







Product	Run. No.	Glass type (Mono-types without coating)	Glass assembly	U _g (DIN EN 673) in W/m ² K	Resistance class*) (DIN EN 356/1063)	Resistance class*) Windows (DIN EN 1627/DIN EN 1522)	Light transmission*) (DIN EN 410) in % (±2)	Solar factor*) g value (DIN EN 410) in % (±2)	Light reflexion (DIN EN 410) in % (±2)	Thickness**) in mm	Weight**) in kg/m ²	Notes and other product options. Please observe static calculations as per relevant requirements!	
 ISOLAR MULTIPACT® P2A · P4A · P5A Resistance against manual attack (DIN EN 356)	4.01	mono	8 P2A	44.2	P2A	–	89	78	8	8	20	Typical protection use: Family and apartment houses in residential areas, remote individual houses, exclusive residential properties, holiday and weekend cottages. The following applies to the entire ISOLAR MULTIPACT product range: The thicker the glass assembly, the more noticeable the glass's inherent colour becomes, so it is recommended to use glass products with a particularly low inherent colour. All ISOLAR MULTIPACT types can also be supplied as triple safety glass. Max. dimension 4000 X 2600 mm, or 500 kp/unit.	
	4.02		9 P4A	44.4	P4A	RC 2	89	77	8	9	20		
	4.03		10 P5A	44.6	P5A	RC 3	89	76	8	10	20		
	4.04		12 P5A	55.6	P5A	RC 3	88	74	8	12	25		
	4.05	advance 34 //	27 P2A	4: / 15-16 / 44.2	1,1	P2A	–	80	60	12	27		30
	4.06		28 P4A	4: / 15-16 / 44.4	1,1	P4A	RC 2	80	60	12	28		30
	4.07		29 P5A	4: / 15-16 / 44.6	1,1	P5A	RC 3	80	60	12	29		30
	4.08		31 P5A	4: / 15-16 / 55.6	1,1	P5A	RC 3	80	60	12	31		35


 ISOLAR MULTIPACT® P6B - P8B Resistance against manual attack (DIN EN 356)	5.01	mono	15 P6B	15	P6B	RC 4	87	72	8	15	30	Typical protection use: Exclusive residential properties containing valuables, photo, electronic and video shops, IT installations, certain areas of department stores, antique shops, museums, art galleries, psychiatric facilities, furriers, jewellers, power plants, prisons, pharmacies etc. Typical protection use: Buildings and facilities for police forces, the Army; politicians, members of the judiciary and business people at risk of attacks; banks and cash rooms etc. For many ISOLAR MULTIPACT types, a combination of heat insulating and solar control glass as well as toughened or patterned glass is possible. Alarm triggering by toughened safety glass available as per corresponding VdS approval in models: ISOLAR MULTIPACT alarm covered or ISOLAR MULTIPACT alarm visible .	
	5.02		20 P7B	20	P7B	RC 5	86	69	8	20	38		
	5.03		25 P8B	25	P8B	RC 6	84	65	8	25	50		
	5.04	advance 34 //	31 P6B	6: / 10 / 15	1,4	P6B	RC 4	78	58	11	31		45
	5.05		36 P7B	6: / 10 / 20	1,4	P7B	RC 5	77	57	11	36		53
	5.06		41 P8B	6: / 10 / 25	1,4	P8B	RC 6	76	57	11	41		65


 ISOLAR MULTIPACT®	<p>On request, the following ISOLAR MULTIPACT® types are also available:</p> <p>Bullet resistant acc.to DIN EN 1063 – ISOLAR MULTIPACT® BR1 - BR7, SG1 and SG2</p> <p>Explosion-resistant acc.to DIN EN 13 541 – ISOLAR MULTIPACT® ER1 - ER4</p> <p>Special glasses: post offices, bank tellers, protection against climbing over – ISOLAR MULTIPACT® S</p>											Typical protection use: Buildings and facilities for police forces, the Army; politicians, members of the judiciary and business people at risk of attacks; banks and cash rooms etc. For many ISOLAR MULTIPACT types, a combination of heat insulating and solar control glass as well as toughened or patterned glass is possible. Alarm triggering by toughened safety glass available as per corresponding VdS approval in models: ISOLAR MULTIPACT alarm covered or ISOLAR MULTIPACT alarm visible .
	<p>On request, the following ISOLAR MULTIPACT® types are also available:</p> <p>Classification in accordance with VdS – ISOLAR MULTIPACT® EH 01, EH 02, EH 1 - EH 3</p>											

 ISOLAR MULTIPACT®	<p>On request, the following ISOLAR MULTIPACT® types are also available:</p> <p>Classification in accordance with VdS – ISOLAR MULTIPACT® EH 01, EH 02, EH 1 - EH 3</p>											Typical protection use: Similar to ISOLAR MULTIPACT PA or PB . Need for application depending on insurance cover as per the security guidelines of insurance companies. All EH types are approved by VdS.

 ISOLAR ORNILUX® Bird protection glass	6.01	mikado mono	VG 4: / 4 / :4	5,3	–	–	84	71	11	13	30	ISOLAR ORNILUX is the first bird protection glass worldwide which has shown improved perception by birds in extensive tests carried out by recognised ornithological institutes in Germany and in the USA. It can be used the same as conventional glass. Other combinations on request. ¹⁾ These types of ISOLAR ORNILUX® glass reached an approach flight rate of at least 70 % to the control pane in ABC flight tunnel tests ("EFFECTIVE CATEGORY"). Find more information at www.birdsmartglass.org . The "ABC Glass Collisions Program" is a reliable source for assessments of various glass products, or the hazard factors for birds. The flight tunnel results form the basis for the LEED Pilot Credit 55. www.usgbc.org ²⁾ Outer pane is thermally toughened.
	6.02	mikado mono	VG 12: / 12 / :12	4,7	–	–	76	57	10	37	90	
	6.03	mikado uno // 1,0 ¹⁾	6: / 16 / :VSG 44.2	1,0	–	–	66	47	24	30	35	
	6.04	mikado advance 34 // 1,1 ¹⁾	4: / 16 / :VSG 44.2	1,1	–	–	77	61	15	28	30	
	6.05	mikado advance 34 /// 0,6 ¹⁾	4: / 14 / :4 / 14 / :VSG 44.2	0,6	–	–	70	52	18	44	40	
	6.06	mikado A 70 // 66.36 ¹⁾	6: / 16 / :VSG 44.2	1,0	–	–	66	36	16	30	35	
	6.07	mikado A 60 // 58.32	6: / 16 / :VSG 44.2	1,0	–	–	58	32	16	30	35	
	6.08	mikado A 50 // 51.26 ^{1) 2)}	VG 46.2: / 16 / 4	1,0	–	–	51	26	19	30	35	
	6.09	mikado A 40 // 41.22 ^{1) 2)}	VG 46.2: / 16 / 4	1,0	–	–	41	22	23	30	35	
	6.10	mikado A 70 /// 60.33 ¹⁾	6: / 14 / :4 / 14 / :VSG 44.2	0,6	–	–	60	33	17	46	45	
	6.11	mikado A 60 /// 53.29 ¹⁾	6: / 14 / :4 / 14 / :VSG 44.2	0,6	–	–	53	29	17	46	45	
	6.12	mikado A 50 /// 45.25	6: / 14 / :4 / 14 / :VSG 44.2	0,6	–	–	45	25	20	46	45	
	6.13	mikado A 50 /// 46.24 ²⁾	VG 66.2: / 14 / 4 / 14 / :4	0,6	–	–	46	24	20	48	50	

 ISOLAR VISOREX® Light use/privacy with glass	7.01	white	// 47.37	4 - v - 4 / 16 / :4	1,0	–	47	37	32	27-28	30	Combinations with laminated safety glass (overhead glazing), toughened safety glass (sports facilities) and ISOLAR MULTIPACT (object protection) are possible. Max. dimensions 2500 x 1300 mm. Light guiding glazing ISOLAR VISOREX direct on request.
	7.02	white	// 32.26	4 - w - 4 / 16 / :4	1,0	–	32	26	42	27-28	30	
	7.03	white	/// 43.32	4 - v - 4 / 14 / :4 / 14 / :4	0,6	–	43	32	33	44-45	40	
	7.04	white	/// 29.23	4 - w - 4 / 14 / :4 / 14 / :4	0,6	–	29	23	43	44-45	40	

Product	Run. No.	Glass type	Glass assembly	U value (calculated) in W/m ² K	U value (legal approved) in W/m ² K	Sound insulation (DIN EN ISO 140-3/717-1) R _w in dB	Dimensions in mm	Thickness**) in mm	Weight**) in kg/m ²	Notes and other product options. Please observe static calculations as per relevant requirements!
 ISOLAR VACUREX® High-performance heat insulating glass panels	8.01	// 0,30	6 / SZR 18 / 6	0,30	0,41	36	max. 2500 x 4000	30	26	ISOLAR VACUREX consists of two thermally toughened panes which can be designed with RAL colours. The inner pane can optionally be replaced by a coated metal sheet. Higher insulation characteristics are possible on request.
	8.02	// 0,27	6 / SZR 20 / 6	0,27	0,36	–	max. 2500 x 4000	32	26	
	8.03	// 0,34	6 / SZR 27 / 3 steel sheet	0,34	0,46	44	max. 2500 x 4000	37	49	

Product	Run. No.	Glass type	Glass assembly	U _g (DIN EN 673) in W/m ² K	Resistance class*)	Light transmission*) (DIN EN 410) in % (±2)	Solar factor*) g value (DIN EN 410) in % (±2)	Light reflexion*) (DIN EN 410) in % (±2)	Sound insulation (DIN EN ISO 140-3/717-1) R _w in dB	Thickness**) in mm	Weight**) in kg/m ²	Notes and other product options. Please observe static calculations as per relevant requirements!	
 ISOLAR ARDOREX® Fire protection glass	9.01	advance 34 //	mono	4,9	F(EI) 30	86	69	8	43	22	40	ISOLAR ARDOREX fire protection glass Arnold Fire is tested and approved for use in metal, wood and plaster systems. In the event of use beyond legal approval, legal permission is required in each individual case. Approval e.g.: Z-19.14-713;-1086; -1646; -1705; -1723; -1833; -1950; -2015; -2118; -2228; Z-6.20-1920; -1930; -1975; -2004;	
	9.02	–	EI 30.12	4,6	F(EI) 60	85	68	8	44	28	46		
	9.03	–	EI 60.18	4,4	F(EI) 90	84	66	8	46	34	54		
	9.04	–	EI 90.24	3,9	F(EI) 120	82	64	8	46	48	70		
	9.05	–	EI 120.38	–	F(EI) 30	78	60	11	–	≥ 34	50		
	9.06	–	–	ISO	1,1-0,5	F(EI) 60	77	59	11	–	≥ 40		56
	9.07	–	–	ISO	1,1-0,5	F(EI) 90	76	59	11	–	≥ 46		64

^{*)}The indicated performances have been determined according to the relevant test standards and legal rules for the test dimensions and test conditions required or described therein. Deviating dimensions and combinations as well as glass thickness adjustments resulting from static requirements, for example, may lead to changes in individual characteristics. Indicated values only refer to glass elements. The performances of building elements depend to a large extent on the construction of the frame.

^{**)}Tolerance dependant on type.

U_g values are calculated according to DIN EN 673 for vertical installations. Due to tolerances of input parameters, a deviation of up to 0,1 W/m²K from calculated value is possible. Please also note our Technical Data Sheet!

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