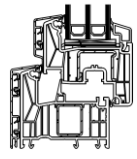
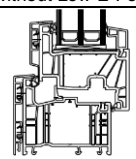
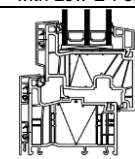
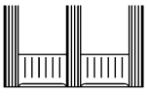



table of Uw-values according to GEG 2020 for aluminium-pvc-windows in W/(m²K)

standards according to GEG (2020) $U_w = \max. 1.3 \text{ W/(m}^2\text{K)}$
standards according to KfW $U_w = \max. 0.95 \text{ W/(m}^2\text{K)}$

U_w -values over $1.0 \text{ W/(m}^2\text{K)}$ are indicated with one decimal place! e.g. $1.34 \rightarrow 1.3$
 U_w -values under $1.0 \text{ W/(m}^2\text{K)}$ are indicated with two decimal places! e.g. $0.78 \rightarrow 0.78$

system	→	AKF 700		AKF 734 S
cross-section	→	without Low-E-Foil	with Low-E-Foil	
				
building depth (in mm)	→	88,5	88,5	88,5
view width (all around; in mm)	→	130	130	120
Uf-value	$W/(m^2K)$ →	1,0	0,82	1,0

glazing	Ug-value $W/(m^2K)$	Psi-value $W/(mK)$			
	0,5	0,030	0,75	0,68	0,74
	0,6	0,030	0,81	0,75	0,80
	0,7	0,030	0,88	0,81	0,87
	0,8	0,030	0,94	0,88	0,94
	1,0	0,032	not possible	not possible	1,1
	1,1	0,032	not possible	not possible	1,1

values highlighted in green are suitable for passive houses

values highlighted in red exceeding the reference value of GEG 2020! (note approval in individual cases)

glass spacer:

-thermally insulated glass spacer (pvc) according to DIN EN ISO 10077-2 = 0.030 & 0.032 $W/(mK)$
-no arches possible

calculation basis and indication of source for:

Uf-value: thermal transmittance coefficient for frame parts in $W/(m^2K)$
Ug-value: thermal transmittance coefficient for glazing according to DIN EN 673 in $W/(m^2K)$
Uw-value: mathematical determination of the thermal transmittance coefficient of windows in $W/(m^2K)$ according to DIN EN ISO 10077-1 (reference size 1230x1480mm), proportion of the frame approx. 30%
calculation: calculation method according to DIN EN ISO 10077-2
reference size: size of the test specimen according to DIN EN ISO 14351-1
psi-value: fundamentals of EN ISO 10077-2
sash bars: according to DIN EN ISO 14351 amendment (DIN 4108) or DIN EN ISO 10077-1:2018-01 table G.4

limitations for sash bars (according to DIN EN ISO 14351-1):

+ 0.1 $W/(m^2K)$ single cross joint of sash bars between the glass panes
+ 0.2 $W/(m^2K)$ multiple cross joint of sash bars between the glass panes
+ 0.4 $W/(m^2K)$ glass dividing sash bars

As an alternative to flat-rate correction values, it can be taken into accounts as follows:

length-related heat transfer coefficient for pvc spacer bars (according to DIN EN ISO 10077-1:2018-01 table G.4):

with double glass: 0.040 $W/(mK)$
with triple glass, with rung in a cavity: 0.020 $W/(mK)$
with triple glass, with rung in both cavities: 0.030 $W/(mK)$