

We make gas visible!

Gas Filling

Gas Analytics

Pressure
Compensation

Process
Monitoring

www.helantec.de



HELANTEC®



Managing partners Jochen Weiß and Gregor Witrofsky

Your Advantage

For over 35 years, HELANTEC has been developing and manufacturing solutions for the insulating glass industry – from gas filling technology and gas analysis to process monitoring and pressure compensation.

Decades of experience, in-house development and manufacturing, and close collaboration with our customers shape our products. Reliable technology, high availability and continuous development are at the heart of what we do.

Our in-house manufacturing enables us to respond quickly to individual requirements and develop customised solutions. Our products and systems are used by insulating glass manufacturers and testing institutes worldwide.

Technology built on experience. Solutions for practical applications.



In-house Developments. Made in Germany.

Many of our products are specifically developed to meet the requirements of our customers and their production processes. Almost all products and systems are developed and manufactured in-house by HELANTEC – **Made in Germany**.

In-house development and manufacturing enable short communication channels, individual adaptations and continuous product development. Our experienced teams support our customers worldwide with consulting, sales and technical service.



Pump unit



Precision pressure sensors



Electronic board with gas sensor



Suction probes



Electronic boards

Specially developed assemblies, tailored to the respective application.



Sensors

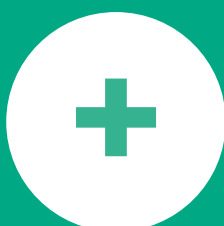
Precise, maintenance-free and long-lasting sensors for reliable measurement values.



Probes

Application-specific probes for optimum filling results.

Ready for what's next?



- Individual software and control solutions
- Customer-specific adaptations and extensions
- Connected systems and digital process data
- Process monitoring and transparent documentation



Pumps and valves

Robust pumps and high-quality valves – tested and certified.

ISO-Altimeter PROFESSIONAL

Pressure is a question of adjustment

IG units can be subject to positive or negative pressure due to differences in altitude between the production and installation locations. A correctly adjusted IG unit at the installation location is therefore an important quality feature.

With the ISO-Altimeter PROFESSIONAL, IG units are pressure-compensated during production for their intended installation altitude.

The system takes the local conditions into account and calculates the required pressure compensation during production. This ensures that the IG units are correctly adjusted for their installation location – without the need for subsequent adjustment.

Suitable for double- and triple-glazed IG units with different gas fillings and glass configurations.





Highest precision

- Pressure balance based on climate annual average at installation altitude
- Consideration of current production conditions
- Flow measurement with high resolution



Maximum process reliability

- Input pressure
- Flow
- Pressure inside IG unit
- Tightness



Network connectivity

- Data transfer directly from order processing
- Integrated FTP-server
- Remote access



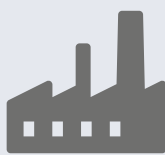
Complete documentation

- Processing of barcodes
- Label printing per IG unit
- Documentation and tracking

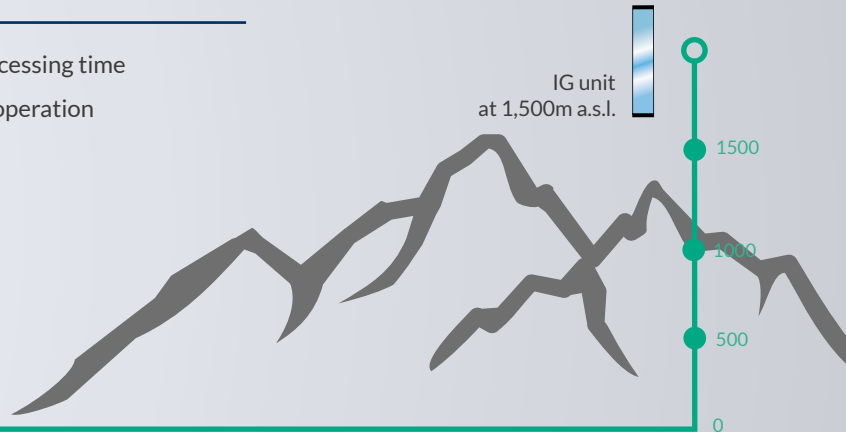


Safe operation

- Short processing time
- Intuitive operation



IG unit
at 100m a.s.l.



HELANTEC Valve

Permanent pressure compensation for insulating glass units

The HELANTEC Valve is the key component for permanent and reliable pressure compensation in insulating glass units. It ensures that the adjusted pressure compensation is maintained over the long term without compromising the thermal insulation performance or gas filling of the insulating glass unit.





RAPIDE – High-Speed Gas Filling Technology

Faster filling. Precise control.

Precise control of the filling process is particularly important for large-format insulating glass units. The RAPIDE series was developed for fast and cost-effective gas filling processes.

The gas filling systems are designed for efficient flow technology. Gas concentration is continuously monitored during the filling process, and the process is automatically stopped as soon as the desired concentration is reached.

TURBOFILL complements the RAPIDE series as a solution for single-hole gas filling, enabling short cycle times and high production output.

“

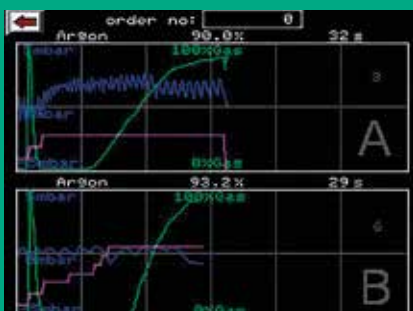
It's not just about filling speed, but about achieving the highest possible efficiency.”



Functional overview

No.	Uhrzeit	Li	Konz.	Gas	Sec	Stat
33	11:19	A	96.4%	Argon	28	N
34	11:19	B	91.2%	Argon	18	N
35	11:19	A	97.7%	Argon	10	N
36	11:20	A	94.8%	Argon	32	N
37	11:21	A	95.2%	Argon	11	N
38	11:22	A	95.2%	Argon	10	N
39	11:22	A	97.4%	Argon	11	N

Automated data record



Analyser for quality control

Efficient and cost-effective

Efficient filling with low gas consumption – even for large-format insulating glass units.

Intelligent and precise

Automatic unit detection, continuous process monitoring and digital recording of filling data.

Simple and intuitive operation

Clear operation and automatic documentation for a transparent production process.

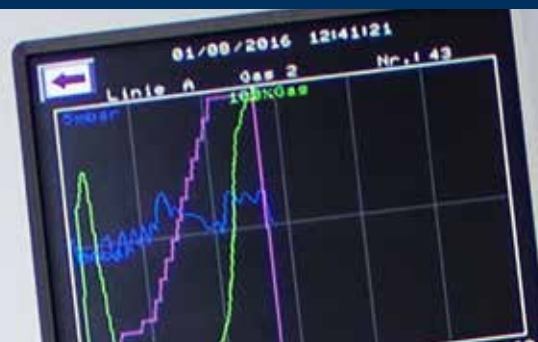
Process Control with the HELANTEC IPC

Transparent processes. Reliable quality.

With the HELANTEC IPC, gas filling processes are monitored, documented and traceable. Integrated process control ensures consistent quality and transparency in production.

The desired gas concentration can be individually set. During filling, relevant process data is recorded and monitored. The filling process ends automatically as soon as the specified gas concentration is reached.

Each filled unit is documented and can be uniquely assigned via barcode. The stored data can be used for quality verification and process analysis and can also be transferred to higher-level systems via the network connection.



	TURBOFILL High capacity for small budgets	RAPIDE L200 The entry-level model in the RAPIDE series	RAPIDE L500 The best-selling gas filling system	RAPIDE L900 The most powerful gas filling system
Filling line / Capacity ¹⁾	2 / 1000 4 / 2000	1 / 400 2 / 800	1 / 600 2 / 1200	1 / 800 2 / 1600
Filling line upgradeable	✓	✗	✓	✓
Gas inlet	1	1	2	4
Gas analyser per line	✓	✓	✓	✓
IPC	ECO LINE	ECO LINE	HIGH LINE	HIGH LINE
- Documentation	✗	✗	✓	✓
- Network connection	✗	✗	✓	✓
- Barcode	✗	✗	✓	✓
- Label printer	✓	✓	✓	✓

¹⁾ At 8 hours / day and for IG units with 0.8 m² / 14 mm spacers / 11.2 litre volume / argon / 90% gas concentration.

SEALANT INSPECTOR

Process monitoring for 2-component sealant systems

The SEALANT INSPECTOR continuously monitors the mixing ratio of two-component sealants and detects deviations at an early stage.

This ensures that the specified mixing ratios and the required sealant properties are reliably maintained.

Benefits:

- Continuous monitoring of the mixing ratio
- Early detection of deviations
- Documentation of process data
- Support for consistent sealant quality

A HELANTEC development project for the insulating glass production of tomorrow.



IGM/IPA

Process monitoring for gas filling presses

IGM/IPA monitors the gas filling process and records the relevant process data for each insulating glass unit.

Gas concentration, filling process data and other process parameters are automatically recorded and assigned to the respective insulating glass unit. This makes gas filling processes transparent and traceable.

The data can be documented, analysed and transferred to higher-level systems via the network connection. In combination with the GAS INSPECTOR, the entire gas filling process can also be analysed and documented.

For greater transparency in the filling process

- Automatic recording of filling data
- Assignment to the respective insulating glass unit
- Documentation and analysis
- Network connection
- Integration into existing quality management systems

A HELANTEC development project for the insulating glass production of tomorrow.



Complete documentation

- Mixing ratio
- Batch number of sealants
- Permissible limits



Individual configuration

- All paste-like sealants
- All common barrel pumps
- Manual and automated sealing machines



Network connectivity

- Integrated FTP server
- Integration in quality management systems
- Remote access

Special features of this technology

- Sensors are not in direct contact with sealant
- No calibration required
- Low wear and virtually maintenance-free

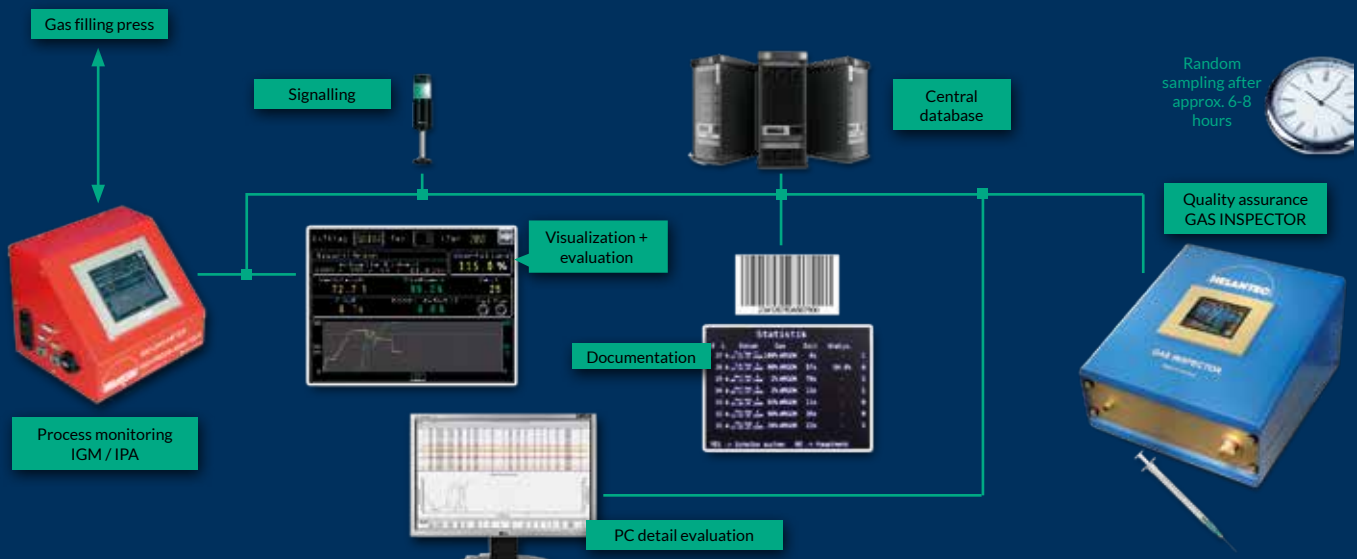
Your benefits with this system

- Increase your quality standard
- Prevent defective products
- No expenditure on personnel for inspection of



*There are no comparable systems on the market!
Only HELANTEC makes gas visible"*

Process monitoring for gas filling presses



Quality Control

Simple and Reliable

Gas analysis has been one of HELANTEC's core areas of expertise for over 35 years. Our gas analysers support quality control of gas-filled insulating glass units in production, laboratories and testing applications.

Robust measurement technology, precise sensors and intuitive operation enable fast and reliable measurements. Depending on the application, our systems are available for spot checks, precise reference measurements and digital quality control.

All instruments are tested before delivery and supplied with a test report or calibration certificate. This ensures reliable measurement technology for the respective application.



GAS TESTER

*Fast quality inspection
in production*

HELOX 4

*Maximum precision for
laboratory and production*

GAS INSPECTOR

*Digital quality control
with documentation*



HELANTEC- analysis technology means

- Precise determination of the gas concentration
- Usable for all standard gases / gas mixtures
- Suitable for multi-coated IG units
- Suitable for triple-glazed units and all spacer materials
- Easy calibration and plausibility check
- Long service life measuring cells (usually more than 10 years)

	GAS TESTER	HELOX 4	ISO GAS CONTROL	GAS INSPECTOR
Oxygen measurement	✗	✓	✗	optional
Gas type measurement (argon)	✓	✗	✓	✓
Other gas types (krypton, etc.)	✓	✓	✓	✓
Sampling via syringe	✗	✓	✓	✓
Sampling via pump	✓	✗	✗	optional
Triple-glazed units	✓	✓	✓	✓
LCD displays / touch screen	✓ / ✗	✓ / ✗	✓ / ✗	✗ / ✓
Battery operation	✓	optional	optional	optional
Data storage	✓	✗	✗	✓
Network connection	✗	✗	✗	✓
Barcode	✗	✗	✗	optional



Test equipment for quality control must be easy in use and reliable in operation.

According to these criteria, we have developed our analysers.”

Gas Filling Systems for Small Production Runs

Cost-effective gas filling technology for different production requirements – with time-controlled filling or integrated gas analysis.

The HELANTEC gas filling systems enable precise and efficient filling of insulating glass units. During filling, the gas concentration is continuously monitored and the process automatically stops as soon as the desired value is reached.

Even for higher production volumes, well-proven and specially developed components ensure reproducible filling results and cost-effective production.

Highlights

- Efficient gas filling with low gas consumption
- Integrated gas analysis, depending on configuration
- Special filling probes
- Monitoring of inlet pressure
- Simple and intuitive operation



Efficient gas filling for reproducible filling results. HELANTEC systems are equipped with intelligence!”





EASY.FILL

Simple. Cost-effective. Compact.

Stops the filling process once the preset gas concentration has been reached. The appropriate filling time is taken from the respective table.

STANDARD

Powerful. Efficient. Proven.

Simultaneous filling of up to four insulating glass units with integrated gas analysis and automatic top-up filling.



SMART 150

Precise. Intelligent. Efficient.

The compact entry-level system with integrated gas analysis. The desired gas concentration can be set individually.

	EASY.FILL	SMART 150	STANDARD
Filling lines / capacity ¹⁾	2 / 200	1 / 150	4 / 400
Filling line can be retrofitted	✗	✗	✗
Gas inputs	1	1 / optional 2	1
Gas analyser	✗	1	1
Dyn. concentration display	✗	✓	✓
Number of pumps	✗	1	1
Automatic top-up	✗	✗	✓
Cylinder pressure monitoring	✓	✓	✓
All gases / gas mixtures	✓	✓	✓
Foot switch	✓	✗	optional

¹⁾ At 8 hours / day and for IG units with 0.8 m² / 14 mm spacers / 11.2 litre volume / argon / 90% gas concentration.



Leakfinder

The Leakfinder 2.0 detects leaks in insulating glass units and supports quick troubleshooting.

Whether caused by leaking edge seals, insufficient pressure or faulty connections – the Leakfinder helps to locate leaks quickly and precisely.

Handheld, fast and easy to use.

Gas Mixing Systems

The gas mixer allows different argon-krypton mixtures to be individually adjusted and produced as required.

The desired gas concentration can be set directly on the device.

Create flexible gas mixtures directly on site.

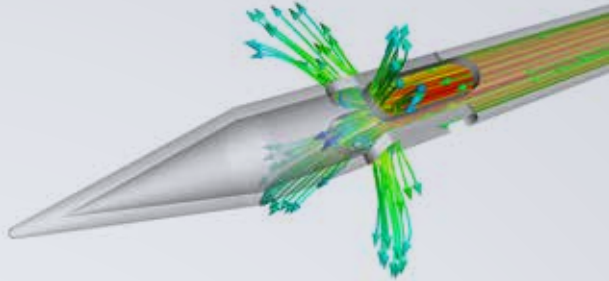


Grinding Wheels

- Suitable for automatic and manual grinding machines
- Suitable for all common coatings
- Cost-effective, Made in Germany

For reliable edge deletion.





Accessories for Gas Filling Systems

Specially developed probes ensure good gas flow and optimum filling results – even for special glass constructions.

- Application-specific probes
- Hoses and filters
- Transport trolley and distributor

Probes and accessories for optimum filling processes.

Accessories for Gas Analysers

- Low wear
- Reliable sample collection
- Different needle lengths
- Suitable accessories for different applications

For safe and easy gas sampling.



Consumables

For gas filling systems and gas analysers, we offer suitable consumables and spare parts for ongoing operation.

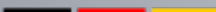
- Precisely fitting components
- Tight tolerances
- High material quality

Precisely fitting. Practical. Available.



**Innovative solutions for Gas Filling, Gas Analysis,
Pressure Compensation and Process Monitoring.**



GERMAN QUALITY

MADE IN GERMANY

Developed and manufactured in Germany.

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