

Hydraulic Testers



**Hydraulic Testers**  
Accumulator Adaptor

## Pressure Transmitter



The PT-RF series of pressure transmitters are an alternative solution for universal pressure measurements for fluid technology applications, which will provide benefits for system operators, maintenance personnel and repair technicians as well as for original equipment manufacturers.

The advantages resulting from the use of the new technology for system operators, maintenance personnel and repair technicians are clear:

Measurements can be carried very easily, without extensive training and within a few seconds at the press of a button and then documented in a reliable process.

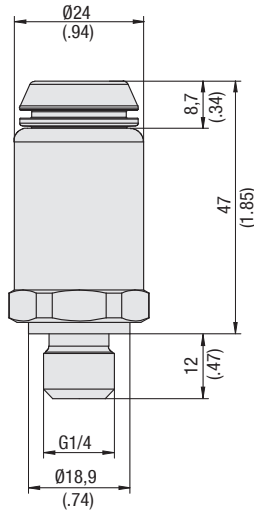
Unscrewing and re-installing pressure gauges or other measuring and display devices – practically a temporary opening of the system – is not required. Potential hazards for people, machines and the environment, for example from emitted residual oil in the test hose or leaks at the measuring point, as well as ingress of dirt into the system (e.g. in dusty environments) can be effectively excluded.

Original equipment manufacturers will also benefit from this new technology: If the pressure transmitters are installed at their factory already, the innovative technology can provide a competitive edge over alternative suppliers and open up specific advantages for the users, increasing the value retention of their own devices in the long term.

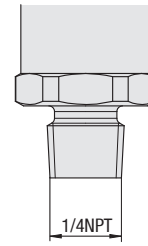
If the pressure transmitters are installed directly in the system or pipeline for permanent use, they protrude only slightly more than conventional hydraulic test couplings and meet the highest demands with regard to space requirements and weight.



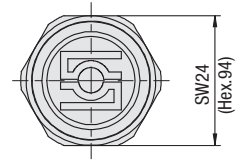
## Pressure Transmitter - Type PT-RF



Process connection G1/4 (B04)



Process connection 1/4NPT (N04)



### Product Description

The pressure transmitters from the PT-RF series are integrated into fluid technology plants and systems permanently or temporarily using the appropriate process connection adapters. The energy required for a measurement is transferred to the pressure transmitter via the antenna of the reading device using wireless RFID technology. This means that the pressure transmitters require neither internal nor external power supply and are completely maintenance-free.

### Technical Data

#### Wetted Parts

- Suitable for liquid and gaseous media

#### Materials

- Housing: Stainless Steel 1.4305
- Sealing (B04): FKM (Viton®)
- Cap: Polyamide (glass fibre-reinforced)

#### Dimensions / Weight

- Dimensions: 59 x 26 mm / 2.32 x 1.02 in
- Weight: 80 g / .18 lbs

#### Temperature Range

- Media temp. (N04): -40°C ... +135°C / -40°F ... +275°F
- Media temp. (B04): -30°C ... +135°C / -22°F ... +275°F
- Ambient temp.: -40°C ... +85°C / -40°F ... +185°F
- Storage temp.: -55°C ... +125°C / -67°F ... +257°F

#### Electrical Data

- Sampling rate: typ. 250 ms / max. 400 ms
- Long-term stability: according to IEC EN 60770-1  
max. ± 0,25 % FS\* / a
- Load cycles (10<sup>6</sup>): 10
- Vibration loading: acc. to IEC 60068-2-6 (20 g)
- Shock loading: acc. to IEC 60068-2-27 (30 g) 11ms

#### Protection Rating

- IP69 protection rating: Dust tight and protected against high-pressure and steam cleaning

### Order Codes

<b>PT</b>	-	<b>RF</b>	-	<b>B00600</b>	-	<b>B04</b>
①		②		③		④
① Series and Type Pressure Transmitter				③ Pressure Range see table		
② Version Signal transmission via RFID technology				④ Process Connection		
				G1/4		<b>B04</b>
				1/4 NPT		<b>N04</b>

### Pressure Range and Accuracies

Version	Pressure Range and Accuracies					
Pressure Transmitter PT-RF	Pressure Range (bar/PSI)	Type of Measurement	Maximum Pressure (bar/PSI)	Burst Pressure (bar/PSI)	Accuracy (±% FS*) typ.	Accuracy (±% FS*) max.
<b>B00016</b>	0 ... 16	Relative pressure	32	48	0,25	0,5
	0 ... 232		464	696		
<b>B00060</b>	0 ... 60	Relative pressure	120	180	0,25	0,5
	0 ... 870		1740	2610		
<b>B00160</b>	0 ... 160	Relative pressure	320	480	0,25	0,5
	0 ... 2320		4641	6961		
<b>B00400</b>	0 ... 400	Relative pressure	800	1200	0,25	0,5
	0 ... 5801		11603	17405		
<b>B00600</b>	0 ... 600	Relative pressure	1200	1800	0,25	0,5
	0 ... 8702		17404	26107		

Temperature behaviour: max. ± 0,2 % FS\* /10K (test condition 25 °C; 45 % v. F.)

\* FS = Full Scale

## Process Connection Adaptors for Pressure Transmitter PT-RF

Various adaptors are available in addition to the pressure transmitters from the PT-RF series, allowing connection to the known STAUFF Test 20 system as well as installation in pipes.


**SDA-20-G1/4-W3**

Adaptor for process connection G1/4 (B04) on test coupling STAUFF Test 20 (connection thread M16 x 2)


**SRS-G1/4-\*\*\*-V-G-W3**

Straight fitting with adaptor  
Note: Please replace \*\*\* with tube-Ø and series (L or S).


**SMD-20-1/4NPT-W3**

Adaptor for process connection 1/4NPT (N04) on test coupling STAUFF Test 20 (connection thread M16 x 2)

Dimensional drawing: All dimensions in mm (in).



Reader ■ Type Reader-PT-RF



Order Code

**Reader-PT-RF**

①

① Series and Type

Reader **Reader-PT-RF**

- Standard option:
- Reader-PT-RF
  - Manual and software on CD
  - Quick guide
  - USB 2.0 cable (1 m / 3.28 ft)
  - 5 V DC / 1 A power supply incl. country-specific adaptors

Technical Data

Material

- Housing made of ABS

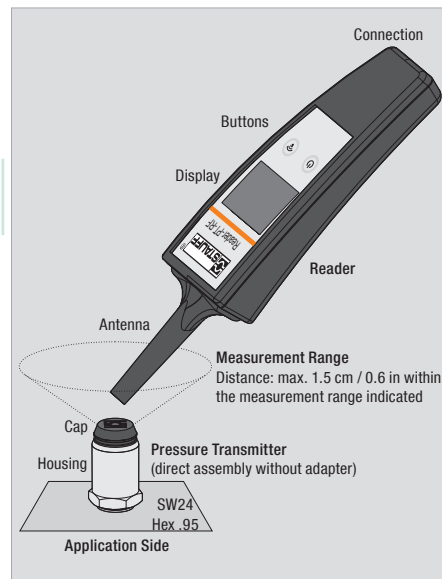
Dimensions / Weight

- Dimensions: 76 x 35 x 240 mm / 3.0 x 1.38 x 9.45 in
- Weight: 220 g / .49 lbs

Measurements / Display

- Pressure: in bar and PSI
- Temperature: in °C and °F
- Display: graphic, LED backlight
- Visible area: 55 x 46 mm / 2.17 x 1.81 in
- Resolution: 128 x 64 Pixel

Set Up



Product Description

The hand-held readers transfer the energy required for a measurement to the pressure transmitter using RFID technology. All that is required is a maximum distance of 1.5 cm / 0.6 in from the antenna to the tip of the pressure transmitter for the duration of the measurement.

When the pressure transmitter is activated by the press of a button, a current measured value is determined within only 0.5 seconds and then immediately transmitted back to the reading device together with other relevant information and then output on the illuminated display and stored. Over 15,000 of these measurement sets can be stored in the internal memory of the device.

PC Software

The software included with the delivery allows transmission of the stored measured values from the reading device to the PC, subsequent evaluation and export, e.g. to Microsoft Excel®.

Electrical Data / Interface

- Sampling rate: typ. 250 ms / max. 400 ms
- Interface: Micro USB
- EMV: EN 61326-1:2013  
EN 300330

Protection Rating

- IP65 protection rating: Dust tight and protected against water jets

Type of Measurement

Start Measurement

1. Switch on the reader using the function button.

During the brief start process, the charge state of the lithium ion battery (Battery) is shown on the display and the share of the currently occupied data memory (MemUsed) in percent as well as the current date and time.

2. Position the tip of the antenna of the reader inside the measurement range of the pressure transmitter and hold this position as long as possible during the entire measurement process.

Individual Measurement (Single Value)

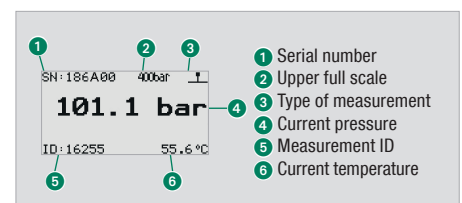
3. Start the individual measurement by tapping the function button once.

Permanent Measurement (Multiple Values)

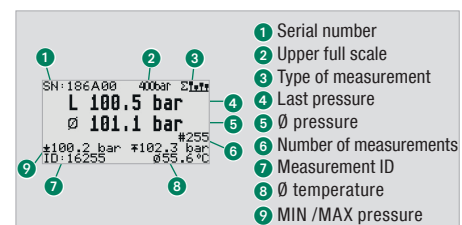
3. Start the permanent measurement by holding down the function button.

The simplest way of recognising the successful start of a permanent measurement is the change in the corresponding symbol in the upper right-hand corner of the display. The absolute number of the values determined as part of the measurement process is shown below the current pressure.

4. End a continuous measurement by releasing the function key.



Display after successful individual measurement



Display after successful permanent measurement



## Complete system ▪ Type PT-RF-SET



Complete system in case PT-RF-SET



### Product Description

The PT-RF-SET complete system is compiled in different versions according to customer requirements. All complete systems are supplied in a handy carrying case containing individually shaped foam inserts for a maximum of 10 pressure transmitters and 10 process connection adaptors and offering space for the following components:

#### Standard Option

- 1x Reader-PT-RF
- up to 3 Pressure Transmitters PT-RF
- up to 3 Process Connection Adaptors SDA or SMD
- 1x Manual and Software on CD
- 1x Quick Guide
- 1x USB 2.0 cable(1 m / 3.28 ft)
- 1x Power Supply incl. country-specific adaptors

### Order Codes

PT-RF	-	SET	-	2	-	400	/	600	/	000	-	B
①		②		③		④		⑤		⑥		⑦

<p>① <b>Series and Type</b> Series PT-RF <span style="float: right;">PT-RF</span></p> <p>② <b>Version</b> Complete system in case <span style="float: right;">SET</span></p> <p>③ <b>Number of Pressure Transmitters in the Set</b></p> <table border="1" style="width: 100%;"> <tr> <td>1x pressure transmitter</td> <td style="text-align: right;">1</td> </tr> <tr> <td>2x pressure transmitter</td> <td style="text-align: right;">2</td> </tr> <tr> <td>3x pressure transmitter</td> <td style="text-align: right;">3</td> </tr> </table>	1x pressure transmitter	1	2x pressure transmitter	2	3x pressure transmitter	3	<p>④ <b>Pressure Range / Version</b> 1<sup>st</sup> pressure transmitter <span style="float: right;">see table</span></p> <p>⑤ <b>Pressure Range / Version</b> 2<sup>nd</sup> Pressure Transmitter <span style="float: right;">see table</span></p> <p>⑥ <b>Pressure Range / Version</b> 3<sup>rd</sup> Pressure Transmitter <span style="float: right;">see table</span></p> <p>⑦ <b>Process Connection Adaptor</b></p> <table border="1" style="width: 100%;"> <tr> <td>Adaptor SDA for process connection G1/4 (B04)</td> <td style="text-align: right;">B</td> </tr> <tr> <td>Adaptor SMD for process connection 1/4NPT (N04)</td> <td style="text-align: right;">N</td> </tr> </table>	Adaptor SDA for process connection G1/4 (B04)	B	Adaptor SMD for process connection 1/4NPT (N04)	N
1x pressure transmitter	1										
2x pressure transmitter	2										
3x pressure transmitter	3										
Adaptor SDA for process connection G1/4 (B04)	B										
Adaptor SMD for process connection 1/4NPT (N04)	N										

### Pressure Transmitter: Pressure Range and Version

Pressure Range	Version of Pressure Transmitter
000	When ordering a complete system with one or two pressure transmitters, the pressure range for the 2 <sup>nd</sup> and 3 <sup>rd</sup> pressure transmitter is given as "000".
016	Version pressure transmitter: B00016 (pressure range: 0 ... 16 bar / 0 ... 232 PSI)
060	Version pressure transmitter: B00060 (pressure range: 0 ... 60 bar / 0 ... 870 PSI)
160	Version pressure transmitter: B00160 (pressure range: 0 ... 160 bar / 0 ... 2320 PSI)
400	Version pressure transmitter: B00400 (pressure range: 0 ... 400 bar / 0 ... 5801 PSI)
600	Version pressure transmitter: B00600 (pressure range: 0 ... 600 bar / 0 ... 8702 PSI)
e.g.	400 (400 bar)      600 (600 bar)      000 (0 bar)

## Spare Parts / Accessories



Case-Reader-PT-RF

### Product Description

In addition to the Charger-Set-Reader-PT-RF which is available as a spare part, the Case-PT-RF-Set is also available as an individual item for assembling a complete system later on.

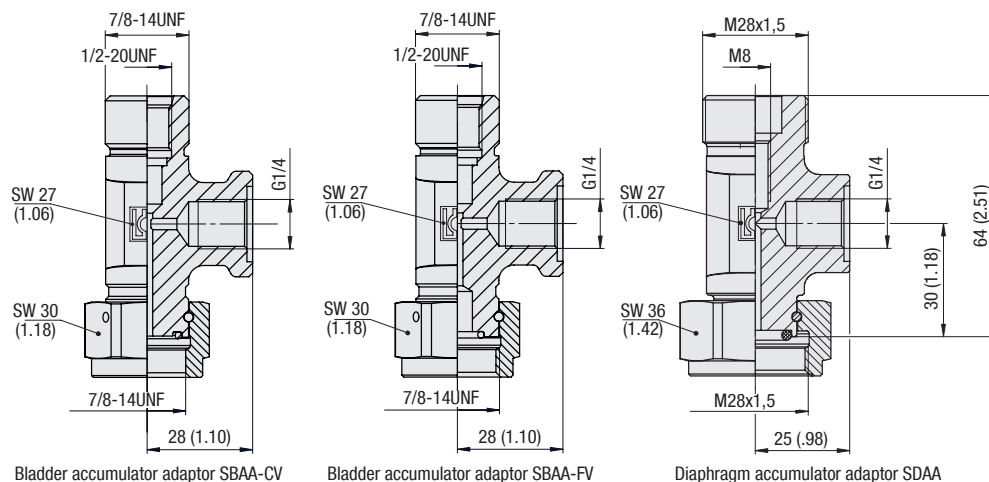
The Case-Reader-PT-RF is available if only a storage case for the reading device is required. It only provides space for the reading device and the associated accessories (without pressure transmitters and process connection adaptors).

### Order Codes

<b>Spare Parts / Accessories</b>	
①	
① <b>Spare Parts / Accessories</b>	
Case, small	Case-Reader-PT-RF
Case, large	Case-PT-RF-SET
5 V DC / 1 A power supply incl. country-specific adaptors and USB 2.0 cable	Charger-Set-Reader-PT-RF
Adaptor for pressure transmitter (B04)	SDA-20-G1/4-W3
Adaptor for pressure transmitter (N04)	SMD-20-1/4NPT-W3
Straight fitting with adaptor	SRS-G1/4-***-V-G-W3



## Accumulator Adaptor - Type SBAA / SDAA



### Product Description

Membrane and bladder accumulators are important components of modern hydraulic systems. Monitoring the nitrogen pressure level is becoming ever more important for ensuring correct operation.

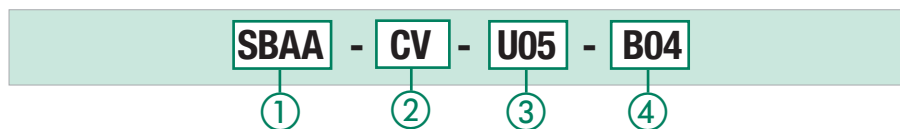
The STAUFF Accumulator Adaptor together with the PT-RF pressure sensors allow maintenance personnel to quickly and easily check the accumulator pressure without pressure loss. Pressure values, serial numbers, date and time will automatically be stored in the memory of the reader and then easily and conveniently read out on the PC later on.

For this, the Accumulator Adaptor is screwed onto the nitrogen connection of the accumulator and a PT-RF pressure sensor is attached at the side.

### Technical Data

- max. Pressure: 400 bar / 5801 PSI
- Burst Pressure: 1600 bar / 23206 PSI
- Sealing Material: NBR (Buna-N®)

### Order Codes



#### 1 Adaptor Type

STAUFF Bladder Accumulator Adaptor	<b>SBAA</b>
7/8-14UNF Connection Thread	
STAUFF Diaphragm Accumulator Adaptor	<b>SDAA</b>
M28x1.5 Connection Thread	

#### 2 Adaptor Type (only for SBAA)

for accumulators with changeable valve	<b>CV</b>
for accumulators with fixed valve	<b>FV</b>
(only for SBAA)	

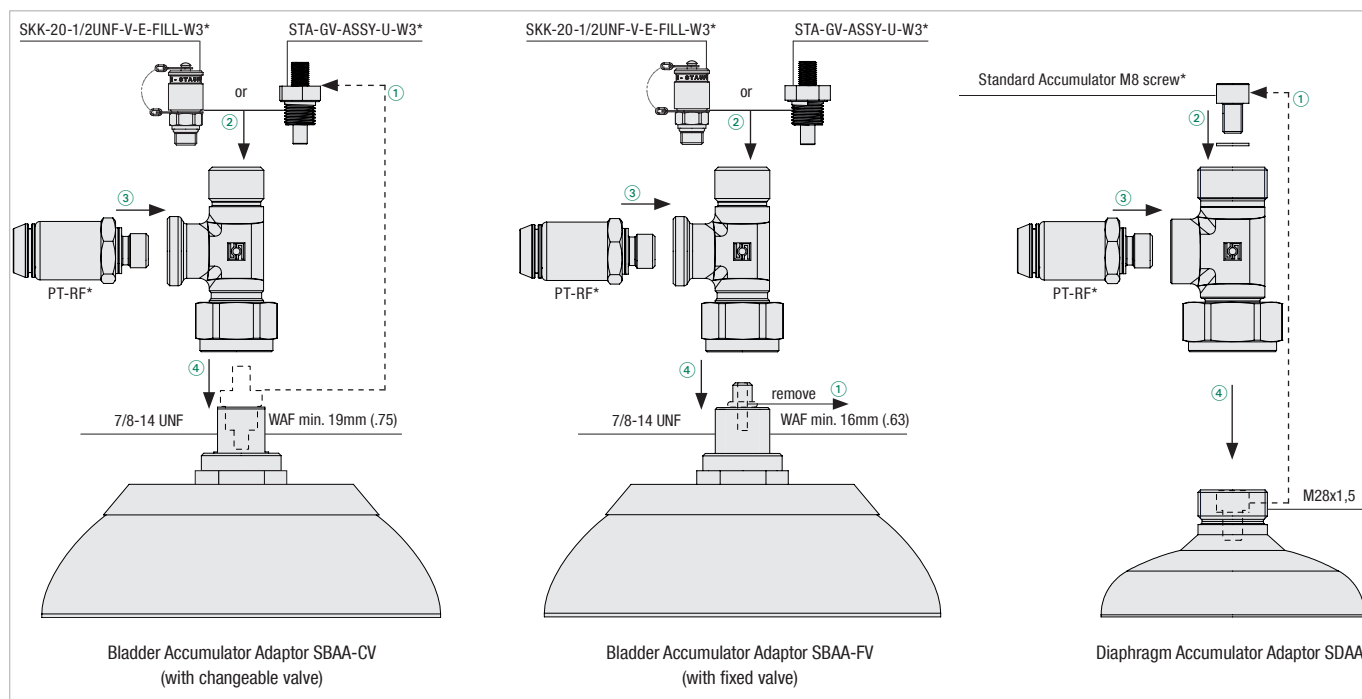
#### 3 Valve Connection Thread

1/2-20UNF (only for SBAA)	<b>U05</b>
M8 (only for SDAA)	<b>M08</b>
Other Connection Threads available on request.	

#### 4 Sensor Connection Thread

G1/4 Connection Thread	<b>B04</b>
Other Connection Threads available on request.	

### Set Up



\*not included.



## SDAA

The SDAA is designed for use with diaphragm accumulators.

To use the adaptor, the M8 screw in the accumulator has to be removed with the sealing ring and re-inserted into the upper connection of the adaptor. The adaptor is supplied with a replacement seal (BD-Ring-U02-W32-B), so worn or defective seals can be replaced. The conventional filling set is used for refilling.

## SBAA-CV

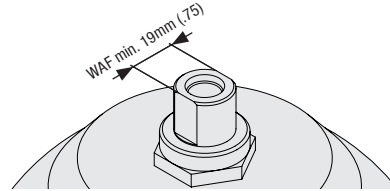
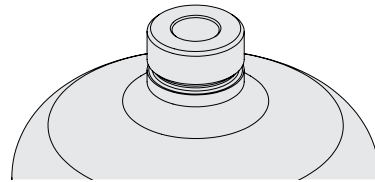
The SBAA-CV is designed for use with bladder accumulators with changeable valves. The spanner area (WAF) on the accumulator connection **cannot be smaller than 19 mm/.75 in.**

To use the adaptor, the original valve must be unscrewed from the accumulator connection, and – if it fits (external thread 1/2-20UNF) – inserted into the upper connection of the adaptor again. The conventional filling set is used for refilling. If the original valve does not have a matching thread, either a Schrader gas valve (STA-GV-ASSY-U-W3) or a test connection SKK-FILL (SKK-20-1/2UNF-V-E-FILL-W3) can be used, which are offered by STAUFF as accessories.

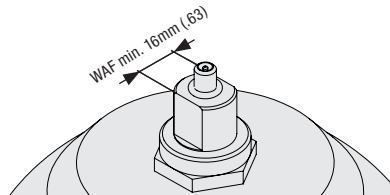
## SBAA-FV

The SBAA-FV is designed for use with bladder accumulators with a fixed valve head (7.5 mm/0.29 in). The spanner width (WAF) on the accumulator connection **cannot be smaller than 16 mm/.63 in.**

For use, the valve insert must be removed from the valve head to allow filling through the adaptor. A new valve with an external thread 1/2-20UNF must then be inserted into the upper connection of the adaptor. STAUFF offers a matching Schrader gas valve (STA-GV-ASSY-U-W3) or a test connection SKK-FILL (SKK-20-1/2UNF-V-E-FILL-W3).



!The Spanner area on the accumulator connector cannot be smaller than 19mm / .75in!



!The Spanner area on the accumulator connector cannot be smaller than 16mm / .63in!

## Accessories / Spare Parts

### Order Codes

### Accessories / Spare Parts

①

#### ① Accessories / Spare Parts

Sealing for SDAA	BD-Ring-U02-W32-B
Schrader gas valve	STA-GV-ASSY-U-W3
Test connection SKK	SKK-20-1/2UNF-V-E-FILL-W3
Test hose test coupling STAUFF Test	SGS-20/B1/4-1500-D-W3
M16x2 to G1/4 in 1,5m	
Adaptor G1/4 to W24,23	ADAPTOR-DIN477-10/G1/4-DEG60
Valve Key	Key-SBAA-Valve

## Application

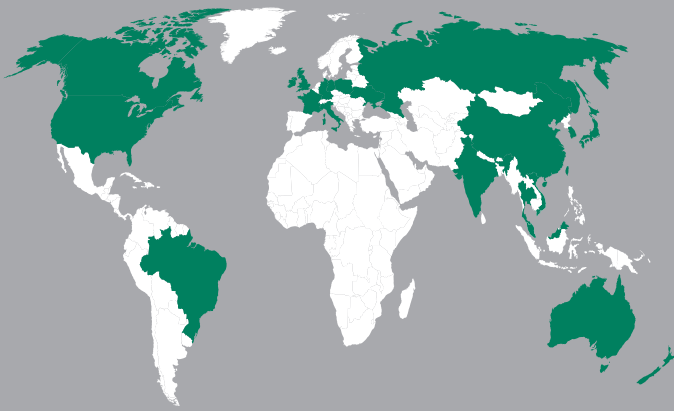


Bladder Accumulator Adaptor



Diaphragm Accumulator Adaptor





## GERMANY

Walter Stauffenberg GmbH & Co. KG  
Im Ehrenfeld 4  
58791 Werdohl  
Tel.: +49 2392 91 60  
Fax: +49 2392 91 61 60  
E-Mail: sales@stauff.com

STAUFF products and services are globally available through wholly-owned subsidiaries and a tight network of authorised distributors and representatives in all major industrial regions of the world.

You can find detailed contact information at  
[www.stauff.com](http://www.stauff.com)

## AUSTRALIA

STAUFF Corporation Pty Ltd  
Tel.: +61 2 4271 9000  
sales@stauff.com.au

## BRAZIL

STAUFF Brasil Ltda.  
Tel.: +55 11 47 72 72 00  
stauff@stauffbrasil.com

## CHINA

STAUFF China  
Tel.: +86 21 68 18 70 00  
info@stauff.com.cn

## FRANCE

STAUFF S.A.S.  
Tel.: +33 2 54 50 55 50  
direction@stauffsa.com

## INDIA

STAUFF India Pvt. Ltd.  
Tel.: +91 20 67 31 4900  
sales@stauffindia.com

## IRELAND

STAUFF Ireland  
Tel.: +44 28 92 60 69 00  
sales@stauffireland.com

## ITALY

STAUFF Italia S.r.l.  
Tel.: +39 031 65 84 94  
sales@stauff.it

## CANADA

STAUFF Canada Ltd.  
Tel.: +1 416 282 46 08  
sales@stauffcanada.com

## KOREA

STAUFF Korea Ltd.  
Tel.: +82 51 266 66 66  
info@stauff.co.kr

## MALAYSIA

STAUFF South East Asia Sdn Bhd  
Tel.: +60 3 5637 7888  
sales@stauff.com.my

## NEW ZEALAND

STAUFF Corporation (NZ) Ltd.  
Tel.: +64 9 271 48 12  
sales@stauff.co.nz

## POLAND

STAUFF Polska Sp. z o.o.  
Tel.: +48 58 660 11 60  
sales@stauff.pl

## RUSSIAN FEDERATION

STAUFF LLC  
Tel.: +7 495 276 16 50  
sales@stauff.ru

## THAILAND

STAUFF (Thailand) Co., Ltd.  
Tel.: +66 2 721 73 23  
sales@stauff.co.th

## UNITED STATES

STAUFF Corporation  
Tel.: +1 201 444 78 00  
sales@stauffusa.com

## UNITED KINGDOM

STAUFF UK Ltd.  
Tel.: +44 114 251 85 18  
sales@stauff.co.uk

## VIETNAM

STAUFF Vietnam Ltd.  
Tel.: +84 8 3948 1041  
sales@stauff.com.vn