

# 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 material transforming processes? Then **SCHMIDT® Toggle Presses** are just the right choice.

## Characteristics

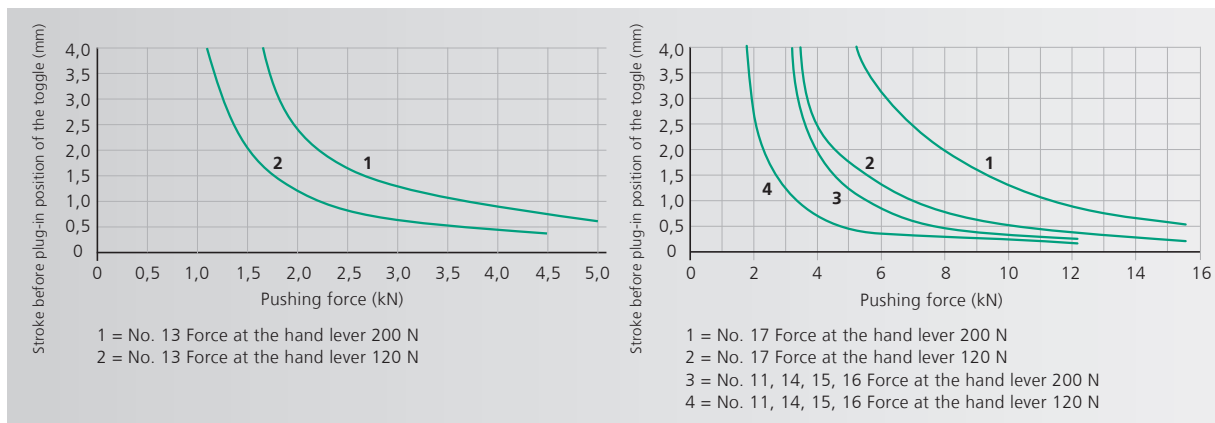
- High force at the end of stroke (see diagram below)
- Honed bores and ground rams provide a long service life and a precise guidance



Press Type 13RFZ



Press Type 11/14 -17R



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
<b>Press head type</b>		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	40 35	40 35	45 35	45 35 <sup>5)</sup>	45 35 <sup>5)</sup>	45 35 <sup>5)</sup>	60 50	60 50	60 50	60 50	20 20 <sup>5)</sup>
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		o		o		o		o		o		
Angle of rotation		95°	95°	110°	110°	110°	110°	125°	125°	125°	125°	90°
Max. weight upper tool <sup>3)</sup>	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/-
<b>Return stroke lock<sup>1)</sup></b>												
Minimum working stroke	mm		25		20		20		24		24	
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	
<b>Working height<sup>4)</sup></b>	F mm											
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. 5	mm											65-315 50-300
Frame No. 2	mm					100-345 80-325	100-345 80-325			110-360 85-335	110-365 85-335	
Frame No. 2-600 Ø	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	190-575 175-560
Frame No. 2-1000 Ø	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	315-1015 300-1000
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	o	o	o	o	o	o	o	o	o	o	o
Throat depth frame (total depth) 111 mm, 131 mm			o	o	o	o	o	o	o	o	o
Additional fixture mounting plate suitable for throat depth frame			•	•	•	•	•	•	•	•	•
Block clamping piece <sup>2)</sup>	o	o	•	•	•	•	o	o	o	o	•

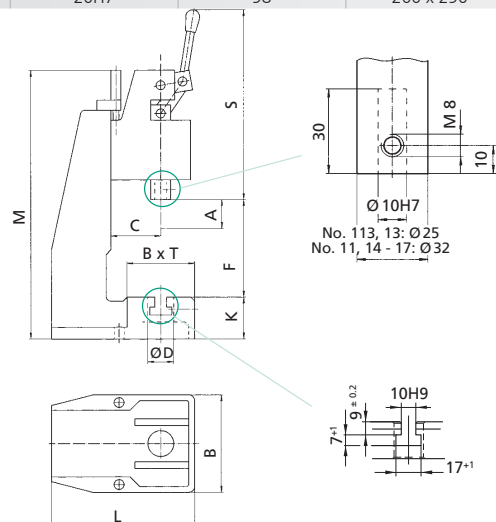
Frame Overview	Press Type	Frame Height M (mm)	Table Size B x T (mm)	Table Bore D (Ø mm)	Table Height K (mm)	Mounting Surface B x L (mm)
No. 13	13	475	110 x 80	20H7	46	110 x 185
No. 3	11, 14, 17	540	150 x 110	20H7	60	150 x 260
No. 5	17	536	185 x 110	20H7	60	185 x 275
No. 2	15, 16	700	185 x 110	20H7	60	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 o Additional charge applies
- <sup>1)</sup> Adjustment of locking position on request
- <sup>2)</sup> Stroke reduction about 10 mm by version with additional charge
- <sup>3)</sup> The weight was determined with hand lever position 45° forward (guide)
- <sup>4)</sup> Typical values; can vary ± 3 mm due to casting and production tolerances
- <sup>5)</sup> Stroke adjustable with stop clamp (in the scope of delivery)

### 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



Detailed dimensional drawings can be downloaded: [www.schmidttechnology.de](http://www.schmidttechnology.de)

# SCHMIDT® Toggle Presses with Horizontal Pull

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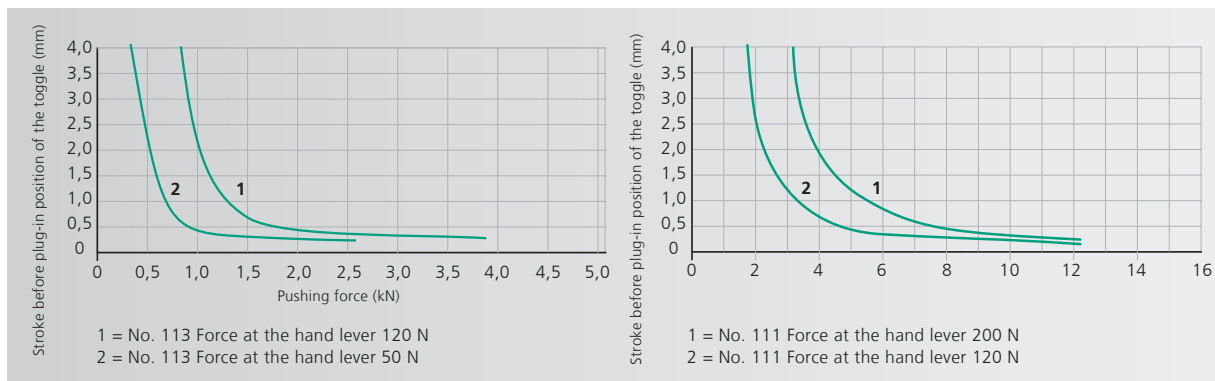
Press Type 113RFZ



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).



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
<b>Press head type</b>			113 113F	113R 113RF	111 - 45 111F - 50	111R - 45 111RF - 50
Nominal force		kN	2.5	2.5	12	12
Working stroke <sup>5)</sup>	<b>A</b>	mm	28	28	45	45
Throat depth	<b>C</b>	mm	65	65	86	86
Press head height	<b>S</b>	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 <sup>3)</sup>		kg	1/3 0.6/3	0.5/2.5 0.6/3	2.5/- 3/-	2.5/- 3/-
<b>Return stroke lock<sup>1)</sup></b>						
Minimum working stroke		mm		22		24
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
<b>Working height<sup>4)</sup></b>						
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 O		mm			200 - 580 185 - 570	200 - 580 185 - 570
Frame No. 2-1000 O		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 <sup>2)</sup>	● ○	● ○	● ○	● ○

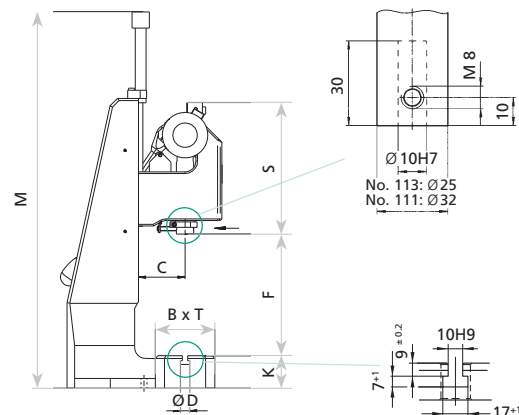
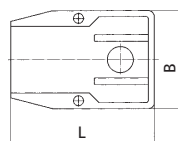
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