

Longitudinal & Lateral Seismic Clamp Fig. AF730

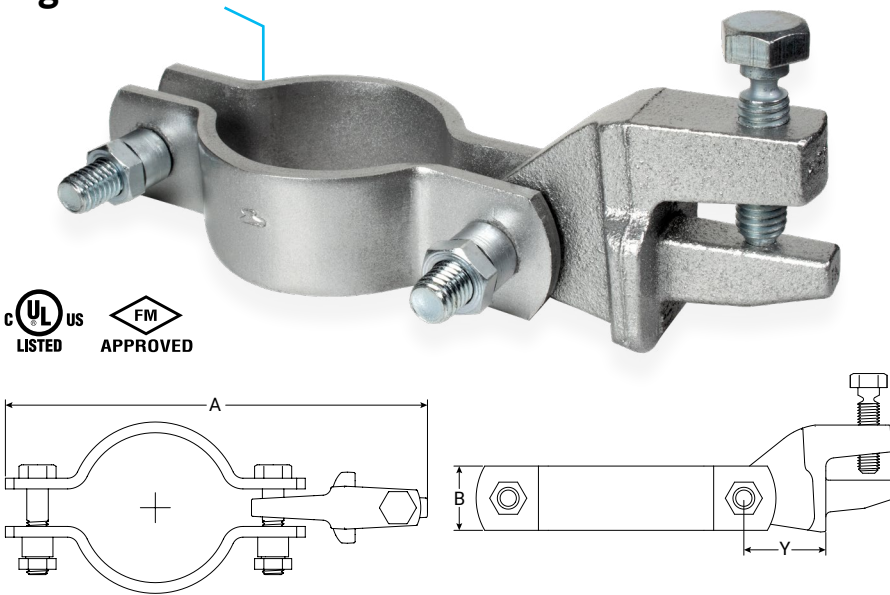


FIG. AF730 Dimensions and Weight

| Size | A | B | Y | Weight | |
|------------|----------|-----------|-----------|--------|------|
| | In./mm | In./mm | In./mm | lbs | kgs |
| 1" (DN25) | 7.6 193 | | | 2.49 | 1.13 |
| 1½" (DN32) | 8.0 203 | | | 2.55 | 1.13 |
| 1½" (DN40) | 8.2 208 | | | 2.64 | 1.20 |
| 2" (DN50) | 8.7 221 | | | 2.78 | 1.26 |
| 2½" | 9.2 234 | | | 2.92 | 1.32 |
| 3" (DN80) | 9.8 249 | 1.50 38.1 | 1.91 48.5 | 3.13 | 1.42 |
| 4" (DN100) | 10.8 274 | | | 3.38 | 1.53 |
| 5" | 12.1 307 | | | 3.81 | 1.73 |
| 6" | 13.2 335 | | | 4.12 | 1.87 |
| 8" | 15.2 386 | | | 6.40 | 2.90 |
| 10" | 18.1 460 | | | 7.60 | 3.45 |
| 12" | 20.1 511 | | | 8.60 | 3.90 |

Notes:
ASC Engineered Solutions™ brand bracing components are designed to be compatible ONLY with other ASC Engineered Solutions brand bracing components, resulting in a Listed seismic bracing assembly. Updated UL listing information may be viewed at www.ul.com and updated FM approval information may be viewed at www.approvalguide.com.

Material Specifications

Size Range

Service Pipe Size: 1" – 12", DN25–DN100

Material

Carbon Steel Clamp and Hardware. Ductile Iron Brace Member Attachment Fitting.

Finish

Clamp: Plain
Clamp: Hot Dipped Galvanized per ASTM A153
Brace Member Attachment Fitting: Electro-Galvanized per ASTM B633

Service

A seismic longitudinal and lateral brace clamp designed to connect a piping system to a brace member. The AF730 rigidly braces piping systems subjected to horizontal and vertical seismic loads.

Approvals

cULus Listed (ANSI/UL 203a) and FM Approved (FM 1950-13). FM Tested (ANSI/FM 1950-16). Complies with NFPA 13, ASCE 7, IBC, & MSS SP-127 bracing requirements.

Features

- Torque off set screw and nuts provide a visual indication that the desired installation torque values have been achieved.

Ordering

Specify figure number, service pipe size, finish, and description.

Disclaimer:

ASC Engineered Solutions does not provide any warranties and specifically disclaims any liability whatsoever with respect to ASC bracing products and components that are used in combination with products, parts or systems not manufactured or sold by ASC. In no event shall ASC be liable for any incidental, direct, consequential, special or indirect damages or lost profits where non-ASC bracing components have been, or are used.

Seis Brace® Seismic Fire Protection Design Tool may be accessed at www.seisbrace.com

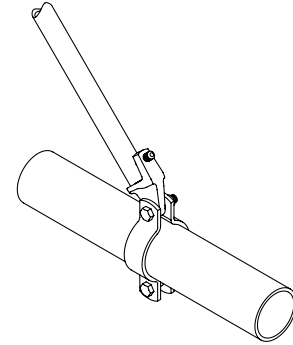


| PROJECT INFORMATION | APPROVAL STAMP |
|---------------------|-------------------|
| Project: | Approved |
| Address: | Approved as noted |
| Contractor: | Not approved |
| Engineer: | Remarks: |
| Submittal Date: | |
| Notes 1: | |
| Notes 2: | |

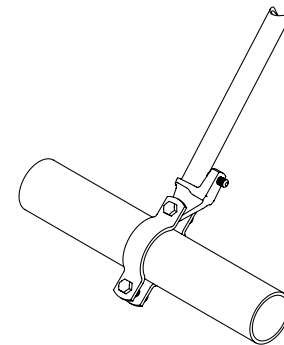
Longitudinal & Lateral Seismic Clamp Fig. AF730

FIG. AF730 cULus Listing per ANSI/UL 203a (ASD)

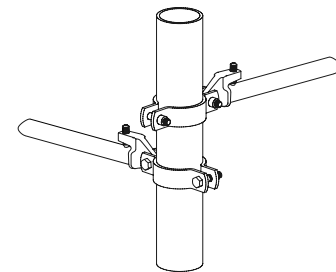
| Service Pipe Size | Standard Service Pipe | Specialty Service Pipe | Horizontal Load Rating at Brace Angle | | | | | | | |
|-------------------|-----------------------------------|---|---------------------------------------|--------------|--------------|--------------|---------------------|--------------|--------------|--------------|
| | | | Longitudinal Load Rating | | | | Lateral Load Rating | | | |
| | | | 30°-44° | 45°-59° | 60°-90° | Listed | 30°-44° | 45°-59° | 60°-90° | Listed |
| lbf/kN | lbf/kN | lbf/kN | lbf/kN | lbf/kN | lbf/kN | lbf/kN | lbf/kN | lbf/kN | | |
| 1" (DN25) | Sch. 10 Sch. 40 Metric Pipe | Mega-Thread MLT / GL Eddy Thread EZ-Thread | 340 1.51 | 480 2.14 | 588 2.62 | 680 3.02 | 340 1.51 | 480 2.14 | 588 2.62 | 680 3.02 |
| 1¼" (DN32) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread | | | | | | | | |
| 1½" (DN40) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread Fire-Flo EZ-Thread | 375 1.67 | 530 2.36 | 649 2.89 | 750 3.34 | 375 1.67 | 530 2.36 | 649 2.89 | 750 3.34 |
| 2" (DN50) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread Fire-Flo EZ-Thread | | | | | | | | |
| 2½" | Sch. 10 Sch. 40 | Mega-Flow Eddy Flow Fire-Flo | 545 2.42 | 770 3.43 | 943 4.19 | 1090 4.85 | 545 2.42 | 770 3.43 | 943 4.19 | 1090 4.85 |
| 3" (DN80) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow Eddy Flow Fire-Flo | | | | | | | | |
| 4" (DN100) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow Eddy Flow Fire-Flo | | | | | | | | |
| 5" | Sch. 10 Sch. 40 | - | | | | | | | | |
| 6" | Sch. 10 Sch. 40 | Mega-Flow | 942 4.19 | 1333 5.93 | 1632 7.26 | 1885 8.38 | 942 4.19 | 1333 5.93 | 1632 7.26 | 1885 8.38 |
| 8" | Sch. 10 0.188" Wall Sch. 40 | - | | | | | | | | |
| 10" | 0.188" Wall Sch. 40 | - | | | | | | | | |



Longitudinal Application



Lateral Application



Riser Application

Brace Angles are determined from Vertical.

Sch. 10 & 0.188" Wall Load Ratings may be used for any thicker wall pipe of the same diameter.

Listed load ratings reduced for angle ranges in accordance with NFPA 13-2019 Table 18.5.2.3.

See table on page 4 for UL listed specialty pipes & UL Listed metric service pipes.

See table on page 4 for UL listed brace members.

Load ratings include a minimum safety factor of 2.2 in accordance with NFPA 13-2019 Section A.18.5.2.3.

All load ratings may be used for NFPA 13-2016 designs.



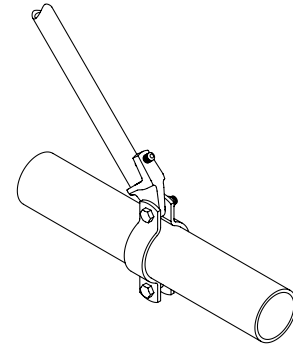
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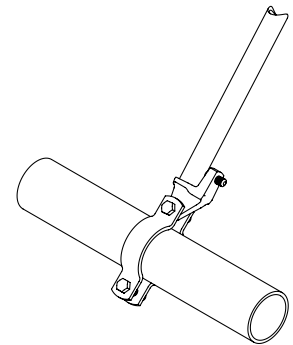
Longitudinal & Lateral Seismic Clamp Fig. AF730

FIG. AF730 FM Approved (Listing) per FM 1950-13 (ASD)

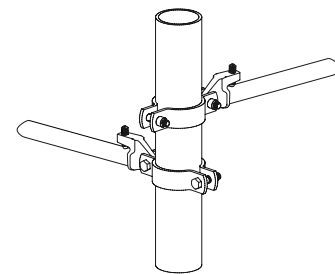
| Service Pipe Size | Standard Service Pipe | Specialty Service Pipe | Horizontal Load Rating at Brace Angle | | | | | | | |
|-------------------|-----------------------------------|---|---------------------------------------|---------|---------|---------|---------------------|---------|---------|---------|
| | | | Longitudinal Load Rating | | | | Lateral Load Rating | | | |
| | | | 30°-44° | 45°-59° | 60°-74° | 75°-90° | 30°-44° | 45°-59° | 60°-74° | 75°-90° |
| lbf/kN | lbf/kN | lbf/kN | lbf/kN | lbf/kN | lbf/kN | lbf/kN | lbf/kN | | | |
| 1" (DN25) | Sch. 10 Sch. 40 Metric Pipe | Mega-Thread MLT / GL Eddy Thread EZ-Thread | 550 | 640 | 670 | 740 | 1740 | 2460 | 3010 | 3360 |
| | | | 2.24 | 2.84 | 2.98 | 3.29 | 7.74 | 10.94 | 13.39 | 14.95 |
| 1¼" (DN32) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread EZ-Thread | 740 | 680 | 820 | 1620 | 1430 | 2020 | 2480 | 2770 |
| | | | 3.29 | 3.02 | 3.65 | 7.21 | 6.36 | 8.99 | 11.03 | 12.32 |
| 1½" (DN40) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread Fire-Flo EZ-Thread | 800 | 650 | 790 | 1800 | 1790 | 2530 | 3100 | 3460 |
| | | | 3.56 | 2.89 | 3.51 | 8.01 | 7.96 | 11.25 | 13.79 | 15.39 |
| 2" (DN50) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow MLT / GL Mega-Thread Eddy Flow Eddy Thread Fire-Flo EZ-Thread | 830 | 990 | 1190 | 1620 | 1820 | 2580 | 3160 | 3530 |
| | | | 3.69 | 4.4 | 5.29 | 7.21 | 8.1 | 11.48 | 14.06 | 15.7 |
| 2½" | Sch. 10 Sch. 40 | Mega-Flow Eddy Flow Fire-Flo | 800 | 700 | 850 | 1930 | 1610 | 2280 | 2790 | 3120 |
| | | | 3.65 | 3.11 | 3.78 | 8.59 | 7.16 | 10.14 | 12.41 | 13.88 |
| 3" (DN80) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow Eddy Flow Fire-Flo | 960 | 1330 | 1540 | 1700 | 1550 | 2200 | 2690 | 3010 |
| | | | 4.27 | 5.92 | 6.85 | 7.56 | 6.89 | 9.79 | 11.97 | 13.39 |
| 4" (DN100) | Sch. 10 Sch. 40 Metric Pipe | Mega-Flow Eddy Flow Fire-Flo | 760 | 1040 | 1270 | 1400 | 1260 | 1790 | 2190 | 2440 |
| | | | 3.38 | 4.63 | 5.65 | 6.23 | 5.6 | 7.96 | 9.74 | 10.85 |
| 5" | Sch. 10 Sch. 40 | - | 890 | 1230 | 1410 | 1550 | 1260 | 1790 | 2190 | 2440 |
| | | | 3.96 | 5.47 | 6.27 | 6.89 | 5.6 | 7.96 | 9.74 | 10.85 |
| 6" | Sch. 10 Sch. 40 | Mega-Flow | 700 | 940 | 1140 | 1310 | 950 | 1340 | 1640 | 1830 |
| | | | 3.11 | 4.18 | 5.07 | 5.83 | 4.23 | 5.96 | 7.3 | 8.14 |
| 8" | 0.188" Wall Sch. 40 | - | 990 | 1130 | 1360 | 1520 | 1540 | 2170 | 2660 | 2970 |
| | | | 4.4 | 5.03 | 6.05 | 6.76 | 6.85 | 9.65 | 11.82 | 13.21 |
| 10" | 0.188" Wall Sch. 40 | - | 1020 | 850 | 1000 | 1100 | 1700 | 2410 | 2950 | 3290 |
| | | | 4.54 | 3.78 | 4.45 | 4.89 | 7.56 | 10.72 | 13.12 | 14.63 |
| 12" | 0.188" Wall Sch. 40 | - | 970 | 1010 | 1220 | 1430 | 1690 | 2390 | 2930 | 3270 |
| | | | 4.31 | 4.49 | 5.43 | 6.36 | 7.52 | 10.63 | 13.03 | 14.55 |



Longitudinal Application



Lateral Application



Riser Application

Brace Angles are determined from Vertical.

Sch. 10 & 0.188" Wall Load Ratings may be used for any thicker wall pipe of the same diameter.

Load ratings include a minimum safety factor of 1.5 in accordance with NFPA 13-2016 Section A.9.3.5.2.3. To convert the load ratings above to a safety factor of 2.2 per NFPA 13-2019 Section A.18.5.2.3, multiply load ratings by a factor of 0.68.

To convert to LRFD Load Ratings, ASD Load Ratings may be multiplied by a factor of 1.5.

See table on page 4 for FM approved metric service pipes.

See table on page 4 for FM approved brace members.



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Longitudinal & Lateral Seismic Clamp Fig. AF730

Method 1 – Connection to Brace Member First

- 1 Slide the brace member over the lower jaw until it contacts the back wall of the brace member attachment fitting.
- 2 Hand tighten the set screw until it contacts the brace member. Continue to torque the set screw until the head breaks off.
- 3 Rotate the brace assembly to the service pipe. Unbolt the back nut & bolt and rotate the clamp halves over the service pipe. Re-assemble the nut and bolt.
- 4 Hand tighten the nuts on both sides of the clamp. Evenly and alternately torque the nut until the head breaks off. It is best practice to tighten the nut at the jaw side first.
- 5 Ensure the brace angle is within the range specified.

Method 2 – Connection to Service Pipe First

- 1 Unbolt the back nut & bolt and rotate the clamp halves over the service pipe. Re-assemble the nut and bolt.
- 2 Hand tighten the nuts on both sides of the clamp. Evenly and alternately torque the nut until the head breaks off. It is best practice to tighten the nut at the jaw side first.
- 3 Slide the brace member over the lower jaw until it contacts the back wall of the brace member attachment fitting.
- 4 Hand tighten the set screw until it contacts the brace member. Continue to torque the set screw until the head breaks off.

FIG. AF730 cULus Listed & FM Approved Brace Members

| Brace Member | Sizes | Standards (or Equivalent) | UL Listed | FM Approved |
|---------------------|------------------------|-------------------------------|-----------|-------------|
| Sch. 40 NPS Pipe | 1", 1¼", 1½", 2" | ASTM A53, A106, A135, or A795 | ✓ | ✓ |
| Sch. 40 Metric Pipe | | KS D 3562 | ✓ | ✓ |
| Metric Pipe | DN25, DN32, DN40, DN50 | EN10255H | | ✓ |
| | | GB/T 3091 | | ✓ |
| | | JIS G3454 | | ✓ |

FIG. AF730 cULus Listed & FM Approved Metric Service Pipes

| Brace Member | Service Pipe Sizes | UL Listed | FM Approved |
|------------------------|--------------------------------------|-----------|-------------|
| KS D 3507 KS D 3537 | | ✓ | ✓ |
| KS D 3562 Sch. 40 | | ✓ | ✓ |
| GB/T 3091 GB/T 3092 | DN25, DN32, DN40, DN50, DN 80, DN100 | | ✓ |
| JIS G3452 | | | ✓ |
| EN 10255M | | | |
| EN 10255H | | | |



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