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114 Lincoln Ave.  
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**PRODUCT LISTING**

**Reference No.** WBA-A-785-FlameGuard

**Status:** Current

**Manufacturer:**

Watson Bowman Acme  
95 Pineview Drive  
Amherst, NY 14228

Manufacturing Location  
ETS Schaefer  
8050 Highland Point  
Macedonia, OH 44056

**Product(s):**

Flame Guard II Seismic Expansion Control Joint Systems

**Report:**

Guardian Engineering Evaluation Report ER 78511; Evaluation Report Date 2/28/2011 and 3/7/2011  
Standards Evaluated to: UL-2079, ASTM E-1966, CAN/ULC S115

Watson Bowman is a manufacturer of "Flame Guard II" Seismic Expansion Control Joint Systems that are rated between 2 and 4 hours as Fire Barrier Assemblies. The listed systems also include the manufacture and supply of Watson Bowman Acme's optional 18 gauge perforated metal retainer profiles



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**PRODUCT LISTING**

Flame Guard II Numbering System Example:

HFG-602-AA

- ❖ HFG =Horizontal or Vertical Flame Guard (HFG or VFG)
- ❖ 6 =Nominal Opening Range in inches (02 - 26)
- ❖ 02 =Hour Rating (02, 03 or 04)
- ❖ AA =Retainer Combination (AA, AB, BB, KK, EE, HTC)

The listed 2-hour Flame Guard II fire barrier assemblies are:

HFG-1402AA, HFG-1602AA, HFG-1802AA  
HFG-1402AB, HFG-1602AB, HFG-1802AB  
HFG-1402BB, HFG-1602BB, HFG-1802BB  
HFG-2002AA, HFG-2202AA, HFG-2402AA, HFG-2602AA  
HFG-2002AB, HFG-2202AB, HFG-2402AB, HFG-2602AB  
HFG-2002BB, HFG-2202BB, HFG-2402BB, HFG-2602BB  
VFG-2002KK, VFG-2202KK, VFG-2402KK, VFG-2602KK

The listed 3-hour Flame Guard II fire barrier assemblies are:

VFG-203EE, VFG-303EE, VFG-403EE, VFG-503EE, VFG-603EE

The listed 4-hour Flame Guard II fire barrier assemblies are:

HFG-204HTC, HFG-304HTC, HFG-404HTC, HFG-504HTC, HFG-604HTC



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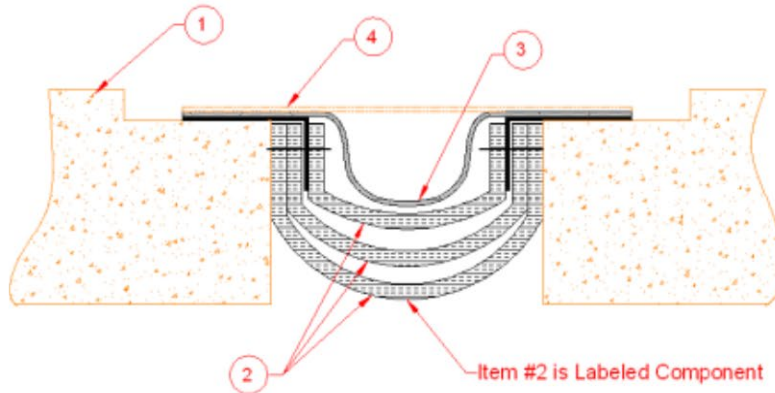
**PRODUCT LISTING**

**HFG-1402AA, HFG-1602AA, HFG-1802AA  
Flame Guard II Fire Barrier Assemblies**

Standards: UL 2079, ASTM E-1966, CAN/ULC S115  
Assembly Rating: 2 Hours (Also Approved for Ratings less than 2 Hours)

Nominal Joint Width:  
14 Inches  
16 Inches  
18 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement



- 1. Floor Construction** – Reinforced lightweight or normal weight (100-150 pcf) structural concrete having a minimum rating of 2 hours.
- 2. Fire Barrier Assembly** – Nominal width of joint applies to system shown in table below. Flexible multilayer mat material with 18 ga. perforated steel mounting angles on longitudinal edges. Angles are to be attached to floor with min ¼ inch diameter by 2 ¼ inch long steel concrete sleeve anchors spaced max. 18 inch on center. The fire barrier assembly shall be installed in accordance with the installation instructions accompanying the units.

	<u>Model</u>	<u>Nominal Opening (Width)</u>
Watson Bowman Acme Corp –	HFG-1402AA	14”
	HFG-1602AA	16”
	HFG-1802AA	18”

- 3. Elastomeric Moisture Barrier (Optional)** – Single layer installed above Fire Barrier and below Expansion Joint Cover.
- 4. Expansion Joint Cover** – Minimum .030-inch thick cover formed of aluminum, bronze, stainless steel, galvanized steel, or elastomeric thermoplastic or thermoset material. Floor covers anchored to floor slabs on one side of joint opening, continuous over entire length of joint, in accordance with manufacturer’s instructions. Joint covers attached to floor with min. ¼ inch diameter by 1 ¼ inch long steel concrete sleeve anchors spaced max. 24 inches on center. Manufacturer’s adhesives are approved if for installation of specific elastomeric seal profiles. Manufacturer’s engineered joint systems are also approved provided they meet the minimum requirements as stated above.



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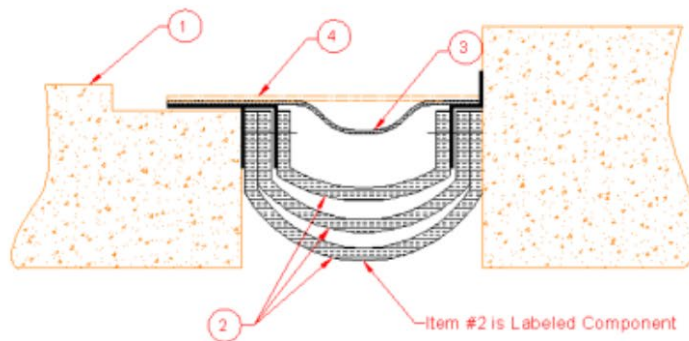
**PRODUCT LISTING**

**HFG-1402AB, HFG-1602AB, HFG-1802AB  
Flame Guard II Fire Barrier Assemblies**

Standards: UL 2079, ASTM E-1966, CAN/ULC S115  
Assembly Rating: 2 Hours (Also Approved for Ratings less than 2 Hours)

Nominal Joint Width:  
14 Inches  
16 Inches  
18 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement



- Floor Construction** – Reinforced lightweight or normal weight (100-150 pcf) structural concrete having a minimum rating of 2 hours.
- Fire Barrier Assembly** – Nominal width of joint applies to system shown in table below. Flexible multilayer mat material with 18 ga. perforated steel mounting angles on longitudinal edges. Angles are to be attached to floor with min ¼ inch diameter by 2 ¼ inch long steel concrete sleeve anchors spaced max. 18 inch on center. The fire barrier assembly shall be installed in accordance with the installation instructions accompanying the units.

	<u>Model</u>	<u>Nominal Opening (Width)</u>
Watson Bowman Acme Corp -	HFG-1402AB	14"
	HFG-1602AB	16"
	HFG-1802AB	18"

- Elastomeric Moisture Barrier (Optional)** – Single layer installed above Fire Barrier and below Expansion Joint Cover.
- Expansion Joint Cover** – Minimum .030-inch thick cover formed of aluminum, bronze, stainless steel, galvanized steel, or elastomeric thermoplastic or thermoset material. Floor covers anchored to floor slabs on one side of joint opening, continuous over entire length of joint, in accordance with manufacturer’s instructions. Joint covers attached to floor with min. ¼ inch diameter by 1 ¼ inch long steel concrete sleeve anchors spaced max. 24 inches on center. Manufacturer’s adhesives are approved if for installation of specific elastomeric seal profiles. Manufacturer’s engineered joint systems are also approved provided they meet the minimum requirements as stated above.



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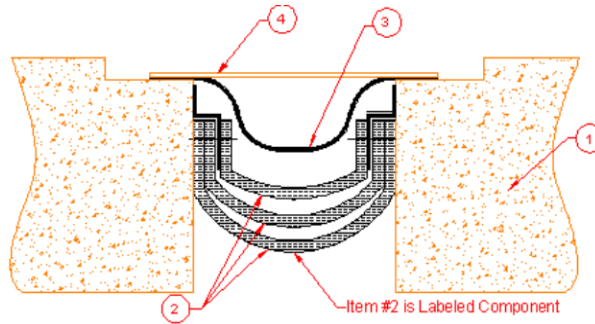
**PRODUCT LISTING**

**HFG-1402BB, HFG-1602BB, HFG-1802BB  
Flame Guard II Fire Barrier Assemblies**

Standards: UL 2079, ASTM E-1966, CAN/ULC S115  
Assembly Rating: 2 Hours (Also Approved for Ratings less than 2 Hours)

Nominal Joint Width:  
14 Inches  
16 Inches  
18 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement



- Floor Construction** - Reinforced lightweight or normal weight (100-150 pcf) structural concrete having a minimum rating of 2 hours.
- Fire Barrier Assembly** - Nominal width of joint applies to system shown in table below. Flexible multilayer mat material with 18 ga. perforated steel mounting angles on longitudinal edges. Angles are to be attached to floor with min ¼ inch diameter by 2 ¼ inch long steel concrete sleeve anchors spaced max. 18 inch on center. The fire barrier assembly shall be installed in accordance with the installation instructions accompanying the units.

	<u>Model</u>	<u>Nominal Opening (Width)</u>
Watson Bowman Acme Corp -	HFG-1402BB	14"
	HFG-1602BB	16"
	HFG-1802BB	18"

- Elastomeric Moisture Barrier (Optional)** - Single layer installed above Fire Barrier and below Expansion Joint Cover.
- Expansion Joint Cover** - Minimum .030-inch thick cover formed of aluminum, bronze, stainless steel, galvanized steel, or elastomeric thermoplastic or thermoset material. Floor covers anchored to floor slabs on one side of joint opening, continuous over entire length of joint, in accordance with manufacturer's instructions. Joint covers attached to floor with min. ¼ inch diameter by 1 ¼ inch long steel concrete sleeve anchors spaced max. 24 inches on center. Manufacturer's adhesives are approved if for installation of specific elastomeric seal profiles. Manufacturer's engineered joint systems are also approved provided they meet the minimum requirements as stated above.



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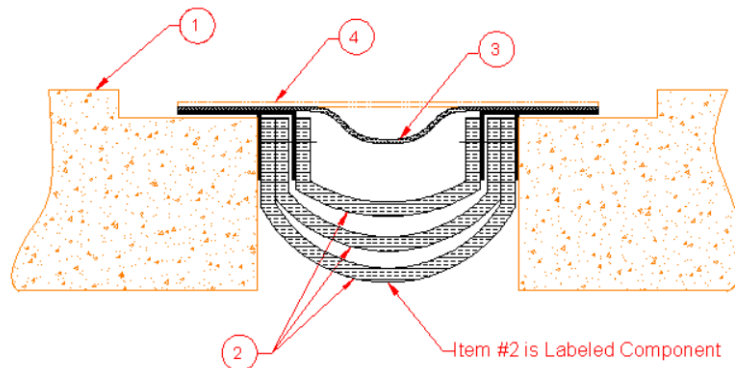
**PRODUCT LISTING**

**HFG-2002AA, HFG-2202AA, HFG-2402AA, HFG-2602AA  
Flame Guard II Fire Barrier Assemblies**

Standards: UL 2079, ASTM E-1966, CAN/ULC S115  
Assembly Rating: 2 Hours (Also Approved for Ratings less than 2 Hours)

Nominal Joint Width:  
20 Inches  
22 Inches  
24 Inches  
26 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement



- 1. Floor Construction** – Reinforced lightweight or normal weight (100-150 pcf) structural concrete having a minimum rating of 2 hours.
- 2. Fire Barrier Assembly** – Nominal width of joint applies to system shown in table below. Flexible multilayer mat material with 18 ga. perforated steel mounting angles on longitudinal edges. Angles are to be attached to floor with min ¼ inch diameter by 2 ¼ inch long steel concrete sleeve anchors spaced max. 18 inch on center. The fire barrier assembly shall be installed in accordance with the installation instructions accompanying the units.

	<u>Model</u>	<u>Nominal Opening (Width)</u>
Watson Bowman Acme Corp -	HFG-2002AA	20"
	HFG-2202AA	22"
	HFG-2402AA	24"
	HFG-2602AA	26"

- 3. Elastomeric Moisture Barrier (Optional)** – Single layer installed above Fire Barrier and below Expansion Joint Cover.
- 4. Expansion Joint Cover** – Minimum .030-inch thick cover formed of aluminum, bronze, stainless steel, galvanized steel, or elastomeric thermoplastic or thermoset material. Floor covers anchored to floor slabs on one side of joint opening, continuous over entire length of joint, in accordance with manufacturer’s instructions. Joint covers attached to floor with min. ¼ inch diameter by 1 ¼ inch long steel concrete sleeve anchors spaced max. 24 inches on center. Manufacturer’s adhesives are approved if for installation of specific elastomeric seal profiles. Manufacturer’s engineered joint systems are also approved provided they meet the minimum requirements as stated above.



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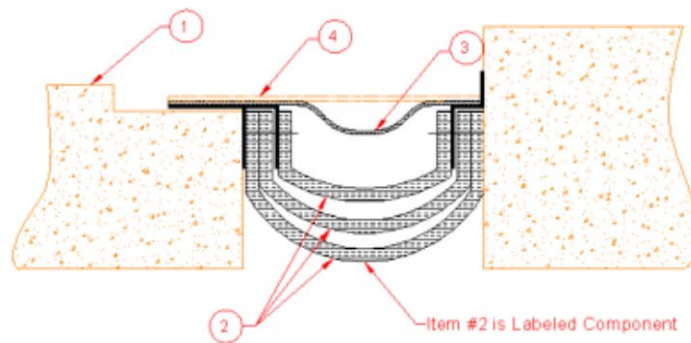
**PRODUCT LISTING**

**HFG-2002AB, HFG-2202AB, HFG-2402AB, HFG-2602AB  
Flame Guard II Fire Barrier Assemblies**

Standards: UL 2079, ASTM E-1966, CAN/ULC S115  
Assembly Rating: 2 Hours (Also Approved for Ratings less than 2 Hours)

Nominal Joint Width:  
20 Inches  
22 Inches  
24 Inches  
26 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement



- Floor Construction** – Reinforced lightweight or normal weight (100-150 pcf) structural concrete having a minimum rating of 2 hours.
- Fire Barrier Assembly** – Nominal width of joint applies to system shown in table below. Flexible multilayer mat material with 18 ga. perforated steel mounting angles on longitudinal edges. Angles are to be attached to floor with min ¼ inch diameter by 2 ¼ inch long steel concrete sleeve anchors spaced max. 18 inch on center. The fire barrier assembly shall be installed in accordance with the installation instructions accompanying the units.

	<u>Model</u>	<u>Nominal Opening (Width)</u>
Watson Bowman Acme Corp -	HFG-2002AB	20"
	HFG-2202AB	22"
	HFG-2402AB	24"
	HFG-2602AB	26"

- Elastomeric Moisture Barrier (Optional)** – Single layer installed above Fire Barrier and below Expansion Joint Cover.
- Expansion Joint Cover** – Minimum .030-inch thick cover formed of aluminum, bronze, stainless steel, galvanized steel, or elastomeric thermoplastic or thermoset material. Floor covers anchored to floor slabs on one side of joint opening, continuous over entire length of joint, in accordance with manufacturer’s instructions. Joint covers attached to floor with min. ¼ inch diameter by 1 ¼ inch long steel concrete sleeve anchors spaced max. 24 inches on center. Manufacturer’s adhesives are approved if for installation of specific elastomeric seal profiles. Manufacturer’s engineered joint systems are also approved provided they meet the minimum requirements as stated above.



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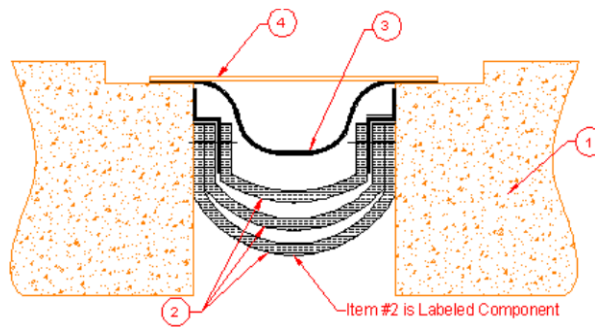
**PRODUCT LISTING**

**HFG-2002BB, HFG-2202BB, HFG-2402BB, HFG-2602BB**  
**Flame Guard II Fire Barrier Assemblies**

Standards: UL 2079, ASTM E-1966, CAN/ULC S115  
Assembly Rating: 2 Hours (Also Approved for Ratings less than 2 Hours)

Nominal Joint Width:  
20 Inches  
22 Inches  
24 Inches  
26 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement



- Floor Construction** – Reinforced lightweight or normal weight (100-150 pcf) structural concrete having a minimum rating of 2 hours.
- Fire Barrier Assembly** – Nominal width of joint applies to system shown in table below. Flexible multilayer mat material with 18 ga. perforated steel mounting angles on longitudinal edges. Angles are to be attached to floor with min ¼ inch diameter by 2 ¼ inch long steel concrete sleeve anchors spaced max. 18 inch on center. The fire barrier assembly shall be installed in accordance with the installation instructions accompanying the units.

	<u>Model</u>	<u>Nominal Opening (Width)</u>
Watson Bowman Acme Corp -	HFG-2002BB	20"
	HFG-2202BB	22"
	HFG-2402BB	24"
	HFG-2602BB	26"

- Elastomeric Moisture Barrier (Optional)** – Single layer installed above Fire Barrier and below Expansion Joint Cover.
- Expansion Joint Cover** – Minimum .030-inch thick cover formed of aluminum, bronze, stainless steel, galvanized steel, or elastomeric thermoplastic or thermoset material. Floor covers anchored to floor slabs on one side of joint opening, continuous over entire length of joint, in accordance with manufacturer’s instructions. Joint covers attached to floor with min. ¼ inch diameter by 1 ¼ inch long steel concrete sleeve anchors spaced max. 24 inches on center. Manufacturer’s adhesives are approved if for installation of specific elastomeric seal profiles. Manufacturer’s engineered joint systems are also approved provided they meet the minimum requirements as stated above.





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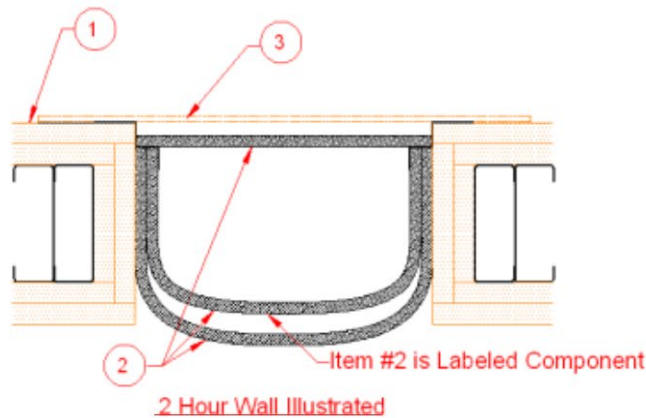
**PRODUCT LISTING**

**VFG-2002KK, VFG-2202KK, VFG-2402KK, VFG-2602KK  
Flame Guard II Fire Barrier Assemblies**

Standards: UL 2079, ASTM E-1966, CAN/ULC S115  
Assembly Rating: 2 Hours (Also Approved for Ratings less than 2 Hours)

Nominal Joint Width:  
20 Inches  
22 Inches  
24 Inches  
26 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement



1. **Wall Construction** - The 2-hour fire-rated framed gypsum board wall assembly shall be constructed with steel studs and a total minimum wallboard thickness of 1-1/4" in accordance with a recognized third party listing. (Note: This listing is applicable to masonry walls.)
2. **Fire Barrier Assembly** - Nominal width of joint applies to system shown in table below. Flexible multilayer mat material with 18 ga. perforated steel mounting angles on longitudinal edges. Angles are to be attached to wall and the assembly shall be installed in accordance with the installation instructions accompanying the units.

	<u>Model</u>	<u>Nominal Opening (Width)</u>
Watson Bowman Acme Corp -	VFG-2002KK	20"
	VFG-2202KK	22"
	VFG-2402KK	24"
	VFG-2602KK	26"

3. **Expansion Joint Cover** - Minimum .030-inch thick cover formed of aluminum, bronze, stainless steel, galvanized steel, or elastomeric thermoplastic or thermoset material. Wall covers anchored to wall construction on one side of joint opening, continuous over entire length of joint, in accordance with manufacturer's instructions. Joint covers attached to wall with min. 1/4 inch diameter screws or anchors spaced max. 24 inches on center. Manufacturer's adhesives are approved for installation of specific elastomeric seal profiles or metal retainers. Manufacturer's engineered joint systems are also approved provided they meet the minimum requirements as stated above.



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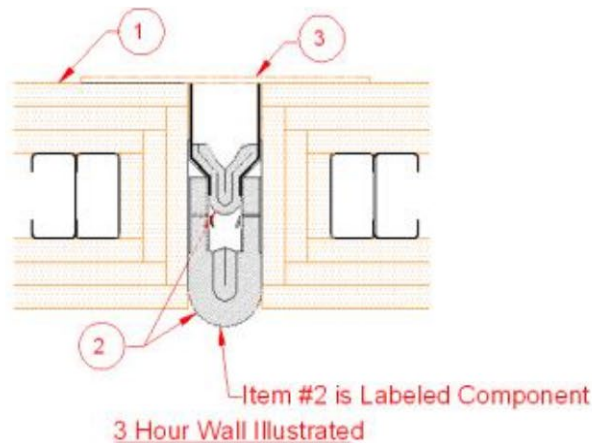
**PRODUCT LISTING**

**VFG-203EE, VFG-303EE, VFG-403EE, VFG-503EE, VFG-603EE  
Flame Guard II Fire Barrier Assemblies**

Standards: UL 2079, ASTM E-1966, CAN/ULC S115  
Assembly Rating: 3 Hours (Also Approved for Ratings less than 3 Hours)

Nominal Joint Width:  
2 Inches  
3 Inches  
4 Inches  
5 Inches  
6 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement



- Wall Construction** – The 3-hour fire-rated framed gypsum board wall assembly shall be constructed with steel studs and a total minimum wallboard thickness of 1-7/8” in accordance with a recognized third party listing. (Note: This listing is applicable to masonry walls.)
- Fire Barrier Assembly** – Nominal width of joint applies to system shown in table below. Flexible multilayer mat material with 18 ga. perforated steel mounting angles on longitudinal edges. Angles are to be attached to wall and the assembly shall be installed in accordance with the installation instructions accompanying the units.

	<u>Model</u>	<u>Nominal Opening (Width)</u>
Watson Bowman Acme Corp -	VFG-203EE	2”
	VFG-303EE	3”
	VFG-403EE	4”
	VFG-503EE	5”
	VFG-603EE	6”

- Expansion Joint Cover** – Minimum .030-inch thick cover formed of aluminum, bronze, stainless steel, galvanized steel, or elastomeric thermoplastic or thermoset material. Wall covers anchored to wall construction on one side of joint opening, continuous over entire length of joint, in accordance with manufacturer’s instructions. Joint covers attached to wall with min. ¼ inch diameter screws or anchors spaced max. 24 inches on center. Manufacturer’s adhesives are approved for installation of specific elastomeric seal profiles or metal retainers. Manufacturer’s engineered joint systems are also approved provided they meet the minimum requirements as stated above.



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**PRODUCT LISTING**

**HFG-204HTC, HFG-304HTC, HFG-404HTC, HFG-504HTC, HFG-604HTC  
Flame Guard II Fire Barrier Assemblies**

Standards: UL 2079, ASTM E-1966, CAN/ULC S115  
Assembly Rating: 4 Hours (Also Approved for Ratings less than 4 Hours)

Nominal Joint Width:

- 2 Inches
- 3 Inches
- 4 Inches
- 5 Inches
- 6 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement

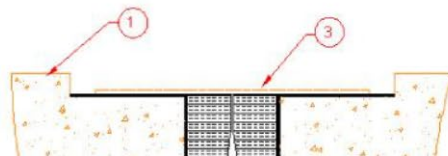
**Fire Rated Expansion Joint System**

Listing Nos. HFG-204HTC  
HFG-304HTC  
HFG-404HTC  
HFG-504HTC  
HFG-604HTC

Assembly Rating: 4 Hours (Also Approved for Ratings Less Than 4 Hours)

Nominal Joint Width: 2 Inches  
3 Inches  
4 Inches  
5 Inches  
6 Inches

Class II and III Movement Capabilities: plus or minus 50% Movement



1. **Floor Construction** - Reinforced lightweight or normal weight (100-150 pcf) structural concrete having a minimum rating equal to required fire barrier.
2. **Fire Barrier Assembly** - Nominal width of joint applies to system shown in table below. Fire barrier consists of a flexible multilayer mat with a high temperature cloth carrier. The fire barrier assembly shall be installed in accordance with the installation instructions accompanying the units.

	<u>Model</u>	<u>Nominal Opening (Width)</u>
Watson Bowman Acme Corp -	HFG-204HTC	2"
	HFG-304HTC	3"
	HFG-404HTC	4"
	HFG-504HTC	5"
	HFG-604HTC	6"

3. **Expansion Joint Cover** - Minimum .030-inch thick cover formed of aluminum, bronze, stainless steel, galvanized steel, or elastomeric thermoplastic or thermoset material. Floor covers anchored to floor slabs on one side of joint opening, continuous over entire length of joint, in accordance with manufacturer's instructions. Joint covers attached to floor with min. ¼ inch diameter by 1 ¼ inch long steel concrete sleeve anchors spaced max. 24 inches on center. Manufacturer's adhesives are approved if for installation of specific elastomeric seal profiles. Manufacturer's engineered joint systems are also approved provided they meet the minimum requirements as stated above.