

GAS FILLING MACHINES PROCESS MONITORING PRESSURE BALANCE



www.helantec.de



Gas filling - visibly better!



Managing partners Jochen Weiß and Gregor Witrofsky

Advantage for you

Worldwide, HELANTEC is the first address in the insulating glass industry for manual gas filling technology and the determination of the gas concentration.

For more than 25 years, HELANTEC is well known in the insulation glass industry. Starting from gas analysis, the company has developed numerous products and innovative solutions for the insulation glass production. The high availability and a long service life characterise our devices and provide you with a sustainable competitive advantage.

Thanks to active communication with our customers and favoured by lean hierarchies and short cut decisions, we can promptly implement the requirements of the markets in our products. The in-house production also allows the implementation of individual adjustments within a short lead-time.

Since many years, we have been working with the main testing institutes and all leading IG manufactures.



Most of our developments are unique.

Virtually all products and systems are in-house developments that we produce by ourselves – Made in Germany.

This premium and robust quality ensures and enables a worldwide distribution of our products and services. Carefully selected trading partners support our marketing activities.



Pump unit



Precision pressure sensors



Electronic board with gas sensor



Suction probes



Electronic boards

Specifically designed and engineered components for certain application



Sensors

Accurate and reliable operating sensors
Maintenance-free and long lasting



Probes

The special design of our probes allows optimal gas concentrations



Pumps and valves

Robust and durable pumps

High-quality valves
Tested and certified

Well prepared for new challenges



- Individual software solutions
- Custom modifications
- Data access via mobile devices
- Smart factory / Industry 4.0

ISO-Altimeter PROFESSIONAL

Pressure is a question of adjustment

You think, gas-filled IG units, which are also flat at the installation (without deflection), are not easy to produce?

You are totally wrong. The ISO-Altimeter Professional pressure balance system now handles the task of pressure balancing in no time at all.

Each and every IG unit is prepared in the production in such a manner that it is flat at the higher altitude or lower altitude of the installation site. Additional after-treatment is not required!

This proven system has already become standard in the insulating glass industry. Worldwide, more than 1.5 million IG units have been pressure balanced with this system (up to August 2016).





Highest precision

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



Largest process reliability

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



Network connectivity

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



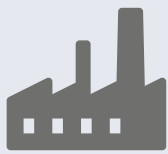
Complete documentation

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

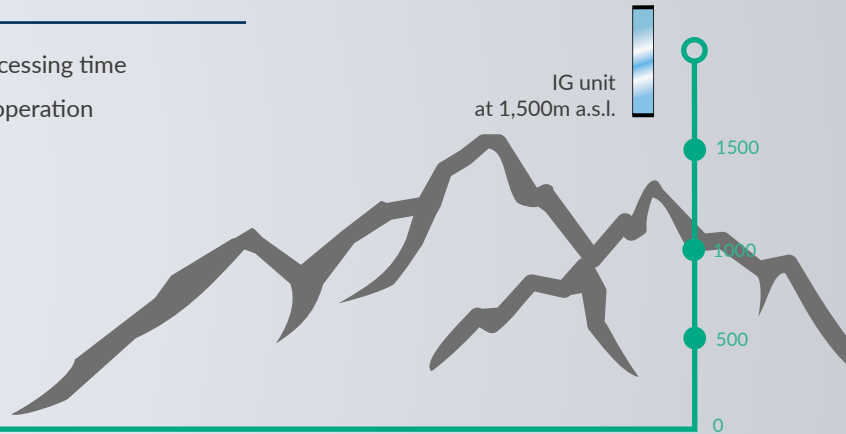


Safe operation

- Short processing time
- Intuitive operation



IG unit at 100m a.s.l.



The HELANTEC-valve

The HELANTEC-valve is a small but important detail. Only with this valve can it be ensured that the executed pressure balance remains intact and that your assured characteristic of the IG unit does not change. Tested and certified by MPA Darmstadt.

Available in diameters of 3, 4 and 5 mm.





Unique acceleration

A precise control of the filling process is particularly important for large IG units. Consequently, we have developed the universal "RAPIDE" fast gas filling series.

Physically and aerodynamically, we reach with these machines the maximum capacity.

The gas concentration is measured and displayed continuously during the entire filling process. The filling process is finished automatically as soon as the desired gas concentration is reached.

Our TURBOFILL model is an optimised solution for turbulent 1-hole filling technology.

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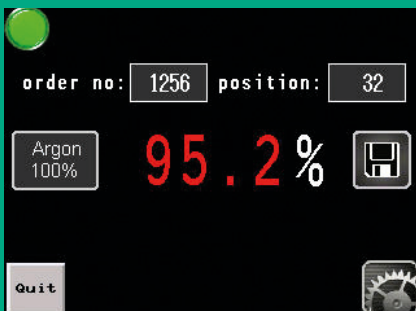
The emphasis is not only on filling speed, but additionally, achieving the highest possible efficiency!”



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

Relax – all runs smoothly!

Have you had enough of stress and the unforeseeable? In terms of quality assurance and quality verification, with the HELANTEC IPC you can sit back and relax.

With IPC you can set the desired gas concentration individually. A label that lists the most important characteristics can be printed for each IG unit – as a quality mark. The visualisation of the filling process informs the user about the current progress during each gas filling process.

In the option HIGH LINE, automatically and without any additional effort, all fillings or any IG unit are recorded. The barcode of each individual IG unit can be read for identification and tracking. All data can be retrieved directly from network. The integration into in-house quality management systems is possible in a breath.



Efficient and economic

Efficient IG unit filling with low gas consumption, economic gas filling of extremely large formats

Intelligent and accurate

Intelligent detection of IG unit size, integrated and precise gas analyser, gas savings program for krypton, input pressure check

Simple and intuitive operation

Now also with 1-hole technology

	TURBOFILL High capacity for small budgets	RAPIDE L200 The entry-level model of the RAPIDE L series	RAPIDE L500 The best-selling gas filling system	RAPIDE L900 The highest-capacity gas filling system
Filling lines / capacity ¹⁾	2 / 600 4 / 1200	1 / 400 2 / 800	1 / 600 2 / 1200	1 / 800 2 / 1600
Filling line can be retrofitted	✗	✗	✓	✓
Gas inputs	1	1	2	4
Gas analyser per line	✓	✓	✓	✓
IPC	ECO LINE	ECO LINE	HIGH LINE	HIGH LINE
- Documentation	✗	✗	✓	✓
- Network connection	✗	✗	✓	✓
- Barcode	✗	✗	✓	✓
- Label printing	✓	✓	✓	✓

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 sealing systems with 2-component sealants

The processing of 2-component sealants requires a certain quality inspection of the mixing ratio. Instead of complex and time-consuming procedures, the SEALANT INSPECTOR monitors continuously the mixing ratio. Moreover, it informs immediately about any deviation.

This ensures that the requirements of the sealant manufacturer are reached. Therefore, the IG manufacturer knows that the mixed sealant fulfils the specified guaranteed properties (e.g. tensile strength, adhesion etc.). Variations in the mixture would have both short- and long-term consequences (for example, a non-hardening edge seal, missing tightness, or reduced adhesion properties).



IGM/IPA

Process monitoring for gas filling presses

For the first time, the system IGM / IPA offers 100% process monitoring for gas filling presses. The integrated warning system informs about quality deviations and the efficiency of the gas filling press.

Every filling or each IG unit is recorded – in an automated procedure, without additional effort. Thanks to network connectivity, all data can be transferred into the existing quality management system.

Using the gas analyser GAS INSPECTOR, the result of the random quality test (measuring the gas concentration) can be assigned to the relevant filling opera-

tion. Thus, the IG manufacturer has the process “gas filling” completely and safely under control.





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

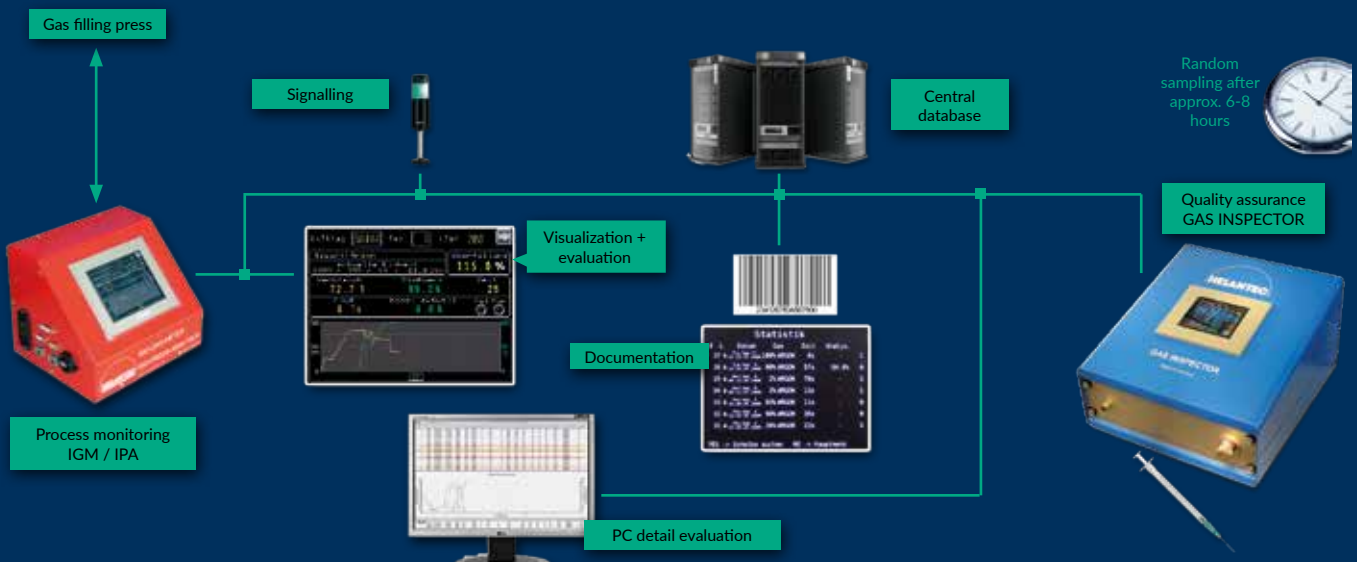
Your benefits with this system

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



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

Process monitoring for gas filling presses



Quality control

Easy and reliable

The origin of HELANTEC is gas analysis. For more than 25 years, we supply analysers that were especially developed for the quality control of gas filled IG units. We deliver the best-suitable device for each application.

The founding of the long endurance of our analysers are the measuring cells, that work virtually maintenance-free. Thus, there are very little upkeep costs.

All analysers are calibrated with our own test equipment; each analyser is delivered with test certificate. Of course, we also check and certificate your analysers regularly, if this is required. The inspection including long-term test and the certification is done in our factory.

Our analysers are used worldwide, among others by accredited auditing companies, in laboratories and in the production of well-known IG manufactures around the world. The worldwide use of these analysers proofs us and our technology.



GAS TESTER

Fast quality inspection in the production

HELOX 4

Highest precision for laboratory and production

GAS INSPECTOR

All-rounder including 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.”

Standard at the highest level

Gas filling machines for every budget – filling with timer or integrated gas analyser, but always with high-quality and innovative components.

This is our standard!

During the entire filling process, the integrated analyser continuously measures and displays the gas concentration. The filling process is ended automatically as soon as the desired gas concentration is reached.

Thus, also standard can shine with high capacity.

Highlights

- Efficient gas filling with low gas need
- Special filling probes
- Input pressure control
- Simple, intuitive operation



Even the standard gas filling machines from HELANTEC are equipped with intelligence!”



EASY.FILL

Simple, inexpensive, reliable.

Terminates the filling process after the set filling time, which is specified in the corresponding table.

STANDARD

High capacity for small IG units.

Synchronous filling of 4 IG units, with integrated analyser and automatic re-filling.



SMART 150

Precise, maintenance-free and durable.

The entry-model with integrated gas analyser. The desired gas concentration can be adjusted 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 the insulated glass production.

With the Leakfinder 2.0 you find the answers to the questions: "Why do I fail to achieve good and stable gas concentration?" or "Why do I consume so much gas?"

It is easy to handle and easy to operate.

Gas mixing device

Stay self-sufficient and flexible in terms of gas mixtures.

With our gas mixer, you produce any argon-krypton-mixture by yourself.

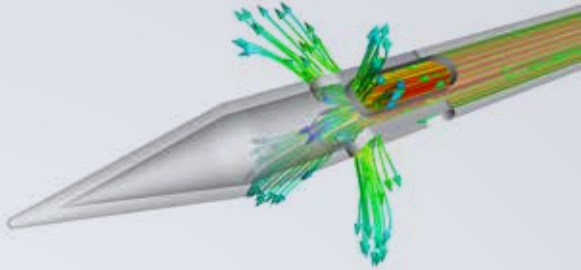
The desired gas concentration is set directly at the mixer.



Grinding wheels

- Universally applicable on automated and manual grinding machines
- Cost-efficient
- Made in Germany





Accessories for gas filling

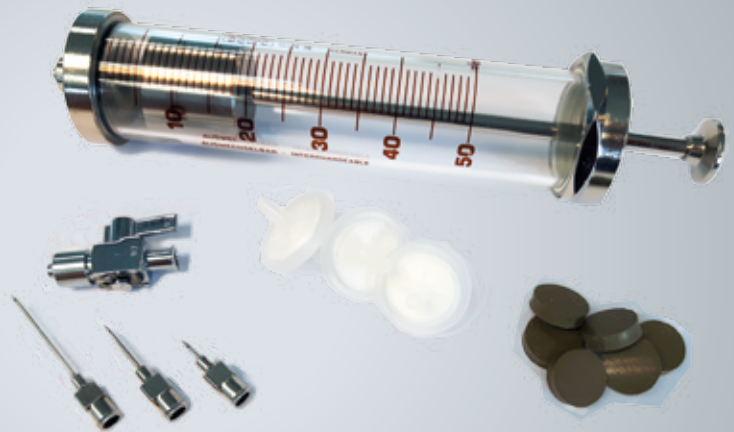
The special design of our probes allows optimal gas concentrations

- Robust and durable
- Sophisticated design

Hoses, filters, distribution arms for hoses

Accessories for analysers

- Low-wear
- Reliable sampling
- Various needle lengths



Consumables

- Highest fitting accuracy
- Tight tolerances
- Reliable quality





Gas filling - visibly better!

Innovative thinking and action for more than 25 years!



GERMAN QUALITY



MADE IN GERMANY

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