

### PROFESSIONAL SOLUTIONS FOR CONDENSATE MANAGEMENT AND INDOOR AIR QUALITY MEASUREMENT





sauermann.us

### ABOUT US



For more than 45 years, Sauermann Group has designed, manufactured and sold products and services dedicated to the industrial and HVACR markets. The Group specifically focuses on the detection, measurement and control of indoor air quality (IAQ).

HIGH ACCURACY UNMATCHED RELIABILITY MULTIPLE APPLICATIONS **Measurement instruments:** Sauermann measurement instruments monitor a broad spectrum of indoor air quality parameters and serve a wide range of applications, from building ventilation (heating and air conditioning) systems, to cold-chain installations and combustion gas analysis. Backed by our testing laboratories and in-house research and development programme, Sauermann instruments deliver the accuracy and reliability that HVACR engineers need.

LOW SOUND LEVEL LOW FAIL RATE HIGH PERFORMANCE **Condensate management solutions:** Safe and effective condensate management for air quality systems can be a challenge. Sauermann pumps are designed to look good, while our patented piston technology delivers whisper-quiet operation and unrivalled reliability.



### OUR PRODUCTS & MARKETS

### Climate systems engineering:

Heating & air conditioning installers, inspection bodies, technical consulting firms, air treatment unit manufacturers, system tuners, operation & maintenance contractors, etc.

#### High-tech industries:

Pharmaceutical & cosmetics laboratories, electronics manufacturers, etc.

 Heavy industries: Food processing, paper, automotive, nuclear, etc. **Commercial**: Hospitals, glasshouses, museums, farms, temperature-controlled transport, etc.

### OUR EXPERTISE

#### ACCREDITED MEASUREMENT LABORATORIES, IN-HOUSE RE-SEARCH AND DEVELOPMENT



Sauermann products and services are backed by cuttingedge facilities and expertise: a team of over 20 experts working at multiple testing and calibration laboratories worldwide, and production lines in France, the United States and China.

Our in-house research and development programme – spearheaded by a young, forward-looking group of 20 engineers and 10 technicians – has three aims: to push the boundaries of innovation in ergonomic design, digital technology and connected objects, to patent our technologies, and to consistently set new standards for electronic and mechanical performance in our products.



Over 20 patents, including our oscillating piston pump technology and the foldable frame system found on our DBM 620 air flow meter.

### Over 800 sq m of laboratory space

Our experts provide adjustment and calibration services for our measurement instruments. **Customer service staff trained by our experts** Our team is here to advise and quote you for the service you need.

### After-sales service within our production lines

Our technicians maintain and repair your devices right where they're made.

#### Our measurement expertise covers a wide range of fields:

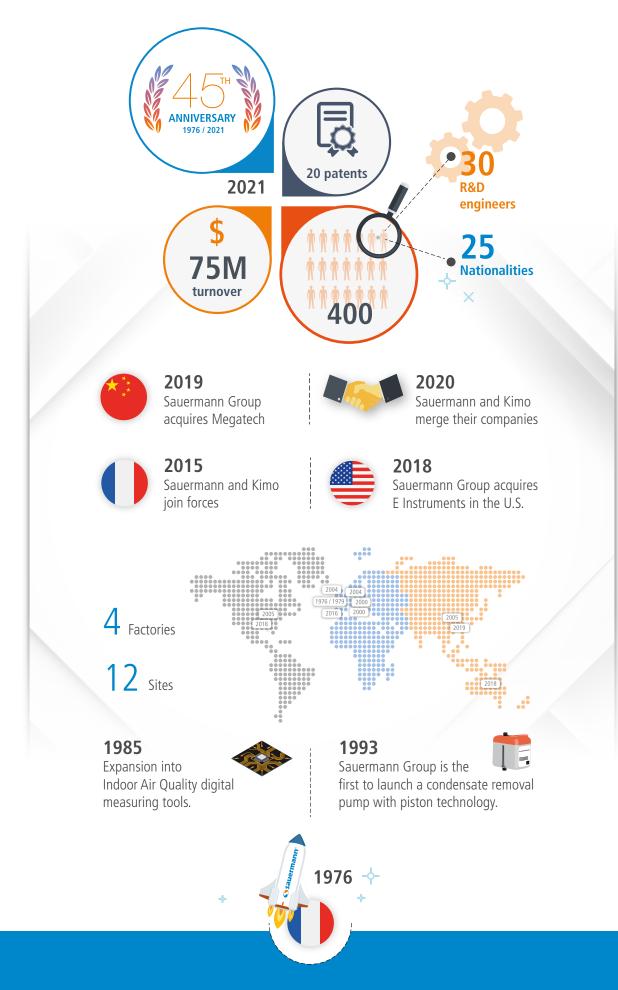
Pressure	Weighing	Air velocity	Light measurement	
Temperature	Radiometry	Air flow	Electrical current	AC DI:
Humidity	Tachometry	Gas analysis	Acoustics	TEN



Sauermann Industrie, Laboratories, located in Montpon (FR), accredited to standard NF EN ISO/ IEC 17025



### **Sauermann**<sup>®</sup>



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55	Si- 1931 Anti-biofilm solution
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# MEASUREMENT INSTRUMENTS

### Check. View. Optimise.







Heating

Ventilation Air conditioning Refrigeration



### HVACR MEASUREMENT INSTRUMENTS



# Sauermann's measurement instruments are backed by a 45-year track record in metrology, delivering unmatched reliability and a user experience that's second to none.

At Sauermann, our experience means we understand the needs of professionals the world over – and design tools to help them do their job better. Our instruments monitor the full spectrum of air quality parameters, catering to the entire HVACR and indoor air quality sector.

Indoor air quality Heat pumps Heating Healthcare High-tech industries Laboratories Transport Residential, commercial & industrial boilers Environment Refrigeration Cold chain Energy efficiency Air conditioning Research Livestock farming Combustion efficiency and emissions Agriculture



### COMBUSTION GAS ANALYSERS



DIGITAL MANIFOLDS



# HVACR measurement instruments

### It's all about simplicity

#### Pressure / Temperature / Humidity / Air velocity / Air flow rate



# Our portable HVACR instruments cover a broad spectrum of measurements, from temperature, relative humidity and pressure, to air velocity and air flow rate.

We offer a full range of easy-to-use instruments: dual input thermometer (Si-TT3), infrared thermometer (Si-TI3), thermo-hygrometer (Si-HH3), digital differential pressure manometer (Si-PM3), vane thermo-anemometer (Si-VV3), hotwire thermo-anemometer (Si-VH3), gas leak detector (Si-CD3) and refrigerant leak detector (Si-RD3).

What's more, our user-friendly Si-HVACR Measurement MobileApp displays measurement data right on your smartphone or tablet.



### Mobile app Si-HVACR Measurement MobileApp

With the Si-HVACR Measurement MobileApp, users can view and record measurements in real time.

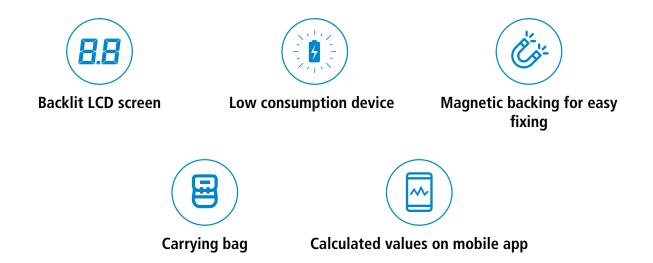
Key features:

- View parameters in user-friendly format
- Access previously saved measurements and charts (average, min. & max. values, etc.)
- Generate reports (PDF, CSV or XML) and add up to four photos









# Applications

Our devices provide everything HVACR engineers need for their routine operations



	<b>(</b>		
	Heating	Ventilation Air conditioning	Refrigeration
	Gas-fired boilers	Ventilation circuit	
	- Measure pressure at the gas inlet valve. - Measure pressure drop (draught) at the flue.	- Check filter fouling. - Measure extractor fan pressure and air flow rate. - Measure air flow in a pipe.	
i-PM3 igital differential ressure manometer	Tip : Connect a Pitot tube to the instrument t	to measure air flow in a pipe. Use the smartphone pipe coefficient.	app to calculate air flow rate by entering the
<b>N</b> 1	Hot water boilers	Multifunction	Refrigerators, freezers
	- Compare the water temperature in the boiler inlet, outlet and return pipes.	- Ambient air temperature. - Air temperature in the pipes. - Temperature in domestic hot water systems.	- Measure superheat and sub-cooling of the refrigerant gas circuit.
Si-TT3 Dual input thermocouple hermometer	Tip : A vital add-on for working	g on refrigeration systems if your manifold does no	t include a temperature probe.
	Radiators		
	- Measure radiator hot and cold spots to determine if venting is required.		
Si-TI3 nfrared thermometer	pable of checking various temperature increase	measurements delivered remotely in real time). Car es, including electrical heating. Affix a black strip o e surface (as per the manual) for accurate measurer	n non-black surfaces and adjust the emissivity
1		Ventilation	
T		- Measure ambient air temperature and relative humidity.	
Si-HH3 Thermo-hygrometer		values (too high or too low) can pose hazards (alle sychometric parameters such as dew point and wet	
<b>6 h</b>		Air conditioning circuit	
Ţ		- Measure air flow through system inlet and outlet grilles.	
5i-VV3 /ane thermo- anemometer	<b>Tip</b> : Input the pipe cross-s	section in the app to calculate average air flow rate	in addition to air velocity.
		Air conditioning circuit	
e		- Measure air flow in pipes (and temperature).	
<b>5i-VH3</b> Hotwire thermo-anemometer		is in the app to calculate average air flow rate in a ead of a vane thermo-anemometer for low-velocity	
~	Gas-fired boilers		
	Detects leaks of combustible gases upstream of the boiler, at the inlet and inside the unit.		
5i-CD3 Gas leak detector	Pay special attention to joi	e device's sensor in contact with gas pipes in even ints in the circuit. Check the condition of the filter e manufacturer's recommendations for replacing th	and replace it if necessary.
0	Heat pumps	Air-conditioning units	Refrigerators, freezers
	Dete	cts refrigerant leaks in every part of the cooling cir	cuit.

### Si - PMSDigital differential pressure manometer

This pocket-sized manometer can take two pressure measurements simultaneously, and you can connect a Pitot tube to measure air velocity and flow rate in a pipe.

#### Reference: SIPM3



Air velocity and air flow with Pitot tube (optional)

Measuring range: -150 to +150 hPa (-60 to 60 inH<sub>2</sub>O)





### SI-TT3

### Dual input thermocouple thermometer

This instrument uses thermocouple technology to take two temperature readings at once (between -200°C and 1,300°C). Ideal for checking the inlet and outlet temperatures of water heating systems.

#### **Reference:** SITT3



Dual channel K thermocouple (2 probes included)

# SI-HH3

### Thermo-hygrometer

This thermo-hygrometer is a turnkey solution for measuring temperature and relative humidity, while dew point and wet bulb temperature are calculated via the accompanying mobile app.

**Reference:** SIHH3



Measuring range: from 0 to 100%RH





## SI-TI3

### Infrared thermometer

Sauermann's Si-TI3 infrared thermometer is the ideal solution for contactless diagnosis, inspection and checking of surface temperatures.

### **Reference:** SITI3



Optical: D.S 12:1



Adjustable emissivity

## SI-VH3

### Hotwire thermo-anemometer with telescopic probe

Sauermann's palm-sized Si-VH3 hotwire thermo-anemometer comes with a highly sensitive and accurate telescopic probe that easily measures air flow rate, velocity and temperature.

#### Reference: SIVH3



### 80 cm (31.5") telescopic probe with double graduation





## SI-VV3

### Vane thermo-anemometer with built-in vane probe

This thermo-anemometer, which features a vane probe with a long cable, can be used to measure air velocity and temperature at an air vent. Air flow rate is calculated via the accompanying mobile app.

Reference: SIVV3



Air velocity and air flow meter



Large vane probe with 2 m (78.74") cable

15031

### SI-CD3

### Gas leak detector

The Si-CD3 gas leak detector is perfect for quickly and easily detecting even the slightest leaks of various combustible gases (methane, propane, isobutane, LPG and other hydrocarbons).

### Reference: SICD3



30 cm flexible probe



Adjustable alarm



# Si-RD3

### **Refrigerant leak detector**

The Si-RD3 refrigerant leak detector uncovers leaks of most common refrigerant gases to a high degree of sensitivity, including all HCFC and HFC refrigerants, R1234yf, R1234ze, R290, R600a, and 5% hydrogen–95% nitrogen mixtures (Nidron 5 and Trace-A-Gas).

#### Reference: SIRD3



30 cm flexible probe



Visual and audio alarm

# Technical information

Differential processo	Si-PM3	Si-HH3	Si-TT3	Si-TI3	Si-VV3	Si-VH3	Si-CD3	Si-RD3
Differential pressure Air velocity and air flow rate with Pitot tube (optional)	✓ ✓	-	-	-	-	-	-	-
Relative humidity	_	~	_	_	_	_	_	
Dew point		× ✓						
Absolute humidity	-	<ul><li>✓</li></ul>	-	-	_	-	-	_
Enthalpy	_	× ✓	-	-	_	-	-	-
Mixing ratio	-	~	-	-	-	-	-	-
Wet bulb temperature	_	~	_	-	_	-	-	_
NTC temperature	-	~	-	-	~	~	-	-
K thermocouple temperature	-	-	~	-	-	-	-	-
Infrared temperature	-	-	-	~	-	-	-	-
Ambient temperature	-	~	-	~	-	-	-	-
Air velocity	-	-	-	-	~	~	-	-
Air flow	-	-	-	-	~	~	-	-
Combustible gases	-	-	-	-	-	-	~	-
Refrigerant gases	-	-	-	-	-	-	-	~
Carrying bag	~	~	~	~	~	~	~	~
Magnet at backside	~	~	~	-	~	~	-	-
Auto shut-off	10 min	10 min	10 min	15 sec	10 min	10 min	0 to 120 min	15 min
Battery life	170 h	250 h	400 h	14 h	120 h	20 h	20 h	> 12 h
Mobile app	~	~	~	~	~	~	-	-
Warranty	2-year	2-year	2-year	2-year	2-year	2-year	2-year	2-year

# Measuring ranges



Differential pressure	-150 to +150 hPa -60 to 60 inH <sub>2</sub> 0	-	-	-	-	-	-	-
Air velocity with Pitot tube (optional)	2 to 80 m/s 394 to 15 748 fpm	-	-	-	-	-	-	-
Air flow rate with Pitot tube (optional)	0 to 9 999 m³/h	-	-	-	-	-	-	-
Relative humidity	-	0 to 100 %HR	-	-	-	-	-	-
Dew point	-	-40 to +60°C <sub>тd</sub> -40 to 140°F <sub>тd</sub>	-	-	-	-	-	-
Absolute humidity	-	0 to 600 g/m <sup>3</sup>	-	-	-	-	-	-
Enthalpy	-	0 to 10 000 kJ/kg	-	-	-	-	-	
Mixing ratio	-	0 to 10 000 g/kg	-	-	-	-	-	-
Wet bulb temperature	-	0 to 60°C <sub>Tw</sub> 32 to 140°F <sub>Tw</sub>	-	-	-	-	-	-
NTC temperature	-	-20 to +60°C -4 to 140°F	-	-	-10 to +60°C 14 to 140°F	-10 to +60°C 14 to 140°F	-	
K thermocouple temperature	-	-	-200 to +1 300°C -328 to 2 372°F	-	-	-	-	-
Infrared temperature	-	-	-	-40 to +500°C -40 to 932°F	-	-	-	-
Ambient temperature	-	-20 to +60°C -4 to 140°F	-	0 to 50°C 32 to 122°F	-	-	-	-
Air velocity	-	-	-	-	0,4 to 30 m/s 78,7 to 5 905 fpm	0 to 30 m/s 0 to 5 905 fpm	-	
Air flow rate	-	-	-	-	0 to 9 999 m³/h 0 to 9 999 m³/min 0 to 9 999 m³/s 0 to 9 999 cfm	0 to 9 999 m³/h 0 to 9 999 m³/min 0 to 9 999 m³/s 0 to 9 999 cfm	-	-
CH <sub>4</sub>	-	-	-	-	-	-	0 to 10 000 ppm 0 to 1% vol 0 to 20% LEL	-
Refrigerant gases		-	-	-	-	-	-	0 to 3 g/year 0 to 30 g/year 0 to 300 g/year

# Combustion gas analyzers

A new degree of efficiency

Our combustion gas analyzers are ideal for maintaining combustion equipment, covering the full range of operations in residential, commercial and industrial applications.

### Sauermann offers a range of compact and intuitive analysers to enhance your performance.

Sauermann's combustion gas analyzers feature the latest digital and metrology technologies, making measurements more reliable and cutting the amount of time heating engineers need to spend on-site. A user experience like no other!

### **Applications**

- Boilers
- Burners
- Water heaters
- Gas and diesel engines



Furnaces

- Industrial kilns
- · Industrial heating systems
- Incinerators



Commercial

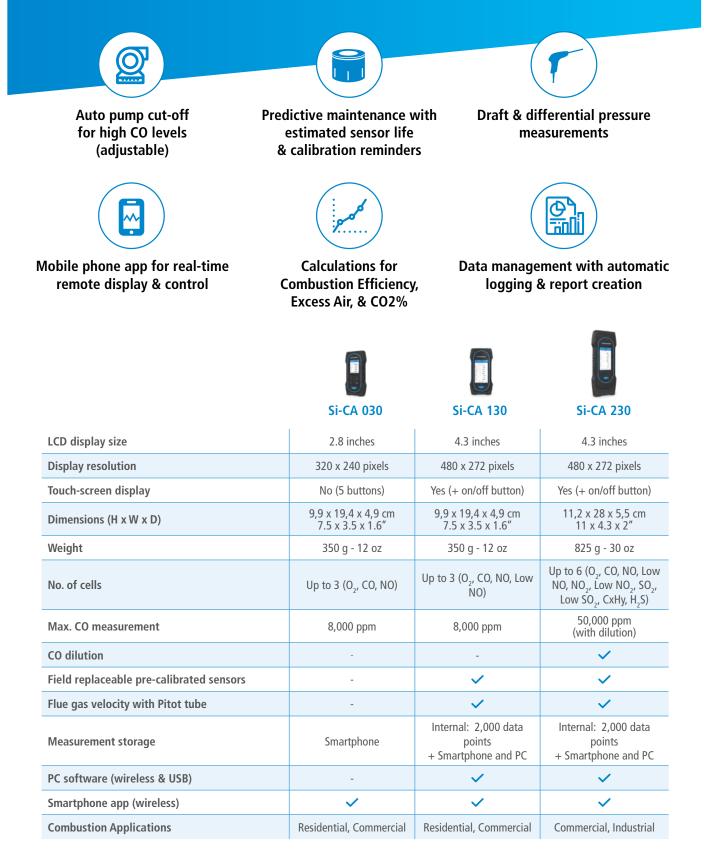
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Industrial

# Features

### Add a digital edge to your combustion analysis



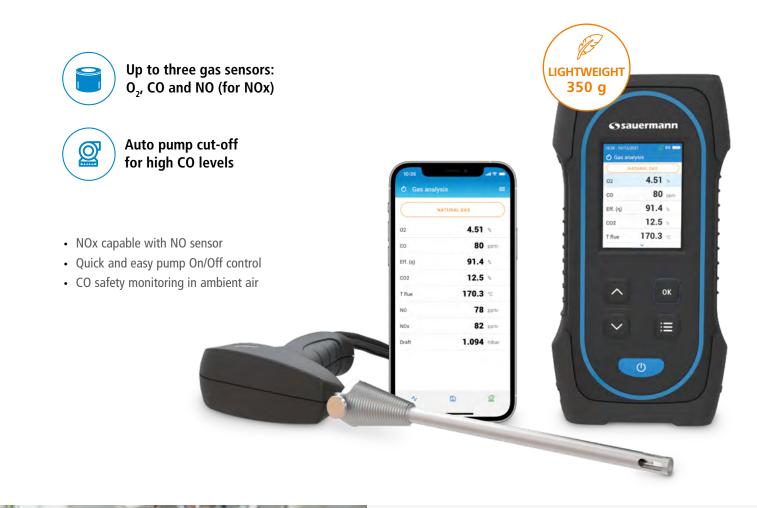
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To see our extensive range of other measurement instruments for heating applications, go to www.sauermanngroup.com

# SI-CA 030

### All the essentials for combustion gas analysis

The Si-CA 030 offers everything heating engineers need to inspect and maintain residential and commercial boilers, with wireless connection to our smartphone app and automatic generation of servicing reports and certificates.





### Common features Si-CA 030 / Si-CA 130

- Predictive maintenance with estimated sensor life
  & calibration reminders
- Draft & differential pressure measurements
- Calculated CO<sub>2</sub>% value

CO |

HD

CO safety monitoring in ambient air

CO measurement up to 8,000 ppm

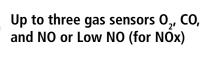
**Color display** 

# SI-CA 130

### Comprehensive, versatile analyzer with touch-screen display

The Si-CA 130 features a touch-screen display and comes with PC-based management software (in addition to the smartphone app) for more in-depth combustion gas analysis. The three field-replaceable cells and sensors offer expanded measurement capability.





Field replaceable precalibrated sensors

- Auto pump cut-off for high CO levels (user-adjustable)
- NOx capable with NO sensor (optional)
- One Touch Pump On/Off with Purge
- PC software with wireless and USB connectivity
- Graphical data display
- Customisable gas analysis screen

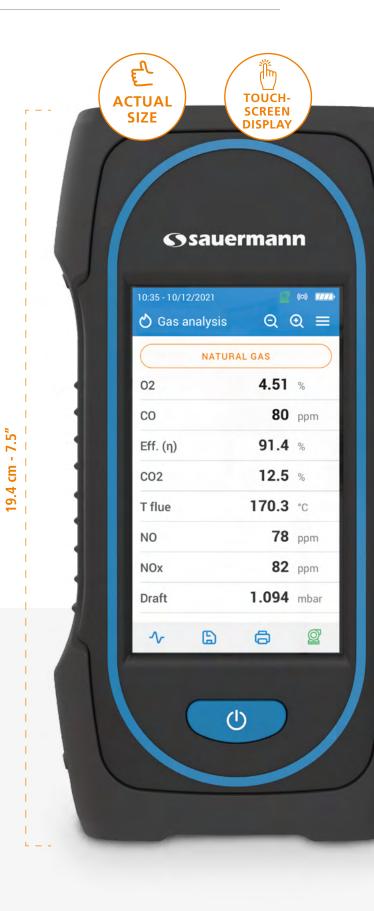
- Combustion efficiency and excess air calculations
- Protective rubber casing

<u>₽</u>

- Maintenance agreements and extended warranties available
- Emissions values adjusted for reference O<sub>2</sub>



Lightweight, only 350 g (12 oz)



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# SI-CA 230

### State-of-the-art, industrial emissions analyzer

With up to six gas sensors and expanded measurement capabilities, the Si-CA 230 is well suited for boilers, burners, engines, and other industrial combustion applications. And with support for more gases and a high CO tolerance threshold, its versatility makes it the ideal choice across commercial and industrial applications.



CO

Up to Six Gas Sensors. Can inlcude  $O_2$ , CO, NO, Low NO, NO<sub>2</sub>, Low NO<sub>2</sub>, SO<sub>2</sub>, Low SO<sub>2</sub>, H<sub>2</sub>S, and CxHy

CO Dilution auto-range with measurements to 50,000 ppm



Total NOx & Low NOx Capable

Field Replaceable Pre-Calibrated Sensors



### Features: Si-CA 230

- Ergonomic, light weight, & durable design
- Data management with automatic logging & report creation

тоисн-

SCREEN DISPLAY

E

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4.51 80 91.4

12.5

170.3

78 4 82

- Predictive maintenance with estimated sensor life & calibration reminders
- One touch pump On/Off with purge

4.51

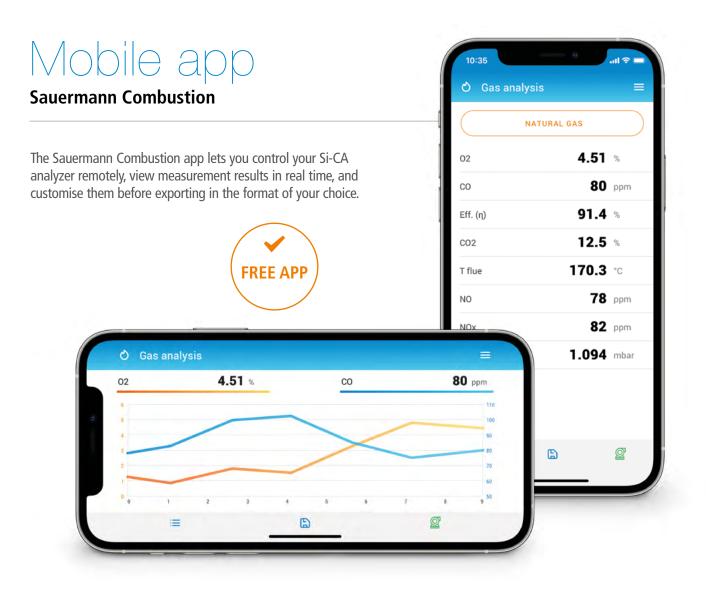
91.4

12.5 ×

82 ....

17 1.094

- PC software with wireless and USB connectivity
- Auto pump cut-off for high CO levels
- · Graphical data display
- Customisable gas analysis screen
- Stack gas velocity with Pitot tube
- · Draft and differential pressure measurements
- Emissions values adjusted for reference O<sub>2</sub>
- CO safety monitoring in ambient air
- Protective rubber holster
- · Maintenance contracts and extended warranties available



- Free apps for iOS & Android mobile devices
- PC software with USB & wireless connectivity
- Fast, easy wireless connection
- Remote live view of combustion analysis data as list or graph
- Remote control to change settings
- Data saving, including automatic logging
- Report creation in PDF, CSV (for Excel) and XML formats
- Databases for customers, operators, & equipment

### Download Sauermann Combustion app





# Warranty

All devices come with a two-year warranty against manufacturing defects (subject to assessment by our after-sales department).

To find out more about our extended warranties and maintenance plans, please visit our website, or contact our Customer Service Department.





# Selection guide

echnical informa	1001		and the second s	a strategy	
		Si-CA 030	Si-CA 130	Si-CA 230	
Parameter	Measuring range				
# of Gas Sensors		2 - 3	2 - 3	2 - 6	
02	0 to 25%	~		~	
CO	0 to 8000 ppm	~	~	-	
CO (H <sub>2</sub> comp.)	0 to 10,000 ppm	-	-	~	
CO (with dilution)	100 to 50,000 ppm	-	-	~	
CO <sub>2</sub> (calculated)	0 to 99.9%	~	~	~	
NO	0 to 5000 ppm	~	~	~	
Low NO	0 to 300 ppm	-	~	~	
NO <sub>2</sub>	0 to 1000 ppm	-	-	~	
Low NO <sub>2</sub>	0 to 100 ppm	-	-	~	
NOx (calculated)	0 to 7500 ppm	~	~	~	
Low NOx (calculated)	0 to 450 ppm	-	~	~	
SO <sub>2</sub>	0 to 5000 ppm	-	-	~	
Low SO <sub>2</sub>	0 to 100 ppm	-	-	~	
CxHy (HC)	0 to 5%	-	-	~	
H <sub>2</sub> S	0 to 500 ppm	-	-	~	
Flue temperature	-20 to +1250 °C / -4 to +2282 °F	~	~	~	
Air temperature	-40 to +120 °C / -40 to +482 °F	~	~	~	
Differential temperature	0 to 1250 °C / 0 to 2282 °F	~	~	~	
Pressure/Draft	-200 to 200 mbar / -80 to 80 inH <sub>2</sub> 0	~	~	~	
High accuracy draft	-500 to +500 Pa	-	~	~	
Excess air	0 to 999%	~	~	~	
Efficiency	0 to 100% (Gross/HHV)	~	~	~	
Efficiency (condensation)	0 to 125% (Net/LHV)	~	~	~	
Stack Gas velocity	0 to 99 m/s / 0 to 19,500 fpm	-	~	~	
Application		Residential/ Light Commercial	Residential/ Commercial	Commercial/ Industrial	

#### Features

Wireless Printer	Optional	Optional	Optional
Field-Replaceable Pre-Calibrated Sensors	-	~	$\checkmark$
Real time display of data on the smartphone Definition of App Store	~	~	~
PC Software	-	~	$\checkmark$
Automatic Data Logging	~	~	~
Rechargeable Battery w/ AC Charger	~	$\checkmark$	$\checkmark$

# Available kits

### 20 main packs

27496	SICA 030 KIT 2AS	0 <sub>2</sub> /CO	180	Vinyl	Si-CA 030 Gas Analyzer Kit 2AS, includes two gas sensors (02, CO), 180mm Probe rated to 800C with 2m dual hose, vinyl carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27498	SICA 030 KIT 2BS	0 <sub>2</sub> /CO	300	Vinyl	Si-CA 030 Gas Analyzer Kit 2BS, includes two gas sensors (02, CO), 300mm Probe rated to 800C with 3m dual hose, vinyl carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27501	SICA 030 KIT 3AS	0 <sub>2</sub> /CO/NO	180	Vinyl	Si-CA 030 Gas Analyzer Kit 3AS, includes three gas sensors (02, CO, NO), 180mm Probe rated to 800C with 2m dual hose, vinyl carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27507	SICA 130 KIT 2AS	0 <sub>2</sub> /CO	180	Vinyl	Si-CA 130 Gas Analyzer Kit 2AS, includes two gas sensors (02, CO), 180mm Probe rated to 800C with 2m dual hose, vinyl carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27508	SICA 130 KIT 2AH	0 <sub>2</sub> /CO	180	ABS	Si-CA 130 Gas Analyzer Kit 2AH, includes two gas sensors (O2, CO), 180mm Probe rated to 800C with 2m dual hose, ABS hard plastic carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27509	SICA 130 KIT 2BS	0 <sub>2</sub> /CO	300	Vinyl	Si-CA 130 Gas Analyzer Kit 2BS, includes two gas sensors (02, CO), 300mm Probe rated to 800C with 3m dual hose, vinyl carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27510	SICA 130 KIT 2BH	0 <sub>2</sub> /CO	300	ABS	Si-CA 130 Gas Analyzer Kit 2BH, includes two gas sensors (O2, CO), 300mm Probe rated to 800C with 3m dual hose, ABS hard plastic carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27511	SICA 130 KIT 3AS	0 <sub>2</sub> /CO/NO	180	Vinyl	Si-CA 130 Gas Analyzer Kit 3AS, includes three gas sensors (O2, CO, NO), 180mm Probe rated to 800C with 2m dual hose, vinyl carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27512	SICA 130 KIT 3AH	0 <sub>2</sub> /CO/NO	180	ABS	Si-CA 130 Gas Analyzer Kit 3AH, includes three gas sensors (O2, CO, NO), 180mm Probe rated to 800C with 2m dual hose, ABS hard plastic carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27522	SICA 2302	0 <sub>2</sub> /CO	300	ABS	Si-CA 230 Analyzer includes two gas sensors (O2, CO), 300mm Probe rated to 800C with 3m dual hose, ABS hard plastic carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27597	SICA 2303N	0 <sub>2</sub> /CO/NO	300	ABS	Si-CA 230 Analyzer includes three gas sensors (O2, CO, NO), 300mm Probe rated to 800C with 3m dual hose, ABS hard plastic carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27598	SICA 2303NL	0 <sub>2</sub> /CO/LNO	300	ABS	Si-CA 230 Analyzer includes three gas sensors (O2, CO, Low NO), 300mm Probe rated to 800C with 3m dual hose, ABS hard plastic carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27599	SICA 2304ND	0 <sub>2</sub> /CO/NO/ NO <sub>2</sub>	300	ABS	Si-CA 230 Analyzer includes four gas sensors (O2, CO, NO, NO2), 300mm Probe rated to 800C with 3m dual hose, ABS hard plastic carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate
27600	SICA 2304NS	0 <sub>2</sub> /CO/NO/ SO <sub>2</sub>	300	ABS	Si-CA 230 Analyzer includes four gas sensors (O2, CO, NO, SO2), 300mm Probe rated to 800C with 3m dual hose, ABS hard plastic carrying case, rubber holster, water trap with filter, charger with plug set, USB-C cable, quick reference guide, calibration certificate

## Accessories

### Customize your own analyzer

 $\left| + \right|$ 

Our combustion gas analysers are available in many different configurations, with a wide range of accessories to choose from. Contact our Customer Services team for more information about our kits and accessories, and for guidance on choosing the right options for your needs.

		CA	30 sica	30 . AI	30
Référence	Туре	S	S	S	
27532 (180 mm) 27533 (300 mm) 27534 (750 mm) 27535 (1 m) 27536 (1.5 m)	Probe sizes: 180 mm, 300 mm & 750 mm, and 1 m & 1.5 m	~	~	~	
27936	180 mm flexible probe	~	~	~	7
27544	Draft probe	~	~	~	PO
24646	Smart air temperature probe with 2 m cable	~	~	~	
27865	Pt100 temperature probe	~	~	~	
27547	Ambient CO probe	~	~	~	
27548	Ambient CO <sub>2</sub> probe	~	~	~	
27546	Wireless printer	~	~	~	Ś
27537	Double tube extension, 3 m	~	~	~	
27538	Differential pressure kit	~	~	~	Q
11994	Smoke pump	~	~	~	
26811	SCU for condensate removal	~	~	~	

24

# Applications A range of products for all kinds of combustion equipment









### Digital manifold The future of climate systems engineering

Vacuum / Temperature / Pressure



Countries around the world are constantly tightening regulations on refrigerants in an effort to protect the planet. When it comes to complying with these rules, refrigeration engineers are on the front line. And the manifold is their instrument of choice.

Our digital manifold and vacuum probes combine the capabilities of multiple instruments into one, significantly reducing the size of engineers' toolboxes.

With their user-friendly design and ability to capture and report multiple parameters at once on a mobile app, these instruments are the all-in-one solution that HVACR specialists need.

# Product overview

### The ultimate all-in-one solution





### Si-RM3

Smart wireless manifold probes with dual valves



### Si-RM13

Combined manifold with smart wireless probes and 2-channel by-pass



### Si-RV3

Smart wireless vacuum probe with dual valves







### SMART PROBES

### SI-RM3

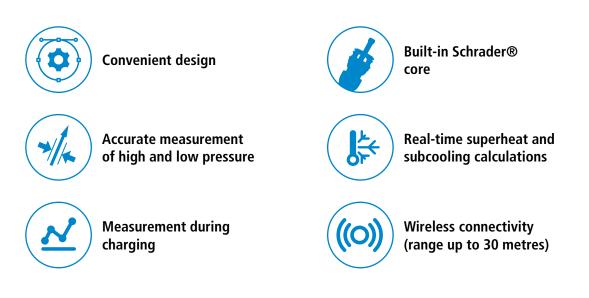
### Smart wireless manifold probes with dual valves



The new Si-RM3 digital manifold from Sauermann provides installers with an ergonomic tool that fits into tight and compact places, an Si-Manifold app with wireless connectivity up to a range of 30 metres, and the ability to take a number of important readings in an all-in-one device.

It includes two pressure probes that precisely measure high side and low side pressure (from -1 to 60 bar) and instantly display the condensation/evaporation temperatures for up to 126 refrigerants on the Si-Manifold App, including new low global warming potential (GWP) and natural refrigerants. Two temperature probes are used to accurately and simultaneously provide real-time superheat/subcooling calculations on the Si-Manifold app during the refrigeration process. A second connector allows for the charging and discharging of the refrigerant, and a built-in Schrader® core avoids leakages when you connect the hose.

Reference : 25555







### Accurate measurements of high and low pressure

Two pressure probes make this possible and provide condensation/evaporation temperatures.

### Measurement during charging

A second connection allows charging of the system, and the built-in Schrader® core prevents leaks during connection/disconnects.





### Real time superheat and subcooling calculations

Two temperature probes used with the Si-Manifold app make this possible and eliminate the need for manual calculations.

### **Technical data**

	Si-RM1
Measuring range	-1 to 60 bar
Pressure sensing accuracy	$\pm 0.5\%$ of full scale
Overload	65 bar
Burst pressure	150 bar
Battery life	250 h
Protection	IP54

	Si-RM2
Measuring range	-40 to 150°C
Temperature accuracy	±1.3°C
Temperature sensor	High-accuracy NTC thermistor
Pipe diameter	6 to 42 mm
Cable	2 m length
Protection	IP54

### VACUUM MEASUREMENT

Air conditioning Heating Refric

Refrigeration

# SI-RV3

Smart wireless vacuum probe with dual valves

Sauermann's Si-RV3 vacuum probe supports the quick, safe evacuation of refrigeration systems and heat pumps with highly accurate measurements.

It has an ergonomic design, an excellent Si-Manifold app with wireless connectivity up to a range of 30 metres, and a high-precision Pirani® sensor that provides deep vacuum measurements. It also provides H2O evaporation temperature on the Si-Manifold app in real time.

A second connector allows for the discharging of the refrigerant, and a built-in Schrader® core avoids any gas leakages when you connect the hose.

### Reference : 25554



Measuring range	25 000 to 5 microns
Pressure sensing accuracy	$\pm 10\%$ of the measured value $\pm 10$ microns
Overload	10 bar
Burst pressure	27,5 bar
Battery life	250 h
Protection	IP54



Download the Si-Manifold





### COMBINED MANIFOLD



# Si-RM13

Combined manifold with smart wireless probes and 2-channel by-pass

Sauermann's Si-RM13 combines the sturdiness of the analogue manifold with the Si-RM3's smart wireless manifold probes.

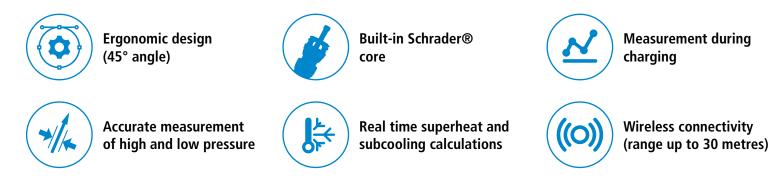
In this premium package, installers can take advantage of both devices.

It includes a traditional 2-channel analogue manifold body (by-pass type) with flexible hoses and a durable block made of anodized aluminium.

Installers can also utilize the numerous benefits from the smart wireless manifold probes for pressure and temperature measurements, as well as the Si-Manifold App.



#### Reference: 25558



### Accessories for our manifold range



#### R410 gas connector

Reference: 25830

• Adaptation connector for R410 gas



**Flexible hoses** 

#### Reference: 25831

- Set of 3 flexible hoses
- 1 m length
- With stop valves



#### Velcro® temperature probe

#### Reference : 26140

- Temperature probe for large diameter pipes
- -40 to 150°C



#### **Extension cable**

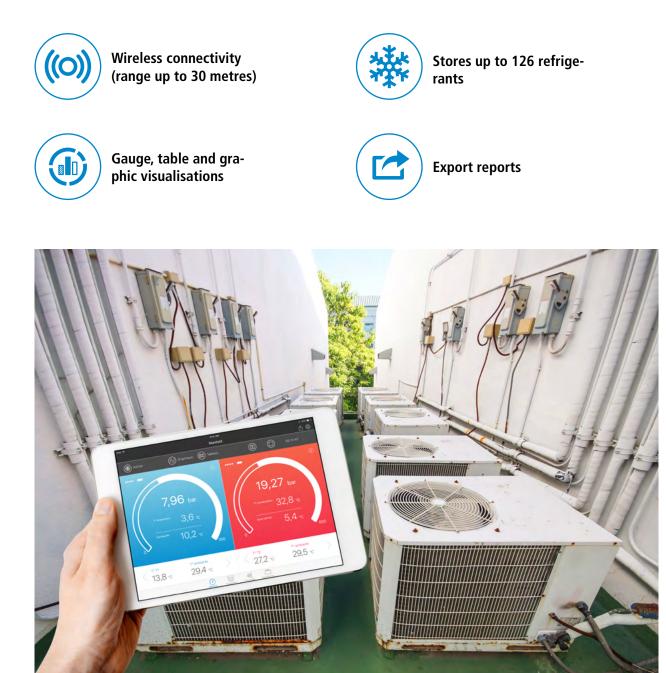
#### Reference: 26141 • 5 m length

# Si-Manifold

### All-in-one mobile app

The Si-Manifold app for iOS and Android provides wireless connectivity up to a range of 30 metres. It has the ability to store and update up to 126 refrigerants, including environmentally-friendly low global warming potential (GWP) and natural refrigerants.

Pressure, condensation/evaporation, pipe, and ambient temperatures are instantly provided on the Si-Manifold app, as are vacuometer measurements. Providing these measurements eliminates the need for manual calculations.





### **User friendly**

Easy-to-read digital gauge, table and graphic visualisations.

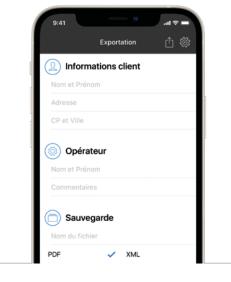
### Everything you need in one app

- Data logging
- Tightness test
- Pressure target settings
- Vacuum function
- Heating and cooling functions
- etc.



### Save and export

- Export reports in PDF, CSV and XML formats for sending by email.
- Dataset can be saved and restarted. This function is very useful for long operations.





### Download the Si-Manifold





# CONDENSATE REMOVAL PUMPS

### Detect. Remove. Protect.







Air conditioning

Heating Refrigeration





MINI PUMPS

TANK PUMPS



### Our condensate removal pumps feature a cutting-edge design that makes them global best-sellers.

Sauermann pumps are compatible with all condensate-generating systems, from domestic air conditioning units to powerful industrial-grade combustion boilers. Drawing on 45 years of experience in designing condensate removal pumps, our R&D team has developed a range of products that strike the perfect balance between versatility, flexibility, power and reliability.





### Mini pumps Exclusive technology, unmatched reliability

Detect and remove condensates from air conditioning units



Our range is compatible with all types of indoor and outdoor system, including all console, split and cassette-type air conditioning units. All our condensate removal pumps are discreet in design, quick and easy to maintain and built to last.

Some of the most reliable mini pumps money can buy

### Mini pumps A solution for every application

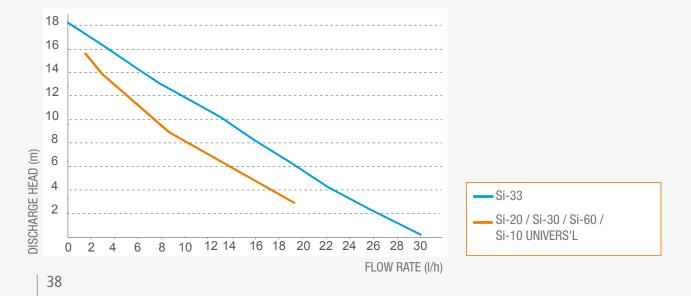


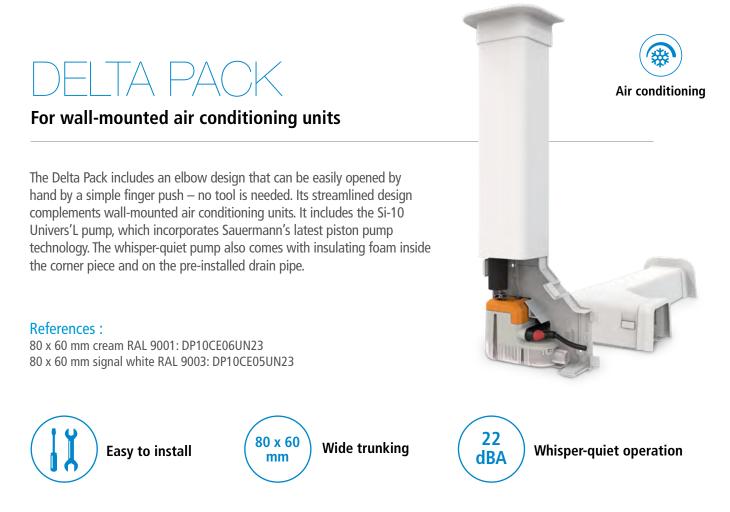
# Applications

### Mini pumps

		Equipment						Location			
		Air conditioning									
		Wall-mounted	Cassettes	Cabinet coolers	Floor-standing	Ducted unit	Suspended ceiling unit	Inside the unit	Wall-mounted (in trunking)	Wall-mounted (under the unit)	False ceiling
	DELTA PACK	х							x		
	Si-10 UNIVERS'L		х		х	х	х	x			x
	OMEGA PACK	х								x	
	Si-20	Х					х	x	x		
<b>*</b>	Si-30 Si-33	х			х		х				x
	Si-60			х	х	х		x			x
	PE5000 PE5100 PE5200	х	х								x

### Actual flow rates





#### **DELTA PACK kit content**

Si-10 Univers'L piston pump - Clear PVC tube (int. Ø 6 mm, L: 1 m, foam-insulated over 800 mm), fitted with a "drain safe device" connector - 1.5 m lockable plug-in power cable, with 2 power wires and 2 NC safety contact wires - 2-part elbow - Ceiling duct cover - Rubber elbow/split gasket - 650 mm rubber tube (int. Ø 15 mm) - Vent pipe - 6 screws and plugs for fixing duct and elbow - 4 double wire clamps Ø 16 mm, 1 double wire clamp Ø 6 mm - 750 mm duct, 80 x 60 mm.

## SI-10 UNIVERS'L

#### Replacement pump for trunking corner pieces

For wall-mounted and floor-standing air conditioning units

The Si-10 Univers'L can replace the majority of corner piece-mounted pumps. It is also suitable as a replacement for Sauermann's Si-10 and SI 1082 models.

Reference : SI10CE03UN23



Universal



#### Technical data

	Si- 10 UNIVERS'L
Maximum flow rate	20 l/h
Maximum discharge head	10 m (flow rate = 4 $l/h$ )
Pump sound level at 1 m	22 dBA
Detection levels (mm)	ON: 16, OFF: 11, Safety: 19
Mains supply	230 V ~ 50 Hz 14 W
Thermal protection	115°C (auto-reset)
Protection	IPX4

## OMEGA PACK



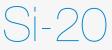
#### Under-unit installation for wall-mounted air conditioners

The Omega Pack is designed for installation under a mini-split air conditioning unit. The onboard Si-20 pump features Sauermann's latest technology for proven reliability, while the pack comes with the full range of installation accessories including an anti-siphon device for hydraulic connection you can trust. The white box matches the colouring of the latest-generation wall-mounted air conditioning units.



#### OMEGA PACK kit content

Si-20 piston pump with anti-vibration rubber dampers - Clear PVC tubing (int. Ø 6 mm, L: 60 mm), fitted with a pre-mounted "drain safe device" connector - Detection unit with installation kit (90° rubber elbow, 3 double wire clamps, 3 tie wraps) - Power cable with NC safety contact wire - Shell (2-part: backplate and cover) - Screws and plugs for affixing backplate.



#### **Piston pump**

The slim design of the Si-20 allows it to easily fit inside most air conditioning units. It can also be installed alongside the unit inside trunking. The pump is fitted with exclusive dampers designed to reduce noise caused by vibration.

#### Reference : SI20CE01UN23



#### Technical data

	Si-20
Maximum flow rate	20 l/h
Maximum discharge head	10 m (flow rate = 4 $l/h$ )
Pump sound level at 1 m*	22 dBA
Detection levels (mm)	ON: 16, OFF: 11, Safety: 19
Mains supply	230 V ~ 50 Hz 14 W
Thermal protection	115°C (auto-reset)
Protection	IP20

## SI-30 / SI-33

#### Mini pumps with float detection

The pump mechanism inside the Si-30 and Si-33 models is specially designed by Sauermann to remove condensates produced by air conditioning units.

#### **References** :

Si-30 : SI30CE01UN23 Si-33 : SI33CE01UN23

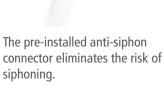




Patented Sauermann technology, specifically designed for removing condensates from air conditioning systems.



Proven reliability



Ultra-reliablinstallation

Ultra-reliable

The mounting plate means the pump can be mounted on a wall, hung on the ceiling or affixed directly to a pipe.



#### **Technical data**

	Si-30	Si-33	
Maximum flow rate	20 l/h	30 l/h	
Maximum suction height	3 m	3.3 m	
Maximum discharge head	10 m (flow rate = 4 l/h)	> 13 m (flow rate = 8 l/h)	
Pump sound level at 1 m*	20 dBA	34 dBA	
Detection levels (mm)	ON: 16, OFF:	11, Safety: 19	
Mains supply	230 V ~ 50 Hz 14 W	230 V ~ 50 Hz 21 W	
Protection	IP	20	

#### Kit content

Pump - Clear PVC tubing (int. Ø 6 mm, L: 1 m), fitted with a pre-mounted "drain safe device" connector - Anti-vibration mounting bracket - 1.5 m lockable plug-in

m lockable plug-in power cable with NC safety contact wires - 6 tie wraps - Detection unit (SI2958) with installation kit: rubber elbow 90° (int. Ø 15 mm, L: 60 mm), vent tube, mounting rail, adhesive.



# SI-60



#### For ducted air conditioning systems and cabinet coolers

The Si-60 pump with built-in tank (0.37 L) is suitable for air conditioning units up to 20 kW. This pump is equipped with Sauermann's piston pump technology specifically designed for removing condensates, and with a reliable anti-clogging detection system for use in all types of environment. Its compact, sleek design makes it a breeze to handle, while the wide range of hydraulic connectors means this pump is easy to install in any location.

#### Reference : SI60CE01UN23



Twist-lock power cable for secure connection.



Reliable anti-clogging detection system for use in all types of environment.



Top and bottom condensate inlet. Can also be installed directly in the tray.





Innovative detection Fits into any location

#### Kit content

Pump - Lockable plug-in 1.5 m cable with NC safety contact wires - Installation kit: adapter (int. Ø 15-20-24-32-40 mm), 90° rubber connector (int. Ø 15 mm, L: 60 mm), 90° plastic connector for int. Ø 6 mm flexible tube, 1 2.5 × 100 mm tie wrap.



#### **Technical data**

	Si-60
Maximum flow rate	20 l/h
Maximum discharge head	10 m (flow rate = 4 $l/h$ )
Pump sound level at 1 m*	< 38 dBA
Detection levels (mm)	ON: 28, OFF: 24, Safety: 35
Mains supply	230 V ~ 50 Hz 14 W
Protection	IPX4

\*According to EN ISO 3744. Measured at LNE lab, pump operating with water, out of application. Suitable as a replacement for an EE 1650 model.



# PE 5000 / PE 5100 PE 5200

### Peristaltic pumps for wall-mounted split units, suspended ceiling units, ducted units and cabinet coolers up to 8 kW

These peristaltic pumps are among the most compact models money can buy. They combine whisper-quiet operation with practical and clever design features: the detachable and replaceable head (PE 5001) and tubes (PE 5002) reduce maintenance work and cost. The PE 5000 is controlled by a signal from the air conditioning compressor.

The PE 5100 is equipped with two temperature probes. The PE 5200 is controlled by a remote detection unit fitted with a 3-level float (on/off/alarm).



#### **Kit contents**

Common items included in installation kit: Pump - Cable (1.7 m) including 2 power supply wires- Sliding plastic bracket - Adapter ( $\emptyset$  15 - 6 mm), pale yellow rubber (35 mm,  $\emptyset$  15 mm).

Additional items in PE 5100 kit: 3.5 m cable for 2 thermal probes (ambient air cap and cold air cap).

Additional items in PE 5200 kit: Detection unit with 3-level float - Power supply cable (1.5 m) with NC safety contact - Detection unit installation kit: vent tube (75 mm,  $\emptyset$  4 x 6 mm), self-adhesive mounting rail.

Removable and replaceable heads and tubes:

PE5002 : replacement tube PE5001 : replacement tube

#### Technical data

	PE 5000 / PE 5100 / PE 5200
Maximum flow rate	6 l/h
Maximum discharge head	12 m
Pump sound level at 1 m*	≤ 30 dBA
Detection levels PE 5200 (mm)	ON: 16, OFF: 11, Safety: 19
Mains supply	230 V~ 50/60 Hz -75 W
Protection	IPX4

### Tank pumps Powerful and built to last

#### For managing large volumes of condensate



# Sauermann tank pumps are built for power and durability, so they can withstand even the toughest conditions.

Our tank pumps are specially designed for high-powered air conditioning, heating and refrigeration systems that generate large volumes of condensate. They're also built to handle hot, acidic, biofilm-heavy and other special types of condensate.

### Applications Keep complex systems protected

Capacity			Equipment						Location					
										A Charles				
				Air-c	ond.	Неа			Ref	rig.				
		Domestic use	Intensive use	Domestic air conditioning	Cassette Ducted unit Multi-cassette system	Domestic gas-fired conden- sing boiler	Domestic oil-fired conden- sing boiler	Dehumidifier	Small refrigerated display cabinet	Large refrigerated display cabinet	Floor-standing	Wall-mounted	Under-unit	In-unit
1	Si-83	x		x		Х					Х	х	х	
	Si-82		x		x	x		x	x		x	x		
	SI 1805		x		x	x			x				х	
	SI 1830		х				x					x	х	x
	Si 1850		x		x	x				x	x			
	Si-1931		x							x	x		х	



## SI-82



### For cassette, multi-cassette and ducted air conditioning systems, dehumidifiers, small refrigerated display cabinets and gas-fired condensing boilers

The Si-82 is designed for easy installation in any situation: floor-standing, wall-mounted or hanging on the ceiling. The pump can remove up to 500 litres per hour and can withstand acidic and charged condensates, making it ideal for air conditioning and refrigeration systems.

References : PACK 1 : SI82CE01UN23 PACK 2 + pH Safe : SI82CE03UN23



Removable cable for easy installation and maintenance.



2 L TANK

Non-return valve for easily connecting  $\emptyset$  10 mm pipes. Four condensate inlets with caps.



Mounting points for floor-standing, ceiling and wall-mounted installation. Reversible tray.



Quick power connection



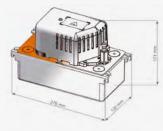
Easy hydraulic connection

Fits into any location

#### **Kit contents**

PACK 1: One-piece centrifugal pump - Tank (2 I) – Built-in non-return valve (10 mm ext. Ø) - Plug-in cable: power (2 m, European plug) and NC safety contact (1.5 m, bare ends) - Straight connector (ext. Ø 10 mm / ext. Ø 6 mm) - 2 screws + 2 plugs.

PACK 2: One-piece centrifugal pump with tank (2 I) - Plug-in cable: power (2 m, European plug) and NC safety contact (1.5 m, bare ends) - Clear PVC tube: int. Ø 10 mm, 5 m - Flexible adapter (int. Ø 15-20-24-32-40 mm) - 2 screws + 2 plugs. The PACK 2 + pH Safe option includes one pH Safe 1 neutralization cartridge.



#### Technical data

	Si-82
Maximum flow rate	500 l/h
Maximum discharge head	5 m (flow rate = 50 l/h)
Pump sound level at 1 m*	< 45 dBA
Detection levels (mm)	ON: 53, OFF: 42, Safety: 64
Mains supply	230 V ~ 50/60 Hz - 70 W
Protection	IP20

\*According to EN ISO 3744. Measured at LNE lab, pump operating with water, out of application. Suitable as a replacement for the SI 1800 and SI 1805 models.

## SI-83



### For domestic air conditioning systems and domestic gas-fired condensing boilers

The Si-83 is more compact than any other pump in its class. With five condensate inlet options and a slimline profile (just 129 mm), it's ideal for installing under domestic gas-fired condensing boilers (up to 40 kW). The SI83CE43UN23 model comes with a neutralization cartridge that effectively neutralizes the acidic condensates produced by domestic gas-fired condensing boilers. The versatile Si-83 pump is also perfect for domestic air conditioning systems (up to 20 kW).

The pump even comes with its very own smartphone app - the Si-83 MobileApp - that makes installation both simple and intuitive.





**References** :

**PACK 1**: SI83CE01UN23

PACK 2 : SI83CE42UN23

Pack 2 + pH Safe : SI83CE43UN23

Easier to install than anything in its class

Neut

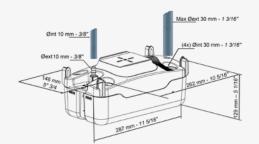
Neutralization

Si-83 MobileApp

#### **Kit contents**

PACK 1: Centrifugal pump with 2 I tank - Removable nonreturn valve, ext. Ø 10 mm - 1.8 m power cable, plug - Built-in safety switch, 1 m wires, plug, NC contact - 2 screws + 2 plugs - Straight connector and tie wrap for 6 mm int. Ø tubes.

PACK 2: Centrifugal pump with 2 I tank - Removable nonreturn valve, ext. Ø 10 mm - 1.8 m power cable, plug - Built-in safety switch, 1 m wires, bare ends, NO contact in Pack 2 - 2 screws + 2 plugs - Multi adapter to be used for Ø 15/17 - 20 - 24/25 - 32 - 40 mm tubes - Clear PVC tubing, int. Ø 10 mm, 5 m. The PACK 2 + pH Safe option includes one pH Safe 1 neutralization cartridge.



#### **Technical data**

	Si-83
Maximum discharge head	5,4 m (65 l/h)
Maximum pressure (flow rate 0)	5,7 m
Pump sound level at 1 m*	<45 dBA
Operating cycle	
Mains supply	230 V~ 50 Hz - 115 W - 1.4 A
Protection	IP44

## SI 1805



### For cassette, multi-cassette and ducted air conditioning systems, small refrigerated display cabinets and gas-fired condensing boilers

The SI 1805 is designed for easy installation in any conditions.

The pump can remove up to 500 litres per hour, making it ideal for air conditioning and refrigeration systems. The robust SI 1805 pump easily withstands the charged, high-temperature and acidic (pH > 3.4) condensates produced by gas-fired condensing boilers.

Reference : SI1805SIUN23



#### Kit content

Pump - 2 screws + 2 plugs - 2 m power cable with European plug, safety switch cord: 1 m, 2 wires (NC contact).

#### Dimensions

L 195 x W 130 x H 132 mm

#### **Technical data**

	SI 1805		
Maximum flow rate	500 l/h		
Maximum discharge head	5,4m		
Pump sound level at 1 m*	≤ 47 dBA		
Detection levels (mm)	ON: 27, OFF: 21, Safety: 32		
Mains supply	230 V~ 50/60 Hz -90 W		
Protection	IP20		

## Si-1830 / SI 1850



#### For oil-fired condensing boilers

The Si-1830 is built for use in the toughest conditions. It easily withstands the charged (e.g. oil residues), hot and highly acidic condensates produced by oil-fired condensing boilers.

Its watertight case protects the motor from acidic fumes and water splashes.

The Si-1830 can also be installed without its tank, directly in the condensate tray.

The 3.8 litre tank means the SI 1850 can remove up to 1,100 litres per hour, making it suitable for high-powered air conditioning and refrigeration systems. The robust SI 1850 pump easily withstands the charged, high-temperature condensates produced by gas-fired condensing boilers.



#### **Kit contents**

Si-1830: Pump with 0.5 I tank - 1.5 m power cable with European plug, safety switch cord: 1 m, 2 wires (NC contact) - Installation kit: 2 screws + 2 plugs, clear PVC tube (int.  $\emptyset$  10 mm, 5 m), flexible adapter ( $\emptyset$  15-24-32-40 mm).

SI 1850: One-piece centrifugal pump with 3.8 l tank - Built-in non-return valve, ext. Ø 10 mm.

#### Dimensions

Si-1830: L 190 x W 80 x H 100 mm SI 1850: L 305 x W 152 x H 257 mm

#### Technical data

	SI 1830	SI 1850
Maximum flow rate	400 l/h	1 100 l/h
Maximum discharge head	3,7 m	10 m
Pump sound level at 1 m*	$\leq$ 43 dBA	≤ 66 dBA
Detection levels (mm)	ON: 32, OFF: 25, Safety: 39	ON: 81, OFF: 48, Safety: 101
Mains supply	230 V~ 50/60 Hz 75 W	230 V~ 50 Hz 200 W
Protection	IPX4	IP20

## Si-2052

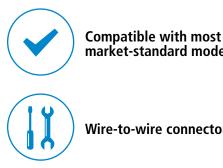


### Maintenance kit for cassette-type systems with centrifugal pump

The SI 2052 pump can be used as a replacement for some Sauermann pumps installed in series on cassette-type and ceiling-mounted air conditioning units up to 20 kW.

The centrifugal technology inside this pump is specially designed to remove condensates quietly and continuously in any type of environment. The single-level detection unit can be used as a safety contact (NC) to cut off the air conditioning system compressor or solenoid valve automatically.

Reference : SI2052SIUN23

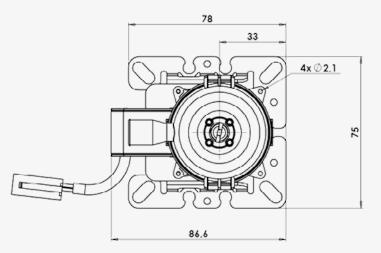


market-standard models

Wire-to-wire connector

#### **Kit content**

Centrifugal pump - 250 mm overmoulded cable - 850 mm cable with wire-to-wire connector - High level safety detection unit (DET01550, 900 mm cable) - Stainless steel screw for detection unit.





#### **Technical data**

	SI 2052
Maximum flow rate	100 l/h at 200 mm
Maximum discharge head	0.9 m (24l/h)
Pump sound level at 1 m*	≤ 30 dBA
Detection levels (mm)	Safety: 18
Consommation électrique	230 V ~ 50/60 Hz - 14 W

ANTI-BIOFILM SOLUTION

### $S_{1} - 1931$ Dairy pump for refrigerated display cabinets

Specially designed to handle condensate from supermarket refrigerated display cabinets, the Si-1931 pump also offers a proven solution against the formation of biofilm with its Gel-clear tablet. The compact design of the pump facilitates installation under low-slung display cabinets.

- Ultra-flat profile: 80 mm high.
- Three inlet points: top, right or left.
- Keeps the condensate drain clear.
- Reduces water leaks by more than 90%.
- Preventing the formation of biofilm reduces the risk of water leaks and extends pump life.



#### **Kit content**

Dairy pump with a power cable (NO safety contact) and a 13 mm outlet - Rubber bellows inlet adapter, 32, 40 and 50 mm int.  $\emptyset$  - Outlet adapter, 10 mm  $\emptyset$  - Hard plastic inlet adapter, 40 mm  $\emptyset$  - 2 Gel-clear tablets.

#### Technical data

	Si-1931
Flow rate at 6 m	700 l/h
Maximum discharge head	24,6m
Protection	IP20
Pump dimensions	L 610 x W 235 x H 80 mm
Tank volume	6.5

Refrigeration

## Cessor

#### Accessories suitable for all makes and applications

# Pipes and fittings (Ø 6 and Ø 10 mm)

Þ	<b>Double wire clamp</b> To ensure safe connection between connectors and a clear PVC tube.	
Dimension	Qty per bag	Ref.
Ø 6 mm	25	ACC00912
Ø 10 mm	25	ACC00913

#### Double wire clamp for braided tube

To ensure safe connection between connectors and a braided PVC tube.

Dimension	Qty per bag	Ref.
Ø 6 mm	25	ACC00916
Ø 10 mm	25	ACC00917





**Elbow connector** To connect two Ø 6 mm (1/4") or Ø 10 mm (3/8") clear PVC tubes.

Qty bag
5
5

per Ref. ACC00904 ACC00905





#### Self-sealing drainage fitting

Used to connect a PVC tube to the exhaust pipe. The self-sealing fitting makes the connection reliable.

Dimension	Qty per bag	Ref.
Ø 6 mm	5	ACC00919
Ø 10 mm	5	ACC00920



"T" connector To connect three  $\emptyset$  6 mm (1/4") or Ø 10 mm (3/8") clear PVC tubes.

Dimension	Qty per bag	Ref.
Ø 6 mm	5	ACC00902
Ø 10 mm	5	ACC00903



**Reducer connector** Reduces diameter of tubing coming out of a tank pump from Ø 10 mm (3/8") to Ø 6 mm (1/4").

Dimension
Ø 6 to Ø 10 mm

Qty per Ref. bag 5

ACC00906



**Rubber reducing adap**ter To connect a  $\emptyset$  20 mm (1  $\frac{1}{2}$ ") PVC tube to a Ø 10 mm (3/8") PVC tube.

Qty per Dimension bag Ø 20 to Ø 10 mm 3

Ref. ACC00908



10		
Le		11
	-	
		- 14

Dimension

Ø 6 mm - 5 m

Ø 6 mm - 50 m

Ø 10 mm - 25 m

Clear PVC tubing Clear PVC tubing for connecting the pum to the discharge outlet. Qty per bag Ref.			e pump
	1	ACC00909	
	1	ACC00910	



#### **Braided tube**

Clear PVC braided tubing for connecting the pump to the discharge outlet.

Ref.

ACC00914

ACC00915

Dimension	Qty per bag
Ø 6 mm - 50 m	1
Ø 10 mm - 25 m	1



#### **Glued fitting**

1

This fitting is perfect for connecting clear tubing to new/first PVC tubing installations with glue recommended on the PVC end.

ACC00911

Dimension	Qty per bag	Ref.
Ø 6 or Ø 10 mm	1	ACC00921



### **Detection mini pumps**

P	Double wire clampWith a diameter of Ø 16 mm (5/8"), it is used for tubes coming out of the condensate tray.		
Dimension	Qty per bag	Ref.	
Ø 16 mm	25	ACC00930	
Reducing adapter To reduce diameter between the AC condensate			





Straight co	nnector
To connect two tubes together.	Ø 16 mm (5/8") rubber
Qty per	Pof

Dimension Ø 16 mm

Ref. bag ACC00928 5

tank and the detection unit inlet.

C		g the AC condensate tank ni pump detection unit. Ø
Dimension	Qty per bag	Ref.
Ø 16 mm - L 600 mm	1	ACC00931

Dimension
<i>(</i> ) <i>(</i> , <i>m</i> ) <i>m</i>
Ø6mm
Ø 10 mm

#### **Drain safe device**

Ensures there is no siphoning effect and that the pump will not run dry and stop working.

Dimension	Qty per bag	Ref.
Ø 6 mm	5	ACC00922
Ø 10 mm	5	ACC00923

		mm, 6"), width (35 nd diameter (16 mm,	
Dimension	Qty per bag	Ref.	
Ø 16 mm - 35mm x 142mm	ı 3	ACC00934	



-		e installation of the of a mini pump detection
Dimension	Qty per bag	Ref.
Ø 16 mm	3	ACC00929



		ne AC condensate tank ini pump detection uni			
Dimension	Qty per bag	Ref.			
Ø 16 mm - L 55 mm 3 ACC00933					

and PE 5200 pumps.

1

Qty per bag

Replacement detection unit for Si-30, Si-33

Ref.

Si-2958



Extension cable for use with the Si-2958 detection unit To increase the length between the

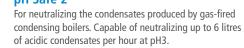
detection unit and the pump - for use with the Si-2958 detection unit.

Dimension	bag	Ref.
3 m	1	ACC00942
5 m	1	ACC00943

Anti-biofilm					
		<b>ar tablets</b> nent tablets fo refrigerated d	or Si-1931 pumps isplay cabinets.		
Dimension		Qty per bag	Ref.		
-		1	SPSI93T1		
-		10	SPSI93T10		



#### pH Safe 2



Qty per Dimension Ref.

bag PH02CE01UN00 1





	Centri	ifuga	al p	um	ps	
Push fit fitting tank tor					k conne	C-
To channel condensate throug of the tank. For 32 mm (1 " 1/4						
Dimension		Qty per bag		Ref.		
	Ø 32 mm	1		ACC00	940	
		Rubber sate in			ter cond	en-
		Multi diameter adapter to be used for a range of different tubes.			for a	
	Dimension		Qty p bag	er	Ref.	
	Ø 15 to Ø 20, 24, 32, 4	10 mm	3		ACC0093	39



Dimension

Rubber condensate inlet adapter To channel condensate into a tank pump through a PVC tube.

Qty per bag Dimension Ref. Ø 25 to Ø 20 mm ACC00936 3 Ø 32 to Ø 20 mm 3 ACC00937 Ø 40 to Ø 20 mm 3 ACC00938



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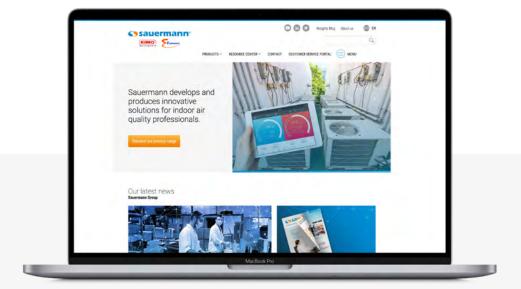
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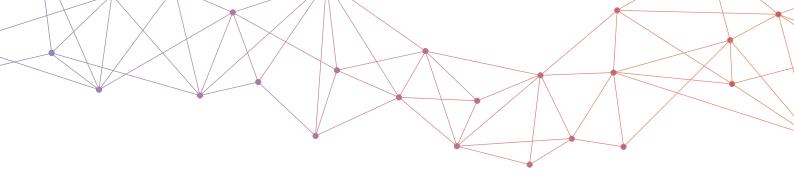


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