

## General VARIOTEC processing instructions for VIP/QASA components

### 1. Transport, storage

- 1.1 The VIP/QASA panels must be protected from any mechanical damage during transport to the installation location. Do not store upright on the unprotected panel edge.
- 1.2 The panels are delivered lying down on pallets and must also be transported to the construction site or stored temporarily in the same way.
- 1.3 The pallets must not be stacked or weighted at points.
- 1.4 The panels must be stored such that they are protected from wet, prolonged insolation, and mechanical damage. QASA type N (uncoated VIPs) may be exposed to high temperatures, high humidity and/or aggressive gases neither during storage nor during use; please note in particular that permanent moisture levels above 60% rel. humidity and temperatures of + 80°C / - 15°C must be avoided.
- 1.5 The max. ambient and processing temperature is 80 °C. When installing VIP in glass façade elements, please note that permanent and long-term function of the VIP element can also be guaranteed only up to a max. temperature load of 80° C.

### 2. Checking the VIP/QASA components for integrity before installation

- 2.1 The VIP/QASA components delivered must be checked for:
- 2.2 Visual inspection with respect to external damage (sort out damaged components, if applicable check for leaks by VARIOTEC). With type N, the high barrier film must tightly enclose the support core; the 4-sided edge protection band must not be damaged, the panel must not be “soft”.
- 2.3 Check the seal of the cover film on QASA components with open edge formation (leaks are revealed by cover films fitting loosely on the core).

### 3. Checking the base at the installation location

- 3.1 The base must be smooth, level and free of pointed elevations or edges. Unevenness must be levelled before installation.
- 3.2 The base must be clean and dry (observe the specifications of the adhesive manufacturer).
- 3.3 All objects adjoining the insulation must likewise be checked for hazard potential for the VIP/QASA components.

### 4. Assembly of the VIP elements

- 4.1 The cover film of the VIP/QASA components must not be damaged. Sawing, drilling and other mechanical processing is possible only to a limited extent in the area of installed and clearly labelled EPS/XPS/PUR edge strips. If there is no label or if the processor is unsure, please consult the supplier. After any processing that takes place, the VIP/QASA components must be checked again for leaks. After adaptation on site, the cut edges must be taped off with waterproof adhesive tape.
- 4.2 In the case of surfaces for which a layout plan is available, the elements must be installed in accordance with the plan (by numbers).
- 4.3 If detailed drawings of the VIP/QASA components are affixed to the elements then these must be removed only after finished processing / adaptation on site.

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- 4.4 The VIP/QASA components can be stuck with mineral adhesive or polyurethane adhesive and the assembly adhesive systems available on the market. Adhesive application quantity coordinated with the adhesive used (observe the processing guidelines of the adhesive manufacturer guidelines). Foaming with PUR foams is also technically possible but should be balanced and tested in advance.
- 4.5 Mechanical fixing by screwing is possible only with VIP/QASA components that are intended specifically for such, with edge formation or centre bar. Edge widths must be observed.
- 4.6 To guarantee the seal at the butt joints to avoid thermal bridges and to compensate for dimensional tolerances, we refer to the use of compression tapes (Comb300 is supplied by VARIOTEC) in the butt and connection area and in the area of adjoining components; likewise, we refer to the taping off of the panel joints with fabric tape of type 386 (use aluminium adhesive tape no. 705 for B1 design). It is essential to avoid wet and moisture in the area of the butt joints.
- 4.7 If possible, dimensional tolerances must not be included in flat surfaces but rather in the outside corners (tolerances for VIP/QASA elements: length/width +/- 2 mm, total thickness -1/+2 mm).
- 4.8 Do not damage vacuum panels with tensile and pressure load or by bending.
- 4.9 Point loads of the VIP/QASA components must be avoided. They may be exposed only to even, flat load. When installing and using QASA type N, they should be exposed to only little or no mechanical load. Spot loads and prolonged shaking or pulling on the cover are to be avoided in particular.
- 4.10 In the assembly processing phase, moisture ingress between the built-in vacuum panels and the flat seal lying on them must be avoided if possible. To avoid heating of the panels in installed condition, it is recommended to finish the further layers e.g. such as moisture insulation, gravel, stone slabs, screed etc. immediately. The use of moisture barriers must likewise be agreed and determined by a structural physicist.
- 4.11 When liquid sealing is used please note that only by VARIOTEC authorized products, which are with the GFRP top layer coordinated, are permitted to use. With the use of liquid sealing it is essential not to use them as a final coating but only as a moisture insulation below a final layer. In case of use of liquid sealing we ask for consultation with our with our application consultants.
- 5. Assembly staff, other trades, users**
- 5.1 The VIP/QASA components may be processed only in consideration of the above points. In case of queries, please contact the following number: +49 9181 6946-29.
- 5.2 Before assembly, the "general VARIOTEC processing instructions for VIP/QASA components" must be pointed out to the assembly staff.
- 5.3 The risk of VIP/QASA components being damaged by mechanical influences must likewise be pointed out to workers from the subsequent trades.
- 5.4 The specific features of the VIP/QASA insulation must likewise be pointed out to the users.
- 6. Further information can be found in our brochure „einfach-sicher-dämmen“**  
<http://variotec.de/hp2741/Vakuumdaemmung-VIP-QASA.htm>

Advice on questions concerning QASA/VIP technology and processing at  
Tel. no.: +49 9181 6946-29 or by mail to [qasa@variotec.de](mailto:qasa@variotec.de).