



FLAME-100

FLAME-100, Safety Bunsen

The safe alternative for all traditional Bunsen or alcohol burners!

Multi-Use

The Flame 100 is ideally suited for all flame related applications in the laboratory. The 15 millimeter precision flame allows graduated heating of dental tools as well as safe sterilization of microbiological instruments. Flame size and intensity can be adjusted infinitely.

Easy operation

The safety Bunsen burner Flame 100 activates immediately with the push of a button. No match or a pilot flame are required. Optionally, the Flame 100 can also be operated by a foot pedal* or an external infrared motion sensor*. The Flame 100 is suitable for stationary natural gas and propane/butane gas supplies as well as gas cartridges or gas cylinders. Numerous adapter systems are optionally available.

Reliable safety

The proven Safety Control System (SCS) is also incorporated in the Flame 100. All potential hazards are constantly monitored and, if necessary, protective measures – such as the shutting off the gas supply – are activated. In addition to the ignition and flame control function and the overheating protection the safety package also features the continuous burner head control BHC. BHC unfailingly identifies burner head clogging by liquids or solid substances. Compared with a conventional Bunsen burner, the Flame 100 with the safety standard „SCS“ eliminates the risk of a gas leak or an explosion.

Efficient

The Flame 100 is economical to operate and attractively priced for any laboratory, thus making savings for both your budget and the environment. Compared with traditional Bunsen burners, the gas consumption is reduced to a minimum, because the flame burns only when it is really needed. Compact and rugged. The housing and burner tube are made of stainless steel. The removable burner tube makes cleaning easy and the small footprint is an advantage for any lab bench.

Flame 100 – for a safe flame in the laboratory!

- Flame without match
- Innovative safety technology
- Simple handling
- Cost-saving and environmentally friendly
- Minimum space required.

With button function Safety Control System (SCS)
 With Burner Head Control (BHC) 2 standard Programs for button (function knob) and foot pedal
 Removable burner tube
 Holding device for 2 inoculation loop holders
 Nozzles for natural gas, propane / butane gas
 Wrench 17mm for gas connection
 Tubing connector with swivel nut

Screwdriver for electrode holder, Switching power supply (global) Instruction manual and 2-year warranty
 Stainless steel foot pedal optional: **6000402**

Accessories:

- 6000406 External DoubleClick IR-Sensor**
touch-free flame activation
- 6000402 Foot pedal**
made of stainless steel
- 6000403 Mini Foot pedal**
made of plastic
- 6000405 Benchtop switch**
made of stainless steel
- 2000404RF RF-Stick radio set**
stainless steel radio foot pedal (available in EU countries only)
- 2000600 Windshield**
made of stainless steel
- 2000701 Adapter 360**
for gas cartridges CV360
- 6000800 – 6000850 Safety adapter with pressure regulator & DVGW-tubing (0.5 m)**
for gas cartridges
- 2000300 Tilt adjustment**
made of stainless steel
- 2000200 Spray & Wax protector**
with stainless steel base and glass cylinder
- 2000201**
without glass cylinder



Model	FLAME-100
Technology	Microprocessor
Programs	Button: Start-Stop mit Ubetwachungs timer, 60 min Foot pedal: Standard (Flame during pressed foot pedal, Foot pedal optional)
Safety features	Safety Control System (SCS) with gas safety cut off: ignition & flame control temp. monitor, burner head clogging monitor (BHC) automatic unit switch off, 4 h
Gas supply & consumption	Gas connection: 1/4" left with Gas filter Gas types: #2ELL3B/P: natural gas E/LL,18 – 25mbar. liquid gas, 20 – 50mbar Connected load: 48 g/h liquid gas Continuous cartridge operation: CV360–65min, CG1750–210min, (approx.) C206–230min, CP250–305min, CV470–550min, CV270–280min
Temperature	Flame temperature: 1200°C liquid gas, 1170°C on natural gas (E) Temp. threshold level: 0.66 kW liquid gas, 0.66 kW natural gas
Electrical	Power consumption: 2VA. Power connection: 100–240V / 50/60Hz / max. 0.3A, 9V DC / 1A
Mechanical	Burner tube: removable, stainless steel. Measurements (WXHxD): 89x34x88mm. Height with burner tube: 94mm. Weight: 385g.



FUEGO SCS BASIC

FUEGO SCS-Series, provides maximum safety and highest convenience for all flame-related applications in the laboratory.

Simply safe to operate Depending on the model, the Fuego SCS Series can be operated with wireless IR-Sensor, button function or foot pedal.

Universal The Fuego SCS Series can be operated with stationary natural gas and propane / butane gas supplies, cartridge gas or gas cylinders.

Top-off-the-Line safety The Safety Control System SCS © means state-of-the-art safety technology which constantly analyzes potential hazards and, if necessary, initiates safety measures, such as an interruption of the gas supply. In addition to the ignition and flame control functions and the overheating protection, the new safety package also features continuous burner head control (BHC). BHC unflinchingly detects burner head clogging by liquids or solid substances and ensures the correct assembly of the burner head.

Exceptional passive safety features: A residual heat display protects against burns. The automatic unit cut-off function prevents unintentional ignition of the flame when the burner has not been ignited for a longer period.

Environment-conscious Excellent energy efficiency in accordance with the most recent standards reduces gas and power consumption. This increases the burning time when gas cartridges are used.

Robust Fabricated entirely of stainless steel – from the controls to the gas connection – and with displays which are protected by heat resistant glass, the Fuego SCS Series withstands even extreme laboratory conditions.



FUEGO SCS BASIC-RF

Fuego-SCS-Basic: More than standard

The Fuego SCS basic can be safely operated by means of the supplied foot pedal or the button function. Different programs are available: a flexible start-stop function or the conventional foot pedal control for short-time applications. In addition, the flame can be started and stopped by briefly pressing on the function knob.

Fuego-SCS-BasicRF: Wireless operation

Wireless and safe flame sterilization! The "RF" model allows operation via radio foot pedal without a disturbing cable. Other than that, the Fuego SCS basic RF has the same functions and safety systems as the standard model Fuego SCS basic. The radio foot pedal is included in the range of delivery.

Fuego-SCS-Digital: Versatile

The Fuego SCS can be operated with the touch-free IR-Sensor, button function or foot pedal (optional). For all options, different programs exist that have been developed on the basis of practical experience: flexible start-stop functions, continuous application for up to 2 hours or programs for short flame sterilization – exact to the second.



FUEGO SCS BASIC-RF

Model	FUEGO-SCS BASIC	FUEGO-SCS BASIC-RF	FUEGO-SCS DIGITAL	FUEGO-SCS DIGITAL-Pro
Programs				
Button function	✓	✓	✓	✓
Pedal Standard	✓	✓	✓	✓
Pedal Start-Stop	✓	✓	✓	✓
Sensor Auto-Off			✓	✓
Sensor Start-Stop			✓	✓
Temp. Regulation			✓	✓
Safety Control System with acoustic signals	✓	✓	✓	✓
Residual heat display	✓	✓	✓	✓
Animated graphic display			✓	✓
Foot pedal included	✓	✓ (radio)		
Single or DoubleClick IR-Sensor			✓	✓
Battery operation with tilt sensor				✓
Cooling reminder			✓	✓
Zero-pressure shut-down			✓	✓
Gas consumption display			✓	✓
2 user accounts			✓	✓
Gas inlet filter	✓	✓	✓	✓
Removable & decomposable burner head	✓	✓	✓	✓
Housing, burner head, gas connection & controls made of stainless steel	✓	✓	✓	✓
DVGW approved	✓	✓	✓	✓



FUEGO SCS DIGITAL

More convenience The animated and high-contrast graphic display can be easily read under all lighting conditions due to the blue background illumination. The self-explanatory, language-less symbol menu facilitates a rapid selection of all functions. The display is not in your line of sight? Acoustic signals additionally aid the user.

Innovative - The DoubleClick IR-Sensor When activated, this additional safety function ensures that the burner can only be ignited by activating the DoubleClick IR-Sensor twice. The detection range and the time interval of the DoubleClick can be individually adjusted. As a result, unintentional ignition or ignition due to dropping or falling objects is virtually impossible, this increases safety considerably.

Precisely adjusted With the new temp. regulation system and an optional temperature sensor, the laboratory gas burner becomes a temperature-control station.

Pressureless The zero-pressure shut-down provides additional safety at the end of work. With it the residual pressure is released from the connection hose and the gas hose's service life is increased.

Gas exhausted? No new cartridge at hand? The new gas consumption display reminds you to have a fresh gas cartridge on hand in a timely manner.

Flexible and individual The Fuego has to 2 user accounts & saves all safety settings, burning times and other parameters for individual & flexible use.

Cooled down The precisely adjustable, exact to the second, cooling time reminder aids you in exactly complying with the required cooling period for inoculation loops.

Properly connected! Graphic installation and operating instructions at the first switch-on facilitate the initial start-up.

Fuego-SCS-Digital-Pro:

Battery performance The exclusive Fuego



FUEGO SCS DIGITAL-PRO

SCS pro provides maximum flexibility. Wireless operation using state-of-the-art rechargeable battery technology guarantees independent operation. Two standard rechargeable batteries allow up to 9 hours of continuous operation. This corresponds to approximately 2000 inoculation loop flaming operations. The Fuego SCS pro has an integrated fast charging function and can be recharged in only 3 hours. The range of functions is identical to those of the Fuego SCS.

Technology	Microprocessor, illuminated graphic display with acoustic signals as operating aids 2,3
Programs	IR-Sensor ^{2,3} : Start-Stop with timer, 1 sec - 2 h Auto-Off with timer, 0 sec - 2 h Foot pedal: Standard (flame during pressed foot pedal) Start-Stop with timer, Fuego SCS basic / Fuego SCS basic RF: 1 h Fuego SCS / Fuego SCS pro: 1 sec - 2 h Button: Start-Stop with timer, Fuego SCS basic / Fuego SCS basic RF: 1 h Fuego SCS / Fuego SCS pro: 1 sec - 2 h Temperature regulation ^{2,3} : with timer, 1 sec - 2 h temperature range from +35°C to +350°C
Safety features	Safety Control System (SCS) with gas safety cut off: ignition & flame control temperature monitor, burner head clogging and assembly monitor (BHC), tilt sensor (>90°) ³ Automatic unit switch off: Fuego SCS basic / Fuego SCS basic RF: 4 h Fuego SCS / Fuego SCS pro: 1 min - 2 h Residual heat display: indicates a hot burner head Zero-Pressure shut-off ^{2,3} : end of work procedure to lower the pressure in the supply hose
Comfort functions^{2,3}	cooling reminder gas consumption display for gas cartridges
Gas supply and consumption	Gas connection: 1/4" left with gas filter Gas types: ll2ELL3B/P: natural gas E/LL, 18 - 25 mbar liquid gas, 20 - 50 mbar Connected load: 70 g/h liquid gas Continuous cartridge operation: CV 360 - 40 min, Express 444 - 50 min, CG 1750 - 150 min, C 206 - 170 min, CP 250 - 210 min, CV 470 - 370 min
Temperatures	Flame temperature: 1350°C on liquid gas, 1300°C on natural gas (E) Temperature threshold level: 1 kW liquid gas, 1kW natural gas
Electrical	Switching power supply: 100 - 240 V / 50/60 Hz / 0.3 A; 9 V DC / 1 A Power consumption: 2 VA IR-Sensor detection range ^{2,3} : 5 - 50 mm, adjustable DoubleClick IR-Sensor ^{2,3} : time range 0.5 - 2.5 sec (adjust. / disengageable)
Technical Data Battery Operation³	Type rechargeable battery: NIMH 2.4V (2 x Mignon (AA), 1.2V, 2600mAh) Operating time: up to 9 hours continuous operation Charging time: 90% / 3 hours Charging current: 700mA
Radio Frequency System¹	Safety standard: MRC safety radio protocol Range: 2 - 5 m Frequency: 2.4 GHz Channels: 253 Batteries foot pedal: 2 x AA (Mignon) Life time batteries (foot pedal): approx. 2000 hours (operation 8 hours per day: > 1 year)
Mechanical	Casing and operating controls: stainless steel / glass, UV and solvent resistant Burner head: removable and decomposable, stainless steel Cover of burner shaft: Ø 23 mm, with drains Dimensions (w x h x d): 103 x 49 x 130 mm Weight: 700 g

Model	Fuego SCS Basic	Fuego SCS Digital
Technology	Microprocessor	Microprocessor, LC-display
IR-Sensor	Start-stop with timer~2h, auto-off with timer~2h	
Foot pedal	Standard (flame during pressed foot pedal)	
Button	start-stop timer - 60min,	start-stop timer ~2h
Safety control system (SCS) with gas safety cut off	Ignition and flame control, temperature monitor, burner head clogging and assembly monitor (BHC), automatic unit switch off, 4h residual heat display	Ignition and flame control, temperature monitor, burner head clogging and assembly monitor (BHC), automatic unit switch off, 1-2h residual heat display
Gas connection	1/4" left with gas filter	
Gas types	I2ELL3B/P, nature gas E/LL 18-25 mbar, liquid gas, 20-50 mbar	
Connected load	70 g/h liquid gas	
Continuous cartridge operation	CV360 - 40min, Express 444 - 50min, CG1750 - 150min, C206 - 170min, CP250 - 210min, CV470 - 370min	
Flame temperature	1350°C on liquid gas, 1300°C on natural gas (E)	
Temperature threshold level	1kw liquid gas, 1kw natural gas	
IR-Sensor coverage	-	5-50mm, Adjustable
Power consumption	2 VA	
Power connection	100-240V 50/60Hz max. 0.3A 9V DC/1A	
Casing & operating controls	Stainless steel/glass, UV and solvent resistant	
Burner head	removable and decomposable, stainless steel	
Cover of burner shaft	Ø23 mm, with drains	
Measurements (mm)	W103xD49xH130	
Weight	700g	



Model: AutoLoop, Carousel For Flame Sterilizing Inoculation Loops

The inoculation loop carousel Autoloop PRO, which is suitable for up to 4 inoculation loops, was developed to comply with current requirements in microbiological, cell biological and bio technological laboratories.

Model	AutoLoop
Technology	Microprocessor
Display	fully graphic dot-matrix
Rotational direction	left / right, depends on removed holder
Inoculation loop holder	1 - 4, with optical holder detection
Time of flame sterilizing	1 - 15 sec
Time for cool-down period	1 - 45 sec
Safety features	temperature control, flame activation warning, indicator of remaining cool-down, tilt sensor, residual heat display
Adjustable sterilization monitor	1 - Off, 2 - low intensity, 3 - middle intensity, 4 - high intensity
Stand by	automatic unit switch off: 1 h (or with stand-by time of the burner)
Operating voltage	via Fuego (foot pedal socket)
Casing	stainless steel & aluminum, UV & solvent resistant
IR-Sensor coverage	5-50mm, Adjustable
Measurements(mm)	W135xD180 Height Autoloop: 305
Weight	1200 g