3.0 DETAILED SIMULATION RESULTS

CSA A440.2-19 Simulation Summary

Manufacturer: Vinyl Pro Window Systems Inc.
Exova Report Number: 20-06-B0015-S7
Product Series / Model: Casement
Window 6.3 File Name: 20-06-B0015-7S-CAS-Vinyl Pro
Date: 13-Feb-20
Simulation Revision No.:

Operator Type: Casement Window
Simulation Window Size: 600 Width (mm) x 1500 Height (mm)
Frame Type: VY - vinyl frame members
Sash Type: VY - vinyl frame members
Thermal Break Type: N/A
Simulation Laboratory Code: SEVA (NFRC)

Physical Air Leakage Value: 0.0 L/s-m^2
Physical Test Report No.: 14-06-M0090-3, Revision 1
Physical Test Report Issued By: Exova
Physical Test Report Date: 29-Jan-15

element

Product Code	Grouping ID Number	Total IGU Thickness		Glazing Option Number	Glazing #1 Thickness		Glazing #2 Thickness		Glazing #3 Thickness		Gap Space 1		Gap Space 2		Gas Information				Emissivity					Spacer Type	Tint	C-O-G U-Factor		C-O-G SHGC	C-O-G VT	Grid Type	Grid Size (in)	Total Product U-Factor		SHGC NO GRID	SHGC GRID<1"	SHGC GRID >= 1"	VT NO GRID	VT GRID < 1"	VT GRID >= 1"	ER NO GRID	ER GRID < 1"	ER GRID >= 1"
		(mm)	(in)		(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	Gas Fill 1	Gas Fill 2	% of Gas Fill 1	% of Gas Fill 2	Surface 2	Surface 3	Surface 4	Surface 5	Surface 6			(W/m²-K)	(Btu/h.ft².F)					(W/m²-K)	(Btu/h.ft².F)									
1		20.64	0.813	1	3.00	0.118	3.00	0.118			14.64	0.576			ARG		97			0.068				ZF-S		1.49	0.262	0.69	0.79	N,G[3]	0.75	1.45	0.255	0.44	0.40	-	0.50	0.45	-	34	31	-
2		20.64	0.813	2	3.00	0.118	3.00	0.118			14.64	0.576			ARG		97		0.068		0.149			ZF-S		1.19	0.210	0.62	0.77	N,G[3]	0.75	1.30	0.229	0.40	0.36	-	0.49	0.44	-	35	33	-
3		28.58	1.125	3	3.00	0.118	3.00	0.118	3.00	0.118	9.79	0.385	9.79	0.385	ARG	ARG	97	97				0.066		ZF-S		1.13	0.199	0.62	0.73	N	-	1.25	0.220	0.39	-	-	0.46	-	-	35	-	-
4		28.58	1.125	3	3.00	0.118	3.00	0.118	3.00	0.118	9.79	0.385	9.79	0.385	ARG	ARG	97	97				0.066		ZF-S		1.13	0.199	0.62	0.73	N,G[1]	0.75	1.25	0.220	-	0.36	-	-	0.41	-	-	33	-
5		28.58	1.125	3	3.00	0.118	3.00	0.118	3.00	0.118	9.79	0.385	9.79	0.385	ARG	ARG	97	97				0.068		ZF-S		1.13	0.199	0.62	0.73	N,G[2]	0.75	1.25	0.220	-	0.36	-	-	0.41	-	-	33	-
6		28.58	1.125	4	3.00	0.118	3.00	0.118	3.00	0.118	9.79	0.385	9.79	0.385	ARG	ARG	97	97	0.068			0.068		ZF-S		0.85	0.150	0.56	0.70	N	-	1.05	0.185	0.36	-	-	0.44	-	-	38	-	-
7		28.58	1.125	4	3.00	0.118	3.00	0.118	3.00	0.118	9.79	0.385	9.79	0.385	ARG	ARG	97	97	0.068			0.068		ZF-S		0.85	0.150	0.56	0.70	N,G[1]	0.75	1.10	0.194	-	0.33	-	-	0.40	-	-	35	-
8		28.58	1.125	4	3.00	0.118	3.00	0.118	3.00	0.118	9.79	0.385	9.79	0.385	ARG	ARG	97	97	0.068			0.068		ZF-S		0.85	0.150	0.56	0.70	N,G[2]	0.75	1.10	0.194	-	0.33	-	-	0.40	-	-	35	-
9		28.58	1.125	5	3.00	0.118	3.00	0.118	3.00	0.118	9.79	0.385	9.79	0.385	ARG	ARG	97	97	0.068		0.068		0.149	ZF-S		0.74	0.131	0.53	0.68	N	-	1.00	0.176	0.34	-	-	0.43	-	-	38	-	-
10		28.58	1.125	5	3.00	0.118	3.00	0.118	3.00	0.118	9.79	0.385	9.79	0.385	ARG	ARG	97	97	0.068		0.068		0.149	ZF-S		0.74	0.131	0.53	0.68	N,G[1]	0.75	1.05	0.185	-	0.31	-	-	0.39	-	-	35	-
11		28.58	1.125	5	3.00	0.118	3.00	0.118	3.00	0.118	9.79	0.385	9.79	0.385	ARG	ARG	97	97	0.068		0.068		0.149	ZF-S		0.74	0.131	0.53	0.68	N,G[2]	0.75	1.05	0.185	-	0.31	-	-	0.39	-	-	35	-

ing Options:

1 3 mm Cardinal Clear - 0.58" Arg 97% - 3 mm Cardinal LoE180[S3]
2 3 mm Cardinal LoE180[S2] - 0.58" Arg 97% - 3 mm Cardinal I89 [S4]
3 3 mm Cardinal Clear - 0.39" Arg 97% - 3 mm Cardinal Clear - 0.39" Arg97% - 3 mm Cardinal LoE180[S5]
4 3 mm Cardinal LoE180[S2] - 0.39" Arg 97% - 3 mm Cardinal Clear - 0.39" Arg97% - 3 mm Cardinal LoE180[S5]
5 3 mm Cardinal LoE180[S2] - 0.39" Arg 97% - 3 mm Cardinal LoE180[S4] - 0.39" Arg97% - 3 mm Cardinal I89[S6]

Spacer Options:
ZF-S Quanex, Superspacer Premium: Silicone Foam Spacer system Single Sealed

Frame Options:
(A) VY-Vinyl Frame and Sash members

Divider Options:
(1) GI1-PB 0.330" x 0.295" , Pencil Bar, Internal Divider, Painted Aluminum Alloy
(2) GI2-MB 0.232" x 0.628", Muntin Bar, Internal Divider, Painted Aluminum Alloy
(3) The divider options (1&2) stated above have a gap greater than 3 mm for the listed glass options, and meet the center-of-glass grouping rule outlined in NFRC100-2017.