

## Capacities and Operating Data

### Performance Data

| Lineal heat release at high fire                      | Btu/hr/ft               | 1,000,000                                   | 1,250,000 | 1,500,000 | 1,750,000 | 2,000,000 | 2,250,000 | 2,500,000 |
|---|-------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|
| Minimum lineal heat release                           | Btu/hr/ft               | 100,000                                     | 100,000   | 100,000   | 100,000   | 100,000   | 100,000   | 100,000   |
| Turndown ratio  |                         | 10:1  | 12.5:1    | 15:1      | 17.5:1    | 20:1      | 22.5:1    | 25:1      |
| Flame length  | feet [1]                | 2.7   | 3.2       | 3.6       | 4.0       | 4.3       | 4.7       | 5.0       |
| Pilot pressure/heat release                           | "w.c.* [2] / Btu/hr     | 5-8" w.c. / 40,000 Btu/hr                   |           |           |           |           |           |           |
| Combustion air flow                                   | SCFM                    | 250   | 313       | 375       | 438       | 500       | 563       | 625       |
| Air pressure at burner inlet                          | ("w.c.) [3]             | 2.3   | 3.6       | 5.1       | 7.0       | 9.1       | 11.5      | 14.2      |
| Air pressure at burner test connection                | ("w.c.)*                | 2.1   | 3.3       | 4.7       | 6.4       | 8.3       | 10.5      | 13.0      |
| Fuel pressure at burner inlet (natural gas)           | ("w.c.) [3]             | 8.5   | 13.3      | 19.2      | 26.1      | 34.1      | 43.2      | 53.3      |
| Fuel pressure at burner test connection (natural gas) | ("w.c.)*                | 7.4   | 11.5      | 16.6      | 22.5      | 29.4      | 37.3      | 46.0      |
| NOx emissions [4]                                     | ppm @ 3% O <sub>2</sub> | <25 ppm corrected to 3% O <sub>2</sub> dry  |           |           |           |           |           |           |
| CO emissions [4]                                      | ppm @ 3% O <sub>2</sub> | <250 ppm corrected to 3% O <sub>2</sub> dry |           |           |           |           |           |           |

[1] Flame length is based on 50% excess combustion air. Flame length will vary depending on various application parameters (e.g. passing air stream velocity, oxygen content, and combustion air preheat temperature)

[2] At inlet of adjustable pilot orifice.

[3] Air and gas DP is differential over system static pressure.

[4] Emissions stated are not guaranteed. Actual emission performance may vary. Contact Maxon for specific application details.

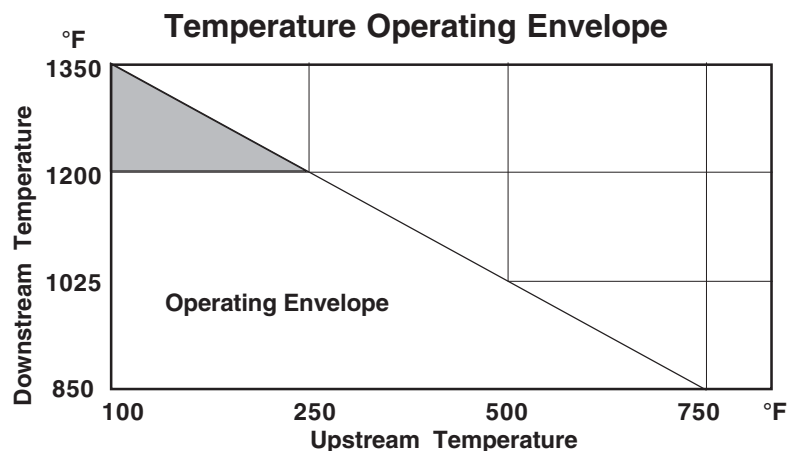
\*Differential pressures measured at burner test connections. Air and gas DP is differential over system static pressure.

### Operating Environment

| Variable                                  |                  | Minimum         | Maximum |
|---|------------------|-----------------|---------|
| Inlet Combustion Air Temp.                | °F               | Ambient         | 200     |
| Inlet Combustion Air O <sub>2</sub> Level | % O <sub>2</sub> | 20.8            | 20.8    |
| Air Stream Cross Velocity                 | ft/min           | 0               | 3000    |
| Air Stream Axial Velocity                 | ft/min           | 0               | 4000    |
| Upstream Air Temperature                  | °F               | See Chart Below |         |
| Downstream Air Temperature                | °F               |                 |         |
| Process Air Stream O <sub>2</sub> Level   | % O <sub>2</sub> | 4               | 21      |

The burner can operate in a variety of environments. Typical operating environments, limits on their variables, and notes concerning operation of the burner are presented at left.

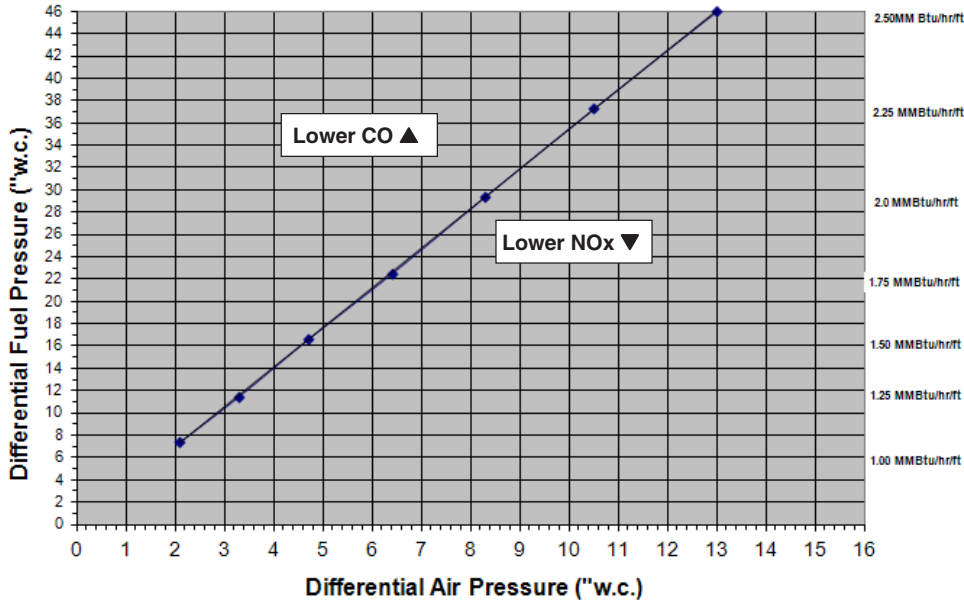
It is important to note that inlet combustion variables such as O<sub>2</sub> level and combustion air temperature will change air pressure requirements and/or maximum firing capacity.



Consult Maxon for operation in shaded region. Ability to operate in shaded region is dependent upon operating conditions.

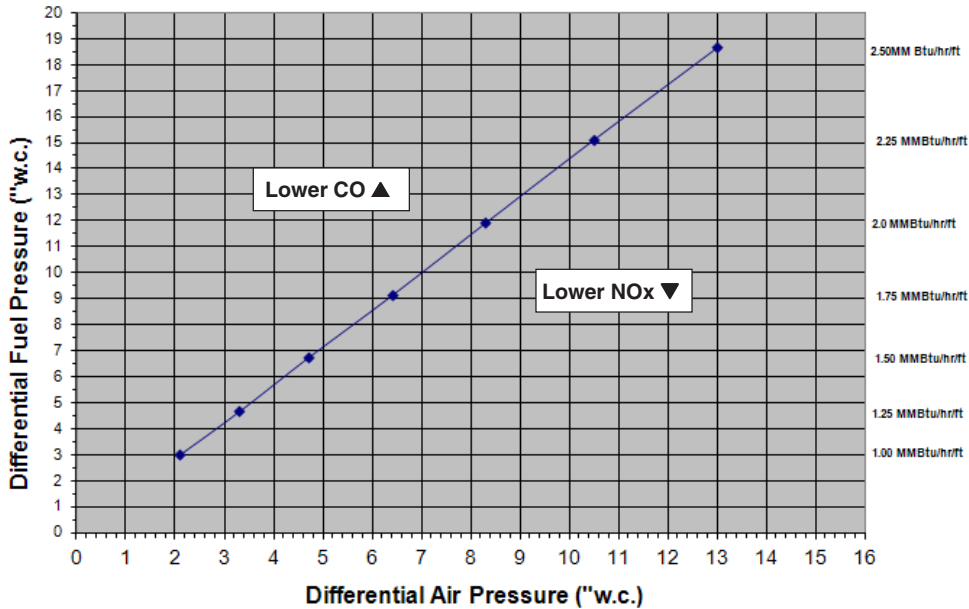
# Capacities and Operating Data

## Natural Gas Fuel/Air Settings



NOTE: Pressure measured at burner test connections; refer to inlet pressure requirements for fan sizing

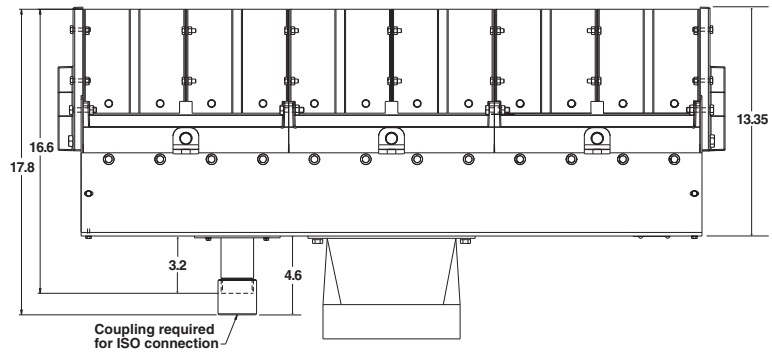
## Propane Fuel/Air Settings



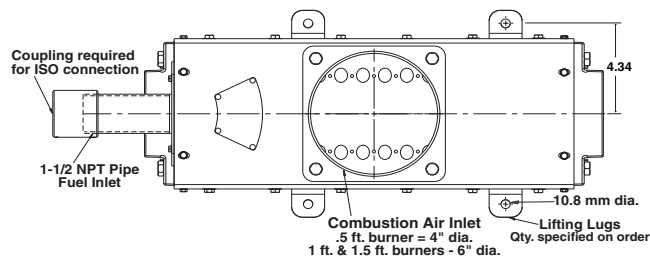
NOTE: Pressure measured at burner test connections; refer to inlet pressure requirements for fan sizing

# Dimensions *(in inches)*

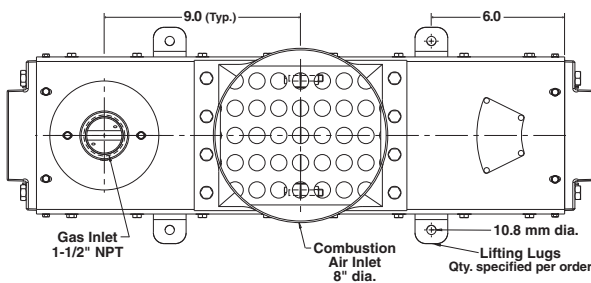
**Side View**  
*(back inlet section shown)*



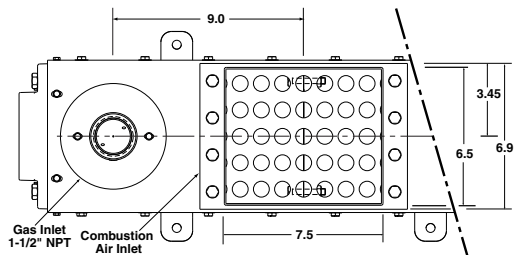
**Bottom View**  
*end inlet section*



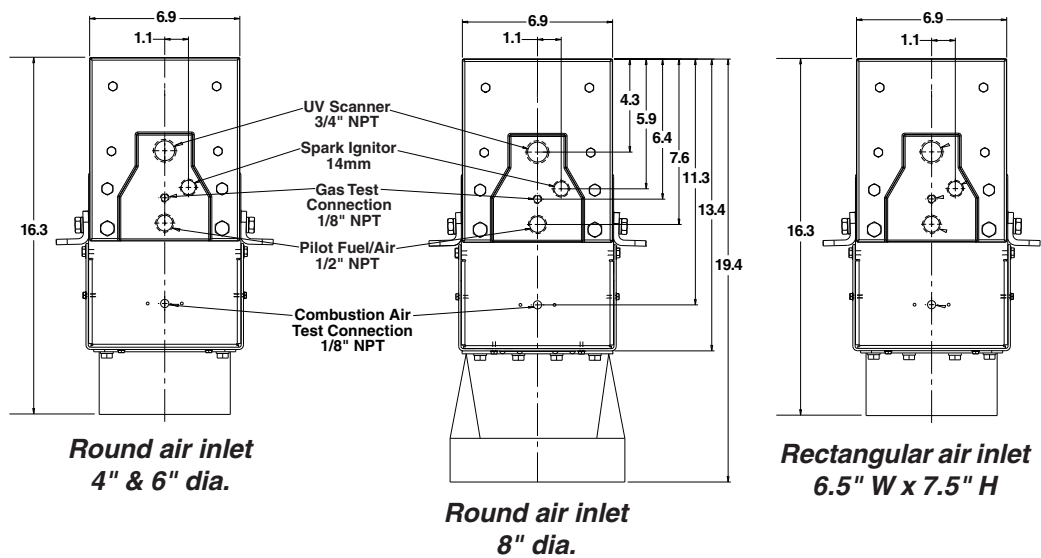
**Bottom view**  
*back inlet section w/round air inlet*



**Bottom view**  
*back inlet section w/retangular air inlet*

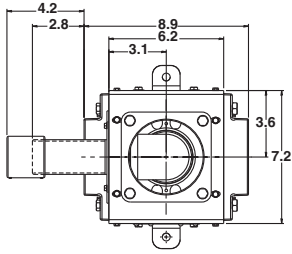


**Pilot End View**

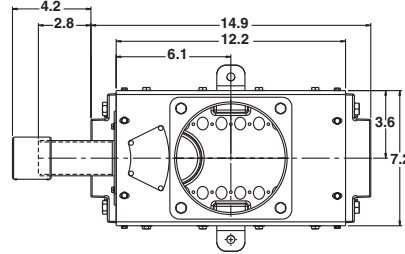


### Dimensions *(in inches)* Straight Burner Sections

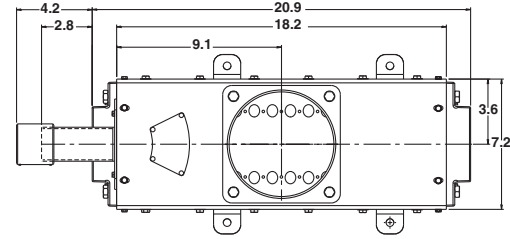
.5 ft. burner - end inlet



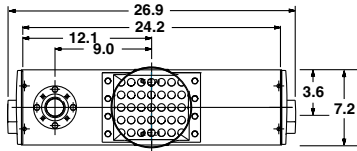
1 ft. burner - end inlet



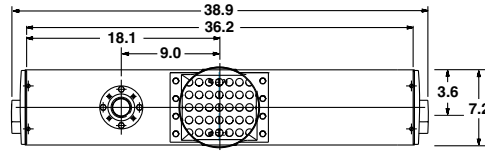
1.5 ft. burner - end inlet



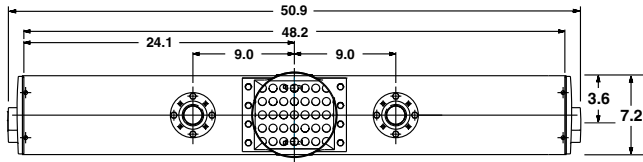
2 ft. burner - back inlet



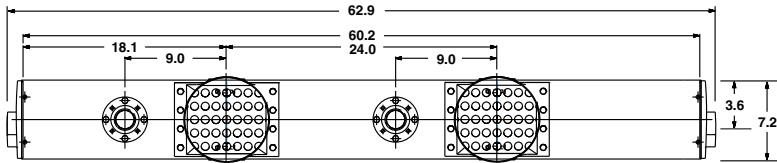
3 ft. burner - back inlet



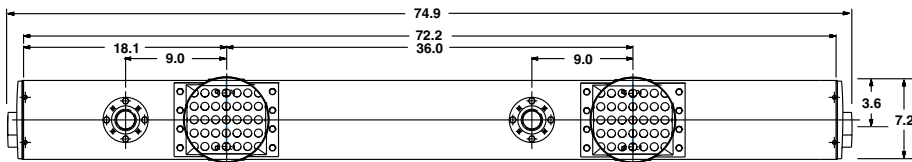
4 ft. burner - back inlet



5 ft. burner - back inlet

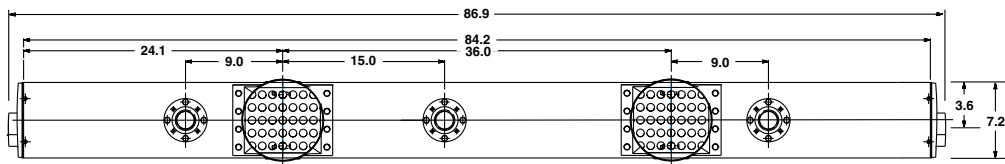


6 ft. burner - back inlet

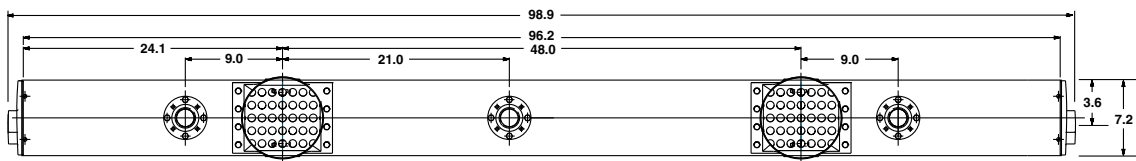


### Dimensions *(in inches)* Straight Burner Sections

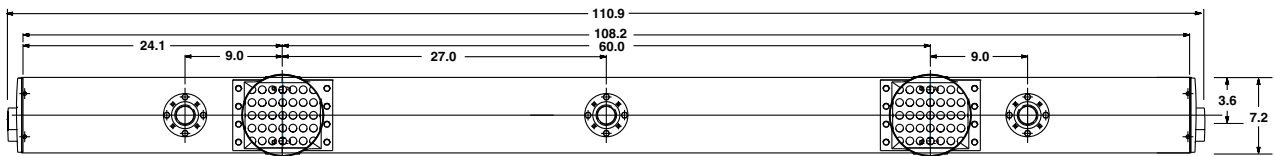
7 ft. burner - back inlet



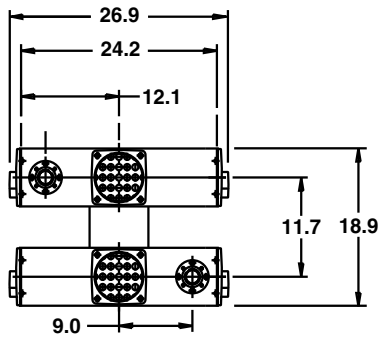
8 ft. burner - back inlet



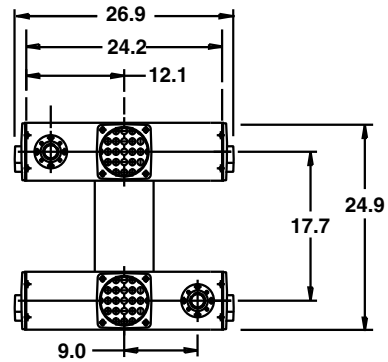
9 ft. burner - back inlet



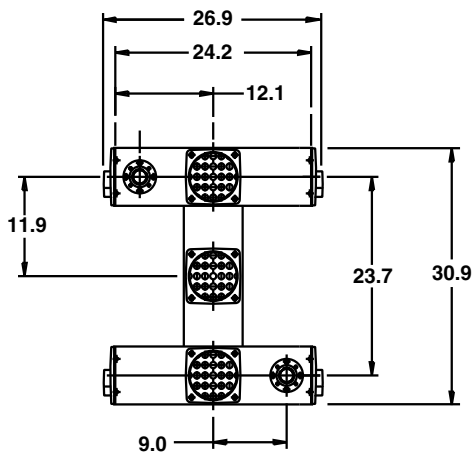
**Dimensions** (in inches)  
2 ft. back inlet grid sections



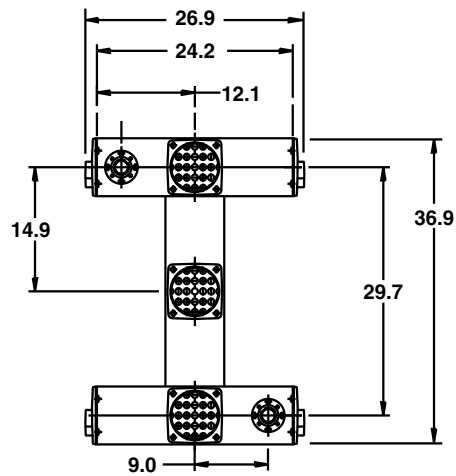
2 BI XF GRD with 12" span



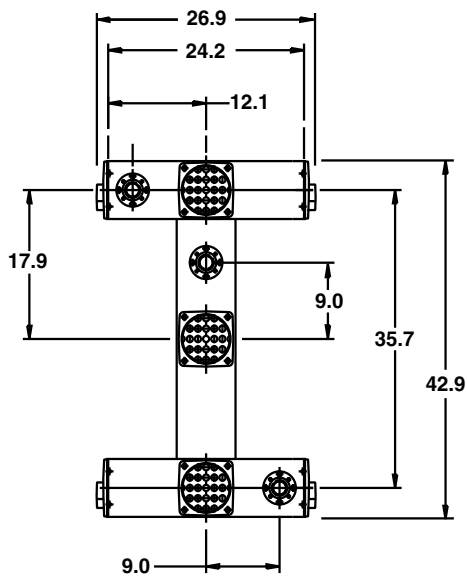
2 BI XF GRD with 18" span



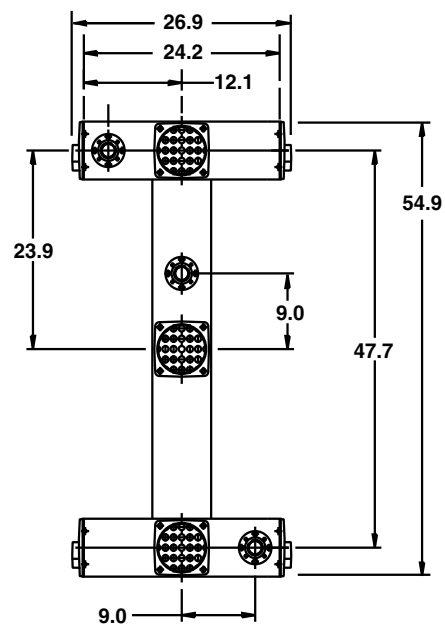
2 BI XF GRD with 24" span



2 BI XF GRD with 30" span

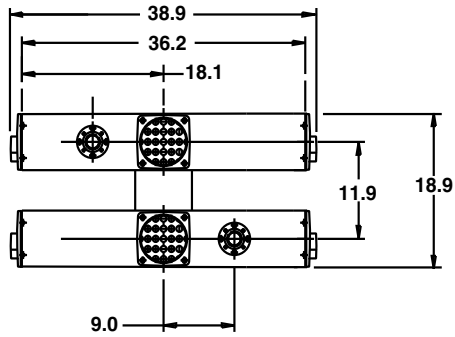


2 BI XF GRD with 36" span

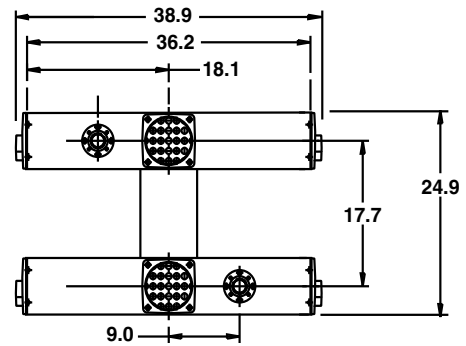


2 BI XF GRD with 48" span

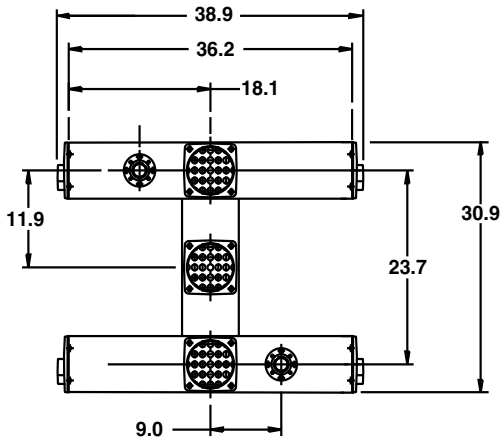
**Dimensions** *(in inches)*  
**3 ft. back inlet grid sections**



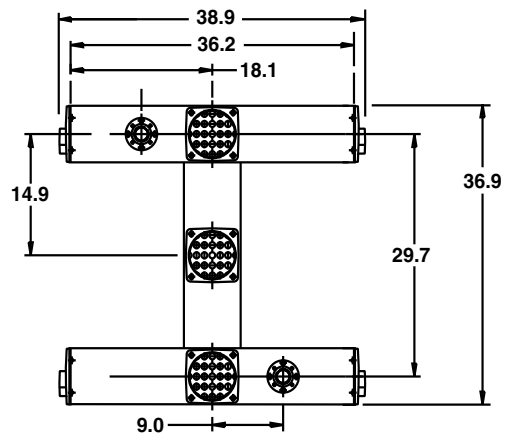
**3 BI XF GRD with 12" span**



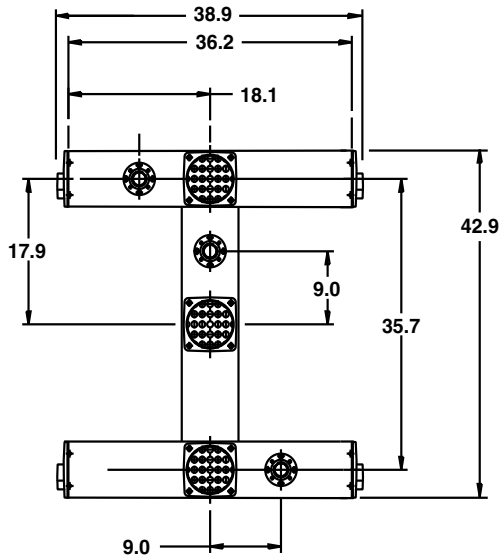
**3 BI XF GRD with 18" span**



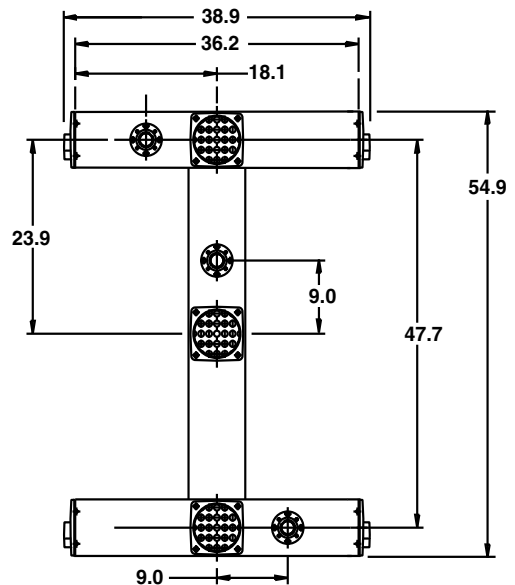
**3 BI XF GRD with 24" span**



**3 BI XF GRD with 30" span**

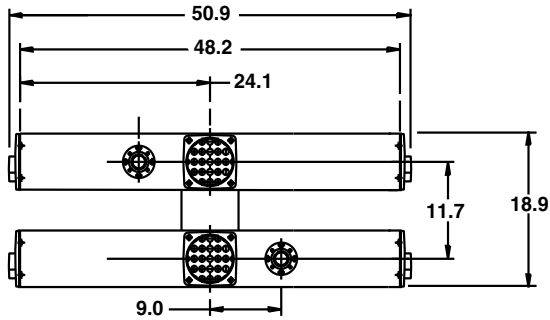


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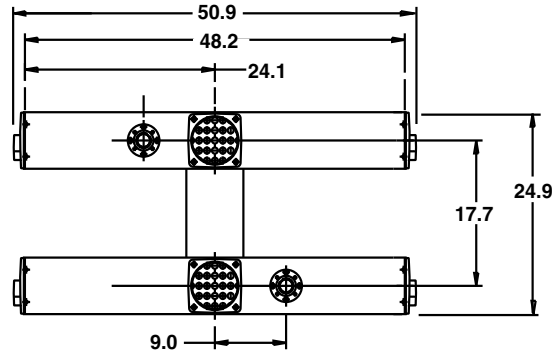


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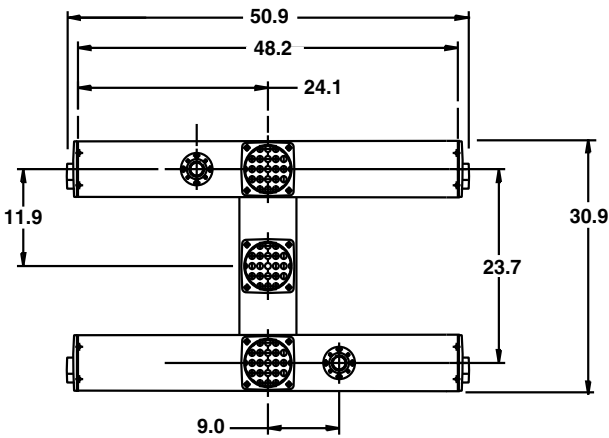
**Dimensions** *(in inches)*  
**4 ft. back inlet grid sections**



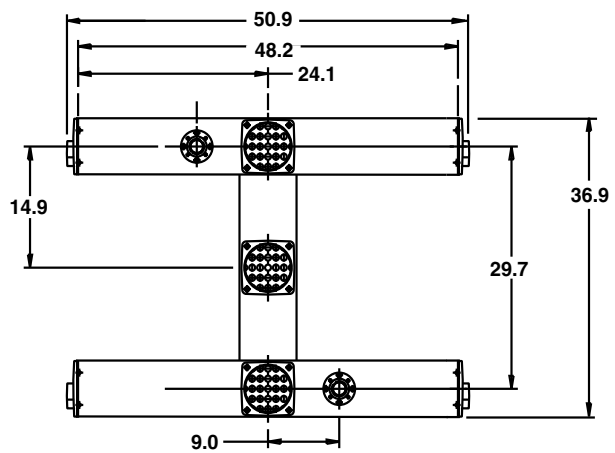
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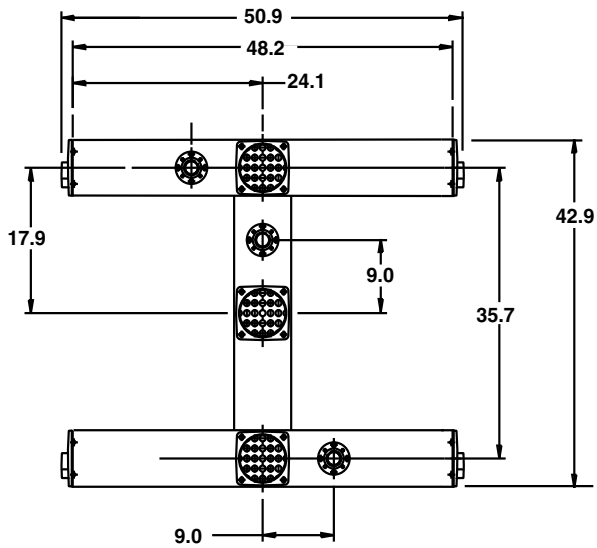
**4 BI XF GRD with 18" span**



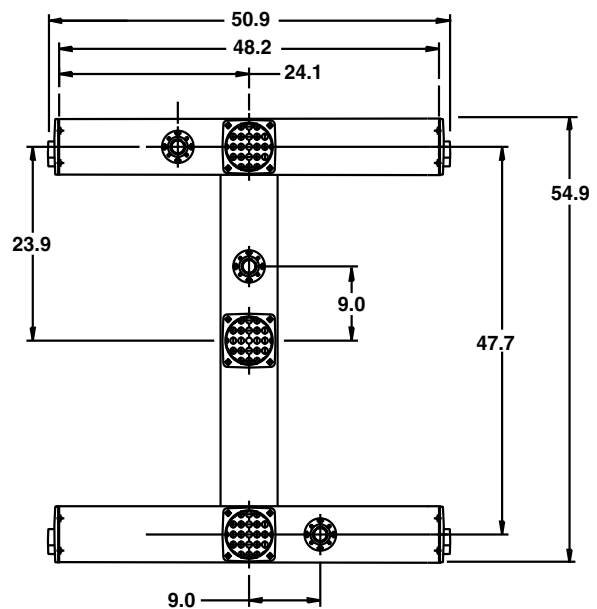
**4 BI XF GRD with 24" span**



**4 BI XF GRD with 30" span**



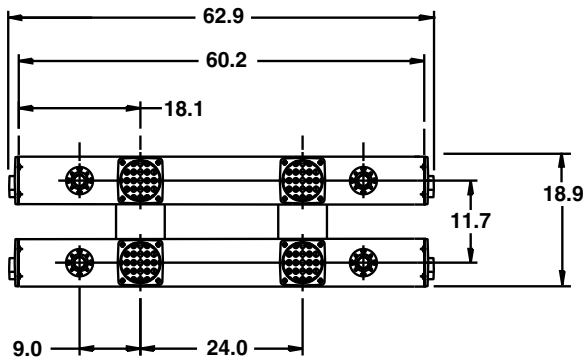
**4 BI XF GRD with 36" span**



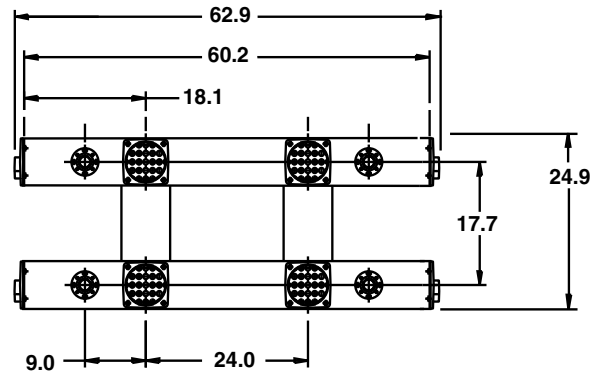
**4 BI XF GRD with 48" span**



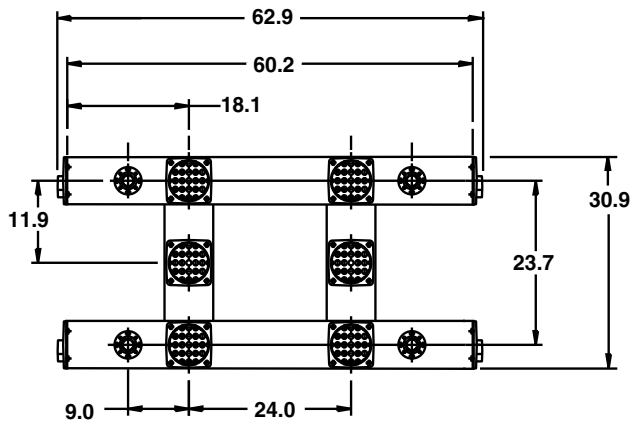
**Dimensions** *(in inches)*  
**5 ft. back inlet grid sections**



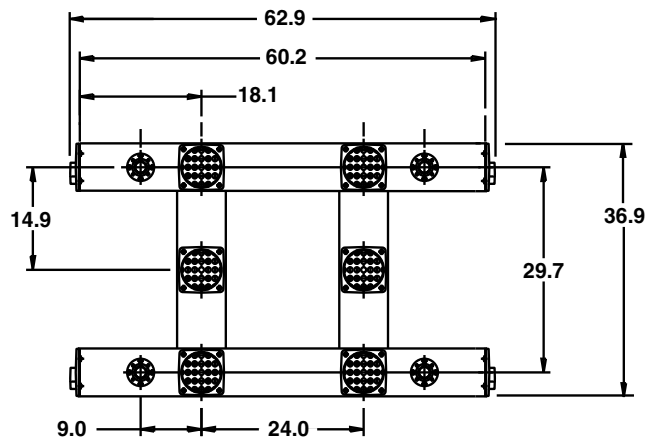
**5 BI XF GRD with 12" span**



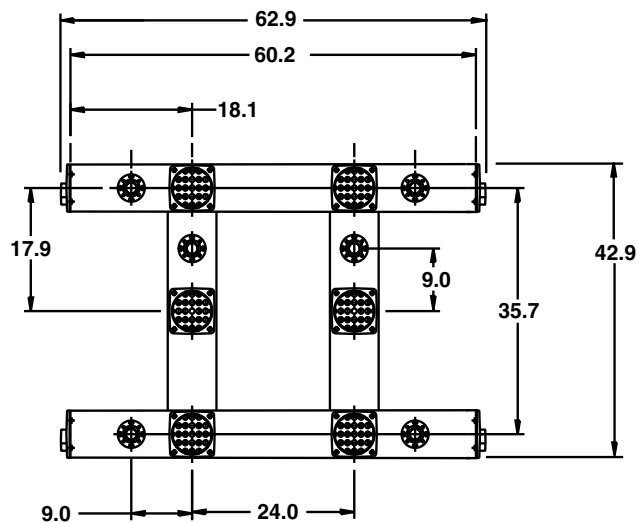
**5 BI XF GRD with 18" span**



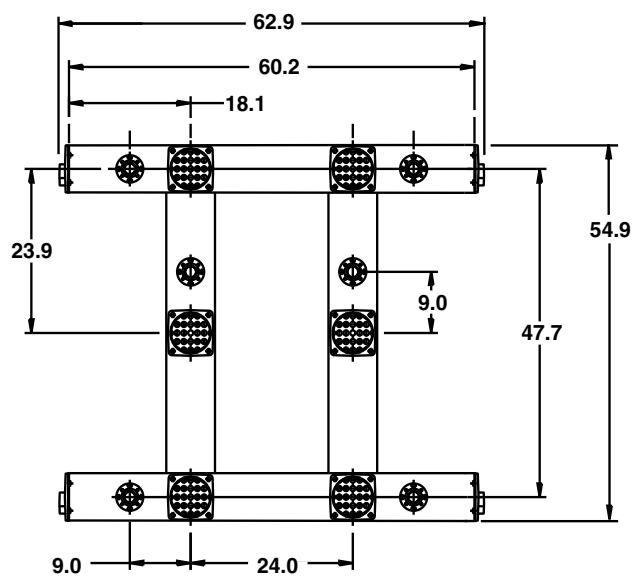
**5 BI XF GRD with 24" span**



**5 BI XF GRD with 30" span**

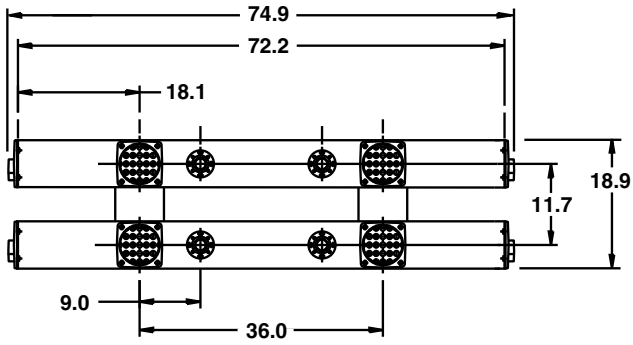


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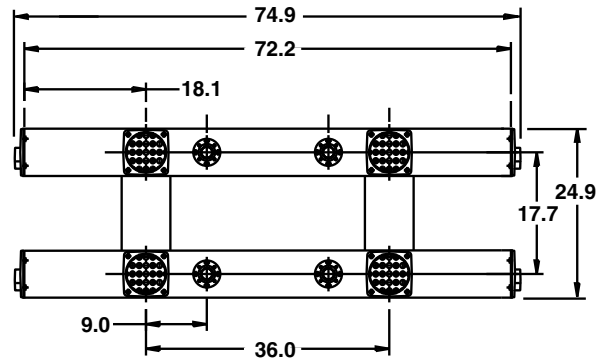


**5 BI XF GRD with 48" span**

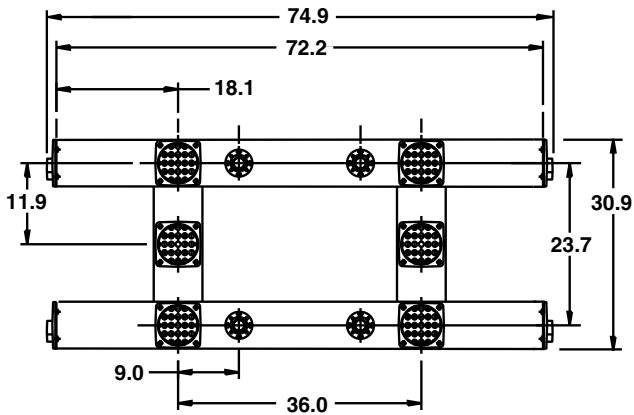
### Dimensions *(in inches)* 6 ft. back inlet grid sections



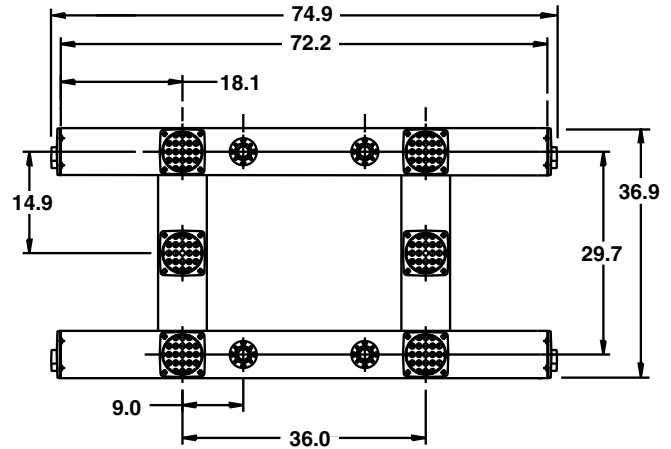
6 BI XF GRD with 12" span



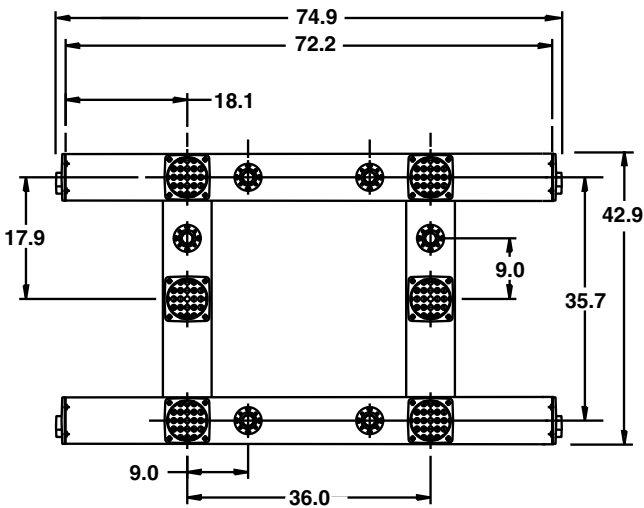
6 BI XF GRD with 18" span



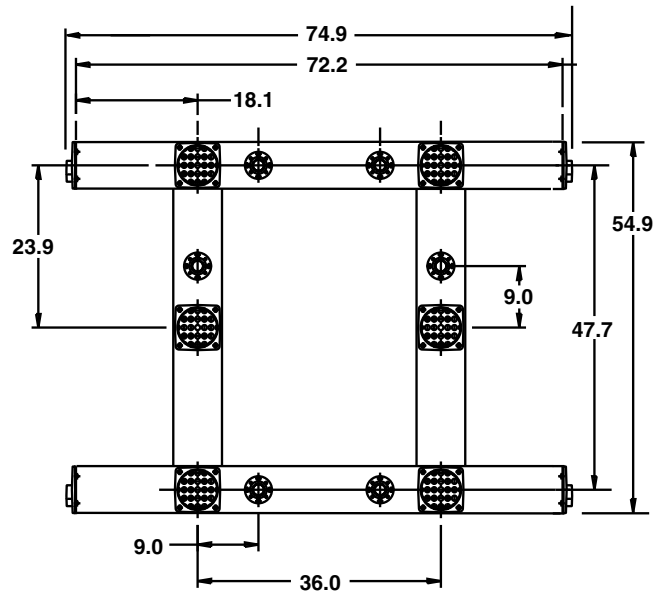
6 BI XF GRD with 24" span



6 BI XF GRD with 30" span

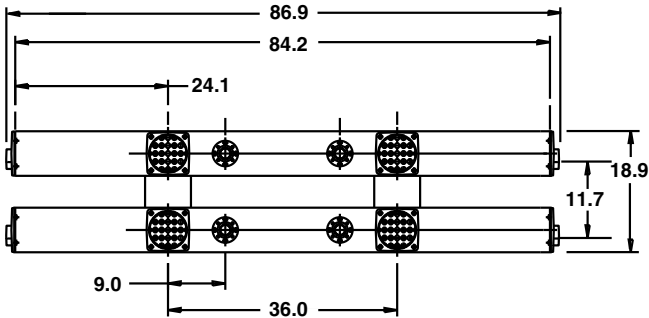


6 BI XF GRD with 36" span

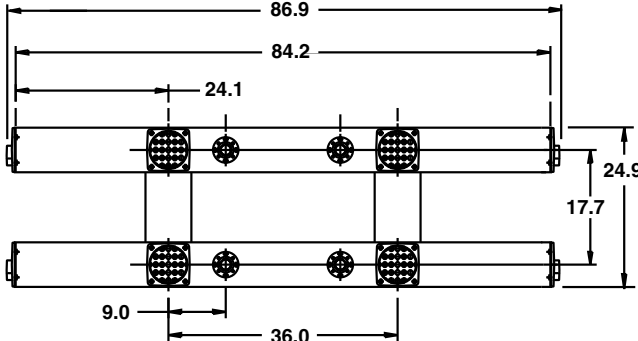


6 BI XF GRD with 48" span

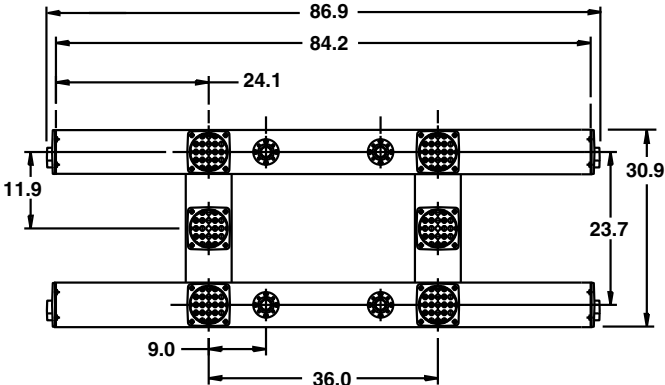
### Dimensions *(in inches)* 7 ft. back inlet grid sections



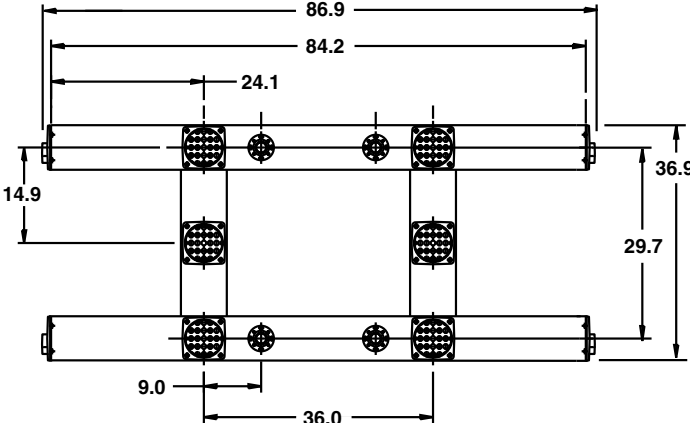
7 BI XF GRD with 12" span



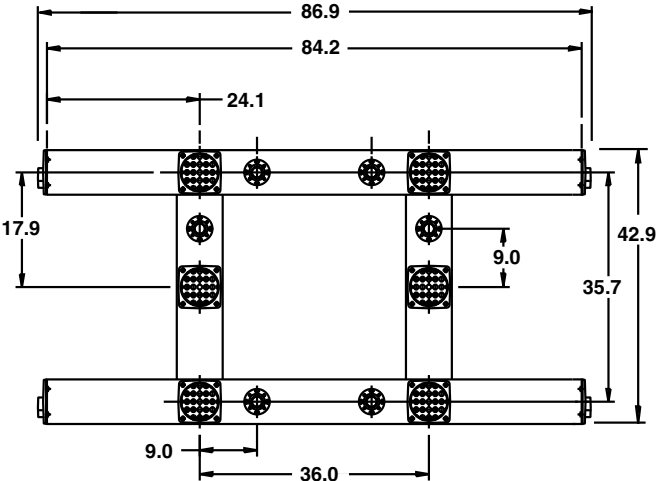
7 BI XF GRD with 18" span



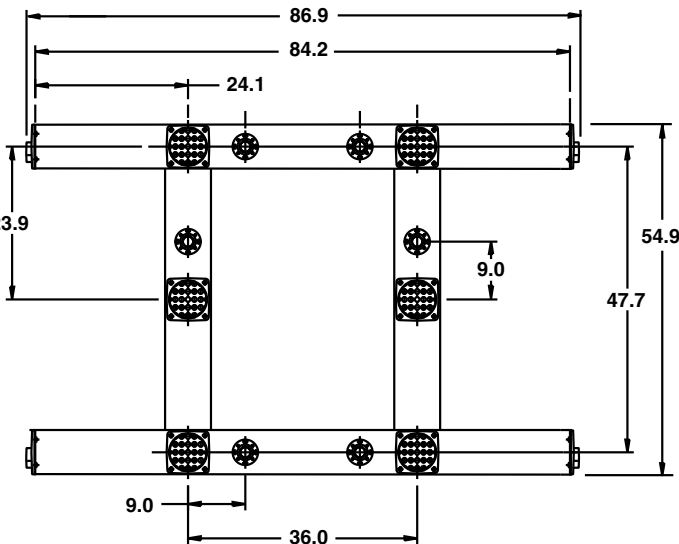
7 BI XF GRD with 24" span



7 BI XF GRD with 30" span

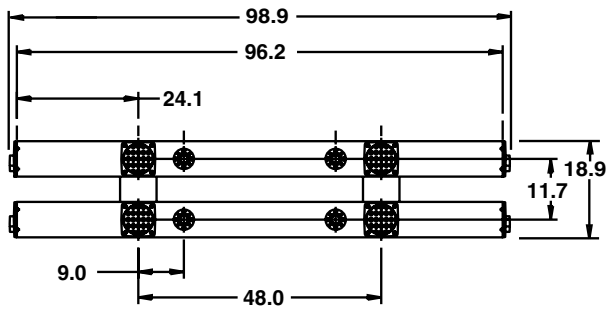


7 BI XF GRD with 36" span

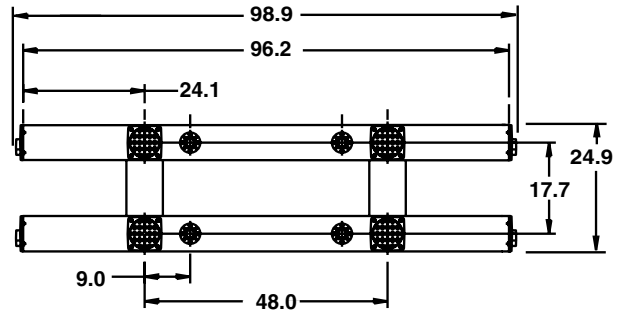


7 BI XF GRD with 48" span

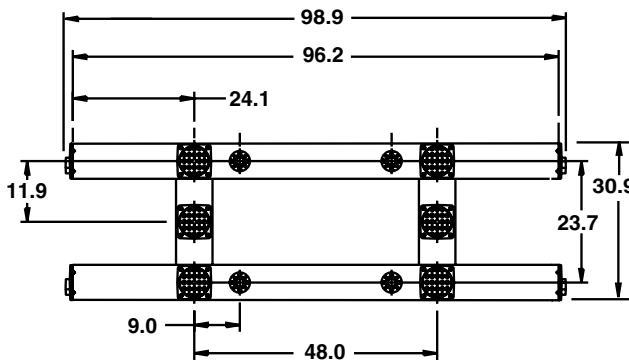
**Dimensions** *(in inches)*  
**8 ft. back inlet grid sections**



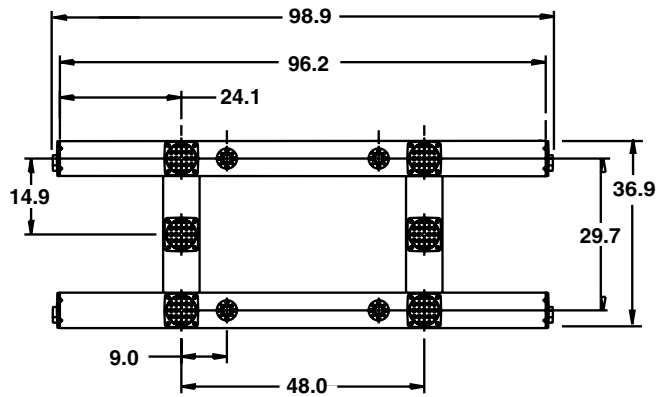
**8 BI XF GRD with 12" span**



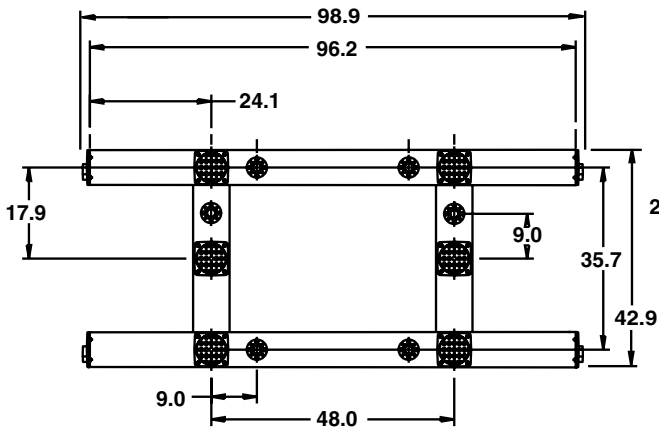
**8 BI XF GRD with 18" span**



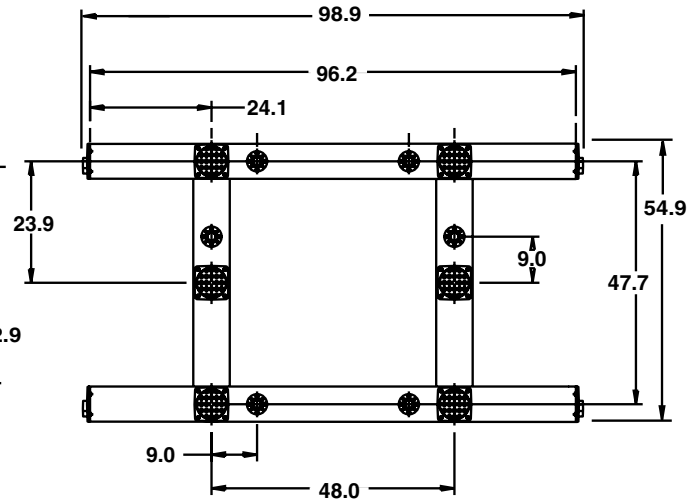
**8 BI XF GRD with 24" span**



**8 BI XF GRD with 30" span**

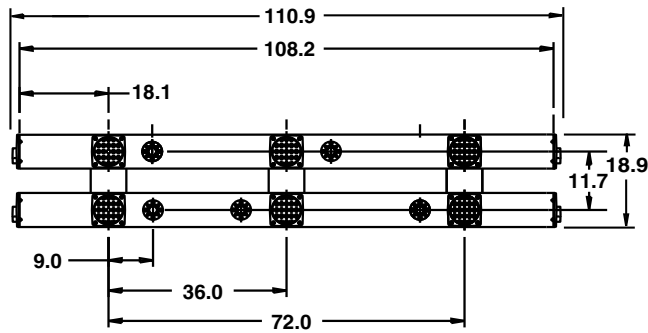


**8 BI XF GRD with 36" span**

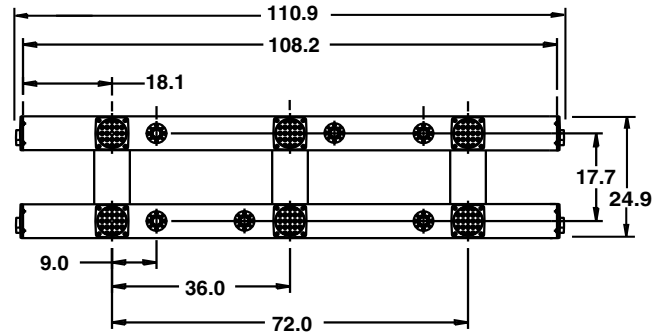


**8 BI XF GRD with 48" span**

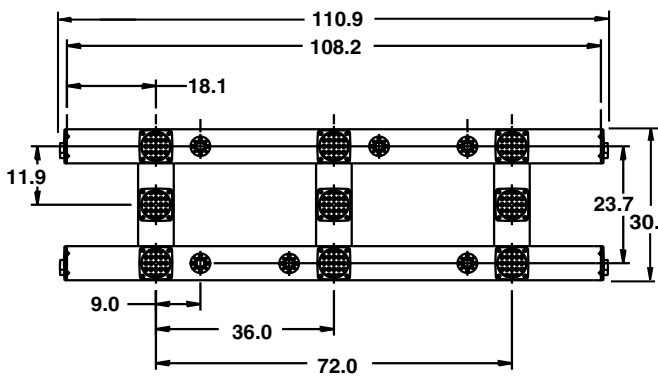
**Dimensions** *(in inches)*  
**9 ft. back inlet grid sections**



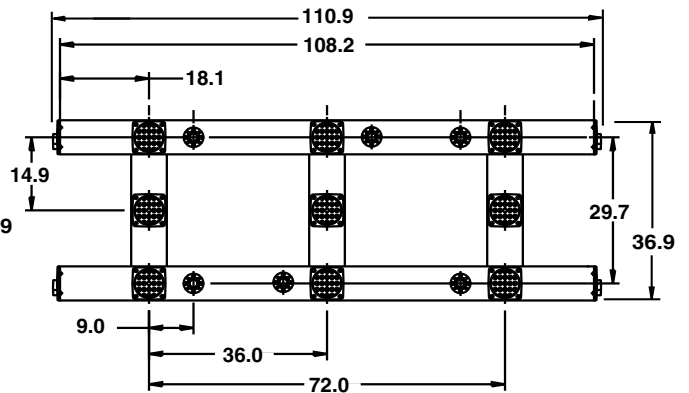
**9 BI XF GRD with 12" span**



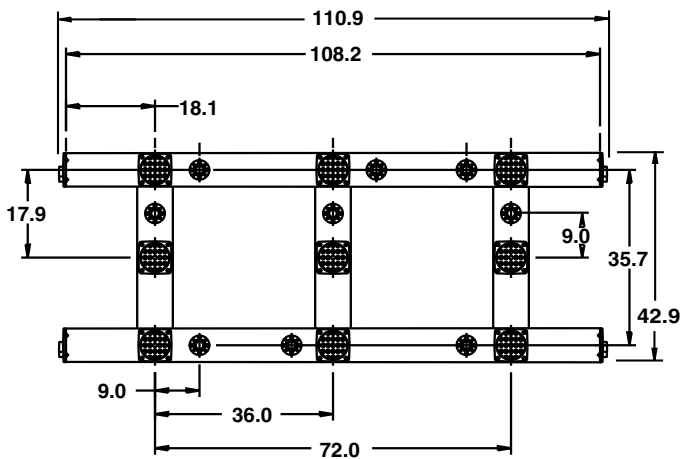
**9 BI XF GRD with 18" span**



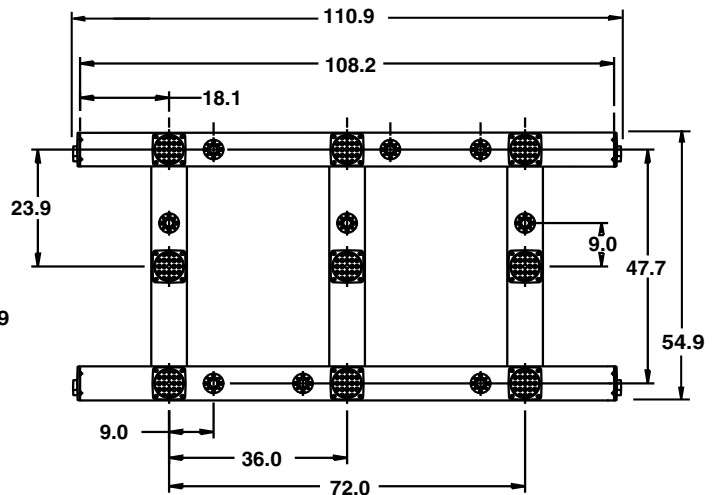
**9 BI XF GRD with 24" span**



**9 BI XF GRD with 30" span**



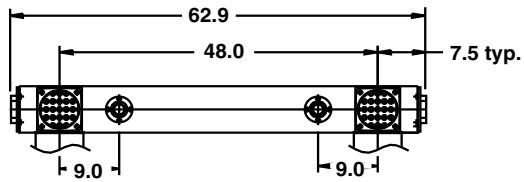
**9 BI XF GRD with 36" span**



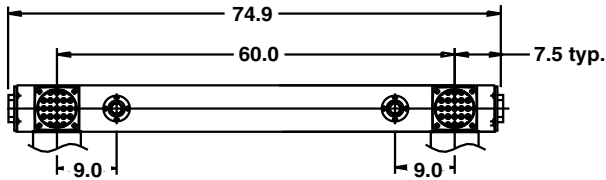
**9 BI XF GRD with 48" span**

## Dimensions *(in inches)*

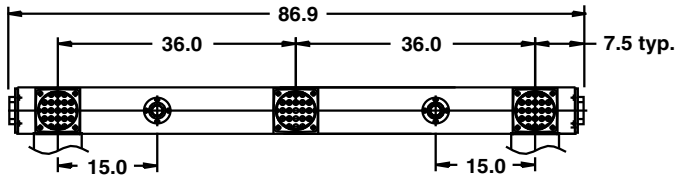
### Horizontal spacing of CROSSFIRE® ladders



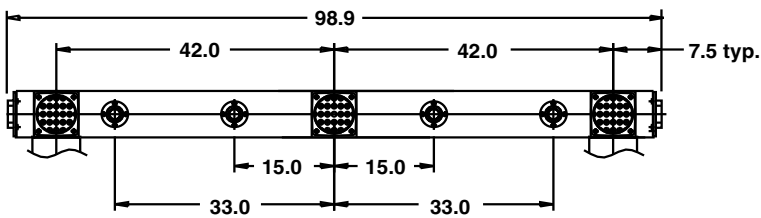
4 ft. CROSSFIRE® Ladder



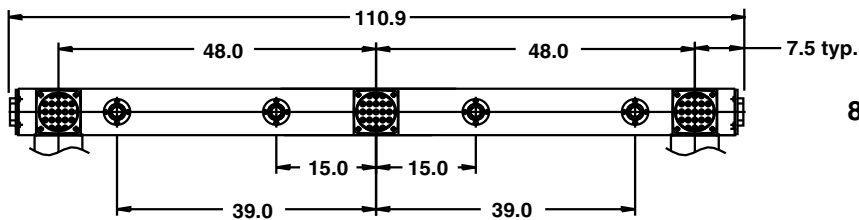
5 ft. CROSSFIRE® Ladder



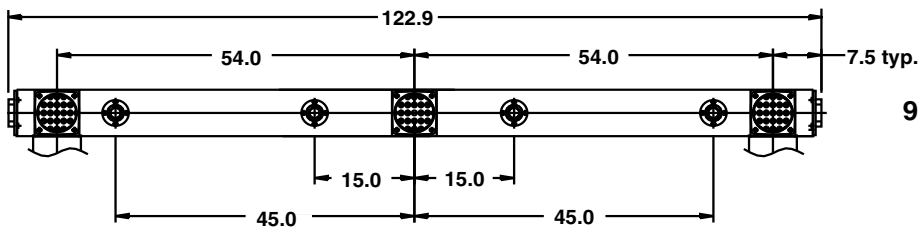
6 ft. CROSSFIRE® Ladder



7 ft. CROSSFIRE® Ladder



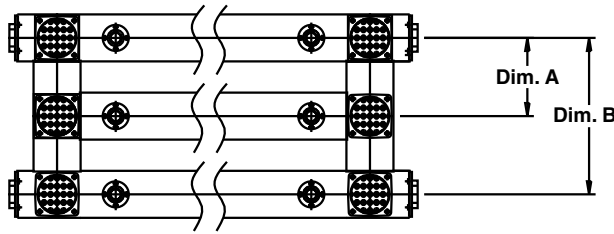
8 ft. CROSSFIRE® Ladder



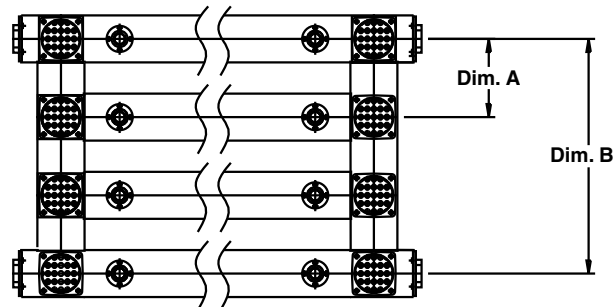
9 ft. CROSSFIRE® Ladder

## Dimensions *(in inches)*

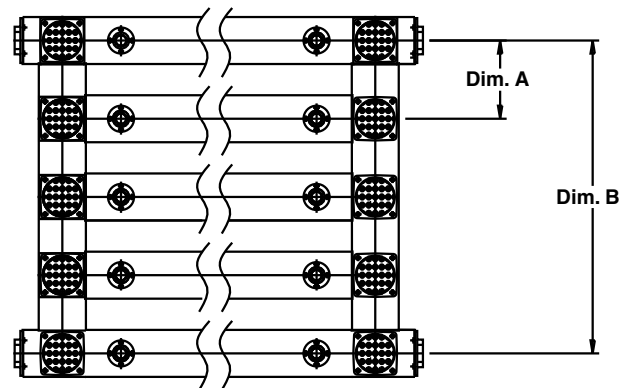
### Vertical spacing of CROSSFIRE® ladders



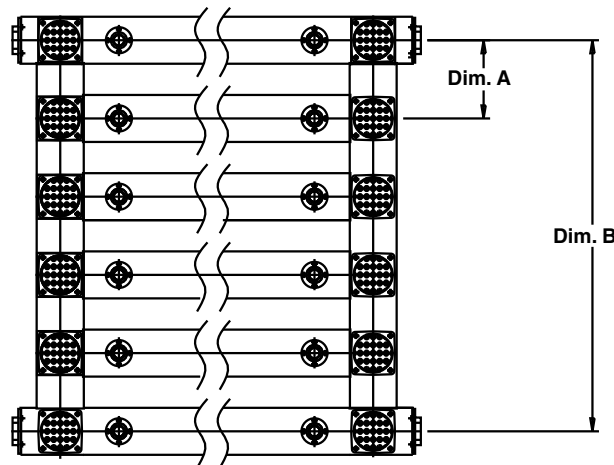
| Cross Member |                      | Dim. A<br>(inches) | Dim. B<br>(inches) |
|--------------|----------------------|--------------------|--------------------|
| Designation  | Description          |                    |                    |
| 112          | Qty. 1 - 12" spacing | 12                 | 24                 |
| 118          | Qty. 1 - 18" spacing | 18                 | 36                 |
| 124          | Qty. 1 - 24" spacing | 24                 | 48                 |
| 130          | Qty. 1 - 30" spacing | 30                 | 60                 |



| Cross Member |                      | Dim. A<br>(inches) | Dim. B<br>(inches) |
|--------------|----------------------|--------------------|--------------------|
| Designation  | Description          |                    |                    |
| 212          | Qty. 2 - 12" spacing | 12                 | 36                 |
| 218          | Qty. 2 - 18" spacing | 18                 | 54                 |
| 224          | Qty. 2 - 24" spacing | 24                 | 72                 |
| 230          | Qty. 2 - 30" spacing | 30                 | 90                 |



| Cross Member |                      | Dim. A<br>(inches) | Dim. B<br>(inches) |
|--------------|----------------------|--------------------|--------------------|
| Designation  | Description          |                    |                    |
| 312          | Qty. 3 - 12" spacing | 12                 | 48                 |
| 318          | Qty. 3 - 18" spacing | 18                 | 72                 |
| 324          | Qty. 3 - 24" spacing | 24                 | 96                 |
| 330          | Qty. 3 - 30" spacing | 30                 | 120                |



| Cross Member |                      | Dim. A<br>(inches) | Dim. B<br>(inches) |
|--------------|----------------------|--------------------|--------------------|
| Designation  | Description          |                    |                    |
| 412          | Qty. 4 - 12" spacing | 12                 | 60                 |
| 418          | Qty. 4 - 18" spacing | 18                 | 90                 |
| 424          | Qty. 4 - 24" spacing | 24                 | 120                |
| 430          | Qty. 4 - 30" spacing | 30                 | 150                |

See page 5616 for horizontal spacing of CROSSFIRE® ladders

# Notes