



FSR, FSR/U, FSR/W

Pivot window equipped with smoke ventilation system

I. APPLICATION

	Pivot window equipped with smoke ventilation system
	Suitable for pitches from 15-90°

II. FEATURES

	Pinewood, natural colour (FSR), white NCS S0502-Y polyurethane (FSR/U), or white acrylic (FSR/W)
	Special actuator opening the sash up to an angle of 90°
	Double sealing system
	Universal installation system
	Steel spacer

III. ADDITIONAL PRODUCTS TO BE USED WITH WINDOWS

Flashings	
	standard
	special
	combination
Control	
	electrically operated by control panel (not included in set)
Mounting accessories	
	insulation sets
	linings
	auxiliary rafters
	bands
	frame extensions

IV. OPTIONS

	Wooden profiles painted in any RAL colour or in one of five azure colours
	External cladding elements painted in any RAL colour or manufactured to match even the most unusual roofing colours (CU, TC)
	Window with a mullion bar

DECLARATION OF PERFORMANCE

Harmonized standard	EN 12101-2:2003
Number of Declaration of Performance	R40/CPR/12101/17

VI. TECHNICAL PARAMETERS

Characteristics			Performance of the product																	Harmonized technical specification	
			FSR, FSR/U, FSR/W																		
Window size [cm]			78x78	78x98	78x118	78x140	94x78	94x98	94x118	94x140	94x160	114x78	114x98	114x118	114x140	134x78	134x98	134x118	134x140		
1	Active surface	A _a [m ²] ⁽¹⁾	0,29	0,38	0,47	0,58	0,35	0,46	0,58	0,70	0,80	0,44	0,57	0,71	0,86	0,52	0,68	0,84	1,01	6	
2	Wind load resistance		WL 3000																	7.4.1	
3	Snow load resistance	15°	SL 2007	SL 1944	SL 1877	SL 1804	SL 1686	SL 1645	SL 1598	SL 1546	SL 1500	SL 1850	SL 1816	SL 1775	SL 1727	SL 1586	SL 1563	SL 1534	SL 1500	7.2.1.1	
		20°	SL 2063	SL 1998	SL 1929	SL 1854	SL 1733	SL 1691	SL 1643	SL 1590	SL 1542	SL 1901	SL 1866	SL 1824	SL 1775	SL 1630	SL 1607	SL 1577	SL 1542		
		25°	SL 2139	SL 2072	SL 2000	SL 1922	SL 1797	SL 1753	SL 1703	SL 1648	SL 1599	SL 1971	SL 1935	SL 1891	SL 1841	SL 1690	SL 1666	SL 1635	SL 1599		
		30°	SL 2238	SL 2168	SL 2093	SL 2012	SL 1880	SL 1834	SL 1783	SL 1725	SL 1673	SL 2063	SL 2025	SL 1979	SL 1926	SL 1768	SL 1743	SL 1711	SL 1673		
		35°	SL 2366	SL 2292	SL 2213	SL 2127	SL 1988	SL 1939	SL 1884	SL 1823	SL 1768	SL 2181	SL 2140	SL 2092	SL 2036	SL 1870	SL 1843	SL 1809	SL 1768		
		40°	SL 2530	SL 2451	SL 2366	SL 2274	SL 2126	SL 2073	SL 2015	SL 1949	SL 1891	SL 2332	SL 2289	SL 2237	SL 2177	SL 1999	SL 1971	SL 1934	SL 1891		
	45°	SL 2741	SL 2655	SL 2563	SL 2463	SL 2303	SL 2246	SL 2183	SL 2112	SL 2048	SL 2526	SL 2479	SL 2423	SL 2358	SL 2165	SL 2135	SL 2095	SL 2048			
4	Low ambient temperature		T (-15)																	7.3.1	
5	Reliability		RE 1000																	7.1.1	
6	Resistance to high temperature		B 300																	7.5.1	
7	Reaction to fire		F																	7.5.2.1	

(1) as per EN 12101-2, attachment B, section B.2.4.2.2

FSR smoke hatch parameters

Size/ symbol of FSR hatch	VVV – SL values depending on the FSR smoke hatch size	ZZZ – value of the active smoke area A _a [m ²] depending on the FSR smoke hatch size. Value only for 90 degree installation angle.	XXX – Geometric values for the smoke surface A _v [m ²] depending on the size of the FSR smoke hatch.
78x78 (23)	2007	0,29	0,50
78x98 (05)	1944	0,38	0,64
78x118 (06)	1877	0,47	0,78
78x140 (07)	1804	0,58	0,93
94x78 (24)	1686	0,35	0,61
94x98 (15)	1645	0,46	0,78
94x118 (08)	1598	0,58	0,96
94x140 (09)	1546	0,70	1,14
94x160 (80)	1500	0,80	1,32
114x78 (25)	1850	0,44	0,75
114x98 (20)	1816	0,57	0,97
114x118 (10)	1775	0,71	1,17
114x140 (11)	1727	0,86	1,41
134x78 (26)	1586	0,52	0,90
134x98 (12)	1563	0,68	1,15
134x118 (18)	1534	0,84	1,40
134x140 (17)	1500	1,01	1,68

*The smoke hatch does not require the U_w value specification, therefore the heat transfer coefficient is not given in the declaration of performance.

VII. DETAILED DIMENSIONS OF PIVOT WINDOWS FSR, FSR/U, FSR/W

Window size	Size Symbol	Frame external size			Distance between lining grooves		Glazing area		Visible glazing area
		S	x	L	p	q	j	k	j * k
[cm]		[mm]							[m ²]
78 x 78	23	777	x	781	715	724	599	591	0,35
78 x 98	05	777	x	981	715	924	599	791	0,47
78 x 118	06	777	x	1181	715	1124	599	991	0,59
78 x 140	07	777	x	1401	715	1344	599	1211	0,73
94 x 78	24	937	x	781	875	724	759	591	0,45
94 x 98	15	937	x	981	875	924	759	791	0,60
94 x 118	08	937	x	1181	875	1124	759	991	0,75
94 x 140	09	937	x	1401	875	1344	759	1211	0,92
94 x 160	80	937	x	1601	875	1544	759	1411	1,07
114 x 78	25	1137	x	781	1075	724	959	591	0,57
114 x 98	20	1137	x	981	1075	924	959	791	0,76
114 x 118	10	1137	x	1181	1075	1124	959	991	0,95
114 x 140	11	1137	x	1401	1075	1344	959	1211	1,16
134 x 78	26	1337	x	781	1275	724	1159	591	0,68
134 x 98	12	1337	x	981	1275	924	1159	791	0,92
134 x 118	18	1337	x	1181	1275	1124	1159	991	1,15
134 x 140	17	1337	x	1401	1275	1344	1159	1211	1,40

