



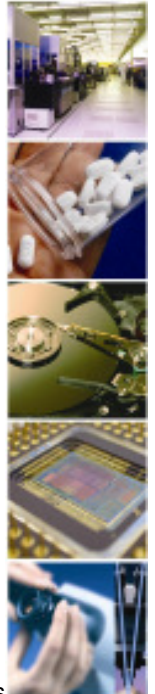
# Membrane differential pressure instruments



Thanks to a new sensor technology, optimised measurement electronics, software and an **integrated automatic zero-point calibration**, this instruments excel with their extremely accurate and stable readings.

Various software functions for adjustment, password protection, measurement filters and intervals, scaleable outputs as well as alarm settings emphasise the versatility of this instrument. Its application areas are consequently vast and it is ideal for demanding dp-controls.

For the first time ever a membrane differential pressure instrument offers such outstanding performances at such competitive prices!



## Main features:

Measurement ranges	: <b>0...+50 Pa / 0...+200 Pa</b> (unidirectional)
Measurement accuracy at 20 °C	: 50 : +/- <b>0.6%</b> (of the full scale) 200 : +/- <b>0.2%</b> (of the full scale)
Hysteresis	: +/- <b>0.15 Pa</b> (over the full scale)
Typical offset drift	: +/- <b>0.15 Pa</b> (automatic zero-point calibration)
Configuration	: <b>PascalTool WIN software</b> (Win98 / NT / 2000 / XP)

## Differential pressure measuring system Pascal-ST/Z

*Accurate, fast, versatile, stable, robust*

The Pascal-ST/Z differential pressure measuring devices are precision instruments for monitoring and controlling pressure differences of gaseous media in low ranges. The measurement principle is based on the static differential pressure detection with a silicon membrane.

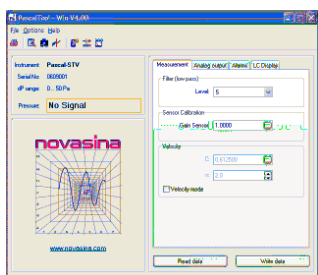
Beside a high robustness and accuracy this devices offer an easy and intuitive handling and start up. The zero calibration is performed automatically and so the instrument is ready for use immediately after its installation.

All other configurations can be done using the user friendly **PascalTool-Win** software (from version V 4.11). The software can be downloaded for free from the Novasina homepage and installed on a local personal computer (Windows).

For more information please visit our homepage.

### Technical data:

Dimensions:	68 x 119 x 29 mm
Weight:	ca. 160 g
Meas. ranges:	0...+50 Pa 0...+200 Pa
Max. resolution:	0.1 Pa (50-series) 0.1 Pa (200-series)
Meas. accuracy:	50: +/- 0.6% (of full scale) 200: +/- 0.2% (of full scale)
Temperature effect:	50 : < 0.01 Pa / °C 200 : < 0.03 Pa / °C
Hysteresis:	+/- 0.15 Pa (const. Temp.)
Offset-Drift:	+/- 0.15 Pa (auto zero)
Max. overpressure:	+/- 20'000 Pa
Operating temp.:	0...50 °C
Power supply:	10.5... 35 VDC
Protection:	IP 54 / EMC



Configuration with PascalTool-Win: can be easily performed with a PC Windows 95, 98, NT, 2000, XP or newer



## Pascal-ST/Z product line



[260 0036](#)

Pascal-STZ 50 Z

### Pascal-STZ 50 Z

Measurement instrument for monitoring and alarm for differential pressures in low ranges of 0 to +50 Pa (unidirectional). The measurement principle is based on a silicon membrane for static measurement. The installation is a closed system (no air mass flow). The exceeding or under-running of the **freely selectable alarm levels** are displayed by integrated LED. Two galvanic separated, corresponding to the LED, relays can be used for an external alarm installation.

#### Technical data:

Measurement range: 0 ... 50 Pa  
2 selectable thresholds  
red/green LED indicators  
2 relays (close/make contact)  
Configuration by PascalTool-Win software  
Power supply: 10.5 ... 35 VDC  
Power consumption max. 2 W  
Relays contacts: 2 x 48V, 2 A  
Weight: 320 gr



[260 0040](#)

Pascal-STZ 200 Z

### Pascal-STZ 200 Z

Measurement instrument for monitoring and alarm for differential pressures in low ranges of 0 to +200 Pa (unidirectional). The measurement principle is based on a silicon membrane for static measurement. The installation is a closed system (no air mass flow). The exceeding or under-running of the **freely selectable alarm levels** are displayed by integrated LED. Two galvanic separated, corresponding to the LED, relays can be used for an external alarm installation.

#### Technical data:

Measurement range: 0 ... 200 Pa  
2 selectable thresholds  
red/green LED indicators  
2 relays (close/make contact)  
Configuration by PascalTool-Win software  
Power supply: 10.5 ... 35 VDC  
Power consumption max. 2 W  
Relays contacts: 2 x 48V, 2 A  
Weight: 320 gr



[260 0037](#)

Pascal-STVS 50 Z

### Pascal-STVS 50 Z

Same instrument with alarm functions as the Pascal-STZ 50, with additional integrated LCDisplay though. The display can be set to different units using the configuration software.

The device can also measure and display, by converting the differential pressure, the air velocity value. This setting can be done by the PascalTool WIN software.

#### Technical data:

Measurement range: 0 ... 50 Pa  
2 selectable thresholds  
red/green LED indicators  
2 relays (close/make contact)  
Configuration by PascalTool-Win software  
Display: LCD Dot Matrix  
Power supply: 10.5 ... 35 VDC  
Power consumption max. 2 W  
Relays contacts: 2 x 48V, 2 A  
Weight: 320 gr



[260 0041](#)

Pascal-STVS 200 Z

### Pascal-STVS 200 Z

Same instrument with alarm functions as the Pascal-STZ 200, with additional integrated LCDisplay though. The display can be set to different units using the configuration software.

The device can also measure and display, by converting the differential pressure, the air velocity value. This setting can be done by the PascalTool WIN software.

#### Technical data:

Measurement range: 0 ... 200 Pa  
2 selectable thresholds  
red/green LED indicators  
2 relays (close/make contact)  
Configuration by PascalTool-Win software  
Display: LCD Dot Matrix  
Power supply: 10.5 ... 35 VDC  
Power consumption max. 2 W  
Relays contacts: 2 x 48V, 2 A  
Weight: 320 gr



[260 0034](#)

Pascal-STD 50 Z

### Pascal-STD 50 Z

Measurement instrument for monitoring and alarm for differential pressures in low ranges of 0 to +50 Pa (unidirectional). The measurement principle is based on a silicon membrane for static measurement. The installation is thus a closed system (no air mass flow). The measured value goes on for controlling or data collection on a configurable **analogue output** (U: 0/2...10V / I: 0/4...20 mA). The exceeding or under-running of the free selectable alarm levels are displayed by integrated LED.

#### Technical data:

Meas. range: 0 ... 50 Pa  
Output: analogue output  
U : 0/2...10VDC (max.500 Ohm)  
I : 0/4...20mA (max.500 Ohm)  
freely scalable & adjustable  
Configuration by PascalTool-Win software  
Power supply: 10.5 ... 35 VDC  
Power consumption max. 4 W  
Weight: 320 gr



**260 0038**

Pascal-STD 200 Z

### Pascal-STD 200 Z

Measurement instrument for monitoring and alarm for differential pressures in low ranges of 0 to +200 Pa (unidirectional). The measurement principle is based on a silicon membrane for static measurement. The installation is thus a closed system (no air mass flow). The measured value goes for controlling or data collection on a configurable **analogue output** (U: 0/2...10V / I: 0/4...20 mA). The exceeding or under-running of the free selectable alarm levels are displayed by integrated LED.

#### Technical data:

Measurement range: 0 ... 200 Pa  
 Output: analogue output  
     U : 0/2...10VDC (max.500 Ohm)  
     I : 0/4...20mA (max.500 Ohm)  
 freely scalable & adjustable  
 Configuration by PascalTool-Win software  
 Power supply: 10.5 ... 35 VDC  
 Power consumption max. 4 W  
 Weight: 320 gr



**260 0035**

Pascal-STV 50 Z

### Pascal-STV 50 Z

Measurement instrument for monitoring and alarm for differential pressures in low ranges of 0 to +50 Pa (unidirectional). The measurement principle is based on a silicon membrane for static measurement. The installation is thus a closed system (no air mass flow). The measured value is displayed on a Dot Matrix LCDisplay. This value goes for controlling or data collection on a configurable **analogue output** (U: 0/2...10V / I: 0/4...20 mA). The exceeding or under-running of the free selectable alarm levels are displayed by integrated LED.

#### Technical data:

Measurement range: 0 ... 50 Pa  
 Output: analogue output  
     U : 0/2...10VDC (max.500 Ohm)  
     I : 0/4...20mA (max.500 Ohm)  
 freely scalable & adjustable  
 Configuration by PascalTool-Win software  
 Display: LCD Dot Matrix  
 Power supply: 10.5 ... 35 VDC  
 Power consumption max. 4 W  
 Weight: 320 gr



**260 0039**

Pascal-STV 200 Z

### Pascal-STV 200 Z

Measurement instrument for monitoring and alarm for differential pressures in low ranges of 0 to +200 Pa (unidirectional). The measurement principle is based on a silicon membrane for static measurement. The installation is thus a closed system (no air mass flow). The measured value is displayed on a Dot Matrix LCDisplay. This value goes for controlling or data collection on a configurable **analogue output** (U: 0/2...10V / I: 0/4...20 mA). The exceeding or under-running of the free selectable alarm levels are displayed by integrated LED.

#### Technical data:

Measurement range: 0 ... 200 Pa  
 Output: analogue output  
     U : 0/2...10VDC (max.500 Ohm)  
     I : 0/4...20mA (max.500 Ohm)  
 freely scalable & adjustable  
 Configuration by PascalTool-Win software  
 Display: LCD Dot Matrix  
 Power supply: 10.5 ... 35 VDC  
 Power consumption max. 4 W  
 Weight: 320 gr



**111 6848**

Win software

### PascalTool-Win

*Configuration program for Windows*

Configuration program PascalTool-Win to set and change the parameters in *Pascal* STS, STVS, STD, STV

->Delivered on a CD.

#### Requirements:

Windows PC with CD drive  
 Windows 95 / NT / 2000 / XP  
 Usable with Pascal STS, STVS, STD, STV

## Accessories



**111 5966** Power supply

### External power supply-EUR

90 ... 260VAC

External power supply for a voltage range of 90 to 260 VAC with Euro-plug.

The secondary side of the power supply can be connected directly to all Pascal gauges (open end cable).

#### Technical data:

Primary side:  
 Voltage range: 90 ... 260VAC  
 Euro-plug  
 Secondary side (open end cable):  
 Voltage: 24VDC +/- 5%  
 The open cable end is prepared for connection.  
 Weight: 90g



[111 5967](#) Power supply US

### External power supply-US/JP

90 ... 260VAC

External power supply for a voltage range of 90 to 260 VAC with US-Japanese plug.

The secondary side of the power supply can be connected directly to all Pascal gauges (open end cable).

#### Technical data:

Primary side (plug):  
Voltage range: 90 ... 260VAC  
US- and Japanese-plug  
Secondary side (open end cable):  
Voltage: 24VDC +/- 5%  
The open cable end is prepared for connection.  
Weight: 110g



[111 6849](#) Cable PC

### Programming cable to PC (DB9)

Programming cable for connecting a PC to a *Pascal-Switch*, *-Dat*, *-Vision* or any *Pascal-ST* type.

#### Existing of:

- Cable length: 1,5 m
- Special phone jack on Pascal
- D-Sub 9 plug on the PC side
- Weight: 95g



[252 3481](#) Zero-cal. plug

### Zero calibration plug to Pascal-ST (only for old Pascal-ST without automatic zero point calibration)

Zero calibration plug **as spare part** for zero calibration of former Pascal-ST version with following PN:  
252 1062; -1066, -1067; -1068; -1077; -1079; -1080; -1081.

The Pascal-ST firmware recognises the plug automatically and performs the zero calibration without any other additional configuration.

#### Technical data:

Special plug with internal short circuit bridge  
Weight: 10 gr  
Available separately as spare part



[111 7603](#) Factory calibration

### Factory calibration

at 3 measurement points

Factory calibration and check on a checking station under standard conditions including appropriate documents und certificates.

The calibration is performed at 3 measurement points that has to be indicated by the customer.

The factory certificate is not compliant to an official international certificate of an accredited metrology institute.

#### Technical data:

Factory calibration including certificate at 3 measurement points.  
The tests are done by a calibrated and certified reference differential pressure gauge.



[111 6333](#) plug black

### Protection plug black

Protection plus for RS-232 front socket. Colour, black.

Available for all *Pascal* models **as spare part**

#### Technical data:

Material: plastic / FPM  
Dimensions: ø 8/3.5 x 10  
Colour: black  
Weight: 0.5 gr



[111 7038](#) plug white

### Protection plug white

Protection plus for RS-232 front socket. Colour, white.

Available for all *Pascal* models **as spare part**

#### Technical data:

Material: plastic / FPM  
Dimensions: ø 8/3.5 x 10  
Colour: white  
Weight: 0.5 gr

**Attention:** This protection plug is made of silicone!