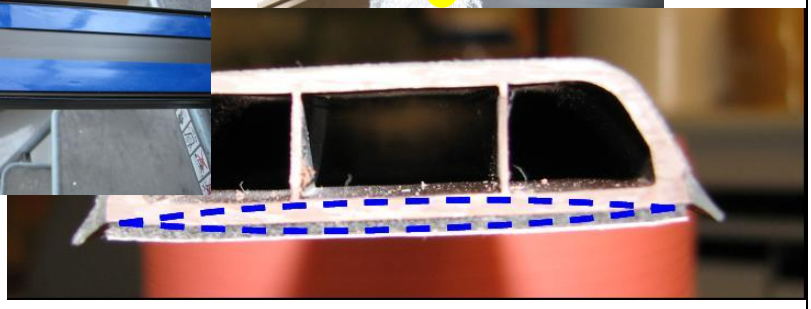
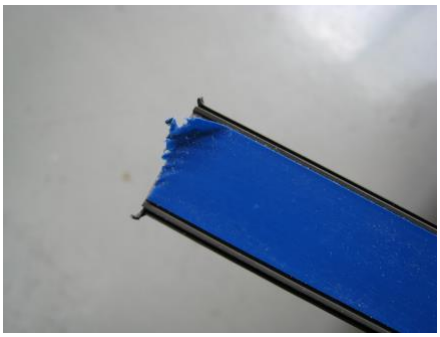
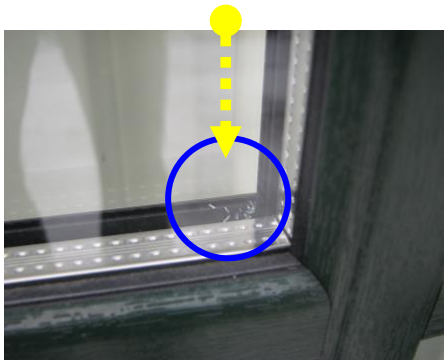
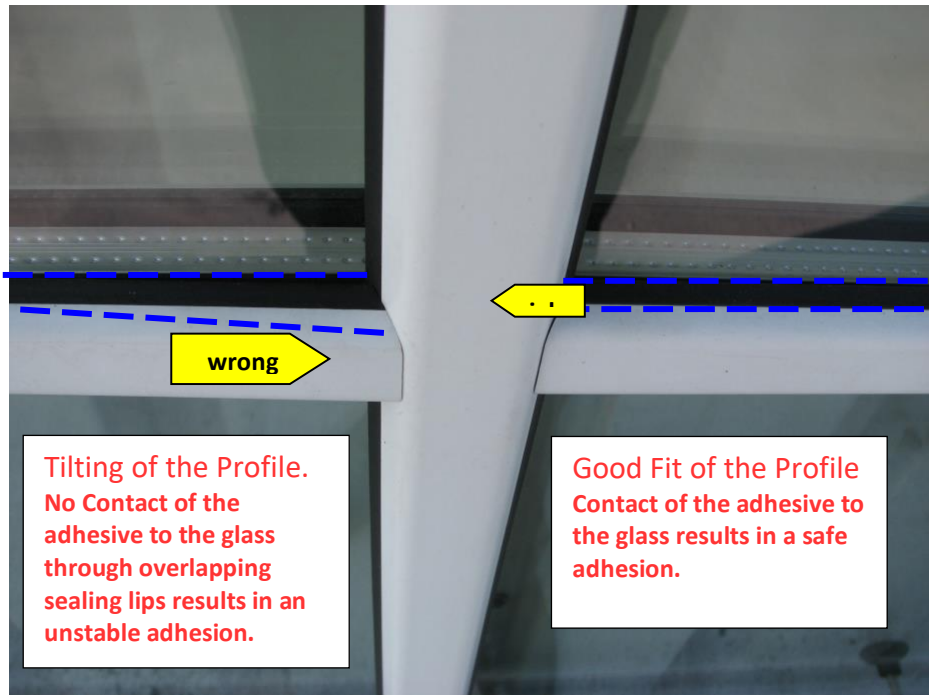
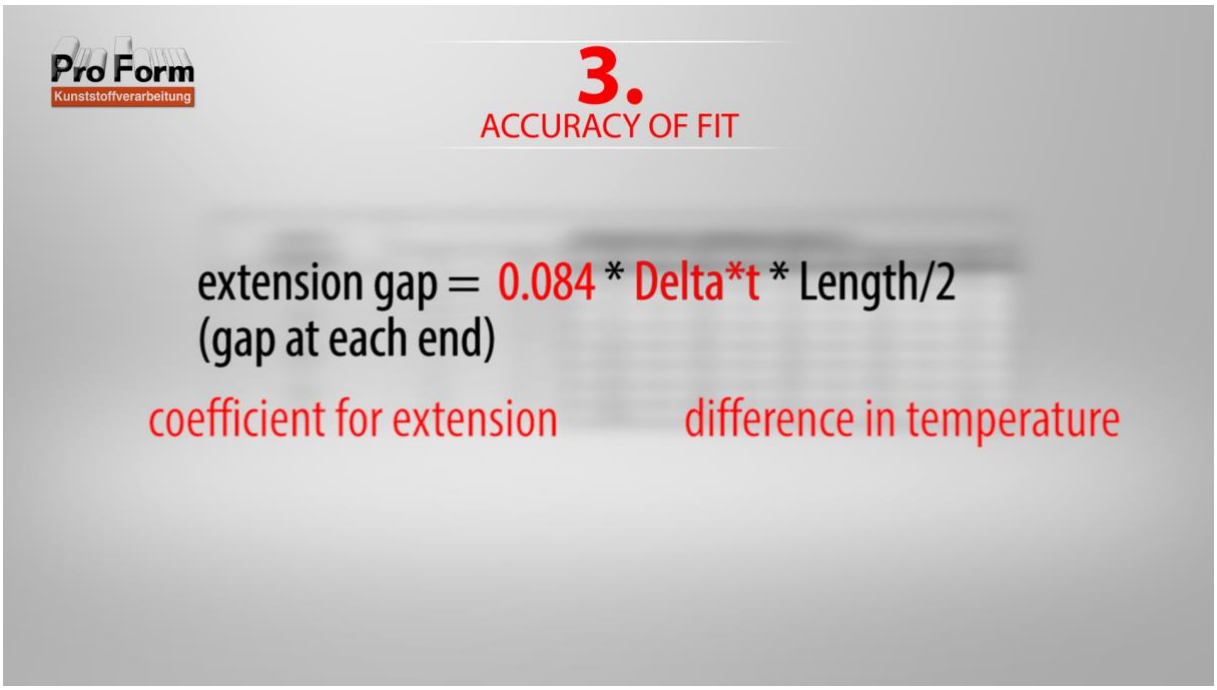
Video on Youtube: Click here !		30.03.15
Standard Operation Procedures – Muntin Bar Mounting		
1	Check window bars from your supplier before using them for flatness, **pressure marks** on the liner, liner lifting and accurate sealing lips. Do not use defective parts of the profile.	**Pressure marks**     **Concavity** 
2	Avoid the **liner flagging** off at the edges and pollution of the adhesive during your cutting or grooving process. **Cut through the liner first** for best results. Change the saw blade.	**Lifting the release film and pollution of adhesive surface**  
3	Verify the good fit of the pre-cut part into the window frame before removing the liner. Leave	

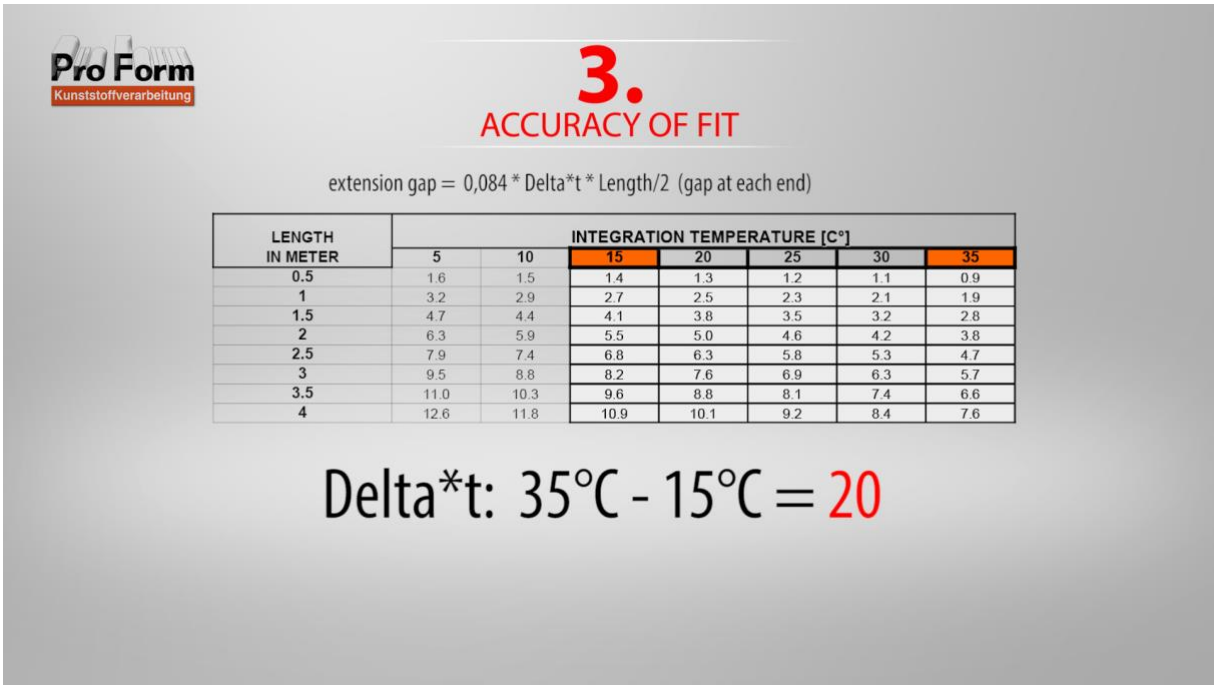
	a gap at each end.# The **minimum gap of 0,25mm** works for parts of short length. Calculate the extension gap with help of the table for integration temperatures if you are working with longer parts. **(see Video example and attachment)** **If** the parts are too long, do not push in by force but re-work the length.	
4	Wait until the window has reached shop floor temperature in order to avoid condensation water on the glass. The **minimum application temperature is 15°C.**	**Application temperature:**  **optimum temperature = 25°C** minimum temperature = 15°C) Windows and profiles must have the same application temperature. Before using them store both materials for 12 hours in the same room.
5	**Use isopropanol** or an Industry **Cleaner** for example **Tesa Industrial Cleaner.** Use **clean towels** in order to clean the window glass from dust and grease. Let dry off 30 seconds.	**Glass cleaning: Remove residues for secure adhesion**  The surface tension of the glass can be tested with test-inks and test-pens.
6	For positioning	**Positioning: for long profiles, glue the ends first**

	of **long window bars**, remove a small piece of liner at each end of the part. Use a distance piece in order to **ensure a gap to the frame**. Place on the window pane and pull the liner out off the gap. Then apply pressure by hand. **Attention:** Through permanent change of lengths and **adhesion failures** the adhesive strength may be reduced, and profiles tend to lift from the glass.	 If bars are cut too long or profiles are not cut free, the adhesive does not glue at the end. A lifting take-up must be avoided. In regions with permanent changing climatic conditions, the use of an MS Polymer glue at each end of the profile or a high performance adhesive like ACX-Plus can be usefull.
7	Apply **pressure** to the window bar by the heel of the hand. Start at one end and **push strongly** each 10 cm until the other end Or use a pressure roller like shown in the picture	**Adhesion:**   If Profiles extend 1m enclosed metal inserts should be existent to stabilize the glass. **Attention!** Through multiple glazing the glass pane may be thinner than usual. Through extreme compacting pressure the glass draws back and results in an unstable adhesion.
8	Let the adhesive dwell to the glass for **24 hours before shipment or outdoor storage.**	**Rest period after bonding** 

Attachment – Calculating the extension gap

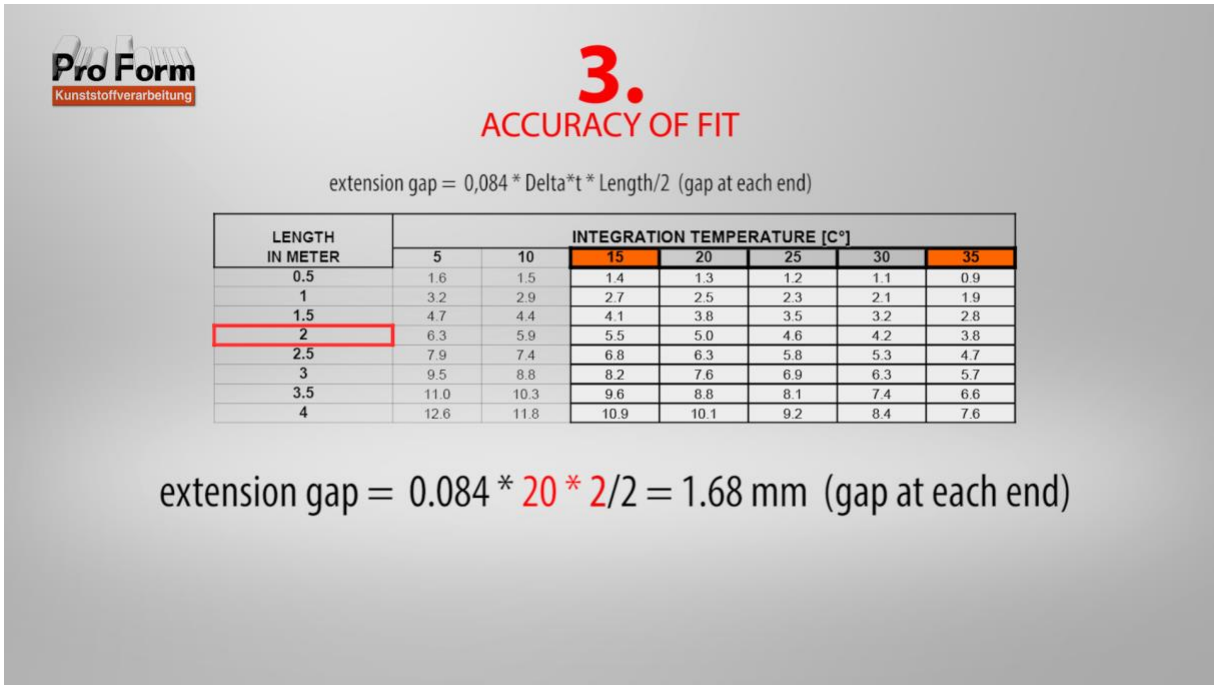


Calculate the extension gap for each end with help of the table for integration temperatures.
The value **0.084** is the coefficient for extension in this formula.
Delta*t is the difference in temperature, of an integration temperature to the highest temperature in the summer.

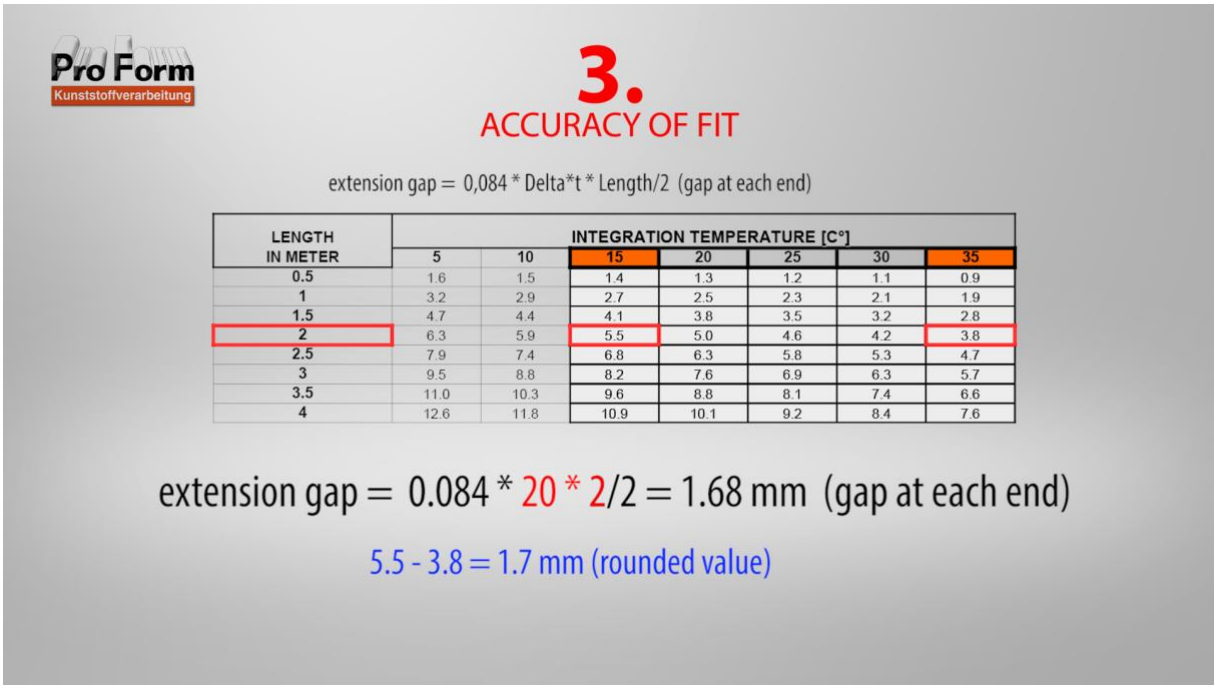


LENGTH IN METER	INTEGRATION TEMPERATURE [C°]						
	5	10	15	20	25	30	35
0.5	1.6	1.5	1.4	1.3	1.2	1.1	0.9
1	3.2	2.9	2.7	2.5	2.3	2.1	1.9
1.5	4.7	4.4	4.1	3.8	3.5	3.2	2.8
2	6.3	5.9	5.5	5.0	4.6	4.2	3.8
2.5	7.9	7.4	6.8	6.3	5.8	5.3	4.7
3	9.5	8.8	8.2	7.6	6.9	6.3	5.7
3.5	11.0	10.3	9.6	8.8	8.1	7.4	6.6
4	12.6	11.8	10.9	10.1	9.2	8.4	7.6

Example: **An integration temperature of 15°C and a maximum temperature of 35°C in the summer, results in the value 20 for Delta*t.**



Example: **With a part of 2m length this results in an extension gap of 1.68mm at each end.**



Example: **As an alternative use the extension values of the table for your calculation.**
For our example this results in the rounded value of 1.7mm at each end.