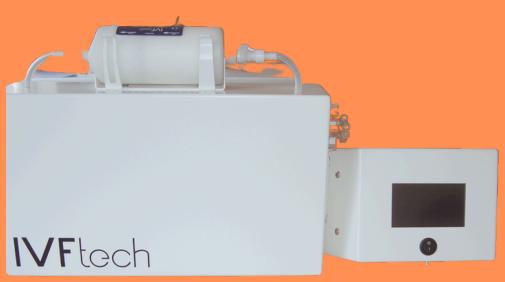
IVFtech®
A Hamilton Thorne Group Company

Portable Equipment

Product information and specs



Products

- Tube Warmer
- Hot Plate
- Gasmixer

TUBE WARMER

The IVFtech Tube Warmer offers both precision and user-friendly features, ensuring your samples receive the constant and uniform temperature they require.

Tube Warmer:
Versatile and Convenient

IVFtech offers a range of tube warmers that are purpose-built to align with the specific requirements of your laboratory.

1.) These tube warmers are meticulously engineered to ensure the protection of the samples contained within the tubes, maintaining a consistent and even temperature which can be changed by increments of 0.5 degrees.

2.) The side panels are transparent so you can visualize your sample.

3.)We have increased the size of the warming block to cover 2/3 of the test tubes.

4.) The sides are removable for easy cleaning.

5.) There is a battery powered option

Easy to use
Easy to clean
Easy to carry

Variants of Tube Warmer

12 or 14 Test Tubes (14ml)

Easy to adjust the temperature, the temperature is variable by 0.1˚C increments.
Removable sides simplify cleaning.
Transparent sides aid visualization.
Uniform Heat - An aluminum block covers 2/3 of the tube, ensuring even heat distribution.

4 Test Tubes (50ml)

Enjoy the same temperature control and maintenance benefits.
Transparent sides aid visualization.
Uniform Heat - An aluminum block covers 2/3 of the tube, providing even heat distribution.

Model	Tube diameter	Tube hole depth	Tubes supported
4 Tubes	29,5 mm	65.5 mm	50 ml (The 4-tube model is mainly used for animal samples)
12 Tubes	17 mm	68 mm	14 ml (59 7x30.5x24.8 (NUNC) and 17x100 (FALCON))
14 Tubes	17 mm	68 mm	14 ml

Battery-Powered Option

Battery Option for Increased Convenience

- IVFtech's tube warmers offer a battery option, enhancing adaptability for various laboratory environments.

Extended Operation Time

- A fully charged battery offers a minimum of 2 hours of operation, ensuring reliability during critical tasks.

Battery Usage Guidelines

- The Tube Warmer's battery is shipped with a 30% charge for safety reasons. It's advisable to fully charge it before the first use.
- If the Tube warmer has been stored without usage for an extended period, it's recommended to fully charge the battery before usage.
- To extend the battery's lifespan, it is advised that you disconnect the Tube warmer from the mains power source when it's fully charged and not in use.
- It usually takes two hours to charge.

Important

To maximize battery life and ensure prolonged battery-powered operation. Charge the battery via the mains and only use the battery power during the procedure.

Temperature Control Unit

Precision and Control

The IVFtech Tube Warmers are equipped with a uniform temperature controller.

With the assistance of four control buttons, you can adjust the following parameters: Targeted Set Temperature, Offset Temperature, Higher Temperature Limit, and Lower Temperature Limit.

The default target temperature is 37.0°C this can be adjusted from 35°C to 40°C in steps of 0.1°C

Within approximately 40 minutes, the Tube Warmer fully stabilizes at the target set temperature, ensuring optimal conditions for your samples. Make sure to allow this stabilization time before you use the Tube warmer.

Service and Preventive Maintenance for Tube Warmer

By following these simple guidelines, you'll ensure the longevity and reliability of your Tube warmer. If you have the non-battery version of the Tube warmer, there's no required service or preventive maintenance for it.

Side Cover Maintenance Guidelines

- For ease of maintenance, the Tube Warmer features removable covers on both sides, facilitating cleaning and disinfection.
- Before cleaning the Tube warmer, it's recommended to remove the side covers. Gently pull them away using your hands.
- After cleaning, reattach the side covers securely.
- Please note that the side covers are held in place with strong magnets, requiring a moderate amount of force for removal.<
- To ensure your battery Tube warmer remains reliable and compliant, it's a good idea to change the rechargeable batteries once a year. This should be handled by an authorized service technician.
- To arrange for the battery replacement, simply get in touch with your local IVFtech distributor. They'll assist you in making sure your Tube warmer stays in top shape.
- In the rare event that your Tube warmer requires repair, remember that it should also be carried out by an authorized service technician.
- Keep in mind that the battery's lifespan can vary based on how often it's used. Use the mains to heat the Tube Warmer to extend the battery's life.

Stand for Tube Warmer

Enhanced Mobility with an Optional Stand

If your Tube warmer needs to be transported from place to place, consider the practical option of acquiring a stand. This stand provides added mobility and convenience, making it easier to move your Tube warmer as needed.

Technical Specs
General & Battery

IVFtech Tube Warmer	Standard	Battery	Unit
Product dimensions (WxDxH)	85x205x130		mm
Product weight [1]	2.0	3.0	kg
Power supply dim. (WxDxH)	123x46x30	143x58x30	mm
Power supply weight	0.25	0.3	kg
Shipping dimensions (WxDxH)	260x155x200		mm
Shipping weight	3.0	4.0	kg
Startup time	40 minutes		min
Temperature control range [2] [3]	35°C - 40°C in steps of 0.1°C		°C
Defaul target temperature	37		
Temperature control accuracy	±0.1 °C		°C

[1] Inclusive power supply
[2] Temperatures like 50 °C can be obtained by changes in main configuration
[3] The temperature can´t be lower than the surrounding temperature

Specifications related only to the battery Tube warmer

IVFtech Tube warmer	Battery	Unit
Low battery alarm (acoustical)	5 minutes of operation left	min
Acoustical alarm sound press	> 69 dBa@ 50cm	dBA
Acoustical alarm frequency	2.7kHz beep 30 times per min.	kHz
Operation time on battery[1]	2-3	Hours
Charging time [2]	2	Hours
Battery type	Samsung ICR18650-26H	Volt
	Rechargeable Lithium-ion 3 pcs. 3.6 Volt nominal - 2600mAH	
Expected lifetime for batteries[3]	1	Year

[1] Minimum 3 hours of operation can be obtained by suppling mains power during heating up
[2] Charged to maximum 30% when shipped from supplier
[3] The batteries are considered as a wear part and is therefore not part of the two-year warranty we give for the tube warmers

Technical Specs:
Operating Environment Specification and Power

Operating environment specification

IVFtech Tube warmer	Environment	Unit
Humidity range	30 - 75	%
Temperature range	20 - 35	˚C
Intended use	Indoor Use Only	
Operational altitude	≤2000m (6500ft.)	
	above sea level	
Service Life [1]	7	Years

[1] IVFtech guarantees to maintain adequate spare parts for the product range for 7 years after last manufacturing batch.

Power specification

IVFtech Tube warmer	Standard	Battery	Unit
Operational mains supply	115Vac - 230Vac / 50-60 Hz (universal mains)		
Power consumption	Max 40Watt (avg.10Watt)	Max 80Watt	Watt

Product Numbers

Number	Product
32300004	Tube Warmer 4, Four 50ml Test Tubes
32300000	Tube Warmer with Battery, 12 x 14ml Test Tubes
32300012	Tube Warmer without Battery, 12 x 14ml Test Tubes
32300014	Tube Warmer without Battery, 14 x 14ml Test Tubes
32310000	Stand for Tubewarmer

HOT PLATE

The IVFtech Hot Plate Mini is a portable solution that provides a uniformly heated tabletop for handling equipment like warming blocks or dishware.

With precise temperature control from ambient to 45°C, it enhances your lab's functionality.

Hot Plate

If your IVF lab requires an additional heated workspace, consider the IVFtech Hotplate.

This compact, self-contained tabletop offers a uniform surface suitable for handling warming blocks, mini-incubators, tubes, dishes and more. It has a precise temperature control, ranging from ambient to 45°C, ensuring reliability in your lab's daily operations.

Service and Preventive Maintenance

There is no required service or preventive maintenance on the IVFtech Hot Plate.

The Hot Plate consists of a HiMacs surface with a built-in controller.

Advantages for Your Lab:

Designed to complement IVFtech's Workstations, the Hotplate is especially ideal for use with warming blocks and other related lab equipment.

Enhance your IVF lab's functionality and maintain a clean, efficient workspace for your vital procedures with the IVFtech Hotplate.

Key Features and Product Number

Elevate Your IVF Lab Workspace with the IVFtech Hotplate

For IVF labs seeking additional heated workspace without the need for an extra workstation, the IVFtech Hot Plate offers an ideal solution.

Portable Convenience

The Hot Plate is easily transportable within your IVF lab, allowing for flexible placement and setup options.

Versatile Heating

Primarily designed for maintaining a consistent and uniform temperature, the Hot Plate accommodates a wide range of items, such as warming blocks, mini-incubators, test tubes, petri dishes, and more.

Effortless Maintenance

Featuring a hygienic and easy-to-clean HI-MACS® finish, the Hot Plate simplifies maintenance and is stain and scratch resistant.

32200010	IVFtech Hot Plate Mini

Clear Visibility and Ease of Use

The Hi-MACS® surface ensures clear visibility of the underside of your dishes.

Precision Temperature Control

Ranging from ambient to 45˚C, changeable at increments of ±0.5˚C

Technical Specs

Technical specifications

IVFtech Hot Plate		Unit
Hot Plate dimensions (WxDxH)	260 x 327 x 20	mm
Heated area (WxD)	220 x 220	mm
Product weight	2.05	kg
Startup time	20 minutes	min
Temperature control range	20°C - 45°C in steps of 0.1°C	°C
Default setpoint temperature	37	
Temperature control accuracy	±0.1 °C	°C

Operating environment specifications

IVFtech Hot Plate	Environment	Unit
Humidity	30 - 95	%
Temperature range	20 – 30	°C
Intended use	Indoor Use Only	
Service Life	IVFtech guarantees to maintain adequate spare parts for the product range for 7 years after last manufacturing batch.	Years

Power specifications

Operational mains supply	110-240Vac / 50-60 Hz
Power consumption	Max: 80 Watt, Average: 30 Watt

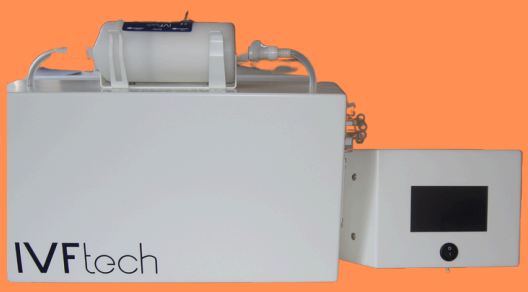
GASMIXER

The IVFtech Gasmixers provide a stable and turbulence-free gas control unit, safeguarding specimens and samples from particle contaminants and suboptimal growth conditions.

Advanced Gas Filtration

IVFtech Gas Mixer boasts a high-efficiency HEPA+VOC filter, crafted meticulously and compliant with cGMP and ISO 9001/13485 standards. This filter acts as your primary defense against particle contaminants in the surrounding atmosphere.

- Positioned conveniently on the Gasmixer's side, an inline high-efficiency HEPA & VOC filter is easy to replace.
- For added versatility, this inline filter is the same as we use for our FreyGen incubators.
- A robust motor efficiently circulates mixed gas through a closed-loop system connecting to incubators. The controller unit typically maintains a speed of 400 RPM. If an incubator lid is open, the motor briefly halts to prevent external air from entering, safeguarding your controlled environment not to mention savings on gas.



- Microprocessor controlled for precise gas management.
- TFT LCD touch display with a user-friendly interface.
- HEPA+VOC filter accessible from the front.
- Gas inlet valves for CO2 or CO2 and N2.
- Adjustable-speed circulation pump for even gas distribution.
- Color-coded alarms for safety and parameter deviations.
- Ergonomic design for operator comfort.
- Magnetic feet for ease of placement and motility
- Easy-to-clean sleek surface.

Precision and Convenience

Precise Temperature Control and Monitoring

Our intuitive touch display empowers you with precise control over various parameters:

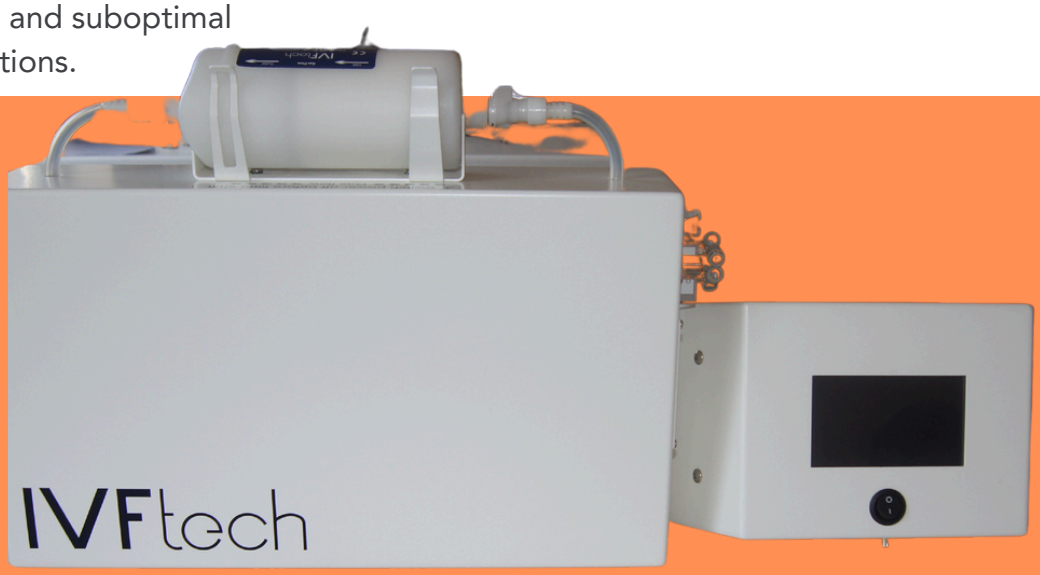
- Easily adjust set point temperatures and gas levels with a user-friendly touch interface.
- Quickly make necessary adjustments when deviations from external measurement equipment occur, ensuring precision.

Precision and Protection

- The IVFtech Gas Mixer is your ally in creating the ideal gas environment for lab work, whether with FreyGen ALF II or Sample Stations in Sterica, Javica, or Classica workstations.
- It maintains stable and turbulence-free gas control, safeguarding your specimens and samples from contaminants and suboptimal growth conditions.

Easy Access

- For your convenience, a touchscreen controller connects effortlessly via a 2.5-meter or 4-meter cable. The Gas Mixer and the controller have magnetic feet so they can be placed on any metal surface and are therefore easy to move around.



Service and Preventive Maintenance

Maintenance Guidelines for IVFtech Gasmixer

To maintain the reliability and compliance of the Gasmixer, it should undergo a service check once every three years. This service check is to be carried out exclusively by an authorized service technician.

- Behind a service cover on the connector side, you will find adjustment knobs for gas flows (only to be operated by a service technician).
- This touchscreen controller is used to set target speed for the pump motor, gas CO2, O2 levels, calibration, and adjustment of the Gasmixer and for controlling alarms.
- A separate touchscreen controller in FreyGen / Sample stations is used to set target temperature levels read current temperatures and control temperature alarms.

Technical Specs

Gasmixer model	CO2 (Carbon dioxide)	CO2 / N2 (Carbon dioxide / Nitrogen)
Dimensions (WxDxH)	45 x 30.5 x 11 cm	
Product weight	7.2 kg	7.5 kg
Shipping dimensions (WxDxH)	740x840x370 mm	
Shipping weight	34 kg	
Noise Level, ISO 6081	< 43 dBa	
CO2 gas quality	Laboratory purity > 99.95%	
CO2 consumption	0.5 L/hour per incubator chamber	0.44 L/hour per incubator chamber
N2 gas quality		Laboratory purity > 99.95%
N2 consumption		0.72 L/hour per incubator chamber
Startup time	40 minutes from start up to fully operational	
	Mixed Gas Levels achieved approx. 5-10 minutes.	
Inline Air filter	Combined HEPA H-14 particle / Micro Carbon for VOC filtering	
CO2, O2 sensor accuracy	± 0.2 %	
CO2 control range	0-20% (adjustable in 0.1% steps)	
O2 control range		0-20% (adjustable in 0.1% steps)
Alarm sound level	>71 dBa (transducer is part of the touch screen controller display)	
Alarm frequency	3200Hz beep once every second	
Motor RPM setting	300 – 400 RPM	
Max configuration	2x FreyGen II or 4x Sample Stations or 1x Frey Gen II and 2x Sample stations	
Max tube length	4-meter tube length in between Gasmixer and incubators	
Inlet forCO2 / N2 connection	6 mm pressure tube	
Connection for incubator/ sample box	6 mm silicone tube	
Service Life[1]	7 Years	
Inline Air filter shelf life[2]	3 Years	

[1] IVFtech guarantees to maintain adequate spare parts for the product range for 7 years after last manufacturing batch.
[2] LOT number shows production date

Technical Specs and Product Number

Operating environment specification

Surrounding humidity	30 - 75%
Temperature	20 – 35˚C
Intended use	Indoor Use Only
Operational Altitude	≤ 2000 m (6500 ft.) above sea level

Power specification

Power consumption	Max 35 Watt / Avg: 30 Watt (incl display)
Operational mains supply	110Vac - 240Vac / 50-60 Hz (universal mains)

Product number

32000000FS	Gasmixer CO2, Gasmixer CO2 Only
32000001FS	Gasmixer CO2/N2, Gasmixer CO2/N2

WHAT, HOW AND WHY

What we do
We design and create customized laboratory equipment

How we do it
In close collaboration with our customers and IVF clinics, we develop and manufacture IVF equipment for individual needs.

Why we do it
We are here to to make life easier for our customers. To support them, as they help people realize their dreams of having a baby.

OUR VALUES

Our values reflect how we work and behave. We always seek to be…

Problem-solving specialists

We offer a personal touch

Down to Earth

We like a Challenge

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TILFØJES SENERE

External Temperature Probes

Enhance Temperature Control with IVFtech External Probes

Customized Temperature Control:
By default, the Hot Plate maintains a target temperature of 37.0°C. However, you have the flexibility to adjust this temperature variable from 20°C to 45°C in 0.1°C steps.

Ensure precise temperature control in your lab with the IVFtech Hot Plate and the external IVFtech temperature probe.

To ensure precise temperature control, the IVFtech Hot Plate can be paired with an external IVFtech temperature probe. This probe serves a dual purpose: calibration of the Hot Plate and accurate temperature measurements for items on it, achieving an accuracy of > 0.1°C when used correctly.

Seamless Connection:
Connecting the external IVFtech temperature probe to the Hot Plate is straightforward using the provided mini jack cable. Please note that this connection will result in changes to the display menus.