **2**		mm			130 - 340 115 - 330	130 - 340 115 - 330
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						
Mechanical counter			❍	❍	❍	❍
Throat depth frame (total depth) 111 mm, 131 mm					❍	❍
Additional fixture mounting plate suitable for throat depth frame					❍	❍
Block clamping piece [2]			●	●	●	●

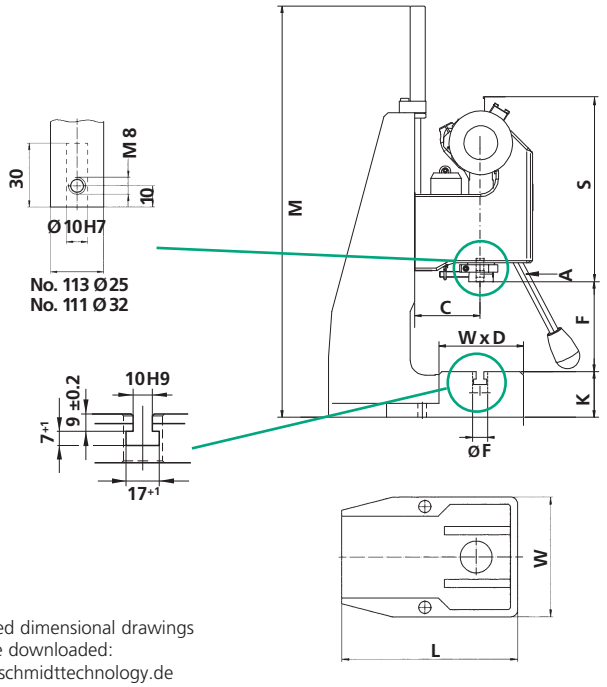
Frame overview

Frame type	Press type	Frame height M mm	Table size W x D mm	Table bore Ø mm	Table height K mm	Mounting surface W x L mm
No. **13**	113	330	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	810	200 x 160	20H7	98	200 x 290
No. **2-1000** ❍	111	1248	200 x 160	20H7	98	200 x 290

Options
● = Series standard 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

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.



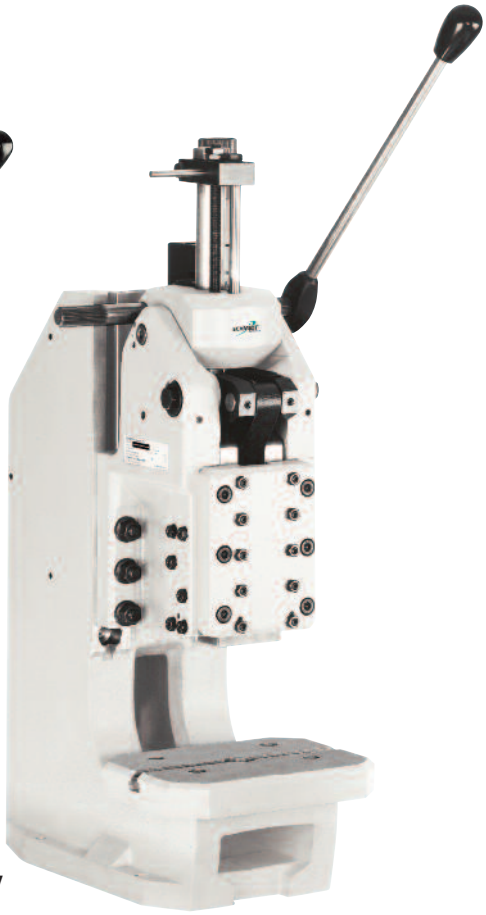
Detailed dimensional drawings can be downloaded:
www.schmidttechnology.de

SCHMIDT® Toggle Presses with Square Ram

Optimum guidance and anti-rotation

11 V
13 V
14 V

15 V
16 V

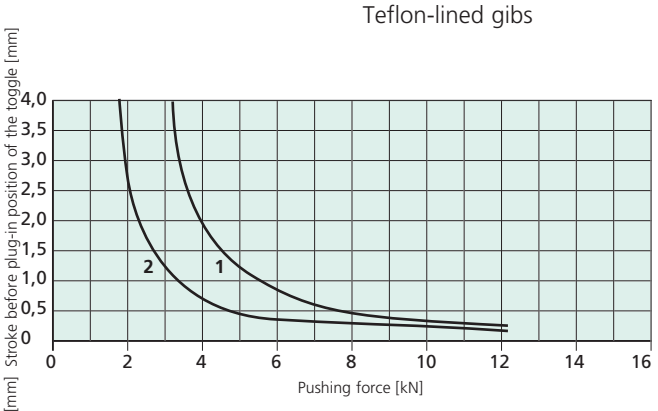


19 V

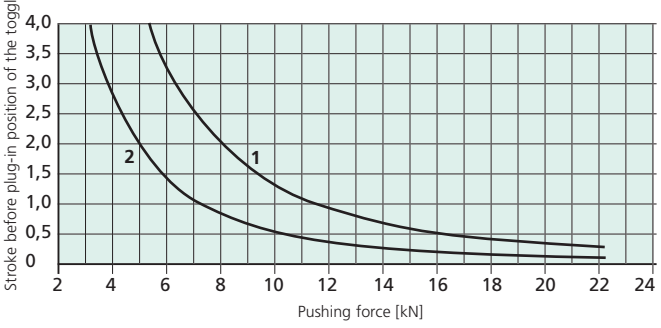
Do you need a high force at the end of stroke for material-transforming processes? Then, **SCHMIDT® Toggle Presses** are just the right choice.

Features:

- High force at end of stroke
- Square ram is anti-rotational (no die sets required)
- Precise adjustment of the press depth via hardened lower stop
- Fully adjustable, play-free Teflon-lined gibs



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 10



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

From 5 kN to 22 kN

Press type			13V 13VF	13VR 13VRF	11V 11VF	15V 15VF	11VR 11VRF	15VR 15VRF	14V 14VF	16V 16VF	14VR 14VRF	16VR 16VRF	19V 19VF	19VR 19VRF
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 11VRF-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	10 - 45 25 - 45	10 - 45 25 - 45	20 - 45 25 - 45	20 - 45 25 - 45	15 - 60 30 - 60	15 - 60 30 - 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°
Spring restoring force standard/enhanced		N	15/45 30/45	15/45 30/45	20/42 30/60	20/42 30/60	20/42 30/60	20/42 30/60	12/45 12/45	12/45 12/45	12/45 12/45	12/45 12/45	25/- 25/-	25/- 25/-
Return stroke lock[1) 3)]														
Locked position 1		mm before BDC		14,5			12	12			14	14	4,5	4,5
Locked position 2		mm before 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	**F**													
Frame No. **13**		mm	65-180 50-155	65-180 50-155										
Frame No. **3**		mm			80 - 210 60 - 180		80 - 210 60 - 180		80 - 215 60 - 190		80 - 215 60 - 190			
Frame No. **2**		mm				120 - 350 100 - 325		120 - 350 100 - 325		120 - 360 100 - 335		120 - 360 100 - 335		
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														
Mechanical counter			❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Throat depth frame 111 mm, 131 mm					❍	❍	❍	❍	❍	❍	❍	❍	❍	
Throat depth frame 151 mm												❍	❍	
Additional fixture mounting plate suitable for throat depth frame					❍	❍	❍	❍	❍	❍	❍	❍	❍[2)]	❍[2)]

Frame overview

Frame typ	Press type	Frame height **M** (mm)	Table size **W x D** (mm)	Table bore Ø mm	Table height **K** (mm)	Mounting surface **W x L** (mm)
No. **13**	13	330	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	810	200 x 160	20H7	98	200 x 290
No. **2-1000** ❍	15, 16	1250	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

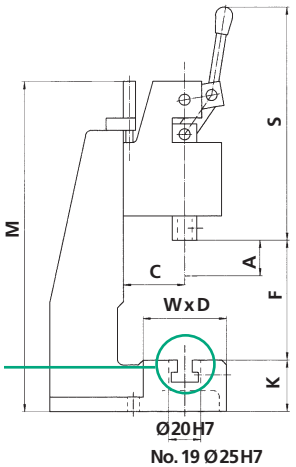
Options

● = Series standard with no additional charge
❍ = Additional charge applies
[1)] = Special strokes 12 mm and 50 mm on request
[2)] = Fixture mounting plate is already existing in the frame
[3)] = Adjustment of locking position on request

Other Available Options

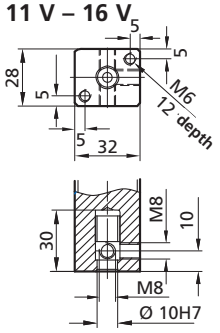
– **Nickel plated** - Cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
– **Custom Paint** - Press and column can be painted to customer's color specification
– **Bores for Adapting Tooling** - Customer specific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

Please consult our Sales Department or Representative.

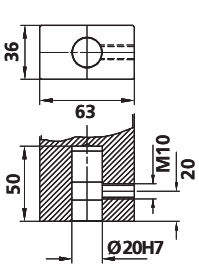


Ram footprint – Bores

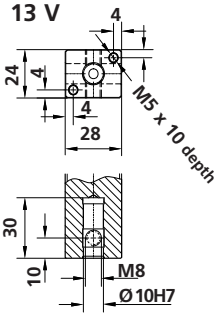
11 V – 16 V

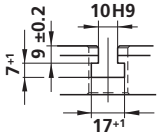


19 V



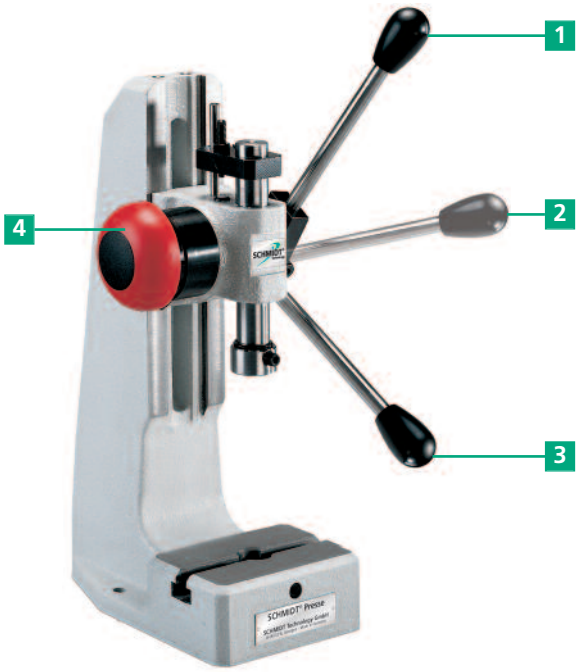
13 V





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

SCHMIDT® ManualPress
Optional accessories



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

1) TDC (Top Dead Center) position

2) First lock-in position: Loose tools can still be aligned.

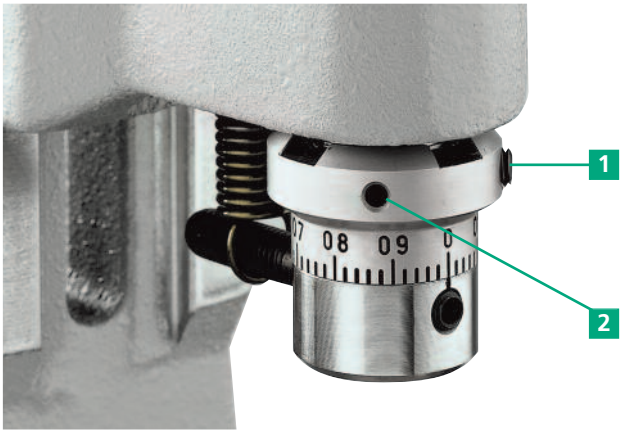
3) After reaching BDC (Bottom Dead Center) by completing the stroke the return stroke lock is released. This guarantees a repeatable BDC and thus a constant press depth.

4) 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.

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 mounting plates, 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, left-handed 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.

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.

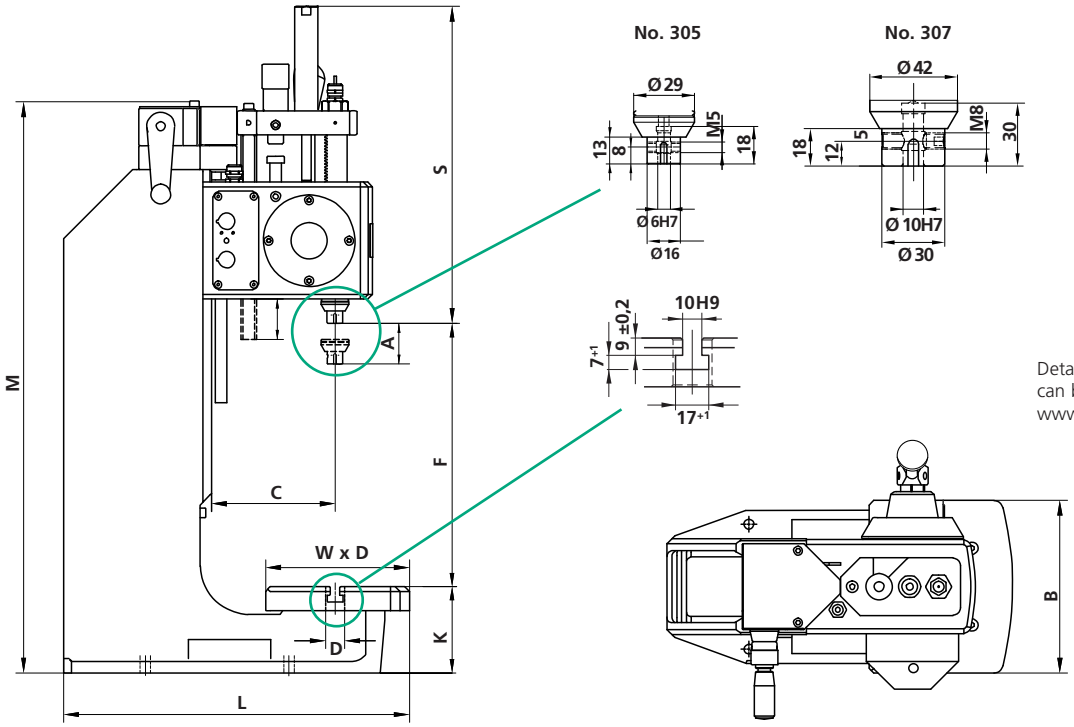
The **SCHMIDT® ManualPress 300 Series** system with **PressControl 3000** includes:
- Integrated reliable measuring technology
- High resolution of the obtained process data
- Graphical and numerical output of the processing results
- Quality monitoring using freely selectable tolerances

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 to 12 kN



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

SCHMIDT® ManualPress 305

Features:

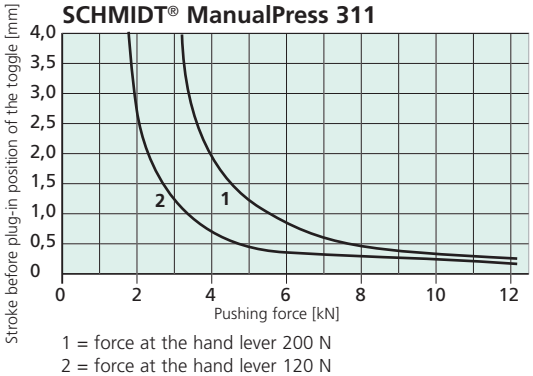
- Linear force progression for **No. 305** and **No. 307**
- High force at the end of stroke for **No. 311**
- Precise adjustment of the press depth via micrometer fine adjustment
- Guides require little maintenance, have little wear and are locked against anti-rotation. This results in precise working 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 platen

Functional components:

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

Press type			**305**	**307**	**311**
Nominal force		kN	0,4	4	12
Force at hand lever		approx. N	50	200	200
Working stroke	**A**	mm	0 – 42	0 – 54	0 – 50[1]
Throat depth	**C**	mm	128	128	128
Press head height	**S**	mm	310	417	555
Ram bore		Ø mm	6H7	10H7	10H7
Stroke stop fine adjustment, division		mm	0,02	0,02	0,02
Stroke resolution		v	0,005	0,005	0,005
Angle of rotation / mm stroke			3,3°	4,8°	non linear
Resolution, process data acquisition		stroke µm/inc force N/inc	5 0,25	5 2,5	5 10
Working height	**F**				
Frame No. **7**			60 – 270	50 – 260	50 – 140
Frame No. **7-600**[3]			90 – 600	80 – 600	80 – 480
Spring restoring force		N	6	10	10 / 30
Weight (standard)		ca. kg	41	41	60
Protection type			IP 54	IP 54	IP 54

Accessories			
Stronger return assist spring	❍	❍	
Speed control	❍	❍	
Throat depth frame[2] [3] (total depth) 168 mm, 208 mm, 248 mm	❍	❍	
Fixture mounting plate suitable for throat depth frame	❍	❍	❍



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

Frame overview

Frame type	**Press type**	**Frame height** M mm	**Table size** W x D mm	**Table bore** D Ø mm	**Table height** K mm	**Mounting surface** W x L mm
No. **7**	No. 305, 307, 311	600	180 x 150	20H7	90	330 x 361
No. **7-600** ❍	No. 305, 307, 311	960	180 x 280	20H7	110	330 x 465 – 505

Options

❍ = 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**

Other Available Options:

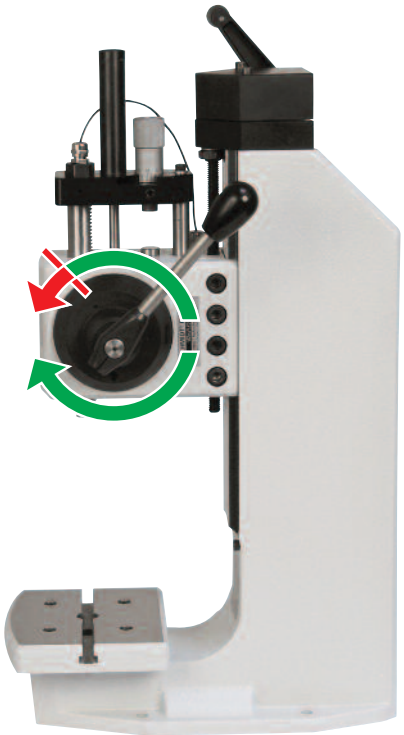
– **Nickel plated** – Cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
– **Custom Paint** – Press and column can be painted to customer's color specification
– **Bores for Adapting Tooling** – Customer specific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

Please consult our sales department or representative.

Process reliability for manual workplaces

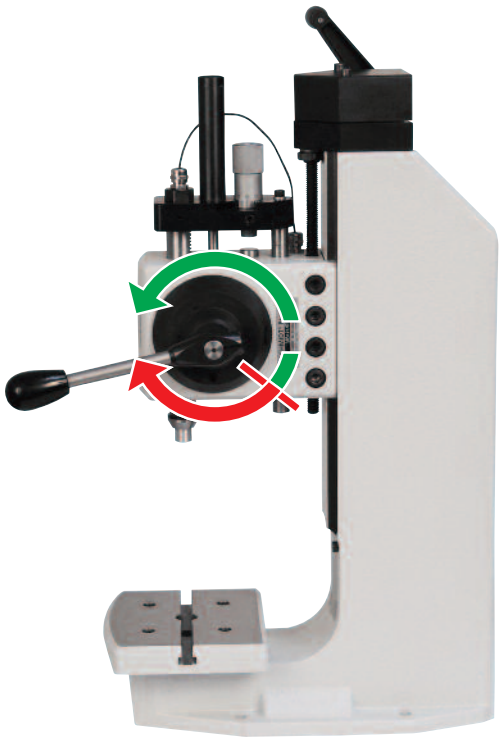
Included with the control unit SCHMIDT® PressControl 3000

- 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 probably.
  - 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
- Integrated software embedding of program modules **SCHMIDT® ControlTool** and **SPC Software** via USB connection to PC for
  - Production data management
  - Process monitoring
  - Process visualization
  - Quality evaluation
  - Static process control



Forward stroke lock mode (the return stroke is released)
Press blocked / restricts the force flow in forward stroke
- When reaching a defined force
- When reaching the stroke

For protecting the produced parts and the force sensor of the press.

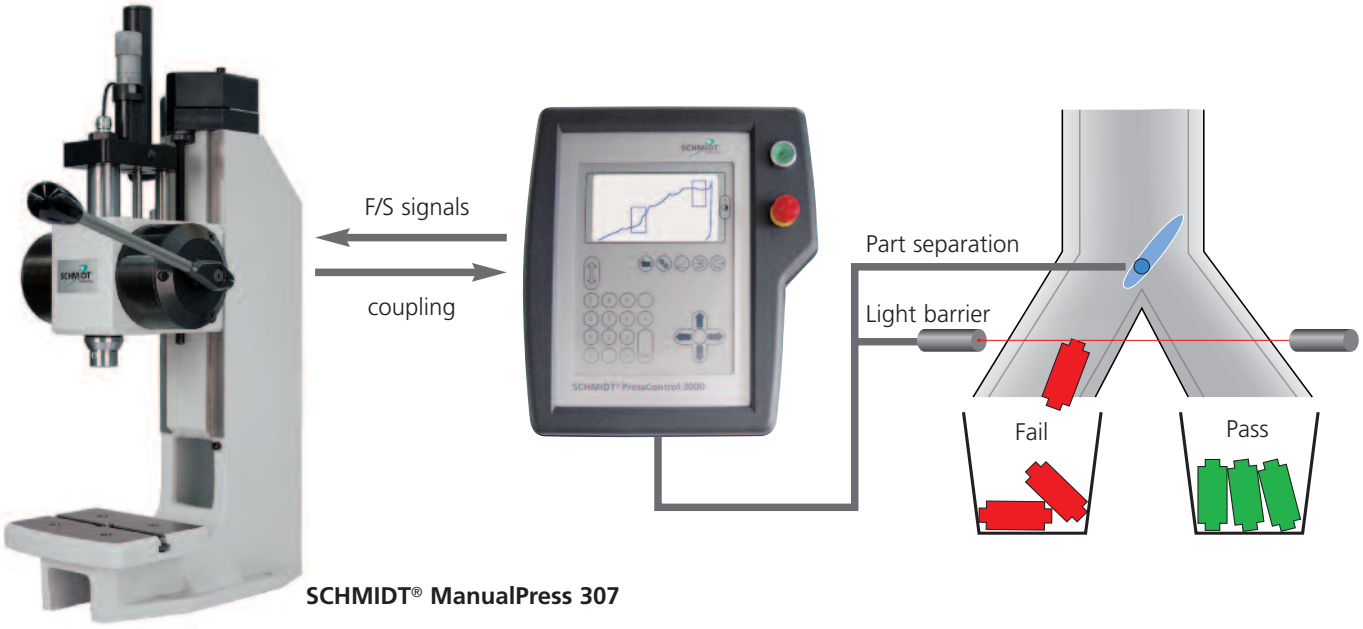


Return stroke lock mode (the forward stroke is released)
Press blocks the return stroke
- If the necessary force has not been reached
- If the required stroke has not been reached

This ensures that the user always completes the operation.

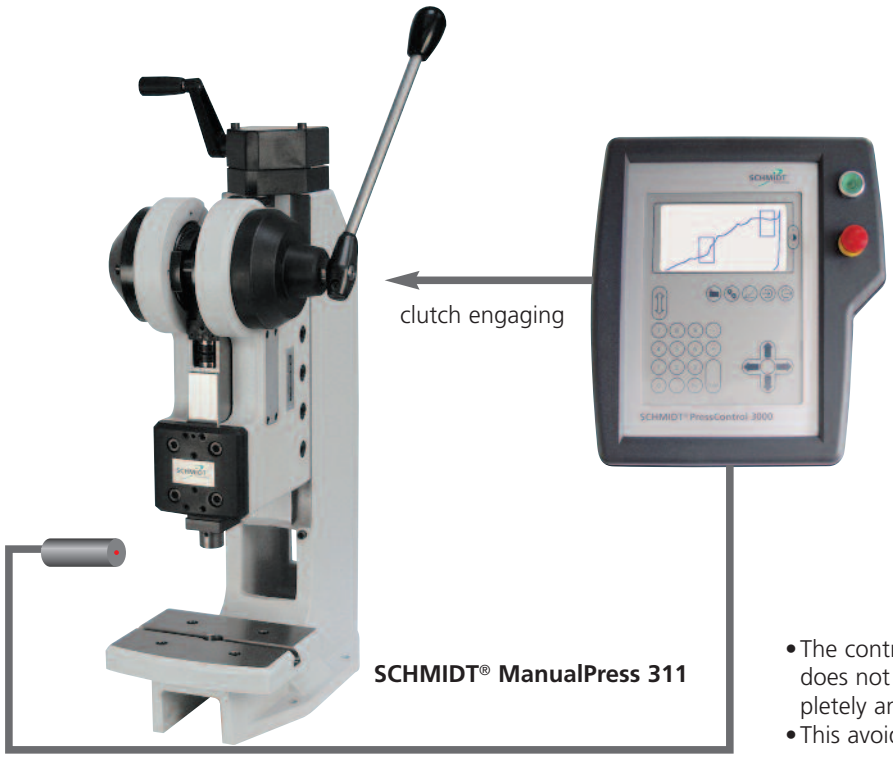
SCHMIDT® ManualPress 300 Series
Examples of verified process workplaces

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 3000** analyzes the force/stroke signals of the **SCHMIDT® ManualPress** using windows.
- Depending on the analysis, 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.



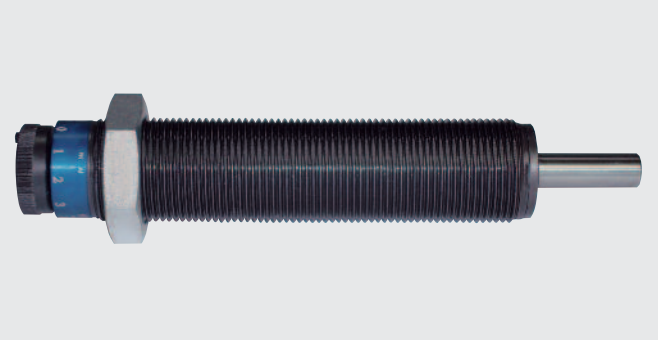
SCHMIDT® ManualPress 311

- The control unit **SCHMIDT® PressControl 3000** does not release the press until all parts are completely and correctly positioned.
- This avoids erroneous pressing.

Options suitable for your application

Control mounting bracket

Used for fastening the **SCHMIDT® PressControl 3000**, either mounted to the table or to the wall. The mounting bracket permits the unit to swivel 70° (Included with control).



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.

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 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.

CAN bus node

Integrates additional digital and analog inputs and outputs (I/O) which enable the full functionality of the control unit. (8 inputs / 4 outputs are included with the control)

I/O distribution board

Facilitates easy interface of up to 8 inputs and 4 outputs.

External Reset Button

We recommend an external reset button in rough production environments.

Ergonomic handle

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