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

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**Model | Technology**
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**FLAME-100**
**Microprocessor**
**Button:** Start-Stop mit Überwachungstoner, 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: II2ELL3B/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.

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**Accessories:**

- **60000406** 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

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The Flame 100 – for a safe flame in the laboratory!
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-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-of-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 unfailingly 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.
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 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.
## BUNSEN BURNERS

### Safety

<table>
<thead>
<tr>
<th>Model</th>
<th>Fuego SCS Basic</th>
<th>Fuego SCS Digital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Microprocessor</td>
<td>Microprocessor, LC-display</td>
</tr>
<tr>
<td>IR-Sensor</td>
<td>Start-stop with timer ~2h, auto-off with timer ~2h</td>
<td></td>
</tr>
<tr>
<td>Foot pedal</td>
<td>Standard (flame during pressed foot pedal)</td>
<td>start-stop timer ~60min, start-stop timer ~2h</td>
</tr>
<tr>
<td>Button</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety control system (SCS) with gas safety cut off</td>
<td>Ignition and flame control, temperature monitor, burner head clogging and assembly monitor (BHC), automatic unit switch off, 4h residual heat display</td>
<td>Ignition and flame control, temperature monitor, burner head clogging and assembly monitor (BHC), automatic unit switch off, 1-2h residual heat display</td>
</tr>
<tr>
<td>Gas connection</td>
<td>1/4” left with gas filter</td>
<td></td>
</tr>
<tr>
<td>Gas types</td>
<td>II2ELL3/P, nature gas E/LL 18–25 mbar, liquid gas, 20–50 mbar</td>
<td></td>
</tr>
<tr>
<td>Connected load</td>
<td>70 g/h liquid gas</td>
<td></td>
</tr>
<tr>
<td>Continuous cartridge operation</td>
<td>CV360 - 40min, Express 444 - 50min, CG1750 - 150min, C206 - 170min, CP250 - 210min, CV470 - 370min</td>
<td></td>
</tr>
<tr>
<td>Flame temperature</td>
<td>1350°C on liquid gas, 1300°C on natural gas (E)</td>
<td></td>
</tr>
<tr>
<td>Temperature threshold level</td>
<td>1kw liquid gas, 1kw natural gas</td>
<td></td>
</tr>
<tr>
<td>IR-Sensor coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>2 VA</td>
<td></td>
</tr>
<tr>
<td>Power connection</td>
<td>100–240V 50/60Hz max. 0.3A 9V DC/1A</td>
<td></td>
</tr>
<tr>
<td>Casing &amp; operating controls</td>
<td>Stainless steel/glass, UV and solvent resistant</td>
<td></td>
</tr>
<tr>
<td>Burner head</td>
<td>removable and decomposable, stainless steel</td>
<td></td>
</tr>
<tr>
<td>Cover of burner shaft</td>
<td>Ø23 mm, with drains</td>
<td></td>
</tr>
<tr>
<td>Measurements (mm)</td>
<td>W103xD49xH130</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>700g</td>
<td></td>
</tr>
</tbody>
</table>

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**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.

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