
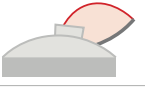
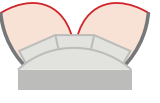


Vario Norm, Vario Therm and Vario Therm-S

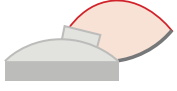
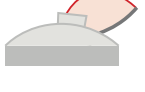
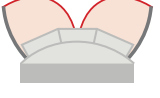
Technical Information – Ventilation



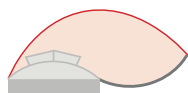
VARIO NORM AND VARIO THERM BARREL VAULT

Flap type	Nominal width	Nominal length	Continuous rooflight nominal width	Geometric opening area A_g	Effective aerodynamic opening area (A_e) (EN 12101-2)	Vario-Firejet® opening angle
Unit	[cm]	[cm]	[cm]	[m ²]	[m ²]	[degrees]
Side flap 	180	100	250 to 350	1,800	1,170	130°
	180	204	250 to 350	3,672	2,390	130°
	215	100	280 to 410	2,150	1,400	130°
	215	204	280 to 410	4,386	2,850	130°
	250	100	300 to 480	2,500	1,630	130°
Cross beam flap 	180	100	350 to 1090	1,800	1,170	130°
	180	204	350 to 1090	3,672	2,390	130°
	215	100	400 to 1090	2,150	1,400	130°
	215	204	400 to 1090	4,386	2,850	130°
	250	100	480 to 1090	2,500	1,630	130°
Double flap 	200	100	200 to 600	2,000	1,220	95°
	200	204	200 to 600	4,080	1,740	95°
	250	100	250 to 600	2,500	1,600	95°
	250	204	250 to 600	5,100	3,490	95°
	300	100	300 to 600	3,000	1,950	95°
	300	204	300 to 600	6,120	4,240	95°

VARIO NORM AND VARIO THERM BARREL VAULT

Flap type	NSHEV AND COMFORT VENTILATION								
	PNEUMATIC				ELECTRICAL				
Functionality	NSHEV only	OPEN/CLOSE NSHEV + comfort ventilation	Snow load	Additional comfort ventilation		OPEN/CLOSE NSHEV + comfort ventilation		OPEN/CLOSE NSHEV + comfort ventilation	
Opening system	Pneumatic lifting cylinder (CO ₂)	Pneumatic lifting cylinder (CO ₂)		Pneumatic lifting cylinder (CO ₂)	Electrical actuator (230V)	Electrical actuator (24V/8A)		Electrical actuator (48V/4A)	
Performance				Stroke	Stroke	Snow load	Comfort venting stroke	Snow load	Comfort venting stroke
Unit	NSHEV	NSHEV + comfort	[N/m ²]	[mm]	[mm]	[N/m ²]	[mm]	[N/m ²]	[mm]
Side flap 	✓	✓	500 T(-05)	300	300	-		-	
Cross beam flap 	✓	✓	500 T(-05) 500 T(00) for 250x100	300	300	-		-	
Double flap 	✓	✓	500 T(-05) 750 T(00)	300 *	300 *	800 T(-15)	300 *	800 T(-15)	300 *


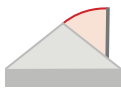
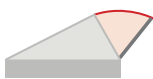
* 1 flap opens




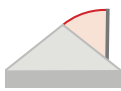
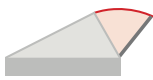
VARIO NORM AND VARIO THERM BARREL VAULT

Full flap		NSHEV AND COMFORT VENTILATION										
		PNEUMATIC						ELECTRICAL				
Functionality		Effective aerodynamic opening area (A _a) (EN 12101-2)	NSHEV only	OPEN/CLOSE NSHEV + comfort ventilation	Snow load T(00)	Additional comfort ventilation		Effective aerodynamic opening area (A _a) (EN 12101-2)	Functionality OPEN/CLOSE NSHEV + comfort ventilation			
Opening system			Pneumatic lifting cylinder (CO ₂)	Pneumatic lifting cylinder (CO ₂)		Pneumatic lifting cylinder (CO ₂)	Electrical actuator (230V)		Electrical actuator (24V/8A)	Electrical actuator (48V/4A)		
Performance		Snow load T(-15)	Snow load T(-15)	Stroke	Stroke	Snow load T(-15)	Comfort venting stroke	Snow load T(-15)				Comfort venting stroke
Nominal width	Nominal length											
[cm]	[cm]	[m ²]	NSHEV	NSHEV + comfort	[N/m ²]	[mm]	[mm]	[m ²]	[N/m ²]	[mm]	[N/m ²]	[mm]
150	100	1,050	✓	✓	500	300	300	0,990	1000	300/500	1400	300/500
160	100	1,120	✓	✓	500	300	300	1,056	1000	300/500	1400	300/500
170	100	1,190	✓	✓	500	300	300	1,122	1000	300/500	1400	300/500
180	100	1,350	✓	✓	500	300	300	1,278	1000	300/500	1400	300/500
190	100	1,425	✓	✓	500	300	300	1,349	1000	300/500	1400	300/500
200	100	1,500	✓	✓	500	300	300	1,420	900	300/500	1250	300/500
210	100	1,575	✓	✓	500	300	300	1,491	1000	300/500	1200	300/500
220	100	1,650	✓	✓	500	300	300	1,562	950	300/500	1100	300/500
230	100	1,725	✓	✓	500	300	300	1,633	800	300/500	1000	300/500
240	100	1,800	✓	✓	500	300	300	1,704	800	300/500	900	300/500
250	100	1,875	✓	✓	500	300	300	1,775	750	300/500	850	300/500
150	134	1,410	✓	✓	500	300	300	1,327	1000	300/500	1400	300/500
160	134	1,504	✓	✓	500	300	300	1,415	1000	300/500	1400	300/500
170	134	1,698	✓	✓	500	300	300	1,503	900	300/500	1300	300/500
180	134	1,692	✓	✓	500	300	300	1,592	850	300/500	1200	300/500
190	134	1,786	✓	✓	500	300	300	1,680	750	300/500	1100	300/500
200	134	1,880	✓	✓	500	300	300	1,769	700	300/500	1000	300/500
210	134	2,121	✓	✓	500	300	300	1,998	800	300/500	950	300/500
220	134	2,222	✓	✓	500	300	300	2,093	750	300/500	850	300/500
230	134	2,323	✓	✓	500	300	300	2,188	650	300/500	800	300/500
240	134	2,424	✓	✓	500	300	300	2,283	600	300/500	750	300/500
250	134	2,525	✓	✓	500	300	300	2,379	600	300/500	700	300/500
150	204	2,295	✓	✓	500	300/500 /1000	300/500	2,234	800	300/500	1100	300/500
160	204	2,448	✓	✓	500	300/500 /1000	300/500	2,383	700	300/500	1000	300/500
170	204	2,601	✓	✓	500	300/500 /1000	300/500	2,532	650	300/500	900	300/500
180	204	2,574	✓	✓	500	300/500 /1000	300/500	2,497	600	300/500	800	300/500
190	204	2,717	✓	✓	500	300/500 /1000	300/500	2,636	500	300/500	750	300/500
200	204	2,860	✓	✓	500	300/500 /1000	300/500	2,774	500	300/500	700	300/500
210	204	3,003	✓	✓	500	300/500 /1000	300/500					
220	204	3,146	✓	✓	500	300/500 /1000	300/500					
230	204	3,289	✓	✓	500	300/500 /1000	300/500	-	-	-	-	-
240	204	3,432	✓	✓	500	300/500 /1000	300/500					
250	204	3,575	✓	✓	500	300/500 /1000	300/500					

VARIO THERM-S MONO PITCH AND DUAL PITCH

Flap type	Nominal width	Nominal length	Continuous rooflight order width	Geometric opening area A _g	Effective aerodynamic opening area (A _a) (EN 12101-2)	Vario-Firejet® opening angle
Unit	[cm]	[cm]	[cm]	[m ²]	[m ²]	[degrees]
30°/30° 	103 to 250	100	230 to 500	1,030 up to 2,500	0,618 up to 1,500	65°
	103 to 250	204	230 to 500	2,101 up to 5,100	1,366 up to 3,315	65°
45°/45° 	106 to 250	100	180 to 500	1,060 to 2,500	0,630 to 1,500	65°
	106 to 250	204	180 to 500	2,152 to 5,100	1,392 to 3,315	65°
30°/60° 	106 to 250	100	260 to 560	1,000 to 2,500	0,600 to 1,500	65°
	106 to 250	204	260 to 560	2,100 to 5,100	1,220 to 3,060	65°

VARIO THERM-S MONO PITCH AND DUAL PITCH

Single flap	NSHEV AND COMFORT VENTILATION								
	PNEUMATIC				ELECTRICAL				
Functionality	NSHEV only	OPEN/CLOSE NSHEV + comfort ventilation	Snow load T(00)	Additional comfort ventilation		OPEN/CLOSE NSHEV + comfort ventilation		OPEN/CLOSE NSHEV + comfort ventilation	
Opening system	Pneumatic lifting cylinder (CO ₂)	Pneumatic lifting cylinder (CO ₂)		Pneumatic lifting cylinder (CO ₂)	Electrical actuator (230V)	Electrical actuator (24V/8A)		Electrical actuator (48V/4A)	
Performance				Stroke	Stroke	Snow load	Comfort venting stroke	Snow load	Comfort venting stroke
Unit	NSHEV	NSHEV + comfort	[N/m ²]	[mm]	[mm]	[N/m ²]	[mm]	[N/m ²]	[mm]
30°/30° 	✓	✓	500	300	300	-	-	-	-
	✓	✓	500	300	300	-	-	-	-
45°/45° 	✓	✓	500	300	300	-	-	-	-
	✓	✓	500	300	300	-	-	-	-
30°/60° 	✓	✓	500	300	300	-	-	-	-
	✓	✓	500	300	300	-	-	-	-