Sommer Informatik GmbH

18.11.2021, hi

GLASGLOBAL® AGSB

The software solution for the calculation of glass statics according to ÖNORM B 3716

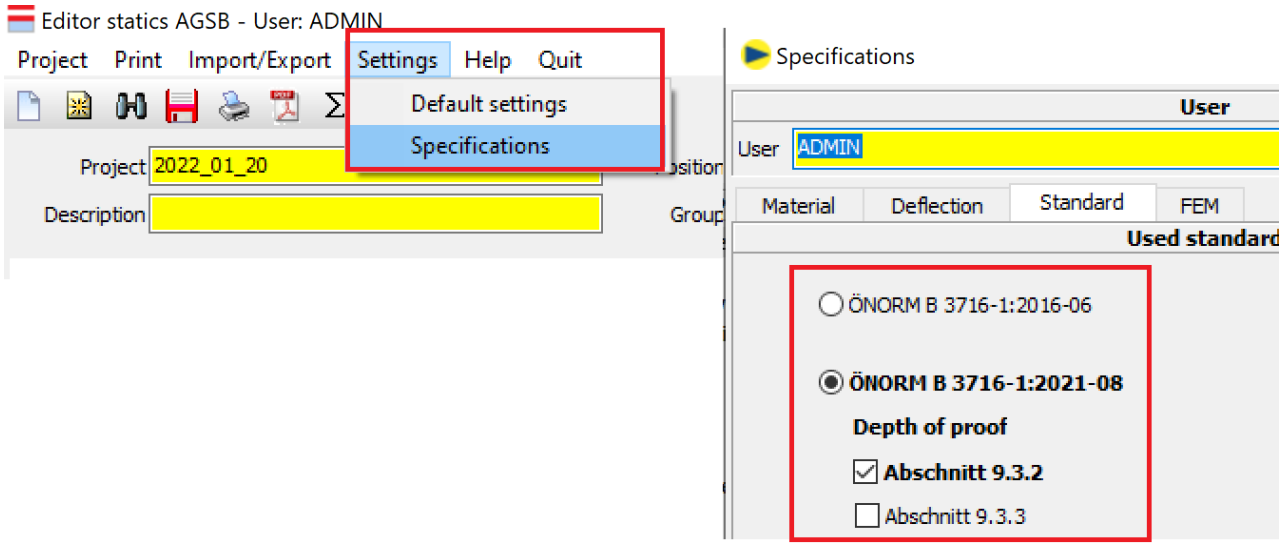
Start GLASGLOBAL® AGSB

GLASGLOBAL® AGSB is a component from the large product range of Sommer Informatik

Version ÖNORM B 3716-1

Selection of the standard version

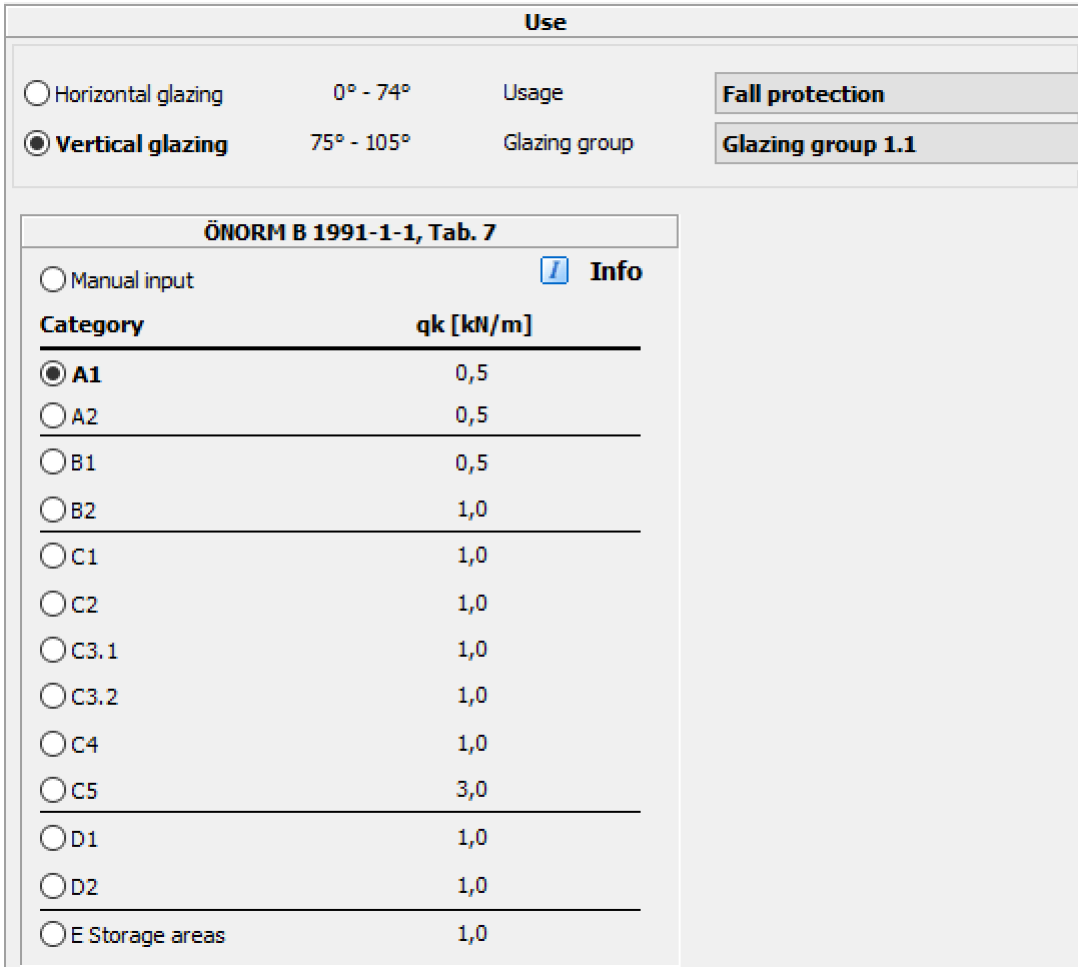
- ÖNORM B 3716-1:2016-06
- ÖNORM B 3716-1:2021-08



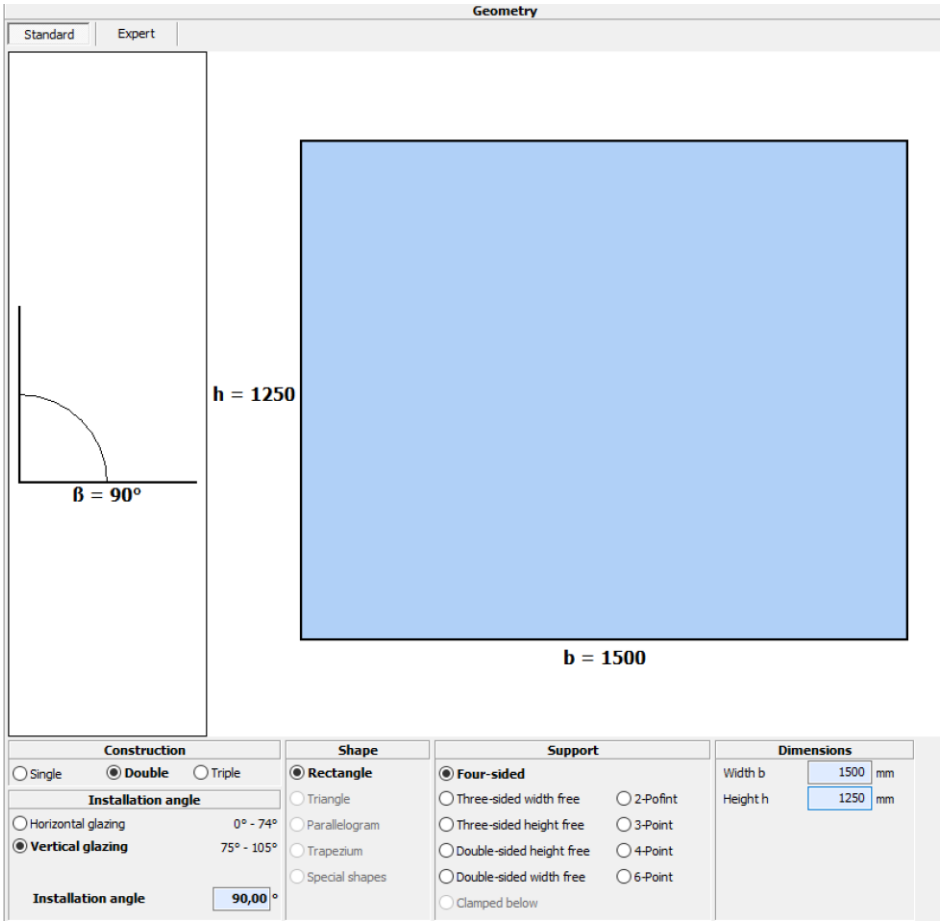
Use

In advance the determination of the use:

- Horizontal
- Vertical
- Category
- Glazing group

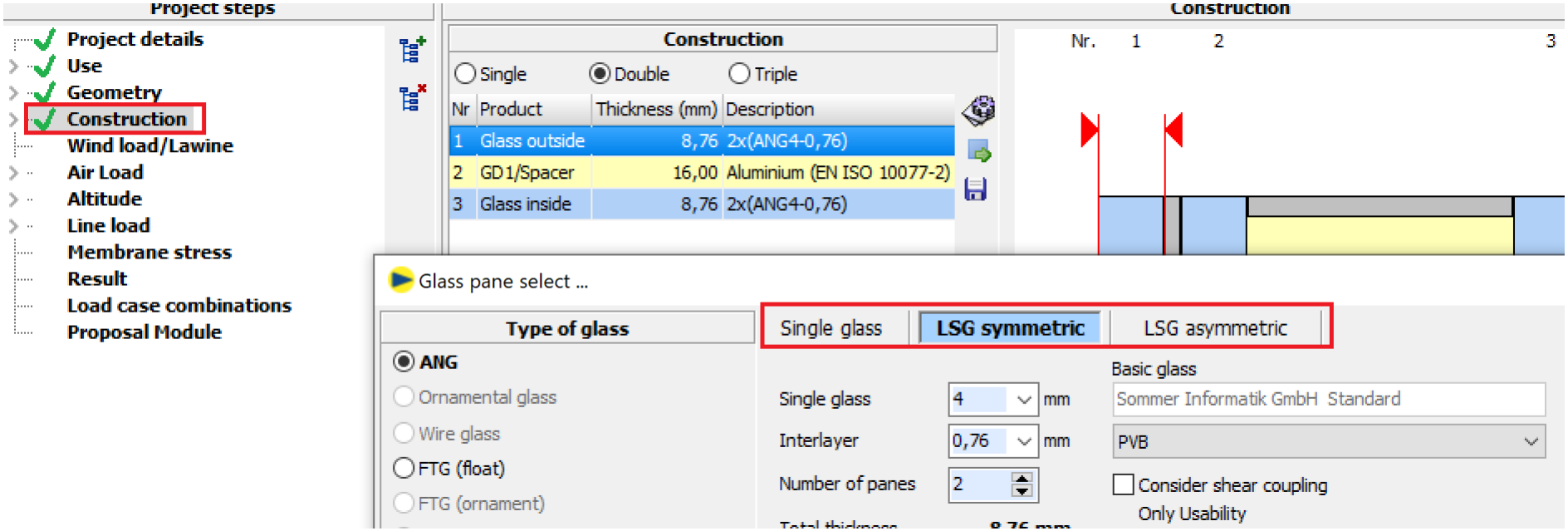


Geometry


Geometry
Standard
Expert
h = 1250
ß = 90°
b = 1500
Construction
Single
Double
Triple
Installation angle
Horizontal glazing
0° - 74°
Vertical glazing
75° - 105°
Installation angle
90,00 °
Shape
Rectangle
Triangle
Parallelogram
Trapezium
Special shapes
Support
Four-sided
Three-sided width free
Three-sided height free
Double-sided height free
Double-sided width free
Clamped below
2-Pofint
3-Point
4-Point
6-Point
Dimensions
Width b
1500
mm
Height h
1250
mm

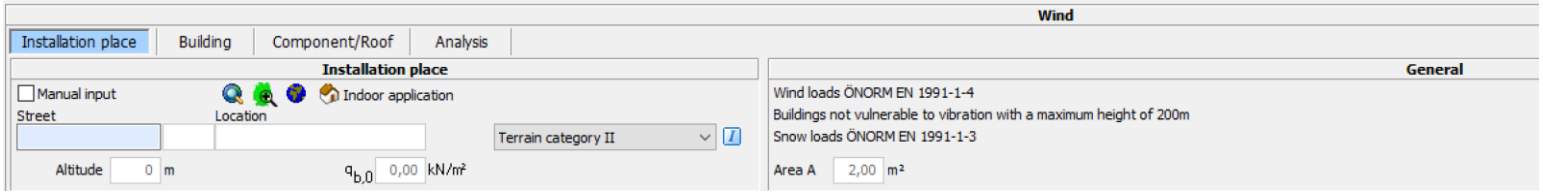
Pane structure

- Single glass, LSG symmetrical and asymmetrical



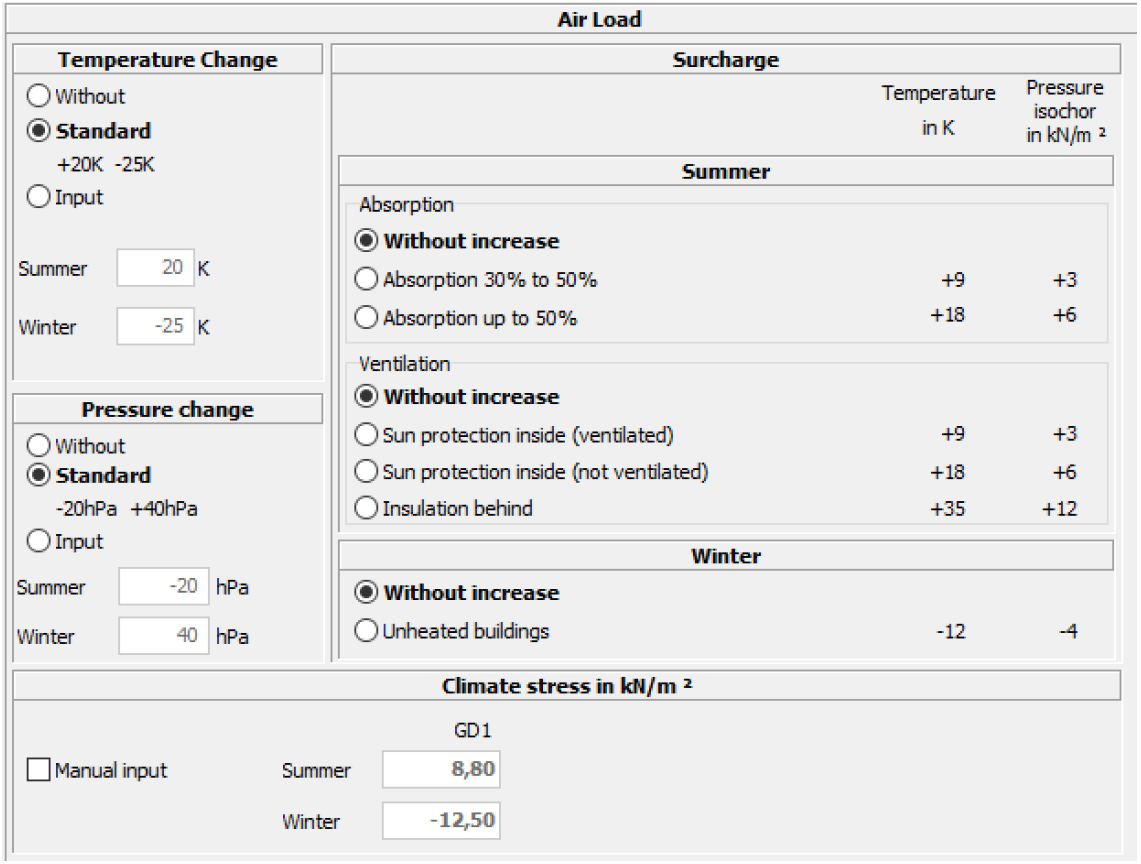
Wind/snow elasticity

- Place info with zip code directory



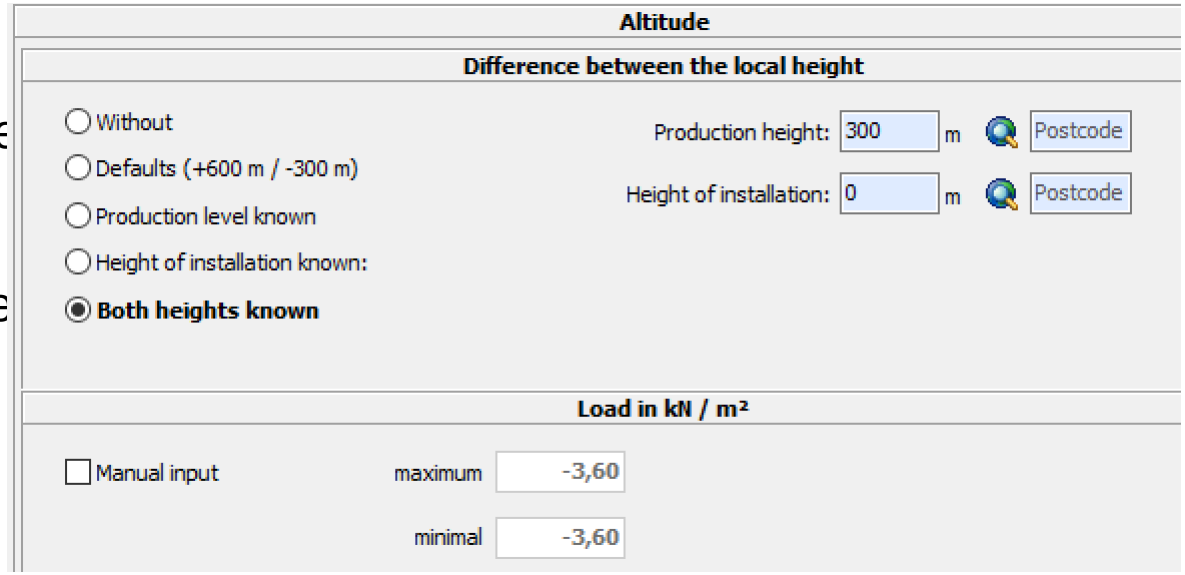
Climate load

- Climate loads are either calculated with default values or defined manually
- Temperature and air pressure changes, climate loads and surcharges for summer and winter can be included in the calculation



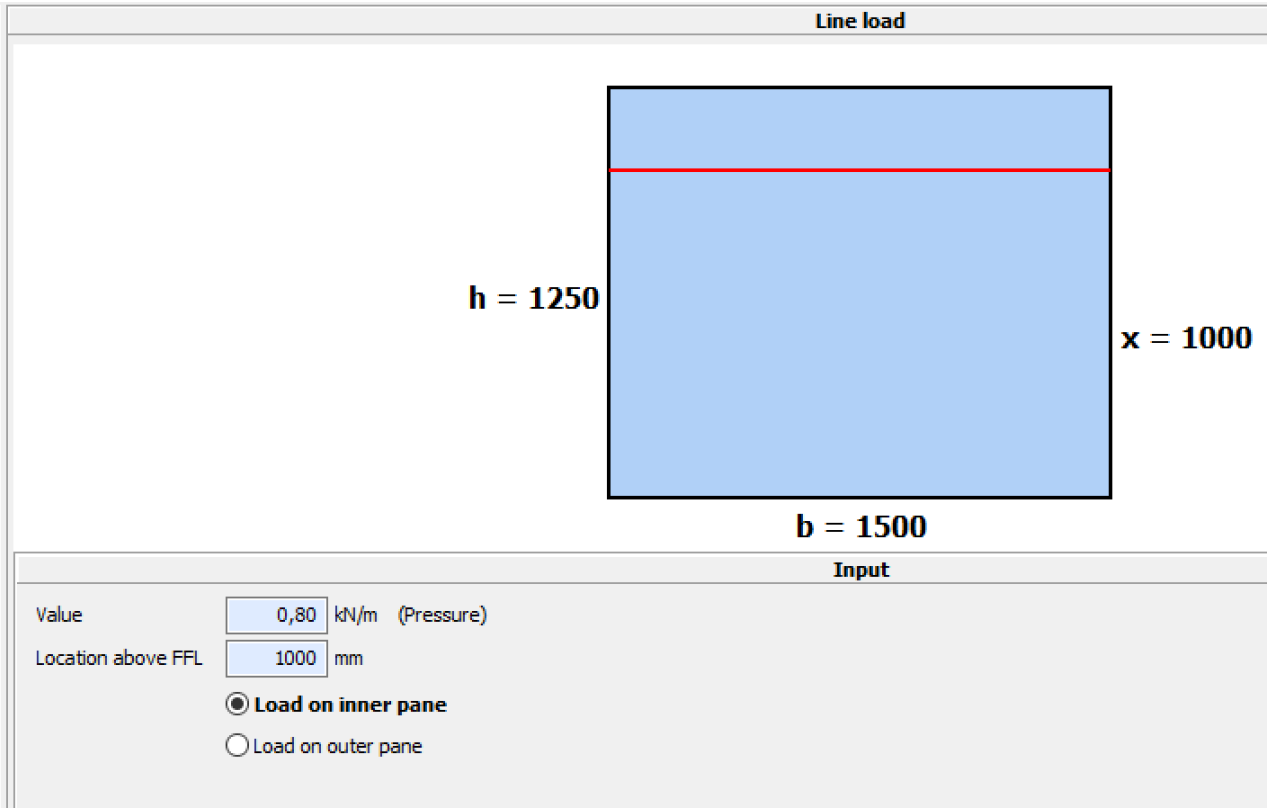
Location height

- The height difference between the production site and the installation site resulting in a load for insulating glass can be determined by entering the heights.



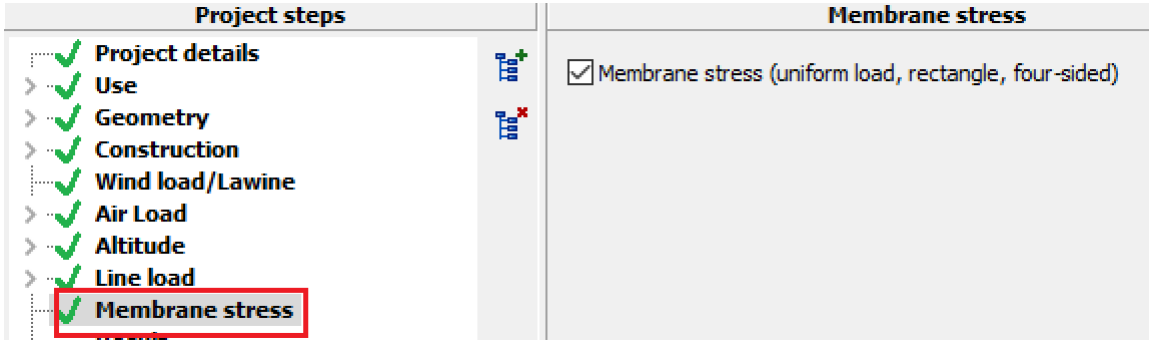
Line load

- Load in kN/m, attack height and load side for vertical glazing



Membrane voltage

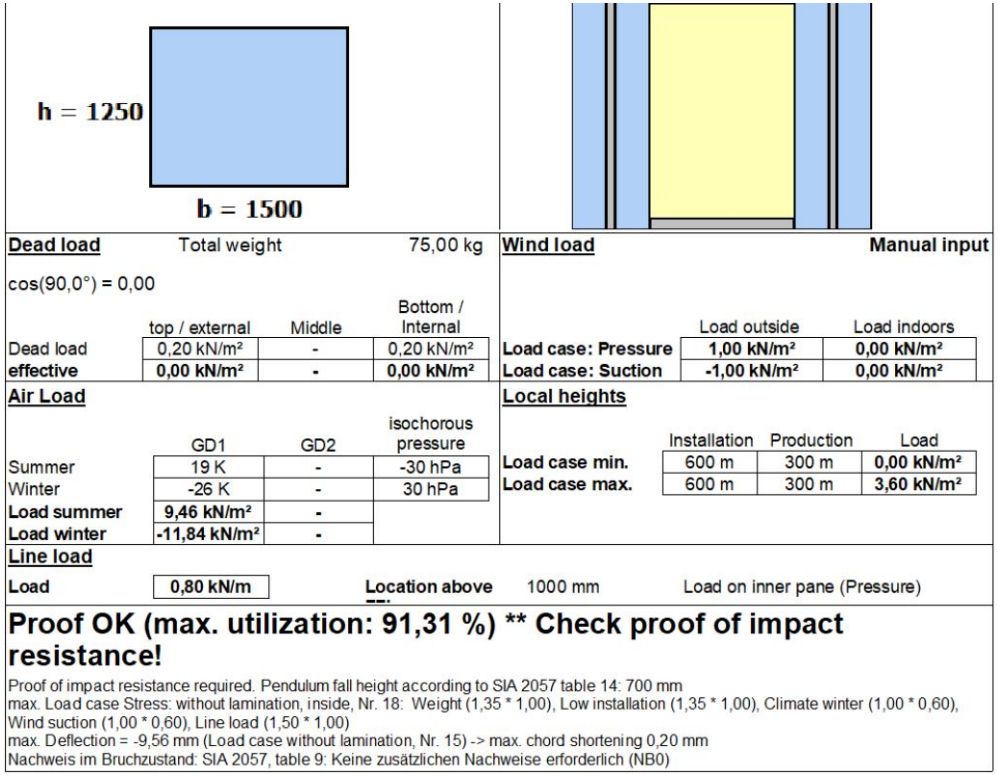
- by simply setting a check mark, the membrane stress can be taken into account in the calculation
- Nonlinear calculation



Result

The output of the results is done by specifying the used parameters

- Overall result
- Indication of the existing utilization



Dead load Total weight 75,00 kg

cos(90,0°) = 0,00

	top / external	Middle	Bottom / Internal
Dead load	0,20 kN/m²	-	0,20 kN/m²
effective	**0,00 kN/m²**	**-**	**0,00 kN/m²**

Wind load **Manual input**

	Load outside	Load indoors
Load case: Pressure	**1,00 kN/m²**	**0,00 kN/m²**
Load case: Suction	**-1,00 kN/m²**	**0,00 kN/m²**

Air Load

	GD1	GD2	isochorous pressure
Summer	19 K	-	-30 hPa
Winter	-26 K	-	30 hPa
Load summer	**9,46 kN/m²**	**-**	
Load winter	**-11,84 kN/m²**	**-**	

Local heights

	Installation	Production	Load
Load case min.	600 m	300 m	**0,00 kN/m²**
Load case max.	600 m	300 m	**3,60 kN/m²**

Line load

Load **0,80 kN/m** **Location above** 1000 mm Load on inner pane (Pressure)

Proof OK (max. utilization: 91,31 %) ** Check proof of impact resistance!

Proof of impact resistance required. Pendulum fall height according to SIA 2057 table 14: 700 mm
max. Load case Stress: without lamination, inside, Nr. 18: Weight (1,35 * 1,00), Low installation (1,35 * 1,00), Climate winter (1,00 * 0,60), Wind suction (1,00 * 0,60), Line load (1,50 * 1,00)
max. Deflection = -9,56 mm (Load case without lamination, Nr. 15) -> max. chord shortening 0,20 mm
Nachweis im Bruchzustand: SIA 2057, table 9: Keine zusätzlichen Nachweise erforderlich (NB0)

Load combinations

- the decisive load cases are generated automatically
- there is also the possibility to define own load cases

Load case combinations (Gamma * Psi)

Temporarily (Other)	constantly (weight, installation)
User-defined	exceptionally

The load combinations listed are relevant generally.
In specific cases, other load cases are relevant.
For the definition of the load combinations of agents is responsible.

Nr	Weight	Low installation	High installation	Climate winter	Climate summer	Wind pressure	Wind suction	Line load	Print
1	1,35 * 1,00							1,50 * 1,00	Yes
2	1,35 * 1,00						1,50 * 1,00		Yes
3	1,35 * 1,00					1,50 * 1,00			Yes
4	1,35 * 1,00		1,00 * 1,00		1,50 * 1,00				Yes
5	1,35 * 1,00	1,00 * 1,00		1,50 * 1,00					Yes
6	1,35 * 1,00	1,00 * 1,00		1,50 * 0,60			1,50 * 0,60	1,50 * 1,00	Yes
7	1,35 * 1,00		1,00 * 1,00		1,50 * 0,60		1,50 * 0,60	1,50 * 1,00	Yes
8	1,35 * 1,00	1,00 * 1,00		1,50 * 0,60			1,50 * 1,00	1,50 * 0,70	Yes
9	1,35 * 1,00		1,00 * 1,00		1,50 * 0,60		1,50 * 1,00	1,50 * 0,70	Yes
10	1,35 * 1,00	1,00 * 1,00		1,50 * 1,00			1,50 * 0,60	1,50 * 0,70	Yes
11	1,35 * 1,00		1,00 * 1,00		1,50 * 1,00		1,50 * 0,60	1,50 * 0,70	Yes
12	1,35 * 1,00	1,00 * 1,00		1,50 * 0,60		1,50 * 0,60		1,50 * 1,00	Yes
13	1,35 * 1,00		1,00 * 1,00		1,50 * 0,60	1,50 * 0,60		1,50 * 1,00	Yes
14	1,35 * 1,00	1,00 * 1,00		1,50 * 0,60		1,50 * 1,00		1,50 * 0,70	Yes
15	1,35 * 1,00		1,00 * 1,00		1,50 * 0,60	1,50 * 1,00		1,50 * 0,70	Yes
16	1,35 * 1,00	1,00 * 1,00		1,50 * 1,00		1,50 * 0,60		1,50 * 0,70	Yes
17	1,35 * 1,00		1,00 * 1,00		1,50 * 1,00	1,50 * 0,60		1,50 * 0,70	Yes

Lastfall bearbeiten...

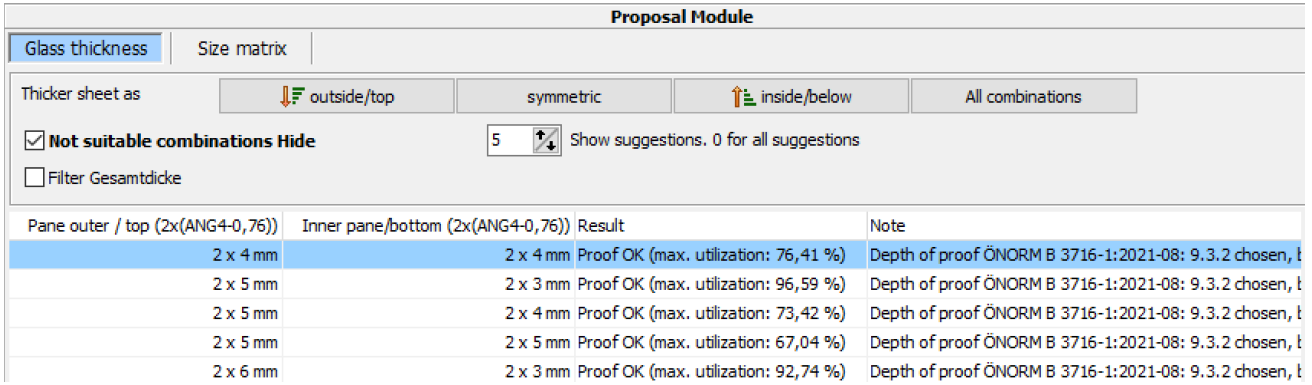
Lastfall

	γG, γQ	Ψ
Gewicht	1,35	1,00
Winddruck	1,50	0,60
Windsog		
Streckenlast	1,50	1,00

Abbrechen OK

Suggestion module - glass thicknesses

The Glass *Thicknesses* module lists different thicknesses for the outer and inner pane, which fulfill the verification, and indicates the degree of utilization for each combination



Pane outer / top (2x(ANG4-0,76))	Inner pane/bottom (2x(ANG4-0,76))	Result	Note
2 x 4 mm	2 x 4 mm	Proof OK (max. utilization: 76,41 %)	Depth of proof ÖNORM B 3716-1:2021-08: 9.3.2 chosen, t
2 x 5 mm	2 x 3 mm	Proof OK (max. utilization: 96,59 %)	Depth of proof ÖNORM B 3716-1:2021-08: 9.3.2 chosen, t
2 x 5 mm	2 x 4 mm	Proof OK (max. utilization: 73,42 %)	Depth of proof ÖNORM B 3716-1:2021-08: 9.3.2 chosen, t
2 x 5 mm	2 x 5 mm	Proof OK (max. utilization: 67,04 %)	Depth of proof ÖNORM B 3716-1:2021-08: 9.3.2 chosen, t
2 x 6 mm	2 x 3 mm	Proof OK (max. utilization: 92,74 %)	Depth of proof ÖNORM B 3716-1:2021-08: 9.3.2 chosen, t

Suggestion module - size matrix

The *size matrix* represents the results of the current setup as a function of any dimensions.

Proposal Module

Glass thickness | Size matrix

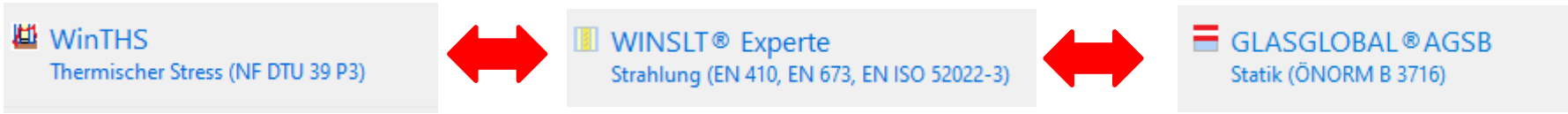
Width b 500 mm to 2000 mm Increment 100 mm
Height h 500 mm to 2000 mm Increment 100 mm
(●) **stress utilization in %**
( ) deflection utilization in %
[ ] colour gradient
Σ Proposals calculate

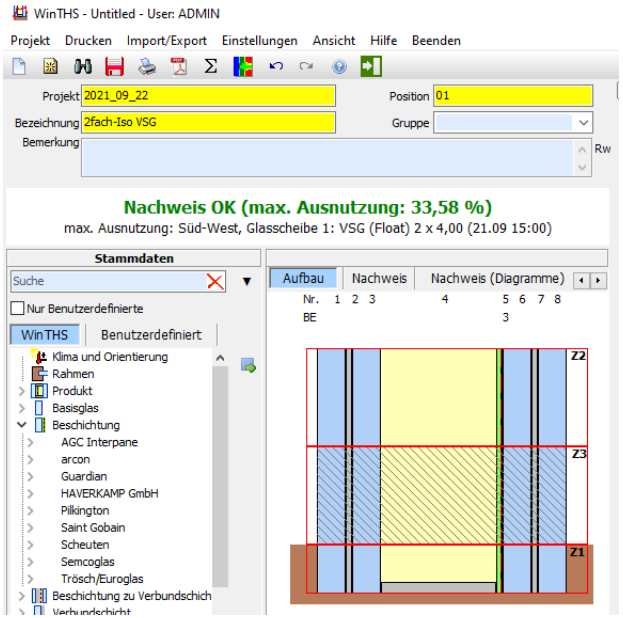
Construction	**2x(ANG4-0,76) | GD 16 | 2x(ANG4-0,76)**
Wind pressure/suction	**500 mm x 500 mm: 0,53 / -0,67 kN/m²**
	2000 mm x 2000 mm: 0,53 / -0,67 kN/m²
Snow	---
Air Load	**8,80 / -12,50 kN/m²**
Altitude	**-3,60 / -3,60 kN/m²**
Line load	**0,50 kN/m; x = 1000 mm**
Membrane stress	**No**

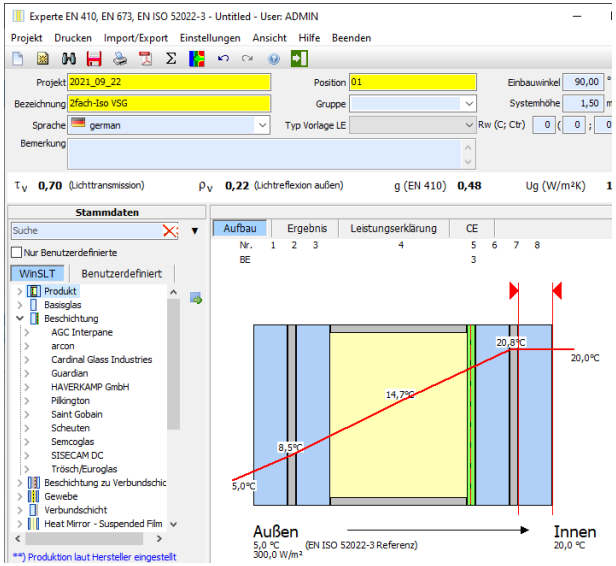
h \ b	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1
500	98,1%	110,5%	122,7%	130,9%	136,4%	139,8%	141,9%	143,0%	143,5%	143,5%	143,2%	142,6%	141,9%	141,2%	140,
600	110,5%	101,3%	112,1%	119,2%	123,7%	126,6%	128,2%	129,0%	129,3%	129,2%	128,8%	128,2%	127,5%	126,6%	125,
700	122,7%	112,1%	98,6%	104,0%	107,2%	109,1%	110,2%	110,6%	110,6%	110,4%	109,9%	109,3%	108,6%	107,9%	107,
800	130,9%	119,2%	104,0%	89,7%	91,8%	92,9%	93,3%	93,4%	93,2%	92,9%	92,4%	91,8%	91,2%	90,5%	89,
900	136,4%	123,7%	107,2%	91,8%	78,7%	79,2%	79,2%	79,0%	78,7%	78,2%	77,7%	77,2%	76,6%	76,1%	75,
1000	139,8%	126,6%	109,1%	92,9%	79,2%	68,1%	67,8%	67,4%	67,0%	66,5%	65,9%	65,4%	64,9%	64,4%	63,
1100	141,9%	128,2%	110,2%	93,3%	79,2%	67,8%	58,7%	58,1%	57,6%	57,0%	56,5%	56,0%	55,5%	55,1%	54,
1200	143,0%	129,0%	110,6%	93,4%	79,0%	67,4%	60,5%	62,4%	64,9%	67,2%	69,2%	71,1%	72,7%	74,2%	75,
1300	143,5%	129,3%	110,6%	93,2%	78,7%	67,0%	68,2%	71,3%	74,4%	78,0%	81,3%	84,4%	87,1%	89,7%	92,
1400	143,5%	129,2%	110,4%	92,9%	78,2%	66,9%	70,6%	74,5%	78,4%	82,4%	86,7%	90,7%	94,5%	98,0%	101,
1500	143,2%	128,8%	109,9%	92,4%	77,7%	67,1%	70,9%	75,2%	79,7%	84,2%	88,8%	93,6%	98,1%	102,4%	106,
1600	142,6%	128,2%	109,3%	91,8%	77,2%	67,0%	70,9%	75,2%	79,9%	84,8%	89,8%	94,7%	99,9%	104,8%	109,
1700	141,9%	127,5%	108,6%	91,2%	76,6%	67,1%	70,9%	75,3%	80,0%	85,0%	90,2%	95,5%	100,8%	106,2%	111,
1800	141,2%	126,6%	107,9%	90,5%	76,1%	67,8%	71,8%	76,1%	80,6%	85,4%	90,7%	96,1%	101,6%	107,0%	112,
1900	140,4%	125,8%	107,1%	89,8%	75,5%	69,0%	73,3%	77,8%	82,6%	87,4%	92,3%	97,0%	102,4%	108,1%	113,
2000	139,6%	124,9%	106,3%	89,1%	74,9%	70,1%	74,6%	79,5%	84,5%	89,6%	94,7%	99,8%	104,7%	109,5%	115,

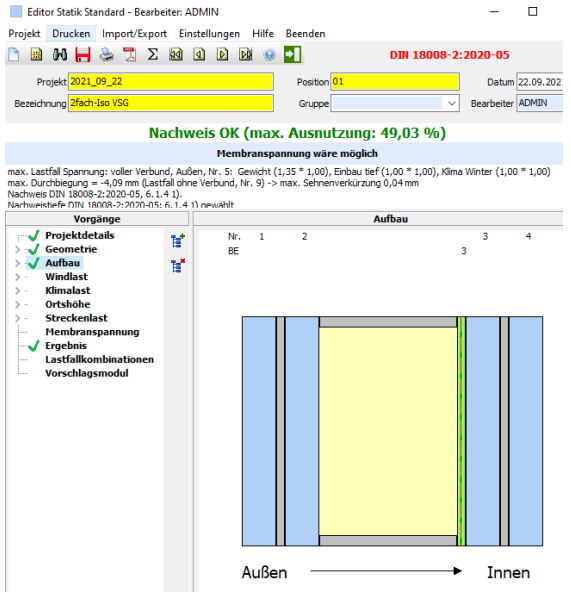
Interfaces

The exchange of projects is possible between all modules









More information

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