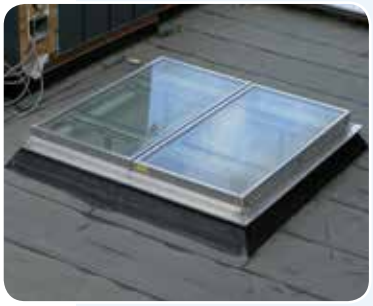
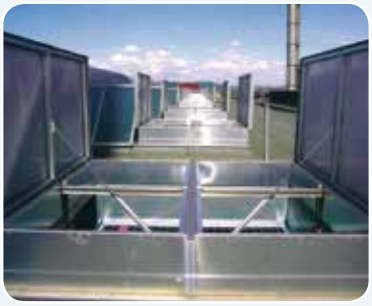
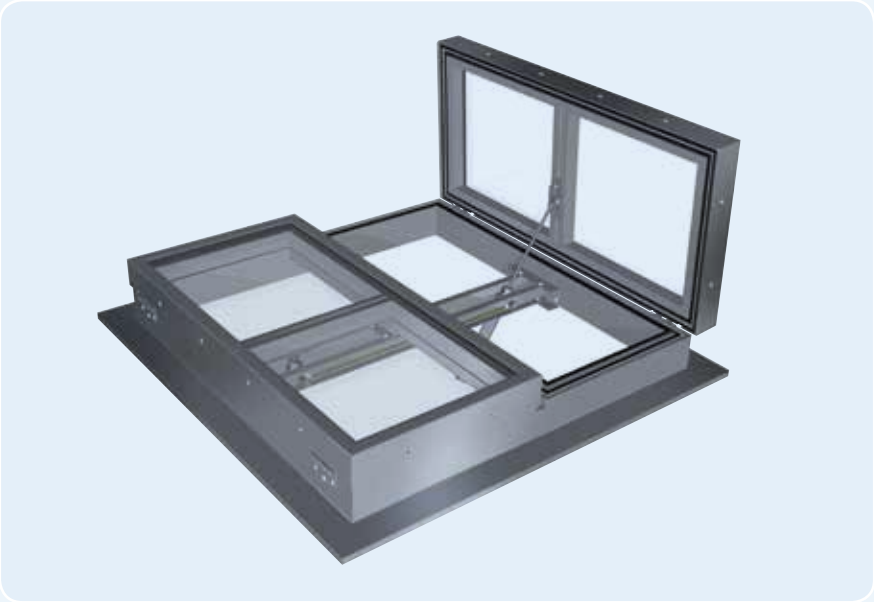
Brakel® DuoTherma





Twin flap ventilator

The Duo Therma is a twin flap system suited for both smoke & heat extraction and daily ventilation. This system is certified in accordance with the EN 12101-2 standard, while it is also highly air and watertight. The countless options available in terms of the base and flaps, as well as numerous operating systems and accessories, enable the creation of a functional solution for any type of building: From industrial properties to cold stores, and from commercial centres to theatres and offices premises. The system is also available as a single flap version, which is known as the Mono Therma.



The cold bridge-free Duo Therma TG fitted with a thermally separated base and flaps offers a high level of durability. It minimises condensation forming and offers advanced comfort features. In the event that sound insulation is also required, two fully acoustic versions of the Duo Therma TG model are available, which have Rw values of 34 dB and 44 dB, and are fully compliant with the EN 12101-2 standard.

EN 12101-2

Green Building Products

As a leading partner in its field, Brakel endeavours to remain a forerunner in the area of corporate social responsibility. Given that with our products, we let in the best that nature has to offer, it is only natural that we also care greatly for the environment. We therefore seek to integrate sustainable solutions in our working methods, products and services, wherever possible.

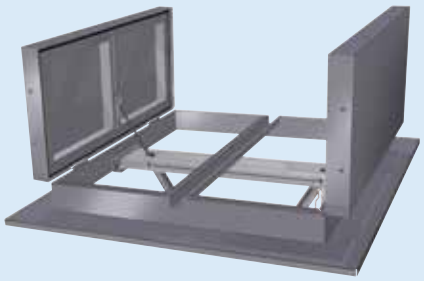
We have categorised our highly extensive product range according to the levels of sustainability and comfort applicable. The many energy efficient products and systems in the range can be recognised by the butterfly icons that they bear.

We classify our products, ranging from functional to sustainable, as follows:

F	functionally applicable in accordance with current qualifications / standards
	compliant with raised sustainability requirements
	compliant with high sustainability requirements
	entirely in keeping with a sustainable solution

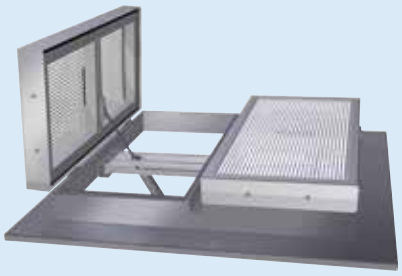
Duo Therma AT uninsulated

- Sea water and corrosion-resistant aluminium EN AW 5754 (AlMg3)
- High air and watertightness
- Considerable flexibility in terms of dimensions and flange type
- Convenient installation



Duo Therma AT insulated

- Optional transparent polycarbonate flaps allow daylight entrance
- Broad range of operating systems and accessories available
- Suitable for all types of buildings and roof applications



Specifications Duo Therma

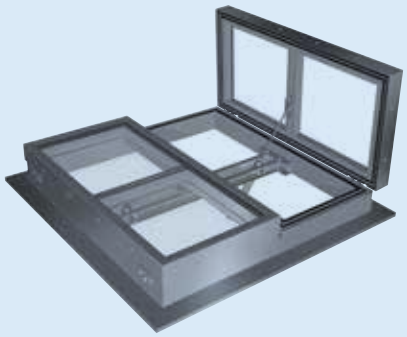
EN 12101-2 CERTIFIED

Type	Throat size width x length (mm)	Geometric surface m²	Aerodynamic surface m²	Cv-value	Height mm TG Acoustic =250mm	Duo Therma AT (un)insulated				Duo Therma TG Thermally broken			
						Weight (kg)							
						Uninsulated aluminium	Insulated aluminium	Transparent multi-wall polycarbonate Isolux	Single laminated safety glass	Insulated aluminium	Transparent multi-wall polycarbonate Isolux	Laminated insulation glass	Acoustic insulated
1010	1000 x 1000	1,00	0,60	0,60	200	31	41	32	63	44	43	72	88
1015	1000 x 1500	1,50	0,90	0,60	200	38	49	39	80	53	51	93	120
1020	1000 x 2000	2,00	1,20	0,60	200	45	57	46	98	62	59	115	153
1025	1000 x 2500	2,50	1,50	0,60	200	52	65	53	116	72	68	137	185
1510	1500 x 1000	1,50	0,90	0,60	200	37	48	37	81	53	51	94	119
1515	1500 x 1500	2,25	1,35	0,60	200	44	57	45	103	64	60	122	163
1520	1500 x 2000	3,00	1,80	0,60	200	52	67	53	126	75	69	150	206
1525	1500 x 2500	3,75	2,25	0,60	200	60	76	61	148	86	78	179	250
2010	2000 x 1000	2,00	1,30	0,65	200	42	55	43	98	63	59	115	151
2015	2000 x 1500	3,00	1,95	0,65	200	51	66	51	126	75	69	151	205
2020	2000 x 2000	4,00	2,60	0,65	200	60	77	60	153	88	79	186	260
2025	2000 x 2500	5,00	3,25	0,65	200	69	88	68	181	100	88	221	315
2510	2500 x 1000	2,50	1,63	0,65	200	48	61	48	116	73	67	137	182
2515	2500 x 1500	3,75	2,44	0,65	200	58	74	57	149	87	78	179	248
2520	2500 x 2000	5,00	3,25	0,65	200	68	86	66	181	100	88	222	314
2525	2500 x 2500	6,25	4,06	0,65	200	78	99	75	214	114	99	264	379

Comment: The Cv-value of the Duo Therma is tested in combination with wind baffles. Deviations can be made depending on the situation in which it is installed. Also available with a single flap: Mono Therma (from 1000 x 1000mm to 1250 x 2500mm).

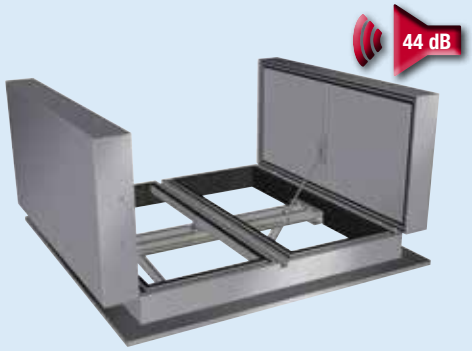
Duo Therma TG thermally separated

- Entirely thermally separated base and flaps
- Extensive choice of flap types
- Standard noise reduction (Rw) of 31 dB
- Increased level of comfort, with U-values of up to 1.0 W/m²K
- Air and watertightness tested accordance NEN EN 1026 / 1027 and DIN EN 12208



Duo Therma TG thermally separated / acoustically insulated

- Thermally separated base and flaps, with additional acoustic insulation
- Available in two EN 12101-2 / EN ISO 140-3 certified types, with Rw-values of 34 dB and 44 dB
- Compliant with highly stringent acoustic requirements
- U-values of up to 0,9 W/m²K



CROSSFLOW

brakel RESELLER

Materials

Base and flanges: Sea water and corrosion-resistant EN AW 5754 (AlMg3) sheet aluminium is used in the Duo Therma AT models; the Duo Therma TG models are made of EN AW 606035 (AlMgSi0,5) extruded profile sections which are thermally separated.

Sealing: All-round, using coated EPDM rubbers, which prevent freezing while guaranteeing a high level of airtightness.

Hinges: Stainless steel.

Flaps: With or without thermal separator

Choice of: uninsulated or mineral wool-insulated aluminium flap, 16 to 55 mm transparent multi-wall polycarbonate filler, single safety glass, insulated safety glass, or a high quality acoustically insulated flap.

Finishing: Standard blank aluminium or coated in a standard RAL colour.

Controls

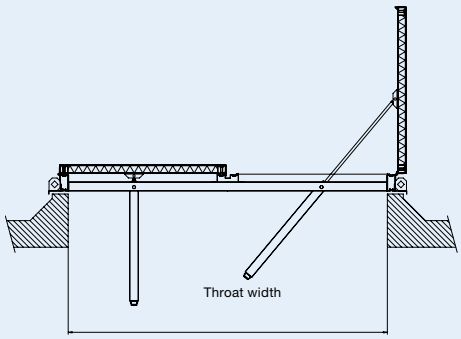
P2: Double-action compressed air operation

M: Motor operation

Optional: **B:** including fire function **FS:** failsafe

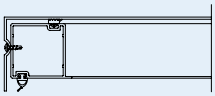
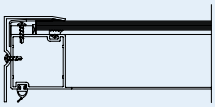
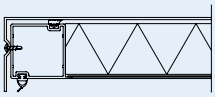
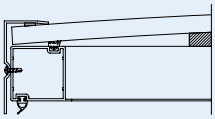
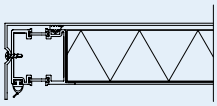
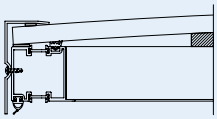
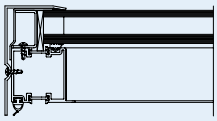
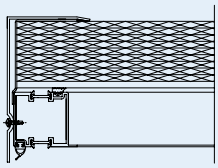
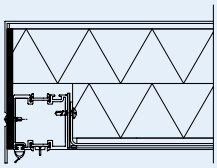
Accessories

- Bird or insect mesh
- Fall protection
- Burglary prevention features
- Insulated flanges
- RAL colour / Anodised

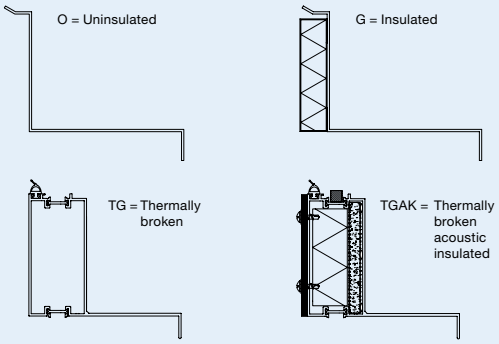


Cross section

Flanges

AT-flaps		U-value W/m² K
	Uninsulated	6,0
	Single laminated glass	5,7
	Insulated	2,0
	Isolux 16 mm	1,8 - 2,3
TG-flaps		**U-value W/m² K**
	Thermally broken insulated	2,0
	Thermally broken Isolux 16 mm	1,8 - 2,3
	Thermally broken laminated insulation glass	1,1 - 2,8
	Thermally broken Isolux 55 mm	1,0
	Thermally broken acoustic insulated	0,9

Flaps



Base

For further information, go to our website: www.brakel.com

Technical changes reserved

EN2150805/DuoTherma Crossflow 10-2015.1

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