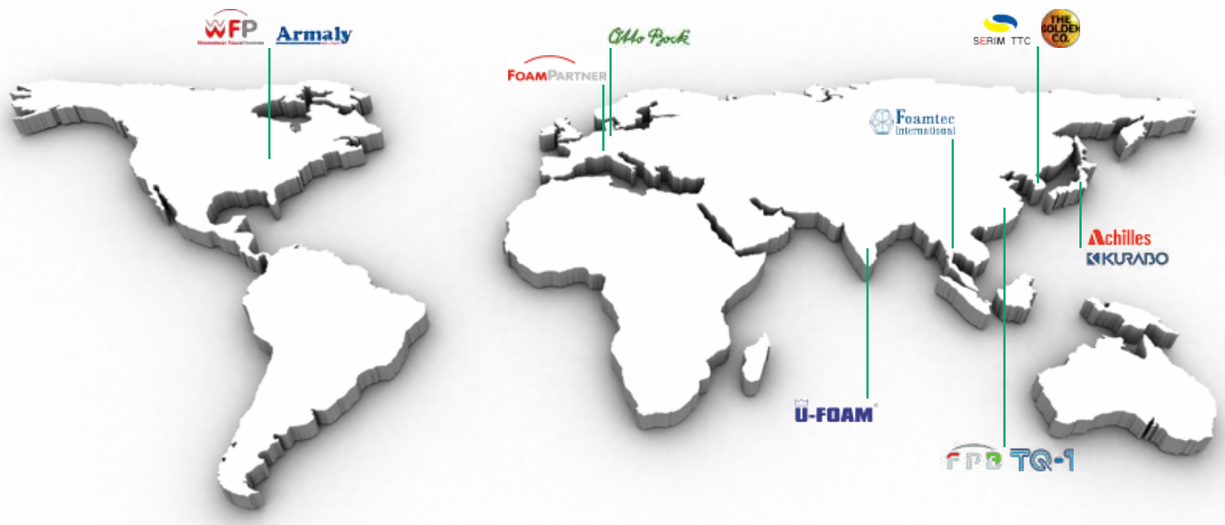
RETICULATUS™
Worldwide References

Many customers already profit by this method.



ATL schubs GmbH
Werfstraße 26
D-31789 Hameln
Tel.: +49 5151 9570-0
Fax: +49 5151 9570-71
E-Mail: info@reticulation.de
Web: www.reticulation.de

Agents wanted for

- USA
- Mexico
- Africa
- Middle East
- India
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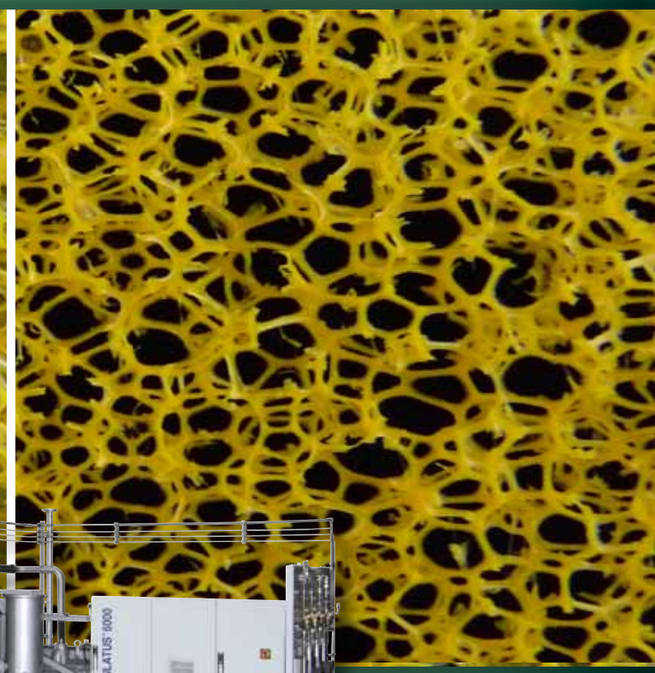
RETICULATUS™
Reticulation Machine

Highest Standard For
SAFETY



ATL SCHUBS STEUERUNGSTECHNIK

RETICULATUS™

Reticulation of Foam

What is reticulation?

Reticulation is a controlled explosion which destroys the fine membranes in the foam and thereby creates the required open cell structure. It is a fully computer controlled process:

1. The first step is to slide the foam block or roll into the pressure chamber. The chamber is made up to 100 mm thick highly extra-high strength steel and is built by ATL schubs itself. The chambers take foam blocks and rolls between three and six cubic meters and are prepared according to customer specifications. As required, foam between 10 and 100 ppi can be individually worked on.

Axel Schulz (left) and Jörn Struckmann (right), developers of Reticulatus™

2. A vacuum pump creates a vacuum in the pressure chamber. Sensors ensure constant conditions and test continuously during the process.

3. Next, a detonating gas mixture is fed into the chamber, also computer controlled and in an exact dose. This exact, and in view of the results, refined procedure, is the main feature of Reticulatus™, making the system completely different to any previous solutions.

4. After the detonating gas mixture is fed into the chamber, the system announces that it is "ready to ignite", as soon as all necessary parameters are reached. The operator can then release the controlled explosion by pressing the button.

5. The controlled explosion ensures that a uniform flame front sweeps through the foam, breaking up the cell structures and produces the required open cell structure.

6. Subsequently, the foam should cool off for a short period and briefly damped with nitrogen to put out any potentially remaining fire pockets.

7. Afterwards, the chamber opens, the foam can be removed and further processed.

The entire process lasts approx. 8 to 10 minutes and can be carried out by almost any semiskilled worker. Reticulatus™ meets the latest explosion protection regulations like ATEX 94/9/EG and is also ASME and UL certified, therefore it complies with all international regulations. In addition, every explosion chamber is MOT/TÜV inspected to ensure its operational safety.

Safety first

Every morning, the system carries out a tightness test on all components during the automatic programme start. Furthermore, automatic reminders of due servicing dates are generated. Especially advantageous is the option of remote servicing via modem which allows a remote programming and replacement of the receptors via email or data transfer.

Reticulatus™ - quality made in Germany

ATL schubs GmbH is based in Hamelin, Germany and the only manufacturer of reticulation machines worldwide. The company was founded in 1996 as a joint venture by the managing directors Axel Schulz and Jörn Struckmann. Both are owners of their own business, too. While Schulz is leading an electrical engineering firm, Struckmann heads a metal work company for special purpose machinery. Consequently, all needed resources and magnitude are at their disposal. Not only to develop the Reticulatus™, but also to build it, completely autonomously - exactly to customer specifications.

Laboratory machine for customer trials

In the first six months of 2012, five reticulation machines will be delivered and installed. And all previous delivered machines are still in operation worldwide - in Germany, Switzerland, South Korea, Japan, India, China, Thailand and the USA.

Even manufacturers and converter of synthetic foams are customers of ATL schubs, not only because of the safety concept that ATL schubs GmbH offers. Up to now, the company has not come across a single competitor that has a comparable solution to the Reticulatus™.

Experience reticulation first hand

With a laboratory machine the company offers the opportunity to test the customer's foam with different pressures levels and detonating gas types at their plant. This machine offers an explosion chamber with the size 400 x 400 x 800 mm. Now it is up to you to experience the reticulation process first hand.

Foam before and after reticulation

Technical Specifications - Standard Block and Roll Sizes (W x H x L)

Size 1	Inside chamber dimensions	1,350 x 1,050 x 2,350 mm (3.33 m³)
	Max. foam size (block)	1,300 x 1,000 x 2,300 mm
	Max. foam size (roll)	Ø 1,050 x 2,300 mm
Size 2	Inside chamber dimensions	1,530 x 1,250 x 2,040 mm (3.90 m³)
	Max. foam size (block)	1,480 x 1,200 x 1,990 mm
	Max. foam size (roll)	Ø 1,150 x 1,990 mm
Size 3	Inside chamber dimensions	1,650 x 1,150 x 2,140 mm (4.06 m³)
	Max. foam size (block)	1,600 x 1,100 x 2,090
	Max. foam size (roll)	Ø 1,050 x 2,090 mm

NST - Nitrogen Sweeping Technology

Another important benefit of Reticulatus™ is the so-called "Sweeping", or NST (Nitrogen Sweeping Technology). It is a separate procedure during the reticulation process. To avoid external combustion of the foam, nitrogen is injected into the chamber after the detonating gas mixture is fed into the machine. Due to this, highest quality can be ensured, especially for sensitive foams.