

## MULTITECH G

The following instruction is mandatory to follow in order to secure the quality of insulating glass units produced.

### STORAGE

To preserve the properties and quality of the MULTITECH G, storage conditions must be observed.

Broken packaging, high humidity and frequent temperature changes will have direct impact on the spacers.

Spacers must be stored at room temperature for at least 48 hours before processing. Preferred storage condition: Around 50% RH and room temperature 15-25 °C.

Avoid storage of spacers in a very dusty environment.

To prevent dust and contamination of the spacers during storage, close the packaging after taking out spacer bars.

This way the MULTITECH G will be protected from dust and will be traceable even after the packaging has been opened.



### HANDLING

Always use gloves during handling to avoid contamination of the surface, and to avoid direct contact with the glass fibre reinforced material.

To avoid damage during transportation from stock to production, make sure to support along the spacer (2 persons are recommended).

Handling of complete bundles will reduce the risk for damage.

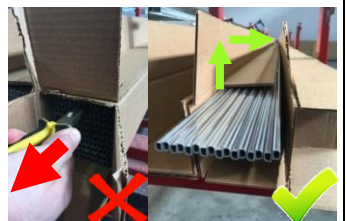
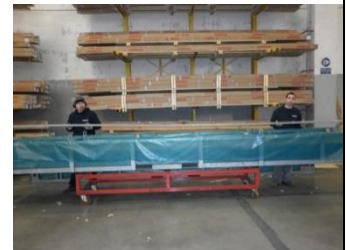
The foil on the backside of the spacer is NOT to be compared with metal and the foil can be easily damaged.

Do not pull the single spacers out of the closed box.

Opened the box at the top and use the spacers from the top and down, as shown on the pictures here right!

To open the bundles without creating damage, use a tool like presented on the picture here right.

A knife will increase the risk of damaging the surface of the spacer.



### CLEANING SURFACE

If the spacer surface is dusty, the dust can be removed with antistatic loaded compressed air or an antistatic cloth. Do not use any chemicals!

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### PROCESSING

The spacer can be processed in different ways. A simple frame assembling can be done by cut-to-length and use of corner keys afterwards.

Frames can also be produced on bending machines suitable for this and frame closing is then done with a connector.

Frames produced with welding machine suitable for this and frame closing is then done with special corner keys.

This must be secured when drilling for desiccant filling, or by installation of crosses (double faced/Georgian) where nails are used. Thin nails are to be preferred.

#### Important to notice

Whenever the foil is penetrated, the damage must be closed with butyl afterwards.

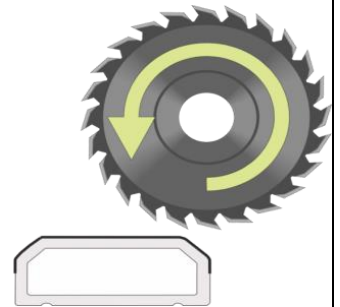
### CUTTING

Secure dust extraction during cutting. Wear eye protective glasses.

Cutting the spacer from the backside (foil side) using a proper saw blade will give the best result. This will also secure a minimum of damage to the foil/spacer.

Saw blade type and RPM to be adjusted for best possible performance.  
Typical range is 3.000 to 4.500 RPM.

Be careful with burs from sawing and remember to clean and remove dust.



### CORNERS AND CONNECTORS

All connections in general must be closed and secured with butyl or alternatively by use of a suitable tape. Either this can be done manually as an after frame processing or even better as an integrated solution, where the connector or corner is pre-butylated.

For easy handling and as a recommended solution use a pre-butylated version with protective moisture-gas barrier, having excellent adhesion to secondary sealants. An example is here shown from S&T Components.

When applying butyl afterward to all corners/connectors it is possible to use also the following standard solutions:

- conventional corners in plastic
- corners for gas filling
- bendable corners for models
- connectors in steel or plastic

**Tight corners secures the best possible performance and durability of the insulating glass.**



Corner keys S&T Components



Conventional corner with butyl

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Bendable corner key secured with butyl.

### BENDING AND WELDING

MULTITECH G spacers can be bended or welded connected by use of already well developed and adapted systems offered by different manufactures worldwide.

There are very different solutions offered. For more information, please contact the actual producer and ask for their specific recommendations.

Pay attention to the thin foil on the spacer back side, which can easily be damaged or even broken by the processing. A damaged foil will cause a defect in the IG system.

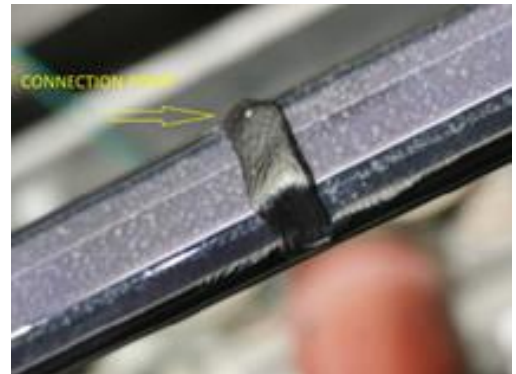
The performance must be evaluated and validated for each machine and bending setup, preferable with checking of both gas leak and humidity uptake afterwards.



Bended corner secured with butyl



Welded corner key secured with butyl



Connector secured with butyl

**All these measures are essential to obtain the best performance in terms of sealing and durability of the insulating glass.**

### MOLECULAR SIEVE

Use only high quality molecular sieves (desiccant), like 100% Zeolite 3A, to fill all 4 sides of the frame. It's important to control that the drill is going through the spacer wall so the frame is correct and fully filled on all 4 sides.

MULTITECH G can be filled both manually and on suitable automatic filling stations. Remember to close any holes made for filling. Make sure to check proper filling by use of weight.

Quantity/weight of desiccant depends on type, size and bulk density.

Filling example with MOLVER MGM 01 for 1 linear meter

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MULTITECH G size	8	10	12	14	15	16	18	20	22	24
MS g/m manually filled (100%)	18	25	33	40	44	49	55	64	68	84
(90%)	16	23	30	36	40	44	50	58	61	76

We recommend a fill weight of over 90%.

### HANDLING OF FRAMES

Frames must be handled and eventually stored in a safe way to avoid damages.

#### Warning

After handling and transport of frames, it's important to check if the connector/corner keys are still in correct position and the system is intact, if not there is a significant risk to have desiccant dust inside the insulating glass unit. Foam behind the connector/corner can be used as preventive action.

### BUTYL APPLICATION

The application surface must be clean, dry, free of oil contamination and dust.

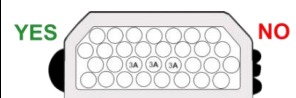
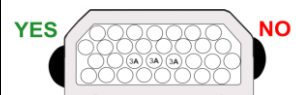
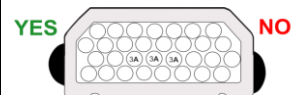
Butyl application along the frame without displacement and without any interruption. The duration of the pressing phase must be long enough to secure full contact of the application surfaces. Absolute min. is 2,5 g/m (2,4 cm<sup>3</sup>/m).

The position of the butyl string is very important and must be as shown on the pictures marked as YES.

Correct volume and correct position in the middle of the side flange.

When pressing the glass onto the spacer to secure the butyl connection, make sure no cracks occurs in the spacer.

If the pressing surfaces are not aligned, it will increase the risk for cracking up the spacer.



### SECONDARY SEALANT

Before applying secondary sealant check the foil is undamaged.

Secondary sealant must be applied only to the foil, and direct contact to the spacer material is to be avoided.

Thickness must be no less than 4 mm on the back of the spacer for a normal IG unit. For triple units or special applications please follow EN1279-2018 part 1 chapter 6.1.

After applying the sealant, no free space or air bubbles between primary and secondary sealant to be seen.

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### NOTE FOR TESTING

For correct adhesion testing using H samples (as shown below) please follow the guide line of the sealant supplier.

Make sure the sealant has full contact to the entire back side area of the spacer.

For testing in tensile machine, make sure the spacer will not be subject to premature deformation and uneven load.

We recommend to insert support drifts, to avoid deformation and cracking.

A deformed spacer will not perform correct during testing.

Butterfly test is not valid as adhesion test with secondary sealants, unless specifically recommended by sealant supplier.

