

AIR LEAKAGE THROUGH A 32" x 32" x 1 1/2" WINDOW WITH AND WITHOUT WEATHER STRIPPING

Wind Velocity Miles per Hour	Leakage Through Window with Weather Strip			Leakage Through Window with Interlocking Type Weather Strip			Per Cent of Air Kept Out—Interlocking Type			Per Cent of Air Kept Out—Rib Type, Groove Clearance 1/32 Inch—Weather Strip Not Packed			Leakage and Per Cent of Air Kept Out—Standard Chamberlin Inlet—All cracks	
	1/8" Crack	3/16" Crack	1/4" Crack	1/8" Crack	3/16" Crack	1/4" Crack	1/8" Crack	3/16" Crack	1/4" Crack	1/8" Crack	3/16" Crack	1/4" Crack	Leakage	Per Cent Air Kept Out
14.38	45	7	8.5	9	10	15	9	10	15	5.5	60.00	60.00	5.5	87.78
20.35	65	12	14	15	15.5	24	8.4	8.1	8.1	77.77	66.67	63.08	9.5	85.46
24.90	78	16	18	19.5	20.5	36	79.48	76.92	75.00	73.72	71.15	61.54	12.4	84.16
28.77	90	20	22	24	25	42	77.78	75.55	73.33	72.22	68.44	60.00	14.8	83.61
32.17	100	23	25	27.5	29	48	77.00	75.00	72.50	71.00	68.00	59.00	17.3	82.70
35.24	109	26	29	31.5	32.5	54	76.15	73.39	71.10	70.18	66.97	58.71	19.6	82.02
38.07	117	29	32	35	37	59	75.41	72.65	70.09	68.38	65.81	56.12	21.9	81.28
40.69	124	31.5	35	37.5	40	64	74.60	71.79	69.76	67.74	65.32	57.66	23.7	80.93
43.17	131	34	38	40.5	44	69	74.31	71.21	69.32	66.67	64.40	57.57	25.9	80.28
45.50	138	36	41	43	47	73	73.91	70.29	68.84	65.93	63.77	57.24	27.8	80.00

All leakages on above chart in cubic feet per minute.

The measurements in this table are in all cases of the sash and the stile. 1/4 inch crack means the sash has 1/4 inch opening on both sides, top and bottom and across the meeting rail. The importance of proper installation cannot be shown to better advantage than by comparing the results in tests with greater clearances proportionate results would be obtained.

Neither the interlocking nor the rib strips were tested in the first test (the interlocking could not be packed). Packing, a regular part of Chamberlin standard installation, gives uniform results, regardless of the crack before installation.

Shrinkage after installation would affect the results in the table equally for all conditions, except that in the case of Chamberlin, service is always available.

In the above tests the sash clearance was 1/4 inch. In tests with greater clearances proportionate results would be obtained.

The results obtained on the standard Chamberlin installation were verified November 9, 1924, by Smith, Hinchman & Grylls of Detroit.

Since the above tests have been compiled and verified (November 9, 1924) an improved strip with the additional feature of a shoulder corrugation has been tested in a manner similar to tests made of standard Chamberlin equipment. This new Chamberlin strip tests an average of 3 per cent greater in efficiency.

Wind Velocity, Miles per Hour	14.38	20.35	24.90	28.77	32.17	35.24	38.07	40.69	43.17	45.50
Standard Chamberlin—Smith, Hinchman & Grylls Test	87.78	85.46	84.16	83.61	82.70	82.02	81.28	80.93	80.28	80.00
New Strip with Shoulder Corrugation	90.00	87.39	86.41	85.89	85.40	84.86	84.23	83.43	83.13	82.83

Chamberlin Metal Weather Strips have passed the test of time and can point to a record of 33 years service which indicates their efficiency in the service which is so important to the engineer, architect, contractor and his client.

CHAMBERLIN TESTS OF TIME

Name of Building	Location and Date of Chamberlin Installation	Date of Test	Size of Window (Lin. Ft. of Crack)	Wind Velocity, M. P. H. U. S. Weather Bureau	Leakage Without W. S. Based on A. S. H. & V. E. Test	Leakage on Date of Test Including Frame and Pulley Leak	Percentage of Possible Leakage Kept Out
E. A. De Wolfe Res.	St. Louis, 1893	3/7/25	18.80	25	78.88	.53	99.3
Equity Bldg.	Detroit, 1894	12/17/24	23.85	24	95.04	5.05	93.70
Majestic Bldg.	Detroit, 1896	12/11/24	34.00	8	46.25	1.79	95.91
Majestic Bldg.	Detroit, 1896	12/11/24	34.00	12	68.38	4.22	93.86
Union Trust Co. Bldg.	Cincinnati, 1901	3/20/25	25.00	15	72.30	7.00	90.32
Adolphus Busch Res.	St. Louis, 1903	3/7/25	18.25	21	66.79	2.51	96.20
Horace Mann School	New York, 1903	4/11/25	20.67	7.5	28.23	1.87	93.38
City Hall	Detroit, 1904	12/3/24	30.67	9	44.36	7.31	83.52
Michael Reese Hosp.	Chicago, 1906	2/15/25	32.00	12	66.10	10.65	83.90
Congress Hotel	Chicago, 1906	2/11/25	25.33	15	63.70	4.00	93.70
Flaming Club	Detroit, 1906	12/2/24	26.50	8	35.28	4.19	88.41
Flaming Bldg.	Des Moines, 1906	2/10/25	25.33	6	23.30	2.50	89.30
Owen Bldg.	Buffalo, 1907	4/3/25	27.00	18	83.15	4.98	94.00
Ford Bldg.	Detroit, 1907	12/6/24	28.00	18	87.00	4.42	94.92
Boston College	Detroit, 1908	11/27/24	26.50	12	53.30	5.01	90.60
Mass.	Newton, 1910	4/10/25	20.67	12.5	47.60	3.34	92.40
Campau Bldg.	Detroit, 1910	12/3/24	28.50	10	47.25	5.00	89.44
Hosp. Rockefeller Inst.	New York, 1910	4/9/25	19.50	14	46.29	3.66	92.10
Cleveland Ath. Club	Cleveland, 1911	4/7/25	31.50	20	109.70	6.30	94.16
Copley Plaza Hotel	Boston, 1912	4/10/25	20.33	12	44.40	1.18	97.34
Hubbell Bldg.	Des Moines, 1912	2/16/25	26.00	7.5	29.25	4.26	85.00
Pharmacy Bldg.	U. of Minn., 1912	2/23/25	25.33	8	38.10	3.00	92.13
Dime Sav. Bk. Bldg.	Detroit, 1913	11/28/24	26.50	22	90.15	9.93	87.60
Board of Commerce	Detroit, 1913	12/10/24	21.00	12	42.13	1.98	95.28
Kresge Bldg.	Detroit, 1914	12/9/24	27.85	28	132.76	17.53	86.80
David Whitney Bldg.	Detroit, 1915	11/25/24	28.50	19	92.65	5.00	94.60
Det. Athletic Club	Detroit, 1915	12/13/24	20.67	14.5	49.82	5.35	89.26
Peter Smith Bldg.	Detroit, 1916	12/11/24	19.85	16	53.17	3.76	92.93
Fort Shelby Hotel	Detroit, 1918	12/5/24	23.33	13	50.73	6.96	86.28
Field Museum	Chicago, 1919	2/26/25	24.17	16.5	66.20	5.65	91.48
Planters Bldg.	St. Louis, 1921	3/7/25	26.70	18	83.75	6.41	92.30
Park Ave. Bldg.	Detroit, 1922	12/10/24	26.85	21	96.46	3.23	96.80
Int'l. Shoe Co. Bldg.	St. Louis, 1923	3/6/25	29.00	15	74.26	2.55	96.60

CHAMBERLIN SERVICE
ALSO ELIMINATES ELSEWHERE LEAKAGES

In-leakage of air between the sash and frame is prevented by the use of Chamberlin Metal Weather Strips. Chamberlin Calking prevents in-leakage through cracks in and around window and door frames.

A still further source of in-leakage are the pulley holes. A new service of Chamberlin is available to prevent pulley hole leakage.

When called upon to solve the problem of heating the architect and engineer should not fail to consider this complete service in conditioning windows and doors—Chamberlin weather strips, calking, calking of frames, pulley guards and also the glazing of sash in conjunction with the weather stripping and calking of old buildings.

NEW DETAIL BOOK AVAILABLE

A complete book of full size details with specifications of every application of Chamberlin equipment is available on request. Adaptable to A. I. A. filing system. Pronounced superior to any other catalogue of its kind.

