

Insulating Glass Range

SANCO[®]
GROUP

SANCO Plus thermal insulation glass

Glass type	Glass structure	U _g -value to DIN EN 673	Light transmission to DIN EN 410	Total energy transmittance to DIN EN 410	Light reflection outside to DIN EN 410	Weight	Element thickness (Thickness tolerance acc. to glass structures)	Sound insulation value	Spectrum adjustment values
 	mm	W/m ² K	LT % (± 2)	g-value % (± 2)	LR % (± 2)	kg/m ² (appr.)	mm (appr.)	R _w in dB	C;Ctr
Double									
SANCO Plus EN2	4 - 12AR - 4	1,3	82	64	12	20	20		
SANCO Plus EN2	4 - 14AR - 4	1,1	82	64	12	20	22		
SANCO Plus EN2	4 - 16AR - 4	1,1	82	64	12	20	24		
SANCO Plus ZERO NG	4 - 16AR - 4	1,0	76	54	15	20	24		
SANCO Plus FREE VISION T*	4 - 16AR - 4	1,0	78	54	13	20	24		
3-fach									
SANCO Plus EN2	4 - 12AR - 4 - 12AR - 4	0,7	74	53	14	30	36		
SANCO Plus EN2	4 - 14AR - 4 - 14AR - 4	0,6	74	53	14	30	40		
SANCO Plus EN2	4 - 18AR - 4 - 18AR - 4	0,5	74	53	14	30	48		
SANCO Plus ZERO NG	4 - 16AR - 4 - 16AR - 4	0,5	65	41	22	30	44		
SANCO Plus ZERO NG	4 - 12KR - 4 - 12KR - 4	0,4	65	41	22	30	36		
SANCO Plus TRIII E	4 - 12AR - 4 - 12AR - 4	0,8	73	62	18	30	36		
SANCO Plus TRIII E	4 - 16AR - 4 - 16AR - 4	0,7	73	62	18	30	44		
SANCO Plus TRIII E	4 - 12KR - 4 - 12KR - 4	0,6	73	62	18	30	36		
SANCO Plus FREE VISION T*	4 - 14AR - 4 - 14AR - 4	0,6	75	55	12	30	40		

SANCO Plus coating on item 3 with 2-layer insulating glass, on items 2 and 5 with 3-layer insulating glass.

*SANCO Plus FREE VISION T coating on item 1, SANCO Plus ZERO NG coating on item 3 with 2-layer insulating glass, SANCO Plus EN2 coating on item 3 and 5 with 3-layer insulating glass.

SANCO Sun solar control insulation glass

Glass type	Glass structure	U _g -value to DIN EN 673	Light transmission to DIN EN 410	Total energy transmittance to DIN EN 410	Light reflection outside to DIN EN 410	Weight	Element thickness (Thickness tolerance acc. to glass structures)	Sound insulation value	Spectrum adjustment values
	mm	W/m ² K	LT % (± 2)	g-value % (± 2)	LR % (± 2)	kg/m ² (appr.)	mm (appr.)	R _w in dB	C;C _{tr}

Double

SANCO Sun COMBI 74/42	6 - 16AR - 4	1,0	74	42	13	25	26		
SANCO Sun COMBI 70/35	6 - 16AR - 4	1,0	70	35	14	25	26		
SANCO Sun COMBI 61/32	6 - 16AR - 4	1,0	61	34	14	25	26		
SANCO Sun COMBI 60/27	6 - 16AR - 4	1,0	60	27	14	25	26		
SANCO Sun COMBI 51/26	6 - 16AR - 4	1,0	51	27	16	25	26		
SANCO Sun COMBI 41/21 T	6 - 16AR - 4	1,0	41	22	18	25	26		
SANCO Sun COMBI Silver 32/21 T	6 - 16AR - 4	1,1	32	21	22	25	26		
SANCO Sun WHITESHINE T	6 - 16AR - 4	1,1	59	49	35	25	26		
SANCO Sun Neutral 50 T	6 - 16AR - 4	1,1	46	38	13	25	26		
SANCO Sun Blue 50 T	6 - 16AR - 4	1,1	44	36	21	25	26		
SANCO Sun Blue 30 T	6 - 16AR - 4	1,1	27	23	28	25	26		
SANCO Sun Silver 20 T	6 - 16AR - 4	1,1	18	17	28	25	26		

Triple

SANCO Sun COMBI 74/42	6 - 12AR - 4 - 12AR - 4	0,7	67	38	15	35	38		
SANCO Sun COMBI 70/35	6 - 14AR - 4 - 14AR - 4	0,6	64	34	17	35	42		
SANCO Sun COMBI 61/32	6 - 14AR - 4 - 14AR - 4	0,6	56	31	16	35	42		
SANCO Sun COMBI 60/27	6 - 14AR - 4 - 14AR - 4	0,6	54	25	15	35	42		
SANCO Sun COMBI 51/26	6 - 14AR - 4 - 14AR - 4	0,6	47	25	17	35	42		
SANCO Sun COMBI 41/21 T	6 - 14AR - 4 - 14AR - 4	0,6	36	19	11	35	42		
SANCO Sun WHITESHINE T	6 - 14AR - 4 - 14AR - 4	0,6	54	42	36	35	42		
SANCO Sun Neutral 50 T	6 - 16AR - 4 - 16AR - 4	0,9	42	34	15	35	46		
SANCO Sun Blue 50 T	6 - 16AR - 4 - 16AR - 4	0,9	41	32	22	35	46		
SANCO Sun Blue 30 T	6 - 16AR - 4 - 16AR - 4	0,8	25	20	29	35	46		
SANCO Sun Silver 20 T	6 - 16AR - 4 - 16AR - 4	0,8	17	15	28	35	46		

SANCO Sun coating on item 2 and SANCO Plus EN2 coating on item 3.

SANCO Sun COMBI coating on item 2 and SANCO Plus EN2 coating on item 5 with 3-layer insulating glass.

SANCO Sun WHITESHINE coating on item 2 and SANCO Plus EN2 coating on item 3 with 2-layer insulating glass, on items 3 and 5 with 3-layer insulating glass. Cannot be thermally tempered.

SANCO Phon sound insulation glass

Glass type	Glass structure	U _g -value to DIN EN 673	Light transmission to DIN EN 410	Total energy transmittance to DIN EN 410	Light reflection outside to DIN EN 410	Weight	Element thickness (Thickness tolerance acc. to glass structures)	Sound insulation value	Spectrum adjustment values
	mm	W/m ² K	LT % (± 2)	g-value % (± 2)	LR % (± 2)	kg/m ² (appr.)	mm (appr.)	R _w in dB	C;Ctr

Double

SANCO Phon 36/24	6 - 14AR - 4	1,1	81	63	12	25	24	36	-1; -5
SANCO Phon 37/28	8 - 16AR - 4	1,1	80	61	12	30	28	37	-2; -6
SANCO Phon 38/28	10 - 14AR - 4	1,1	80	60	12	35	28	38	-2; -5
SANCO Phon 38/30	8 - 16AR - 6	1,1	80	61	12	35	30	38	-2; -6
SANCO Phon 40/32	10 - 16AR - 6	1,1	79	60	12	40	32	40	-2; -5
SANCO Phon 42/31	VSG 44.1 Phon - 16AR - 6	1,1	80	58	12	35	31	42	-3; -7
SANCO Phon 43/34	VSG 55.1 Phon - 16AR - 8	1,1	79	56	12	45	34	43	-2; -6
SANCO Phon 44/35	VSG 44.1 Phon - 16AR - 10	1,1	79	58	12	45	35	44	-2; -6
SANCO Phon 46/41	VSG 55.1 Phon - 20AR - 10	1,1	78	56	12	50	41	46	-1; -6
SANCO Phon 47/34	VSG 44.1 Phon - 12AR - VSG 66.1 Phon	1,3	78	57	12	50	34	47	-3; -8
SANCO Phon 49/36	VSG 44.1 Phon - 16AR - VSG 66.1 Phon	1,1	78	57	12	50	36	49	-2; -7
SANCO Phon 50/42	VSG 44.1 Phon - 20AR - VSG 66.1 Phon	1,1	78	57	12	50	42	50	-2; -7
SANCO Phon 51/46	VSG 88.2 Phon - 16AR - VSG 66.2 Phon	1,1	76	53	11	70	46	51	-1; -6

Triple

SANCO Phon 33/36	4 - 12AR - 4 - 12AR - 4	0,7	74	53	14	30	36	33	-2; -6
SANCO Phon 36/38	6 - 12AR - 4 - 12AR - 4	0,7	73	51	14	35	38	36	-2; -6
SANCO Phon 37/40	8 - 12AR - 4 - 12AR - 4	0,7	73	50	14	40	40	37	-1; -6
SANCO Phon 39/42	8 - 12AR - 4 - 12AR - 6	0,7	72	50	14	45	42	39	-2; -5
SANCO Phon 40/44	10 - 12AR - 4 - 12AR - 6	0,7	72	49	14	50	44	40	-1; -5
SANCO Phon 43/47	VSG 44.2 Phon - 14AR - 4 - 14AR - 6	0,6	72	48	14	45	47	43	-2; -7
SANCO Phon 45/53	8 - 16AR - 4 - 16AR - VSG 44.1 Phon	0,6	72	50	14	50	53	45	-3; -8
SANCO Phon 46/46	VSG 44.2 Phon - 12AR - 4 - 12AR - VSG 44.2 Phon	0,7	72	48	14	50	46	46	-1; -7
SANCO Phon 46/51	VSG 55.1 Phon - 12AR - 6 - 12AR - 10	0,7	70	47	14	65	51	46	-1; -5
SANCO Phon 47/50	VSG 44.2 Phon - 12AR - 6 - 12AR - VSG 55.2 Phon	0,7	71	48	14	60	50	47	-2; -7
SANCO Phon 50/54	VSG 66.2 Phon - 14AR - 4 - 14AR - VSG 44.2 Phon	0,6	71	46	14	60	54	50	-2; -6
SANCO Phon 51/55	VSG 66.2 Phon - 12AR - 6 - 12AR - VSG 66.2 Phon	0,7	69	46	14	75	55	51	-2; -6

SANCO Plus EN2 coating on item 3 with 2-layer insulating glass, on items 2 and 5 with 3-layer insulating glass.

To determine the element thickness, film thicknesses from 0.5 mm were rounded up to full millimeters. Note: These films do not automatically have P2A approval.

SANCO Safe safety insulation glass

Glass type 	Glass structure	U _g -value to DIN EN 673	Light transmission to DIN EN 410	Total energy transmittance to DIN EN 410	Light reflection outside to DIN EN 410	Weight	Element thickness (Thickness tolerance acc. to glass structures)	Sound insulation value	Spectrum adjustment values
	mm	W/m ² K	LT % (± 2)	g-value % (± 2)	LR % (± 2)	kg/m ² (appr.)	mm (appr.)	R _w in dB	C;Ctr

Safety insulation glass with throw-through resistance and breakthrough resistance to DIN EN 356

SANCO Safe P1A	9 - 16AR- 4						29		
SANCO Safe P2A	9 - 16AR - 4						29		
SANCO Safe P3A	9 - 16AR - 4						29		
SANCO Safe P4A	10 - 16AR - 4						30		
SANCO Safe P5A	13 - 16AR - 4						33		
SANCO Safe P6B	23 - 16AR - 6						45		
SANCO Safe P7B	24 - 16AR - 6						47		
SANCO Safe P8B	29 - 16AR - 6						51		

U_g-value, g-values, LT- and LR-values depending on the coating used.

Safety insulation glass with bullet resistance to DIN EN 1063

SANCO Safe BR 1-S							26		
SANCO Safe BR 1-NS							30		
SANCO Safe BR 2-S							33		
SANCO Safe BR 2-NS							40		
SANCO Safe BR 3-S							33		
SANCO Safe BR 3-NS							46		
SANCO Safe BR 4-S							39		
SANCO Safe BR 4-NS							56		
SANCO Safe BR 5-S							47		
SANCO Safe BR 5-NS							62		
SANCO Safe BR 6-S							54		
SANCO Safe BR 6-NS							76		
SANCO Safe BR 7-S							79		
SANCO Safe BR 7-NS							92		

U_g-value, g-values, LT- and LR-values depending on the coating used.

Element thicknesses are manufacturer-specific approximate values.

AR = Argon, KR = Krypton, S = Split, NS = Non Split.

Technical values were computed using glaCE. U_g-value according to DIN EN 673 for vertical installation determined. For dimensional tolerances and production possibilities please refer to the appropriate price list. Attention! By changing the glass thicknesses and interpane spaces, the technical values change.

Excerpt from the total production range. The current data status is available at www.sanco.de

SANCO Insulating Glazing – Functional Overview

	SANCO Plus EN2	Low U_g -value, high g -value, all-purpose, colour-neutral, thermal insulating glass.
	SANCO Plus ZERO NG	Economic thermal insulating glass, the 2-layer structure achieves a U_g -value of 1.0 W/m ² K
	SANCO Plus FREE VISION T	Almost 100 % prevention of external condensation, insulating glass with low U_g -value.
	SANCO Plus TRIII E	Highest g -values, ideal for passive and low-energy houses.
	SANCO Sun COMBI	Highly selective glasses with a combi coating with simultaneous solar control and thermal insulation that combines low g -values and low U_g -values. Ideal for triple glazing.
	SANCO Sun T	Solar control insulating glass with very low g -values. Require additional thermal insulation glass for optimal insulation and must be thermally toughened. Prevents the room from overheating.
	SANCO Sun Night Vision	Anti-reflective solar control glass, clear view at night from lit rooms.
	SANCO Sun WHITESHINE	Solar control insulating glass in an impressive exterior view with white-silver reflection.
	SANCO CONTROL	Glare and visual screening in the insulating glass cavity. Louvre, blinds or folding roller blinds can be integrated. Also used in interior design.
	SANCO Phon	Sound insulating glass with sheets of differing thickness, or laminated glass with sound insulation film. The different natural frequency of the glass sheets reduces sound transmission.



	SANCO Safe	Safety glass with different resistance classes (break-resistant, penetration-resistant, bullet-resistant, splinter-binding, fall-protection).
	SANCO Alarm	An electrically conducting loop connected to an alarm system is embedded at a corner of a toughened safety glass. When the glass is smashed, the alarm is given immediately and automatically.
	SANCO DUR	Toughened safety glass (ESG), thermally tempered, injury-reducing in the case of breakage, increased shock, impact resistance and hail resistance, temperature change resistance.
	SANCO DUR TVG	Heat-strengthened glass (TVG), increased flexural strength and temperature change resistance, TVG is only in conjunction with laminated safety glass (VSG) a safety glass.
	SANCO LAMEX	Laminated safety glass (VSG), 2 or more sheets laminated with viscoelastic, highly tear-resistant PVB films – used as glass which is break-resistant, penetration-resistant and bullet-resistant.
	LAMEX X-STRONG	Laminated safety glass with an increased load capacity of 40 % while retaining the same structural thickness.
	SANCO Pyr	Fire-resisting glass in requirement-matching fire resistance classes. Room isolation against smoke and flames is guaranteed.
	SANCO ACS	Warm edge, improved thermal insulation in the insulating glass edge seal, lower condensate susceptibility.

The technical data listed here conforms to the current values at the time of going to print and can alter without prior notice. The technical values are based on the suppliers' information or were ascertained in the course of tests by an independent testing institution in accordance with the respectively valid standards. The function values are based only on test specimens in the dimensions provided for testing. No further guarantee for technical values shall be accepted, in particular if tests are performed in other installation situations or if subsequent measurements are obtained in the building. During installation, the current version of the SANCO glazing guidelines must be followed without fail. Date 07/2021