

# SCHMIDT® PneumaticPress

## Direct Acting Pneumatic Presses with Force/Stroke Monitoring

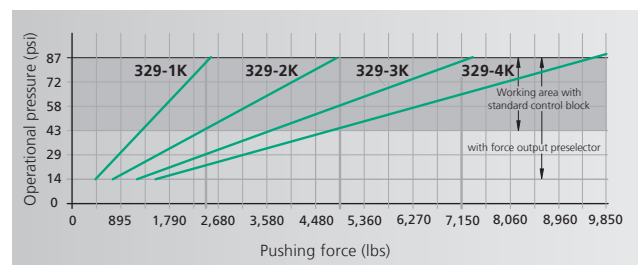
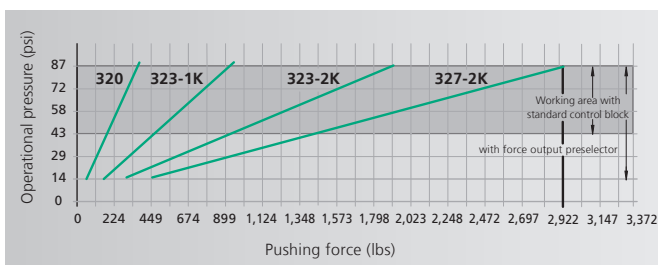
**SCHMIDT® PneumaticPresses** with force/stroke monitoring are offered as complete system with control unit **SCHMIDT® Press-Control 600**. These systems are characterized by sensors and signal amplification integrated in the press head. These signals are evaluated in real time.

### Features

- Direct forces are measured with a force sensor integrated in the ram. Insensitive against side loads
- Force and displacement sensors are immun to EMI and environmental 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 320, 323, 327, 329



From 1.6 kN to 43 kN / 360 lbs. to 9,665 lbs.

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 87 psi	lbs	360	370	1,890	2,920	4,500	4,950	7,195	9,665
Resolution, process data acquisition									
- stroke	inch/inc	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
- force	lbs/inc	0.28	0.56	2.25	2.25	2.25	5.62	5.62	5.62
Throat depth	C inch	5.03	5.15	5.15	5.15	5.15	6.29	6.29	6.29
Throat depth frame o	inch		5.94	5.94	5.94	5.94			
Fixture mounting plate suitable for throat depth frame			o	o	o	o			
Ram bore	Ø mm	20H7	20H7	20H7	20H7	20H7	20H7	20H7	20H7
External ram dimensions	G x H inch	Ø 1.57	2.75 x 1.96	2.75 x 1.96	2.75 x 1.96	2.75 x 1.96	3.54 x 2.36	3.54 x 2.36	3.54 x 2.36
Working height	F								
Frame No. 7	inch	1.96-10.62							
Frame No. 7-600 o	inch	3.34-23.62							
Frame No. 301	inch		5.51-13.77	5.51-13.77	5.51-13.77	5.51-13.77			
Frame No. 301-500 o	inch		12.20-19.68	12.20-19.68	12.20-19.68	12.20-19.68			
Frame No. 329	inch						5.15-11.81	5.15-11.81	5.15-11.81
Frame No. 329-460 o	inch						7.48-18.11	7.48-18.11	7.48-18.11
Weight (standard)	approx. lbs	155	375	375	375	375	705	716	730

Frame Overview	Press Type	Frame Height M (inch)	Table Size B x T (inch)	Table Bore D Ø (mm)	Table Height K (inch)	Mounting Surface B x L (inch)
No. 7	320	23.62	7.08 x 5.90	20H7	3.54	12.99 x 14.21
No. 7-600	320	37.79	7.08 x 11.02	20H7	4.33	12.99 x 18.30-19.88
No. 301	323, 327	32.67	9.84 x 7.87	40H7	5.70	9.84 x 18.11
No. 301-500	323, 327	38.97	9.84 x 7.87	40H7	5.70	9.84 x 18.89
Special fixture mounting plate with 3 longitudinal slots <sup>1)</sup> o			11.81 x 8.66 15.74 x 9.05	40H7		
No. 329	329	31.88	11.81 x 9.05	40H7	5.78	11.81 x 21.65
No. 329-460	329	38.97	11.81 x 9.05	40H7	5.78	11.81 x 24.40
Special fixture mounting plate with 3 longitudinal slots <sup>1)</sup> o			15.74 x 11.02 19.68 x 11.02	40H7		

## Options

o Additional charges apply

<sup>1)</sup> With Press Type 320 only in combination with Frame type No. 7-600 with 6.61 inch, 8.18 inch or 9.76 inch

## Other available Options

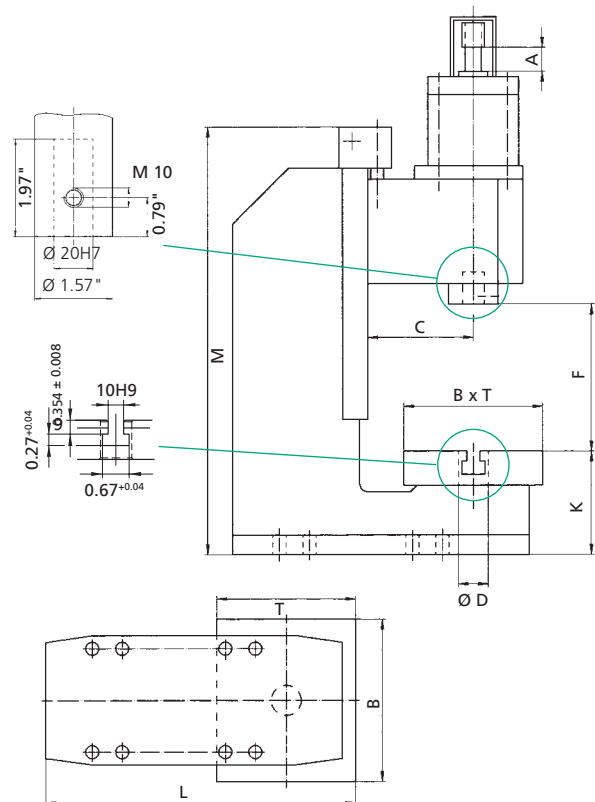
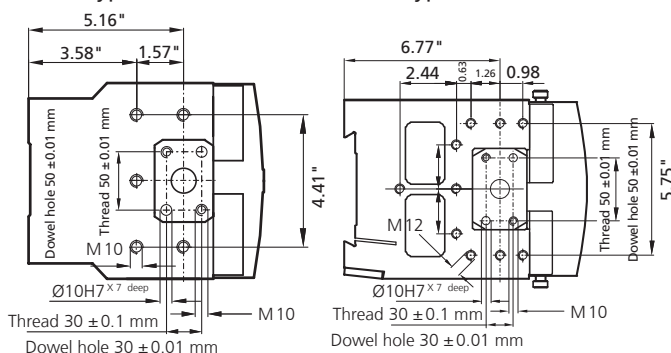
- Nickel plated – cast parts are electroless nickel plated, steel components black oxide finished, aluminum anodized, precision steel surfaces are untreated
- Custom Paint – press and column can be painted to customer's color specification
- Bores for adapting tooling – customer specific sizes can be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

## Bottom View of the Press Head

Fastening drill pattern flange/ram

Press Type 323/327

Press Type 329



# SCHMIDT® PneumaticPress

## Control Versions without Force-Stroke-Monitoring



### Single-channel Control

Integration of the press in an automatic installation

**Single-channel pneumatic Control Block**  
incl. flow control for adjusting the speed in the work stroke

**2 Cylinder Switches**  
for inquiry TDC/BDC incl. holding fixture

**External Control**

**Control Unit**  
**SCHMIDT®**  
PressControl  
70/600 without  
safety equipment

### Two-channel Control

With manual loading of the machine

**Additional Valves**  
1/8" – 5/2" additional valves mounted to the pneumatic control block (not for PressControl 70)

- 2-hand-release
- Light curtain

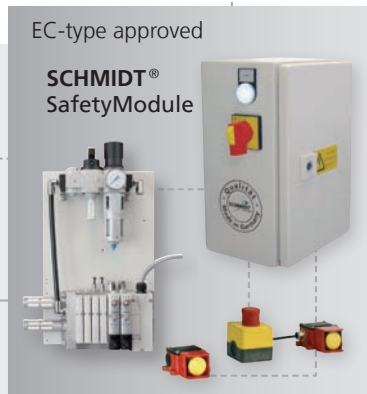
**CAN bus Coupler with in-/output Terminals**  
e.g. CAN bus valve terminal (not for PressControl 70)

CAN bus

**Control Unit**  
**SCHMIDT®** PressControl  
70/600

EC-type approved

**SCHMIDT®**  
SafetyModule



### SCHMIDT® SafetyModule

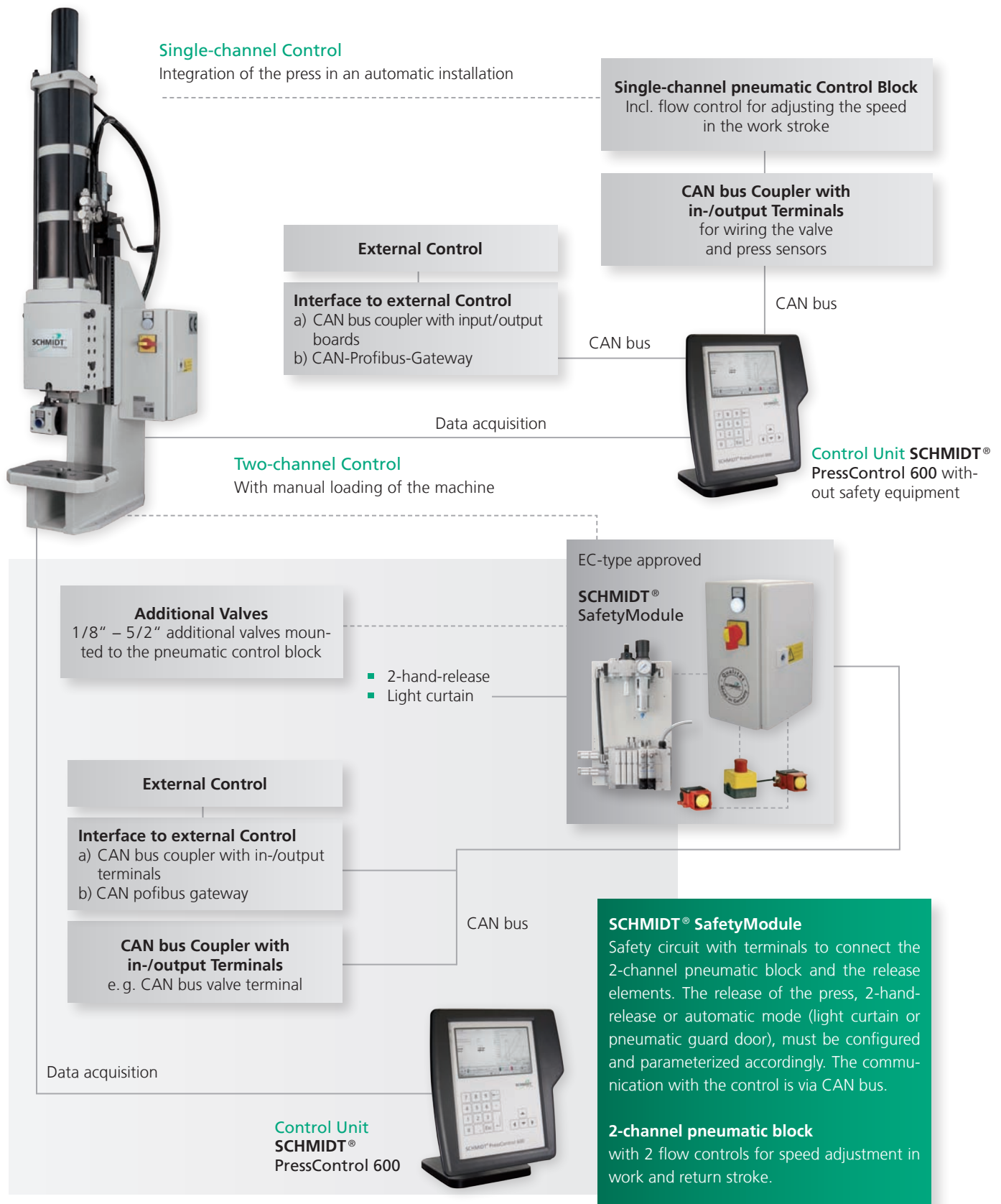
Safety circuit with terminals to connect the 2-channel pneumatic block and the release elements. The release of the press, 2-hand-release or automatic mode (light curtain or pneumatic guard door), must be configured and parameterized accordingly. The communication with the control is via CAN bus.

### 2-channel pneumatic block

with 2 flow controls for speed adjustment in work and return stroke.

# SCHMIDT® PneumaticPress

## Control Versions with Force-Stroke-Monitoring



# Calculation of the Air Consumption

The air consumption per stroke is calculated in cubic feet (scf)<sup>1)</sup> at a working pressure of 87 psi.

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

## SCHMIDT® PneumaticPress Air Consumption per Stroke

At 87 psi in cubic feet (scf)

Press Type	Constant	Variable (per inch Stroke) <sup>4)</sup>	Air Connection <sup>3)</sup>
20	= max. stroke / 1.96 inch x 0.03 scf	0.0007 scf	G 1/4 "
23	= max. stroke / 1.96 inch x 0.09 scf	0.0017 scf	G 1/4 "
24	= max. stroke / 1.96 inch x 0.09 scf	0.003 scf	G 1/4 "
25	= max. stroke / 1.96 inch x 0.09 scf	0.005 scf	G 1/4 "
27-1K	= max. stroke / 1.96 inch x 0.14 scf	0.002 scf	G 3/8 "
27-2K	= max. stroke / 1.96 inch x 0.14 scf	0.005 scf	G 3/8 "
27-3K	= max. stroke / 1.96 inch x 0.14 scf	0.008 scf	G 3/8 "
29-1K	= max. stroke / 1.96 inch x 0.22 scf	0.004 scf	G 1/2 "
29-2K	= max. stroke / 1.96 inch x 0.22 scf	0.009 scf	G 1/2 "
29-3K	= max. stroke / 1.96 inch x 0.22 scf	0.013 scf	G 1/2 "
29-4K	= max. stroke / 1.96 inch x 0.22 scf	0.018 scf	G 1/2 "
320	= max. stroke / 1.96 inch x 0.03 scf	0.0007 scf	G 1/4 "
323-1K	= max. stroke / 1.96 inch x 0.09 scf	0.0017 scf	G 1/4 "3)
323-2K	= max. stroke / 1.96 inch x 0.09 scf	0.003 scf	G 1/4 "3)
327-2K	= max. stroke / 1.96 inch x 0.09 scf	0.005 scf	G 1/2 "3)
329-2K	= (max. stroke + 0.98 inch) / 1.96 inch x 0.22 scf	0.009 scf	G 1/2 "3)
329-3K	= (max. stroke + 0.98 inch) / 1.96 inch x 0.22 scf	0.013 scf	G 1/2 "3)
329-4K	= (max. stroke + 0.98 inch) / 1.96 inch x 0.22 scf	0.018 scf	G 1/2 "3)
32-12	0.03 scf	0.003 scf	G 1/4 "
32-40	0.05 scf	0.0015 scf	G 1/4 "
32-60	0.07 scf	0.0012 scf	G 1/4 "
33-12	0.035 scf	0.0031 scf	G 1/4 "
33-40	0.05 scf	0.0015 scf	G 1/4 "
34-12	0.05 scf	0.004 scf	G 1/4 "
34-40	0.07 scf	0.002 scf	G 1/4 "
34-60	0.10 scf	0.002 scf	G 1/4 "
36-12	0.14 scf	0.012 scf	G 3/8 "
36-40	0.21 scf	0.007 scf	G 3/8 "
36-60	0.28 scf	0.006 scf	G 3/8 "

**Total Consumption = Constant Consumption (scf)<sup>2)</sup> + variable Consumption (scf)**

**Variable Consumption = Air Consumption per inch of Stroke (scf/inch)<sup>2)</sup> X Working Stroke (inch)**

## SCHMIDT® HydroPneumaticPress Air Consumption per Stroke

At 87 psi in cubic feet (scf)

Press Type Standard	Rapid Stroke / Return Stroke (constant)	Power Stroke per inch (variable)	Air Connection <sup>3)</sup>
61-50-6 / 361-50-6	0.07 scf	0.04 scf	G 1/4 "
61-100-12 / 361-100-12	0.14 scf	0.06 scf	G 1/4 "
62-50-6 / 362-50-6	0.10 scf	1.85 scf	G 1/4 "
62-100-12 / 362-100-12	0.21 scf	0.09 scf	G 1/4 "
65-50-6 / 365-50-6	0.17 scf	0.07 scf	G 1/4 "
65-100-12 / 365-100-12	0.35 scf	0.10 scf	G 1/4 "
64-50-6 / 364-50-6	0.28 scf	0.14 scf	G 1/2 "
64-100-12 / 364-100-12	0.56 scf	0.21 scf	G 1/2 "
68-50-6 / 368-50-6	0.28 scf	0.11 scf	G 1/2 "
68-100-12 / 368-100-12	0.56 scf	0.17 scf	G 1/2 "
74-50-6 / 374-50-6	0.28 scf	0.14 scf	G 1/2 "
74-100-12 / 374-100-12	0.56 scf	0.21 scf	G 1/2 "
76-100-12 / 376-100-12	0.91 scf	0.35 scf	G 1/2 "

**Total Consumption = Constant Consumption (scf)<sup>2)</sup> + variable Consumption (scf)**

**Variable Consumption = Air Consumption per inch of Stroke (scf/inch)<sup>2)</sup> X Working Stroke (inch)**

<sup>1)</sup> The air volume is measured under standard conditions (1.013 · 10<sup>5</sup> pascal = 1 atm and a temperature of 25 °Celsius [298 Kelvin])

<sup>2)</sup> Value according to table <sup>3)</sup> For presses with force/stroke monitoring, the air connection refers to the two-channel control block used by us

<sup>4)</sup> For the determination of the consumption, the single stroke is used, the return stroke is automatically contained in the result