


KRISPOL Sp. z o.o. ul. Michała Strzykały 4, 62-300 Września	IN-HOUSE REFERENCE STANDARD	Standard No.: NZ020EN-20:02:2025
	CRITERIA FOR ASSESSMENT OF QUALITY DEVIATIONS	Entered on: 20-02-2025 Replaces: NZ020EN-15:09:2022

1. Introduction

1.1. Subject of the standard

The standard contains information on acceptable quality deviations for products and presents criteria for assessing deviations:

- deflection of panels under the influence of temperature with the door closed,
- deflection of the panels with the door open (in a horizontal position),
- the difference of planes between the panels with the door closed,
- distance between the panels,
- concavity of the panel,
- sealing of service doors,
- deflection of rolling door profiles under the influence of weather conditions with the door closed,
- deflection of rolling door profiles at the lintel resulting from the door structure,
- dimensional tolerances of rolling door.

1.2. Scope of application

The standard applies to the following products:

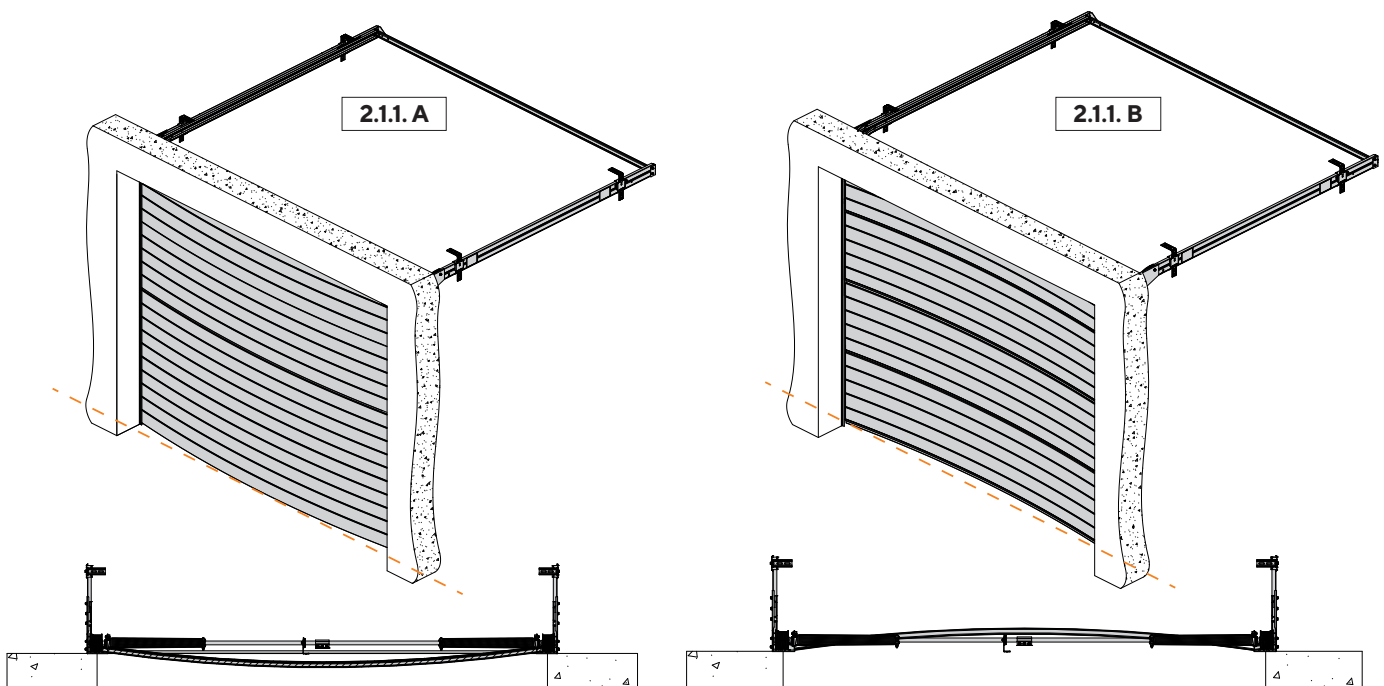
- sectional garage doors,
- industrial sectional doors,
- rolling garage doors,
- industrial rolling doors.

2. Assessment criteria

2.1. The method of conducting the control

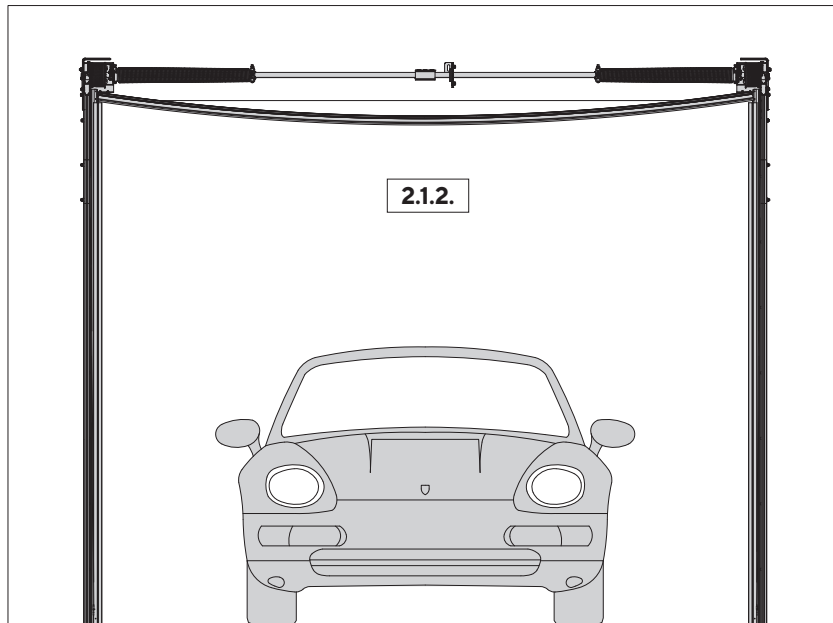
2.1.1. Deflection of panels under the influence of temperature (Fig. 2.1.1. A, 2.1.1. B)

- Deflection measurement made at the place of the maximum deflection of the panels with the door closed, using measuring instruments.
- Measurement of the temperature difference between outside and inside the room during the test.
- Measurement of the temperature difference between the external and internal cladding of the panel.
- Specification the location of the door's shell in relation to the door's cardinal directions.
- Specification the number of reinforcement profiles.
- Specification door ordering dimensions (width B x height H).
- Specification of the colour of the door sheathing (RAL/veneer).



2.1.2. Deflection of the panels with the door open (in a horizontal position; fig. 2.1.2.)

- The door's sheathing should be in the open position for the time necessary for free communication; it is not recommended to leave the door open for the time longer than required by the vehicle entry/exit.
- Deflection measurement taken at the point of maximum deflection of the panels using measuring instruments.
- Specification door ordering dimensions (width B x height H).
- Specification the number of reinforcement profiles.

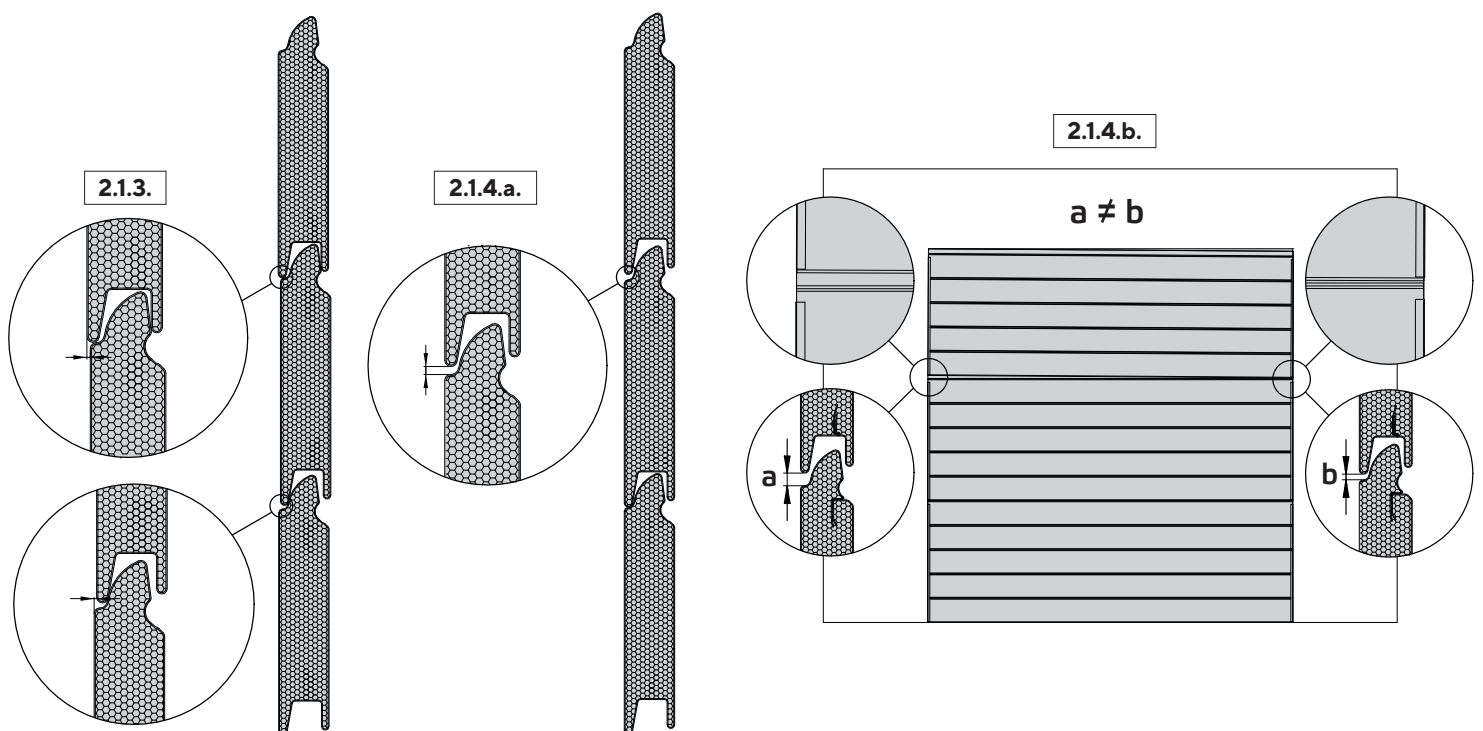


2.1.3. The difference of planes between the panels (Fig. 2.1.3.)

- Measurement made at the place of the maximum deviation of the surfaces of the panels in relation to each other with the door closed; carried out using measuring instruments.

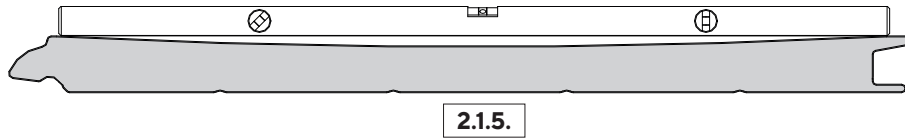
2.1.4. Distance between panels

- Measurement made at extremely different distances between adjacent panels in a vertical position (with the door closed), carried out with measuring instruments (Fig. 2.1.4.a.).
- Measurement made at extremely different distances between the same panels on the left and right in a vertical position (with the door closed) using measuring instruments (Fig. 2.1.4.b.).



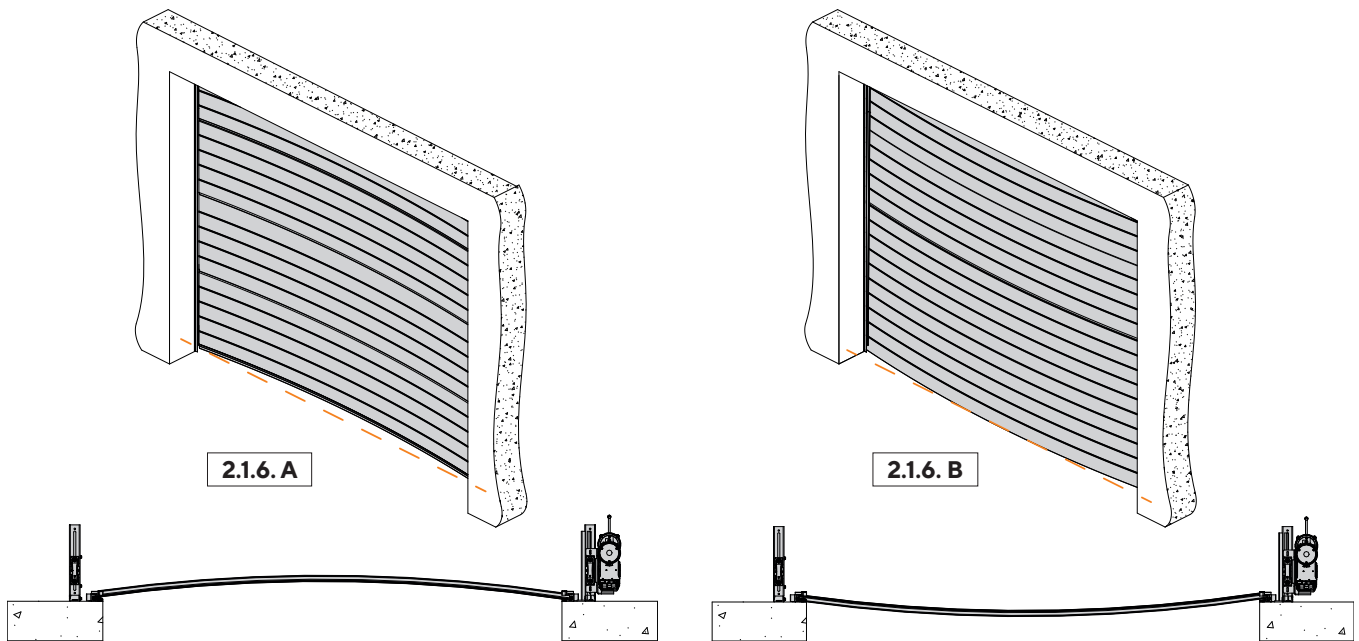
2.1.5. Concavity of the panel (Fig. 2.1.5.)

- Measurement made at the location of the maximum deviation of the cladding from the panel plane, using measuring instruments.



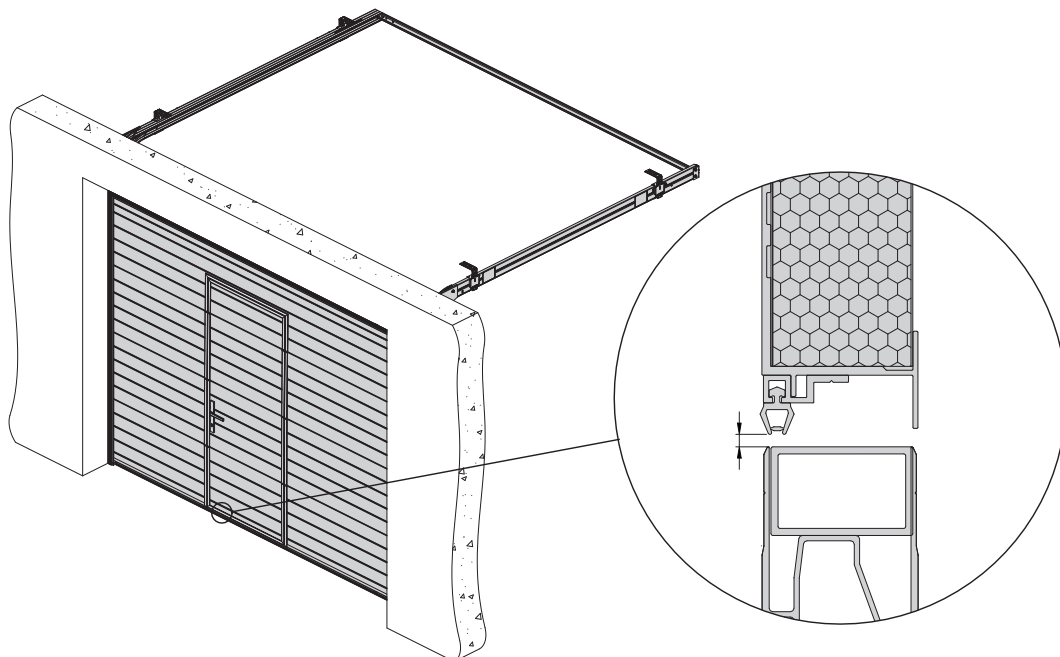
2.1.6. Deflection of rolling door profiles due to weather conditions (Fig. 2.1.6. A, 2.1.6. B)

- Deflection measurement made at the site of the maximum deviation of the profiles using measuring instruments.
- Specification of door ordering dimensions (width B x height H).
- Measurement of temperature inside and outside the room.
- Measurement of temperature of the door profiles from the outside.
- Specification of the location of the door's shell in relation to the door's cardinal direction.
- Specification of the colour of the door sheathing (RAL/veneer).



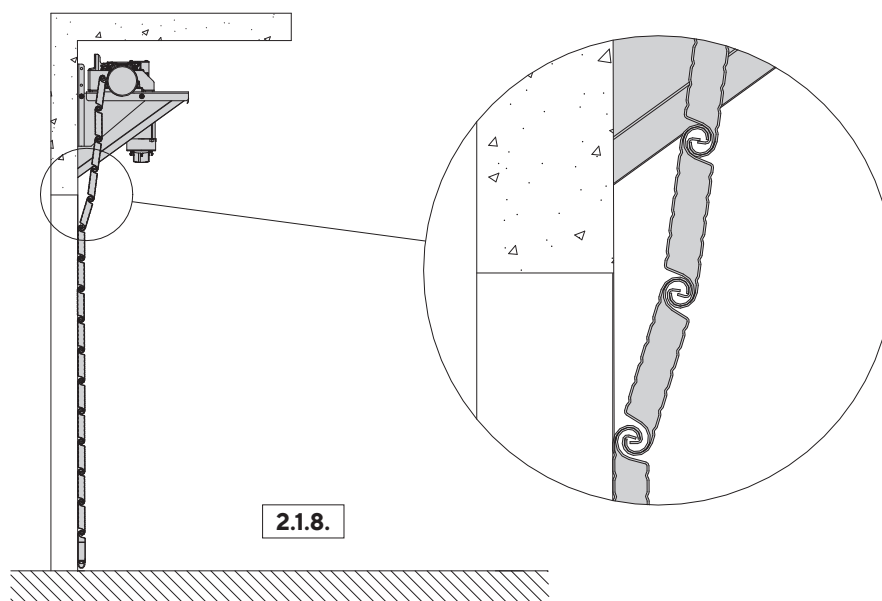
2.1.7. Sealing of service doors

- The service door seal should only be assessed with the door closed.



2.1.8. Deflection of rolling door profiles at the lintel resulting from the door structure (Fig. 2.1.8.)

- Measurement of the deflection made at the site of the maximum deviation of the profiles using measuring instruments.
- Specification of door ordering dimensions (width B x height H).



2.1.9. Dimensional tolerances of roller doors

- Measurement of the width of the product taken at its extreme points using measuring instruments.

2.2. Permissible deviations

2.2.1. Deflection of panels under the influence of temperature

The properties of the materials used and the temperature difference inside and outside the room cause the panels to deflect. It is a natural phenomenon. Permissible values of these deviations are presented in the table below.

B - door width [mm]

ΔT - temperature difference on the outer and inner cladding of the panel [°C]

Door width B [mm]	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
ΔT [°C]	Maximum deflection [mm]												
-50	-12,0	-17,3	-23,6	-30,8	-38,9	-48,1	-58,2	-69,2	-81,3	-94,2	-108,2	-123,1	-138,9
-40	-9,6	-13,8	-18,8	-24,6	-31,2	-38,5	-46,5	-55,4	-65,0	-75,4	-86,5	-98,5	-111,2
-30	-7,2	-10,4	-14,1	-18,5	-23,4	-28,8	-34,9	-41,5	-48,8	-56,5	-64,9	-73,8	-83,4
30	7,2	10,4	14,1	18,5	23,4	28,8	34,9	41,5	48,8	56,5	64,9	73,8	83,4
40	9,6	13,8	18,8	24,6	31,2	38,5	46,5	55,4	65,0	75,4	86,5	98,5	111,2
50	12,0	17,3	23,6	30,8	38,9	48,1	58,2	69,2	81,3	94,2	108,2	123,1	138,9

According to the specifications in the price list, it is not recommended to install dark-coloured (according to the color table, point 4) doors in places with high insolation (e.g. with the southern exposition).

National standards issued by the Polish Committee for Standardization, harmonized with European Standards:

PN-EN 1991-1-5:2005: Actions on structures - Part 1-5: General actions - thermal actions

PN-EN 1991-1-4:2008: Actions on structures - Part 1-4: General actions - wind actions

2.2.2. Deflection of panels with the door open (in a horizontal position)

	Dead weight = 0,114 kN/m ²												
Door width B [mm]	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500
Max. deflection [mm]	1,8	3,1	5,1	7,8	11,6	16,8	23,5	32,2	43,1	56,7	73,3	93,4	117,5

2.2.3. Difference of planes between the panels

Due to the permissible dimensional deviations of the panels, thermal expansion and the door operation characteristics, a difference in planes of adjacent panels of up to 2 mm for 40 mm thick panels and 3 mm for 60 mm thick panels is allowed.

2.2.4. Distance between panels

- Due to the permissible dimensional deviations of the panels, thermal expansion and the door operation characteristics, a difference of up to 3 mm between the individual distances of adjacent panels is allowed.
- Due to the permissible dimensional deviations of the panels and the door operation characteristics, a difference of up to 1 mm between the same panels on the left and right side is allowed.

2.2.5. Panel concavity

Due to the permissible dimensional deviations of the panels, thermal expansion and the characteristics of the door operation, a difference in planes of a single panel up to 3 mm is allowed.

2.2.6. Deflection of rolling door profiles due to weather conditions

The properties of the materials used and the weather conditions cause the door profiles to deflect. It is a natural phenomenon. Permissible values of these deviations are presented in the table below.

B - door width [mm]

Door width B [mm]	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000
Max. deflection [mm]	+/- 164	+/- 172	+/- 180	+/- 188	+/- 196	+/- 204	+/- 212	+/- 220	+/- 228	+/- 236	+/- 244	+/- 252	+/- 260	+/- 268	+/- 276	+/- 284	+/- 292	+/- 300

It is not recommended to install dark-coloured doors in the places with high isolation (e.g. with the southern exposition).

2.2.7. Sealing of service doors

Due to the design of the gate with a service door, a gap of up to 2 mm is allowed between the threshold and the service door leaf.

2.2.8. Deflection of roller door profiles at the lintel resulting from the door structure

The properties of the materials used and the door structure cause the door profiles to deflect at the lintel. It is a natural phenomenon. Permissible values of these deviations are presented in the table below.

B - door width [mm]

Door width B [mm]	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000
Max. deflection [mm]	92	96	100	104	108	112	116	120	124	128	132	136	140	144	148	152	156	160

2.2.9. Permissible dimensional deviations for rolling doors

- Due to permissible dimensional deviations, differences in the width of roller gate boxes up to 5mm are allowed.

3. Exclusions from the assessment

3.1. Deflection of panels under the influence of temperature

- Doors with dark-coloured (according to the color table, point 4) sheathing installed in a strongly sunlit place will not be assessed; this can lead to deformation of the sheathing, which is a natural process resulting from material properties.
- Doors exposed to air temperatures lower than -25 °C and higher than + 55 °C are not subject to the assessment.

3.2. The difference of panel planes in the open position of the door (located horizontally)

- Doors left in the open position for a period longer than the time necessary for vehicle entry/exit will not be assessed.
- Doors exposed to air temperatures lower than -25 °C and higher than + 55 °C are not subject to the assessment.

3.3. Distance between panels

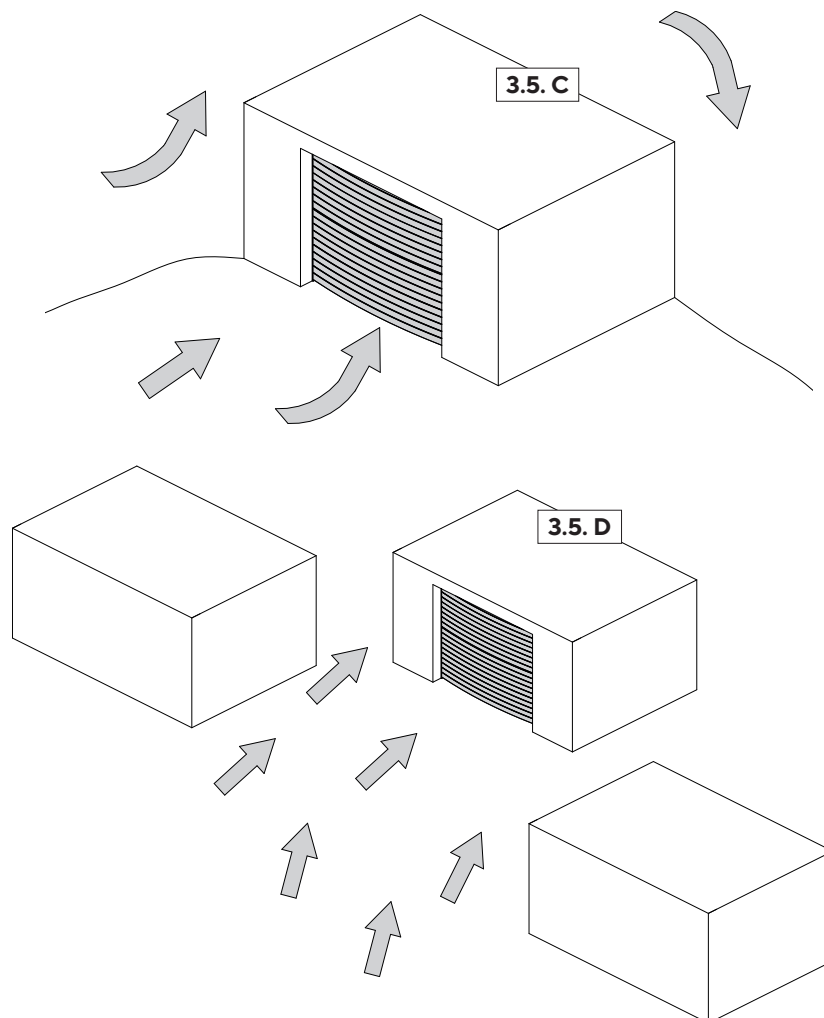
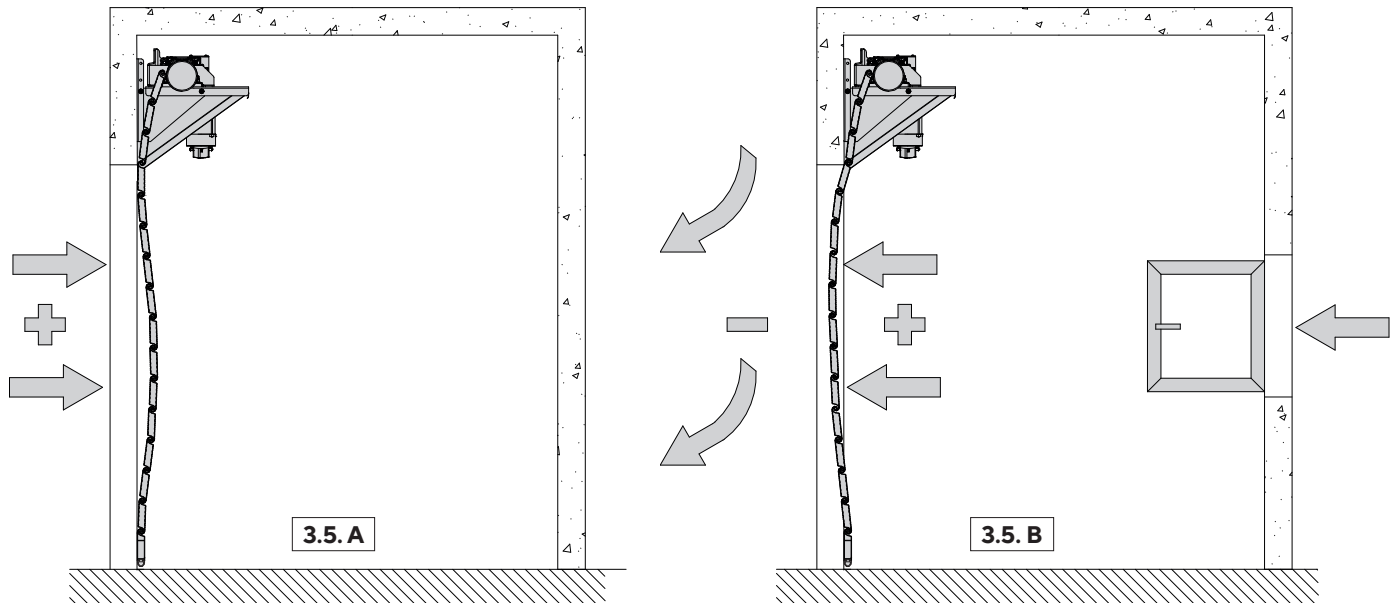
- Doors that require hinge adjustment are not subject to the assessment.
- Doors exposed to air temperatures lower than -25 °C and higher than + 55 °C are not subject to the assessment.

3.4. Sealing

- Due to the structure of the door, in the places of contact of the rubber gaskets with other elements of the door, they may not be 100% tight. The sealing of the door is also conditioned by the level of the floor and the linearity of the lintel and side jambs.
- Due to the design of the gate with the service door, it is permitted not to be fully airtight around the perimeter of the door leaf. This sealing is also conditioned by the floor level and the linearity of the lintel and side jambs.

3.5. Deflection of rolling door profiles due to weather conditions

- Doors with dark-coloured (according to the color table, point 4) sheathing installed in a strongly sunlit place will not be assessed; this can lead to deformation of the sheathing which is a natural process resulting from material properties.
- Doors exposed to air temperatures lower than $-25\text{ }^{\circ}\text{C}$ and higher than $+55\text{ }^{\circ}\text{C}$ are not subject to the assessment.
- Doors exposed to negative pressure difference (Fig. 3.5. A, 3.5. B) are not subject to the assessment.
- Doors installed in buildings located in an open, non-built-up area will not be assessed (Fig. 3.5. C).
- Doors installed in buildings unfavourably situated in relation to other buildings will not be assessed (Fig. 3.5. D).



3.6. Dimensional deviations for rolling shutters

- Gates installed in a manner other than that specified in the order, such as installing a gate designed for lintel mounting within the opening, are not subject to evaluation.

4. Color Table

Decors - veneers table	
Name	Type
Mahogany 12	dark
Winchester 19	dark
Antique pine 20	dark
Natural oak 42	bright
Dark oak 44	dark
Boggy oak 45	dark
Golden oak 48	dark
Chestnut 96	dark
Grey 173	bright
Anthracite 174	dark
Chocolate brown 185	dark
Anthracite - smooth 204	dark
Dark grey smooth 703	dark
Golden Oak light R 53	bright

Decors - veneers table	
Name	Type
Woodec Turner Oak Toffee 13	dark
Black Smoked Oak 16	dark
Grey cedar 22	dark
Espresso Ash 3D 23	dark
Sheffield oak 46	bright
Woodec turner oak malt N 51	bright
Metbrush anthracite 193	dark
White Matt 27	bright
Black Matt 14	dark
Grey Matt 24	dark
Umbragrey Matt 26	dark
Winchester R 52	bright
Dark Gray Matt 28	dark
Woodec Pine Jura 70	bright

The veneer (foil decor) reflects UV rays more effectively than the RAL lacquered surface.

RAL color		RAL color		RAL color		RAL color		RAL color		RAL color	
Name	Type	Name	Type	Name	Type	Name	Type	Name	Type	Name	Type
RAL 9016	bright	RAL 2003	dark	RAL 4006	dark	RAL 6005	dark	RAL 7005	dark	RAL 7047	bright
RAL 8014	dark	RAL 2004	dark	RAL 4007	dark	RAL 6006	dark	RAL 7006	dark	RAL 8000	dark
RAL 1000	bright	RAL 2008	dark	RAL 4008	dark	RAL 6007	dark	RAL 7008	dark	RAL 8001	dark
RAL 1001	bright	RAL 2009	dark	RAL 4009	bright	RAL 6008	dark	RAL 7009	dark	RAL 8002	dark
RAL 1002	bright	RAL 2010	dark	RAL 5000	dark	RAL 6009	dark	RAL 7010	dark	RAL 8003	dark
RAL 1003	bright	RAL 2011	dark	RAL 5001	dark	RAL 6010	dark	RAL 7011	dark	RAL 8004	dark
RAL 1004	bright	RAL 2012	dark	RAL 5002	dark	RAL 6011	bright	RAL 7012	dark	RAL 8007	dark
RAL 1005	bright	RAL 3000	dark	RAL 5003	dark	RAL 6012	dark	RAL 7013	dark	RAL 8008	dark
RAL 1006	bright	RAL 3001	dark	RAL 5004	dark	RAL 6013	bright	RAL 7015	dark	RAL 8011	dark
RAL 1007	bright	RAL 3002	dark	RAL 5005	dark	RAL 6014	dark	RAL 7016	dark	RAL 8012	dark
RAL 1011	bright	RAL 3003	dark	RAL 5007	dark	RAL 6015	dark	RAL 7021	dark	RAL 8015	dark
RAL 1012	bright	RAL 3004	dark	RAL 5008	dark	RAL 6016	dark	RAL 7022	dark	RAL 8016	dark
RAL 1013	bright	RAL 3005	dark	RAL 5009	dark	RAL 6017	dark	RAL 7023	dark	RAL 8017	dark
RAL 1014	bright	RAL 3007	dark	RAL 5010	dark	RAL 6018	bright	RAL 7024	dark	RAL 8019	dark
RAL 1015	bright	RAL 3009	dark	RAL 5011	dark	RAL 6019	bright	RAL 7026	dark	RAL 8022	dark
RAL 1016	bright	RAL 3011	dark	RAL 5012	bright	RAL 6020	dark	RAL 7030	bright	RAL 8023	dark
RAL 1017	bright	RAL 3012	bright	RAL 5013	dark	RAL 6021	bright	RAL 7031	dark	RAL 8024	dark
RAL 1018	bright	RAL 3013	dark	RAL 5014	bright	RAL 6022	dark	RAL 7032	bright	RAL 8025	dark
RAL 1019	bright	RAL 3014	bright	RAL 5015	dark	RAL 6024	dark	RAL 7033	dark	RAL 8028	dark
RAL 1020	dark	RAL 3015	bright	RAL 5017	dark	RAL 6025	dark	RAL 7034	dark	RAL 9001	bright
RAL 1021	bright	RAL 3016	dark	RAL 5018	dark	RAL 6026	dark	RAL 7035	bright	RAL 9002	bright
RAL 1023	bright	RAL 3017	bright	RAL 5019	dark	RAL 6027	bright	RAL 7036	bright	RAL 9003	bright
RAL 1024	bright	RAL 3018	dark	RAL 5020	dark	RAL 6028	dark	RAL 7037	dark	RAL 9004	dark
RAL 1027	dark	RAL 3020	dark	RAL 5021	dark	RAL 6029	dark	RAL 7038	bright	RAL 9005	dark
RAL 1028	bright	RAL 3022	dark	RAL 5022	dark	RAL 6032	dark	RAL 7039	dark	RAL 9006	bright
RAL 1032	bright	RAL 3027	dark	RAL 5023	dark	RAL 6033	bright	703M	dark	RAL 9007	dark
RAL 1033	bright	RAL 3031	dark	RAL 5024	bright	RAL 6034	bright	RAL 7040	bright	RAL 9010	bright
RAL 1034	bright	RAL 4001	dark	RAL 6000	dark	RAL 7000	bright	RAL 7042	bright	RAL 9011	dark
RAL 1037	dark	RAL 4002	dark	RAL 6001	dark	RAL 7001	bright	RAL 7043	dark	RAL 9017	dark
RAL 2000	dark	RAL 4003	bright	RAL 6002	dark	RAL 7002	dark	RAL 7044	bright	RAL 9018	bright
RAL 2001	dark	RAL 4004	dark	RAL 6003	dark	RAL 7003	dark	RAL 7045	bright		
RAL 2002	dark	RAL 4005	dark	RAL 6004	dark	RAL 7004	bright	RAL 7046	dark		