

## SECTION 9

# G-STRUT® ENGINEERING DATA

Mill certification physical/mechanical properties, specification and engineering data for **G-STRUT®** Standard carbon steel channel are as follows:

| PRODUCT(S)<br>PROFILE TYPES  | MIN. YIELD<br>STRENGTH | MIN. TENSILE<br>STRENGTH | MIN.<br>ELONGATION |
|--|------------------------|--------------------------|--------------------|
| ALL 1 5/8" INDUSTRY<br>STANDARD STRUT<br>PROFILES IN SIZES<br>INCLUSIVE FROM 1<br>3/16" THROUGH 3 1/4" | 42,700<br>33,500       | 45,000                   | 20%                |

**G-STRUT®** Metal Framing Channel is interchangeable with industry-standard 1 5/8" strut profiles.

**G-STRUT®** is cold roll-formed, structural grade carbon steel.

**G-STRUT®** conforms to ASTM 1011 for hot rolled steel, ASTM 653 for continuous pre-galvanized steel, and ASTM 123 for HDG hot dip after-fabrication galvanized.

Standard finishes include pre-galvanized (*G-90 coating weight*), painted, galvanized, plain, and hot-dipped galvanized.

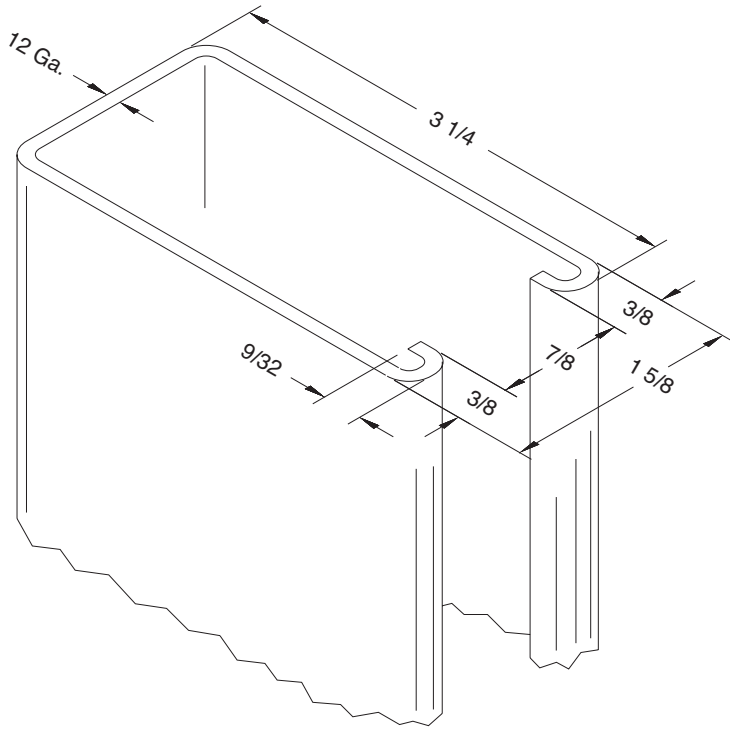
Painted (*Channel Green Standard*) available in polyester urethane powder coat finish or electro deposition cathodic epoxy e-coating.

Special Channel finishes or substrates include: aluminum, yellow zinc electrocoat, fiberglass, PVC coated, custom colors, stainless steel (*grade 304 or 316*).

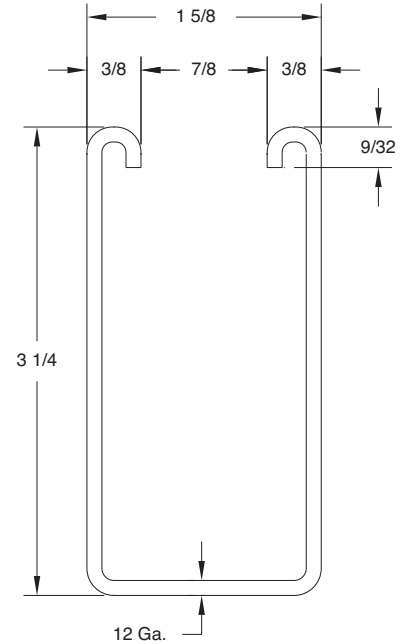
Engineering/Load factors (*see following pages by channel part number*).

# G-STRUT® CHANNEL » G812/G812A

1 5/8" X 3 1/4" (1.625" X 3.25") – 12 GAUGE (0.102" THICK)



|  |  |
|--|--|
|  | <b>G812OS (OVAL-SLOT)</b><br>9/16" X 1 1/8" – 2" ON CTR. |
|  | <b>G812LS (LONG-SLOT)</b><br>13/32" X 3" – 4" ON CTR.    |
|  | <b>G812H (HOLES)</b><br>9/16" DIAM. – 17/8" ON CTR.      |
|  | <b>G812A (BACK-TO-BACK)</b><br>WELDED                    |
|  | <b>G812AOS (BACK-TO-BACK OVAL SLOT)</b><br>WELDED        |
|  | <b>G812KO (KNOCK-OUT)</b><br>7/8" DIAM. – 6" ON CTR.     |



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| ITEM                                | QNT'Y | DESCRIPTION   |          | MATERIAL                      |
|-------------------------------------|-------|---|----------|-------------------------------|
|                                     |       |   |          | ROLLFORM TOLERANCES           |
| SCALE                               | FULL  | CHK'D BY  |          | LENGTH ± 0.125"               |
| DWN BY                              | IDI   | 02-02-02  | APP'D BY | ALL OTHER DIMENSIONS ± 0.020" |
| <b>G-STRUT CHANNEL, PART # G812</b> |       |   |          |                               |
| CAD FILENAME:<br>G812               |       | <b>GREGORY STRUT PRODUCTS</b><br>Division of Gregory Industries<br>4100 13th Street SW, Canton, OH 44710<br>PH: 330-477-4800 FX: 330-477-0626 |          | REF. No.                      |
| LAST PLOT DATE:<br>02-02-02         |       |   |          | DRWG No.                      |
|                                     |       |   |          | <b>G812</b>                   |

# G-STRUT® CHANNEL » G812/G812A

1 5/8" X 3 1/4" (1.625" X 3.25") – 12 GAUGE (0.102" THICK)

## ELEMENTS OF SECTION

| STRUT SECTION NUMBER | WEIGHT/ FOOT LBS. | AREA OF SECTION IN. <sup>2</sup> | XX-AXIS                            |                                  |                        | YY-AXIS                            |                                  |                        |
|----------------------|-------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|------------------------------------|----------------------------------|------------------------|
|                      |                   |                                  | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. |
| G812                 | 2.957             | 0.869                            | 1.061                              | 0.605                            | 1.105                  | 0.422                              | 0.519                            | 0.697                  |
| G812A                | 5.914             | 1.738                            | 6.006                              | 1.848                            | 1.859                  | 0.844                              | 1.039                            | 0.697                  |

## G812 BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G812                 | 12                         | 19540               | 10080                            | 0                        | -                                     |
|                      | 18                         | 19300               | 6720                             | 0.01                     | -                                     |
|                      | 24                         | 19030               | 5040                             | 0.02                     | -                                     |
|                      | 30                         | 18740               | 4030                             | 0.04                     | -                                     |
|                      | 36                         | 18420               | 3360                             | 0.06                     | -                                     |
|                      | 42                         | 18080               | 2880                             | 0.09                     | -                                     |
|                      | 48                         | 17730               | 2520                             | 0.11                     | -                                     |
|                      | 54                         | 17200               | 2240                             | 0.14                     | -                                     |
|                      | 60                         | 16390               | 2010                             | 0.18                     | -                                     |
|                      | 66                         | 15530               | 1830                             | 0.22                     | -                                     |
|                      | 72                         | 14640               | 1680                             | 0.26                     | -                                     |
|                      | 84                         | 12710               | 1440                             | 0.36                     | 1390                                  |
|                      | 96                         | 10590               | 1260                             | 0.47                     | 1060                                  |
|                      | 108                        | 8440                | 1120                             | 0.59                     | 840                                   |
|                      | 120                        | 6840                | 1000                             | 0.73                     | 680                                   |
|                      | 132                        | 5650                | 910                              | 0.88                     | 560                                   |
|                      | 144                        | 4750                | 840                              | 1.06                     | 470                                   |
|                      | 156                        | 4040                | 770                              | 1.23                     | 400                                   |
|                      | 168                        | 3490                | 720                              | 1.44                     | 340                                   |
|                      | 180                        | -                   | 670                              | 1.65                     | 300                                   |
| 192                  | -                          | 630                 | 1.88                             | 260                      |                                       |
| 204                  | -                          | 590                 | 2.11                             | 230                      |                                       |
| 216                  | -                          | 560                 | 2.38                             | 210                      |                                       |
| 228                  | -                          | 530                 | 2.65                             | 180                      |                                       |
| 240                  | -                          | 500                 | 2.92                             | 170                      |                                       |

# G-STRUT® CHANNEL » G812/G812A

1 5/8" X 3 1/4" (1.625" X 3.25") – 12 GAUGE (0.102" THICK)


## G812A BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G812A                | 12                         | 39500               | 30800                            | 0                        | -                                     |
|                      | 18                         | 39270               | 20530                            | 0                        | -                                     |
|                      | 24                         | 39030               | 15400                            | 0.01                     | -                                     |
|                      | 30                         | 38770               | 12320                            | 0.02                     | -                                     |
|                      | 36                         | 38500               | 10260                            | 0.03                     | -                                     |
|                      | 42                         | 37360               | 8800                             | 0.04                     | -                                     |
|                      | 48                         | 35930               | 7700                             | 0.06                     | -                                     |
|                      | 54                         | 34400               | 6840                             | 0.08                     | -                                     |
|                      | 60                         | 32780               | 6160                             | 0.09                     | -                                     |
|                      | 66                         | 31070               | 5600                             | 0.12                     | -                                     |
|                      | 72                         | 29280               | 5130                             | 0.14                     | -                                     |
|                      | 84                         | 25420               | 4400                             | 0.19                     | -                                     |
|                      | 96                         | 21190               | 3850                             | 0.25                     | -                                     |
|                      | 108                        | 16890               | 3420                             | 0.32                     | -                                     |
|                      | 120                        | 13680               | 3080                             | 0.39                     | -                                     |
|                      | 132                        | 11300               | 2800                             | 0.48                     | -                                     |
|                      | 144                        | 9500                | 2560                             | 0.57                     | -                                     |
|                      | 156                        | 8090                | 2360                             | 0.66                     | 2290                                  |
|                      | 168                        | 6980                | 2200                             | 0.77                     | 1970                                  |
|                      | 180                        | -                   | 2050                             | 0.89                     | 1720                                  |
| 192                  | -                          | 1920                | 1.01                             | 1510                     |                                       |
| 204                  | -                          | 1810                | 1.14                             | 1330                     |                                       |
| 216                  | -                          | 1710                | 1.28                             | 1190                     |                                       |
| 228                  | -                          | 1620                | 1.43                             | 1070                     |                                       |
| 240                  | -                          | 1540                | 1.59                             | 960                      |                                       |

# G-STRUT® CHANNEL » G812/G812A

1 5/8" X 3 1/4" (1.625" X 3.25") – 12 GAUGE (0.102" THICK)

FOR PERFORATED CHANNELS, REDUCE TOTAL BEAM LOAD VALUES AS FOLLOWS:

|   |            |    |     |
|---|------------|----|-----|
|  | G812/G812A | OS | 20% |
|   | G812/G812A | LS | 33% |
|   | G812/G812A | H  | 12% |
|   | G812/G812A | KO | 5%  |

E=29000; Fy=42700; K=0.8

## Beam loads

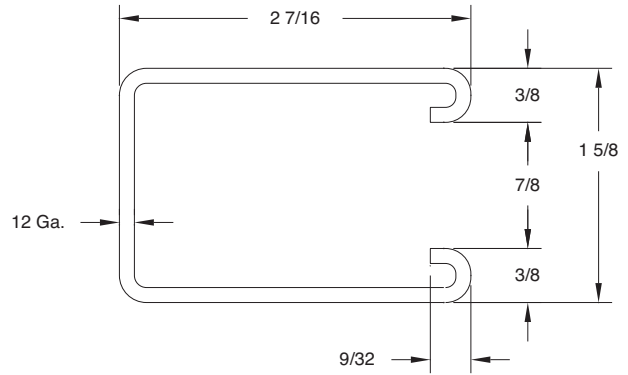
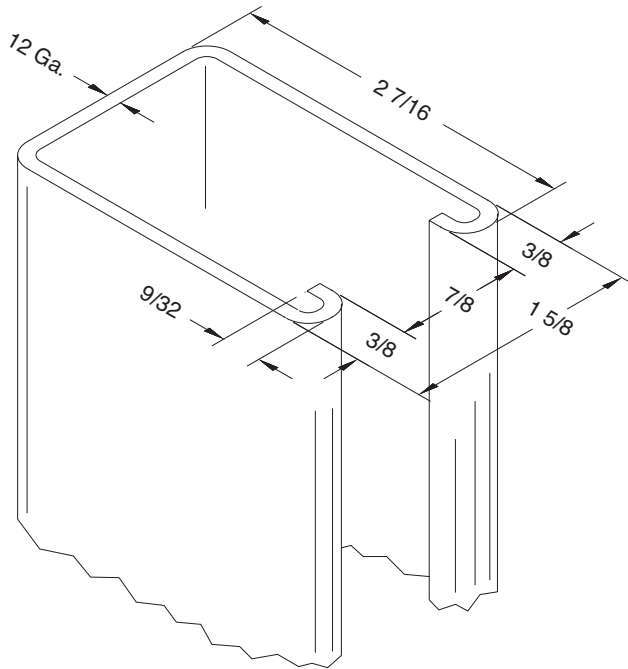
Loads listed are distributed uniformly. For loads concentrated at center of span, multiply uniform load by 0.5 and deflection by 0.8. Where deflection is not a factor, use stress of 25,000 PSI. When deflection is a factor, use deflection of 1/240 span.

## Column loads

Column loads are for allowable axial loads for the unsupported heights listed (*including a K value of 0.80*). Column loads must be reduced for eccentric loading.

# G-STRUT® CHANNEL » G712/G712A

1 5/8" X 2 7/16" (1.625" X 2.4375") – 12 GAUGE (0.102" THICK)



-  **G712OS (OVAL-SLOT)**  
9/16" X 1 1/8" – 2" ON CTR.
-  **G712LS (LONG-SLOT)**  
13/32" X 3" – 4" ON CTR.
-  **G712H (HOLES)**  
9/16" DIAM. – 1 7/8" ON CTR.
-  **G712A (BACK-TO-BACK)**  
WELDED
-  **G712AOS (BACK-TO-BACK OVAL SLOT)**  
WELDED
-  **G712KO (KNOCK-OUT)**  
7/8" DIAM. – 6" ON CTR.

ENGINEERING DATA

|   |                              |       |   |          |   |
|---|------------------------------|-------|---|----------|---|
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|   | SCALE FULL                   |       |   | CHK'D BY | ROLLFORM TOLERANCES<br>LENGTH ± 0.125"<br>ALL OTHER DIMENSIONS ± 0.020" |
|   | DWN BY                       | IDI   | 02-02-02  | APP'D BY |   |
|   | G-STRUT CHANNEL, PART # G712 |       |   |          |   |
| CAD FILENAME:<br>G712<br><br>LAST PLOT DATE:<br>02-02-02  |                              |       | <b>GREGORY STRUT PRODUCTS</b><br>Division of Gregory Industries<br>4100 13th Street SW; Canton, OH 44710<br>PH: 330-477-4800 FX: 330-477-0626 |          | REF. No.<br>DRWG No.<br><br><b>G712</b>                                 |

# G-STRUT® CHANNEL » G712/G712A

1 5/8" X 2 7/16" (1.625" X 2.4375") – 12 GAUGE (0.102" THICK)

## ELEMENTS OF SECTION

| STRUT SECTION NUMBER | WEIGHT/ FOOT LBS. | AREA OF SECTION IN. <sup>2</sup> | XX-AXIS                            |                                  |                        | YY-AXIS                            |                                  |                        |
|----------------------|-------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|------------------------------------|----------------------------------|------------------------|
|                      |                   |                                  | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. |
| G712                 | 2.392             | 0.703                            | 0.503                              | 0.376                            | 0.846                  | 0.326                              | 0.401                            | 0.681                  |
| G712A                | 4.784             | 1.406                            | 2.701                              | 1.108                            | 1.386                  | 0.652                              | 0.802                            | 0.681                  |

## G712 BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G712                 | 12                         | 15280               | 6260                             | 0                        | -                                     |
|                      | 18                         | 15010               | 4170                             | 0.02                     | -                                     |
|                      | 24                         | 14710               | 3130                             | 0.03                     | -                                     |
|                      | 30                         | 14370               | 2500                             | 0.06                     | -                                     |
|                      | 36                         | 14010               | 2080                             | 0.08                     | -                                     |
|                      | 42                         | 13620               | 1790                             | 0.11                     | -                                     |
|                      | 48                         | 13200               | 1560                             | 0.15                     | -                                     |
|                      | 54                         | 12760               | 1390                             | 0.19                     | -                                     |
|                      | 60                         | 12290               | 1250                             | 0.24                     | -                                     |
|                      | 66                         | 11800               | 1130                             | 0.28                     | 1070                                  |
|                      | 72                         | 11290               | 1040                             | 0.34                     | 900                                   |
|                      | 84                         | 10010               | 890                              | 0.47                     | 660                                   |
|                      | 96                         | 8230                | 780                              | 0.61                     | 500                                   |
|                      | 108                        | 6520                | 690                              | 0.77                     | 400                                   |
|                      | 120                        | 5280                | 620                              | 0.95                     | 320                                   |
|                      | 132                        | 4360                | 560                              | 1.14                     | 260                                   |
|                      | 144                        | 3660                | 520                              | 1.38                     | 220                                   |
|                      | 156                        | 3120                | 480                              | 1.62                     | 190                                   |
|                      | 168                        | 2690                | 440                              | 1.86                     | 160                                   |
|                      | 180                        | -                   | 410                              | 2.13                     | 140                                   |
| 192                  | -                          | 2,390               | 2.46                             | 120                      |                                       |
| 204                  | -                          | 390                 | 2.46                             | 120                      |                                       |
| 216                  | -                          | 340                 | 3.05                             | 100                      |                                       |
| 228                  | -                          | 320                 | 3.38                             | 80                       |                                       |
| 240                  | -                          | 310                 | 3.82                             | 80                       |                                       |

# G-STRUT® CHANNEL » G712/G712A

1 5/8" X 2 7/16" (1.625" X 2.4375") – 12 GAUGE (0.102" THICK)

## G712A BEAM & COLUMN LOADS


| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G712A                | 12                         | 31020               | 18460                            | 0                        | -                                     |
|                      | 18                         | 30770               | 12310                            | 0.01                     | -                                     |
|                      | 24                         | 30500               | 9230                             | 0.02                     | -                                     |
|                      | 30                         | 210                 | 7380                             | 0.03                     | -                                     |
|                      | 36                         | 2990                | 6150                             | 0.04                     | -                                     |
|                      | 42                         | 29570               | 5270                             | 0.06                     | -                                     |
|                      | 48                         | 28830               | 4610                             | 0.08                     | -                                     |
|                      | 54                         | 27440               | 4100                             | 0.1                      | -                                     |
|                      | 60                         | 26200               | 3690                             | 0.13                     | -                                     |
|                      | 66                         | 24770               | 3350                             | 0.16                     | -                                     |
|                      | 72                         | 23260               | 3070                             | 0.19                     | -                                     |
|                      | 84                         | 20020               | 2630                             | 0.25                     | -                                     |
|                      | 96                         | 16460               | 2300                             | 0.33                     | -                                     |
|                      | 108                        | 13040               | 2050                             | 0.42                     | -                                     |
|                      | 120                        | 10560               | 1840                             | 0.52                     | 1740                                  |
|                      | 132                        | 8730                | 1670                             | 0.63                     | 1430                                  |
|                      | 144                        | 7330                | 1530                             | 0.75                     | 1200                                  |
|                      | 156                        | 6250                | 1420                             | 0.89                     | 1020                                  |
|                      | 168                        | 5390                | 1310                             | 1.03                     | 880                                   |
|                      | 180                        | -                   | 1230                             | 1.19                     | 770                                   |
| 192                  | -                          | 1150                | 1.35                             | 670                      |                                       |
| 204                  | -                          | 1080                | 1.52                             | 600                      |                                       |
| 216                  | -                          | 1020                | 1.7                              | 530                      |                                       |
| 228                  | -                          | 970                 | 1.91                             | 480                      |                                       |
| 240                  | -                          | 920                 | 2.11                             | 430                      |                                       |



# G-STRUT® CHANNEL » G712/G712A

1 5/8" X 2 7/16" (1.625" X 2.4375") – 12 GAUGE (0.102" THICK)

FOR PERFORATED CHANNELS, REDUCE TOTAL BEAM LOAD VALUES AS FOLLOWS:

|   |            |    |     |
|---|------------|----|-----|
|  | G712/G712A | OS | 20% |
|   | G712/G712A | LS | 33% |
|   | G712/G712A | H  | 12% |
|   | G712/G712A | KO | 5%  |

E=29000; Fy=42700; K=0.8

## Beam loads

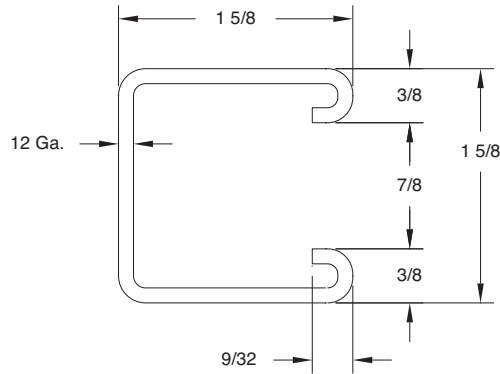
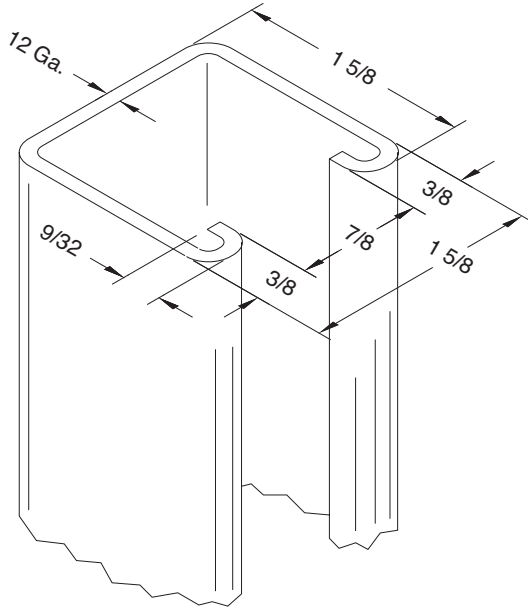
Loads listed are distributed uniformly. For loads concentrated at center of span, multiply uniform load by 0.5 and deflection by 0.8. Where deflection is not a factor, use stress of 25,000 PSI. When deflection is a factor, use deflection of 1/240 span.

## Column loads

Column loads are for allowable axial loads for the unsupported heights listed (*including a K value of 0.80*). Column loads must be reduced for eccentric loading.

# G-STRUT® CHANNEL » G582/G582A

1 5/8" X 1 5/8" (1.625" X 1.625") – 12 GAUGE (0.102" THICK)



|  |  |
|--|--|
|  | <b>G582OS (OVAL-SLOT)</b><br>9/16" X 1 1/8" – 2" ON CTR. |
|  | <b>G582LS (LONG-SLOT)</b><br>13/32" X 3" – 4" ON CTR.    |
|  | <b>G582H (HOLES)</b><br>9/16" DIAM. – 17/8" ON CTR.      |
|  | <b>G582A (BACK-TO-BACK)</b><br>WELDED                    |
|  | <b>G582AOS (BACK-TO-BACK OVAL SLOT)</b><br>WELDED        |
|  | <b>G582KO (KNOCK-OUT)</b><br>7/8" DIAM. – 6" ON CTR.     |

ENGINEERING DATA

|   |                     |       |   |          |   |                               |
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|   | ROLLFORM TOLERANCES |       |   |          |   |                               |
|   | SCALE               | FULL  |   | CHK'D BY |   | LENGTH ± 0.125"               |
|   | DWN BY              | IDI   | 02-02-02  | APP'D BY |   | ALL OTHER DIMENSIONS ± 0.020" |
| G-STRUT CHANNEL, PART # G582  |                     |       |   |          |   |                               |
| CAD FILENAME:<br>G582   |                     |       | <b>GREGORY STRUT PRODUCTS</b><br>Division of Gregory Industries<br>4100 13th Street SW; Canton, OH 44710<br>PH: 330-477-4800 FX: 330-477-0626 |          | REF. No.<br>DRWG No.<br><br><b>G582</b> |                               |
| LAST PLOT DATE:<br>02-02-02   |                     |       |   |          |   |                               |

# G-STRUT® CHANNEL » G582/G582A

1 5/8" X 1 5/8" (1.625" X 1.625") – 12 GAUGE (0.102" THICK)

## ELEMENTS OF SECTION

| STRUT SECTION NUMBER | WEIGHT/ FOOT LBS. | AREA OF SECTION IN. <sup>2</sup> | XX-AXIS                            |                                  |                        | YY-AXIS                            |                                  |                        |
|----------------------|-------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|------------------------------------|----------------------------------|------------------------|
|                      |                   |                                  | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. |
| G582                 | 1.827             | 0.537                            | 0.178                              | 0.194                            | 0.576                  | 0.230                              | 0.283                            | 0.654                  |
| G582A                | 3.655             | 1.074                            | 0.891                              | 0.548                            | 0.911                  | 0.460                              | 0.566                            | 0.654                  |

## G582 BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G582                 | 12                         | 10960               | 3230                             | 0.01                     | -                                     |
|                      | 18                         | 10630               | 2150                             | 0.03                     | -                                     |
|                      | 24                         | 10250               | 1610                             | 0.05                     | -                                     |
|                      | 30                         | 9830                | 1290                             | 0.08                     | -                                     |
|                      | 36                         | 9370                | 1070                             | 0.12                     | -                                     |
|                      | 42                         | 8870                | 920                              | 0.17                     | -                                     |
|                      | 48                         | 8330                | 800                              | 0.22                     | 710                                   |
|                      | 54                         | 7750                | 710                              | 0.28                     | 560                                   |
|                      | 60                         | 7140                | 640                              | 0.34                     | 450                                   |
|                      | 66                         | 6490                | 580                              | 0.42                     | 370                                   |
|                      | 72                         | 5790                | 530                              | 0.49                     | 310                                   |
|                      | 84                         | 4360                | 460                              | 0.68                     | 230                                   |
|                      | 96                         | 3340                | 400                              | 0.89                     | 170                                   |
|                      | 108                        | 2640                | 350                              | 1.11                     | 140                                   |
|                      | 120                        | 2140                | 320                              | 1.39                     | 110                                   |
|                      | 132                        | 1760                | 290                              | 1.68                     | 90                                    |
|                      | 144                        | -                   | 260                              | 1.95                     | 70                                    |
|                      | 156                        | -                   | 240                              | 2.29                     | 60                                    |
|                      | 168                        | -                   | 230                              | 2.75                     | 50                                    |
|                      | 180                        | -                   | 210                              | 3.08                     | 50                                    |
| 192                  | -                          | 200                 | 3.57                             | 30                       |                                       |
| 204                  | -                          | 190                 | 4.06                             | 30                       |                                       |
| 216                  | -                          | 170                 | 4.32                             | 30                       |                                       |
| 228                  | -                          | 170                 | 5.08                             | 30                       |                                       |
| 240                  | -                          | 160                 | 5.75                             | 20                       |                                       |

# G-STRUT® CHANNEL » G582/G582A

1 5/8" X 1 5/8" (1.625" X 1.625") – 12 GAUGE (0.102" THICK)


## G582A BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G582A                | 12                         | 22450               | 9130                             | 0                        | -                                     |
|                      | 18                         | 22150               | 6080                             | 0.01                     | -                                     |
|                      | 24                         | 21820               | 4560                             | 0.03                     | -                                     |
|                      | 30                         | 21460               | 3650                             | 0.04                     | -                                     |
|                      | 36                         | 21080               | 3040                             | 0.07                     | -                                     |
|                      | 42                         | 20660               | 2600                             | 0.09                     | -                                     |
|                      | 48                         | 20220               | 2280                             | 0.12                     | -                                     |
|                      | 54                         | 19760               | 2020                             | 0.16                     | -                                     |
|                      | 60                         | 19270               | 1820                             | 0.19                     | -                                     |
|                      | 66                         | 18400               | 1660                             | 0.24                     | -                                     |
|                      | 72                         | 17180               | 1520                             | 0.28                     | -                                     |
|                      | 84                         | 14530               | 1300                             | 0.38                     | 1170                                  |
|                      | 96                         | 11630               | 1140                             | 0.50                     | 890                                   |
|                      | 108                        | 9180                | 1010                             | 0.64                     | 700                                   |
|                      | 120                        | 7440                | 910                              | 0.79                     | 570                                   |
|                      | 132                        | 6150                | 830                              | 0.96                     | 470                                   |
|                      | 144                        | 5160                | 760                              | 1.14                     | 390                                   |
|                      | 156                        | 4400                | 700                              | 1.33                     | 330                                   |
|                      | 168                        | -                   | 650                              | 1.55                     | 290                                   |
|                      | 180                        | -                   | 600                              | 1.76                     | 250                                   |
| 192                  | -                          | 570                 | 2.03                             | 220                      |                                       |
| 204                  | -                          | 530                 | 2.26                             | 190                      |                                       |
| 216                  | -                          | 500                 | 2.53                             | 170                      |                                       |
| 228                  | -                          | 480                 | 2.86                             | 150                      |                                       |
| 240                  | -                          | 450                 | 3.13                             | 140                      |                                       |

# G-STRUT® CHANNEL » G582/G582A

1 5/8" X 1 5/8" (1.625" X 1.625") – 12 GAUGE (0.102" THICK)

FOR PERFORATED CHANNELS, REDUCE TOTAL BEAM LOAD VALUES AS FOLLOWS:

|   |            |    |     |
|---|------------|----|-----|
|  | G582/G582A | OS | 21% |
|   | G582/G582A | LS | 34% |
|   | G582/G582A | H  | 13% |
|   | G582/G582A | KO | 5%  |

E=29000; Fy=42700; K=0.8

## Beam loads

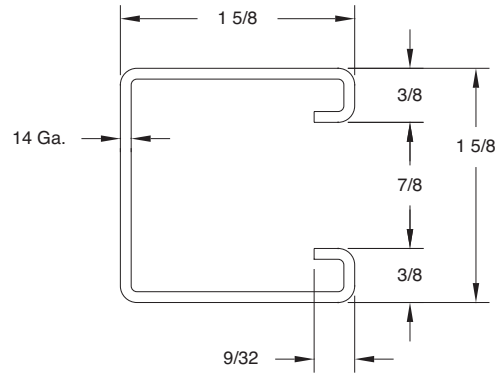
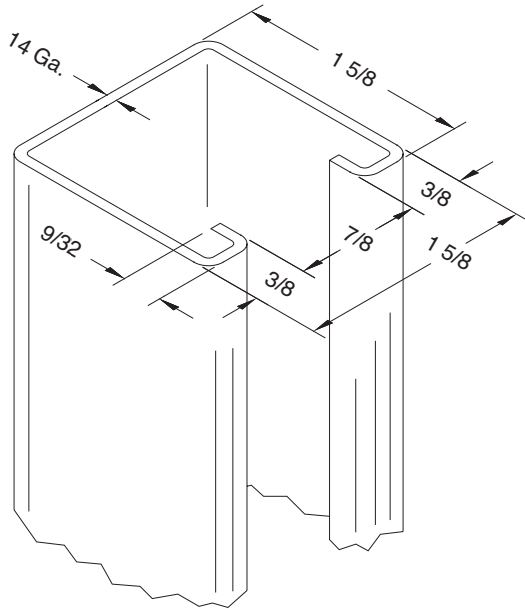
Loads listed are distributed uniformly. For loads concentrated at center of span, multiply uniform load by 0.5 and deflection by 0.8. Where deflection is not a factor, use stress of 25,000 PSI. When deflection is a factor, use deflection of 1/240 span.






## Column loads

Column loads are for allowable axial loads for the unsupported heights listed (*including a K value of 0.80*). Column loads must be reduced for eccentric loading.

# G-STRUT® CHANNEL » G584/G584A

1 5/8" X 1 5/8" (1.625" X 1.625") – 14 GAUGE (0.077" THICK)



-  **G584OS (OVAL-SLOT)**  
9/16" X 1 1/8" – 2" ON CTR.
-  **G584LS (LONG-SLOT)**  
13/32" X 3" – 4" ON CTR.
-  **G584H (HOLES)**  
9/16" DIAM. – 17/8" ON CTR.
-  **G584A (BACK-TO-BACK) WELDED**
-  **G584AOS (BACK-TO-BACK OVAL SLOT) WELDED**
-  **G584KO (KNOCK-OUT)**  
7/8" DIAM. – 6" ON CTR.

ENGINEERING DATA

|   |                                     |              |   |                 |   |                               |
|---|-------------------------------------|--------------|---|-----------------|---|-------------------------------|
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|   | <b>ROLLFORM TOLERANCES</b>          |              |   |                 |   |                               |
|   | <b>SCALE</b>                        | FULL         |   | <b>CHK'D BY</b> |   | LENGTH ± 0.125                |
|   | <b>DWN BY</b>                       | IDI          | 02-02-02  | <b>APP'D BY</b> |   | ALL OTHER DIMENSIONS ± 0.020" |
|   | <b>G-STRUT CHANNEL, PART # G584</b> |              |   |                 |   |                               |
| <b>CAD FILENAME:</b><br>G584<br><br><b>LAST PLOT DATE:</b><br>02-02-02  |                                     |              | <b>GREGORY STRUT PRODUCTS</b><br>Division of Gregory Industries<br>4100 13th Street SW, Canton, OH 44710<br>PH: 330-477-4800 FX: 330-477-0626 |                 | <b>REF. No.</b><br>_____<br><b>DRWG No.</b><br>G584 |                               |

# G-STRUT® CHANNEL » G584/G584A

1 5/8" X 1 5/8" (1.625" X 1.625") – 14 GAUGE (0.077" THICK)

## ELEMENTS OF SECTION

| STRUT SECTION NUMBER | WEIGHT/ FOOT LBS. | AREA OF SECTION IN. <sup>2</sup> | XX-AXIS                            |                                  |                        | YY-AXIS                            |                                  |                        |
|----------------------|-------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|------------------------------------|----------------------------------|------------------------|
|                      |                   |                                  | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. |
| G584                 | 1.429             | 0.42                             | 0.146                              | 0.16                             | 0.59                   | 0.184                              | 0.226                            | 0.662                  |
| G584A                | 2.858             | 0.84                             | 0.721                              | 0.444                            | 0.926                  | 0.368                              | 0.453                            | 0.662                  |

## G584 BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G584                 | 12                         | 8630                | 2660                             | 0.01                     | -                                     |
|                      | 18                         | 8370                | 1770                             | 0.03                     | -                                     |
|                      | 24                         | 8090                | 1330                             | 0.05                     | -                                     |
|                      | 30                         | 7760                | 1060                             | 0.08                     | -                                     |
|                      | 36                         | 7410                | 880                              | 0.12                     | -                                     |
|                      | 42                         | 7030                | 760                              | 0.17                     | -                                     |
|                      | 48                         | 6620                | 660                              | 0.22                     | 580                                   |
|                      | 54                         | 6190                | 590                              | 0.28                     | 460                                   |
|                      | 60                         | 5720                | 530                              | 0.35                     | 370                                   |
|                      | 66                         | 5230                | 480                              | 0.42                     | 310                                   |
|                      | 72                         | 4710                | 440                              | 0.5                      | 260                                   |
|                      | 84                         | 3590                | 380                              | 0.69                     | 190                                   |
|                      | 96                         | 2750                | 330                              | 0.89                     | 140                                   |
|                      | 108                        | 2170                | 290                              | 1.12                     | 110                                   |
|                      | 120                        | 1760                | 260                              | 1.38                     | 90                                    |
|                      | 132                        | 1450                | 240                              | 1.69                     | 70                                    |
|                      | 144                        | -                   | 220                              | 2.02                     | 60                                    |
|                      | 156                        | -                   | 200                              | 2.33                     | 50                                    |
|                      | 168                        | -                   | 190                              | 2.77                     | 40                                    |
|                      | 180                        | -                   | 170                              | 3.04                     | 40                                    |
| 192                  | -                          | 160                 | 3.48                             | 30                       |                                       |
| 204                  | -                          | 150                 | 3.91                             | 30                       |                                       |
| 216                  | -                          | 140                 | 4.33                             | 20                       |                                       |
| 228                  | -                          | 140                 | 5.1                              | 20                       |                                       |
| 240                  | -                          | 130                 | 5.52                             | 20                       |                                       |

# G-STRUT® CHANNEL » G584/G584A

1 5/8" X 1 5/8" (1.625" X 1.625") – 14 GAUGE (0.077" THICK)

## G584A BEAM & COLUMN LOADS


| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G584A                | 12                         | 17650               | 7400                             | 0                        | -                                     |
|                      | 18                         | 17420               | 4930                             | 0.01                     | -                                     |
|                      | 24                         | 17160               | 3700                             | 0.03                     | -                                     |
|                      | 30                         | 16890               | 2960                             | 0.04                     | -                                     |
|                      | 36                         | 16590               | 2460                             | 0.07                     | -                                     |
|                      | 42                         | 16270               | 2110                             | 0.09                     | -                                     |
|                      | 48                         | 15930               | 1850                             | 0.12                     | -                                     |
|                      | 54                         | 15570               | 1640                             | 0.16                     | -                                     |
|                      | 60                         | 15200               | 1480                             | 0.19                     | -                                     |
|                      | 66                         | 14520               | 1340                             | 0.23                     | -                                     |
|                      | 72                         | 13580               | 1230                             | 0.28                     | -                                     |
|                      | 84                         | 11550               | 1050                             | 0.38                     | 940                                   |
|                      | 96                         | 9320                | 920                              | 0.5                      | 720                                   |
|                      | 108                        | 7360                | 820                              | 0.64                     | 570                                   |
|                      | 120                        | 5960                | 740                              | 0.79                     | 460                                   |
|                      | 132                        | 4920                | 670                              | 0.95                     | 380                                   |
|                      | 144                        | 4140                | 310                              | 1.13                     | 320                                   |
|                      | 156                        | 3520                | 560                              | 1.32                     | 270                                   |
|                      | 168                        | -                   | 520                              | 1.53                     | 230                                   |
|                      | 180                        | -                   | 490                              | 1.77                     | 200                                   |
| 192                  | -                          | 460                 | 2.02                             | 180                      |                                       |
| 204                  | -                          | 430                 | 2.27                             | 160                      |                                       |
| 216                  | -                          | 410                 | 2.57                             | 140                      |                                       |
| 228                  | -                          | 380                 | 2.8                              | 120                      |                                       |
| 240                  | -                          | 370                 | 3.18                             | 110                      |                                       |



# G-STRUT® CHANNEL » G584/G584A

1 5/8" X 1 5/8" (1.625" X 1.625") – 14 GAUGE (0.077" THICK)

FOR PERFORATED CHANNELS, REDUCE TOTAL BEAM LOAD VALUES AS FOLLOWS:

|   |            |    |     |
|---|------------|----|-----|
|  | G584/G584A | OS | 21% |
|   | G584/G584A | LS | 34% |
|   | G584/G584A | H  | 13% |
|   | G584/G584A | KO | 5%  |

E=29000; Fy=42700; K=0.8

## Beam loads

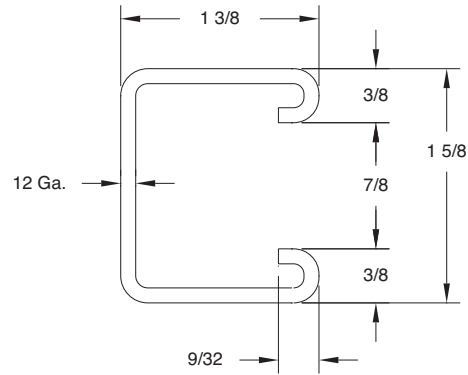
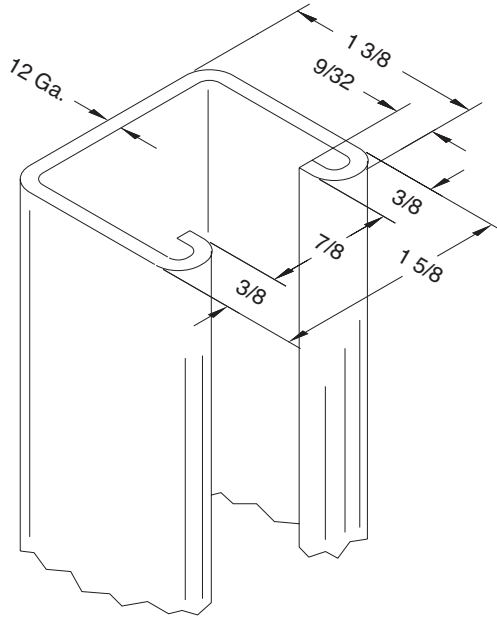
Loads listed are distributed uniformly. For loads concentrated at center of span, multiply uniform load by 0.5 and deflection by 0.8. Where deflection is not a factor, use stress of 25,000 PSI. When deflection is a factor, use deflection of 1/240 span.






## Column loads

Column loads are for allowable axial loads for the unsupported heights listed (*including a K value of 0.80*). Column loads must be reduced for eccentric loading.

# G-STRUT® CHANNEL » G382/G382A

1 5/8" X 1 3/8" (1.625" X 1.375") – 12 GAUGE (0.102" THICK)



-  **G382OS (OVAL-SLOT)**  
9/16" X 1 1/8" – 2" ON CTR.
-  **G382LS (LONG-SLOT)**  
13/32" X 3" – 4" ON CTR.
-  **G382H (HOLES)**  
9/16" DIAM. – 1 7/8" ON CTR.
-  **G382A (BACK-TO-BACK)**  
WELDED
-  **G382AOS (BACK-TO-BACK OVAL SLOT)**  
WELDED
-  **G382KO (KNOCK-OUT)**  
7/8" DIAM. – 6" ON CTR.

ENGINEERING DATA

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| ITEM                                | QNT'Y | DESCRIPTION   | MATERIAL                      |
|-------------------------------------|-------|---|-------------------------------|
|                                     |       | <b>ROLLFORM TOLERANCES</b>  |                               |
| SCALE                               |       | FULL  | LENGTH ± 0.125"               |
| DWN BY                              |       | IDI 02-02-02  | ALL OTHER DIMENSIONS ± 0.020" |
|                                     |       | CHK'D BY  |                               |
|                                     |       | APP'D BY  |                               |
| <b>G-STRUT CHANNEL, PART # G382</b> |       |   |                               |
| CAD FILENAME:<br>G382               |       | <b>GREGORY STRUT PRODUCTS</b><br>Division of Gregory Industries<br>4100 13th Street SW; Canton, OH 44710<br>PH: 330-477-4800 FX: 330-477-0626 | REF. No.                      |
| LAST PLOT DATE:<br>02-02-02         |       |   | DRWG No.<br><br><b>G382</b>   |

# G-STRUT® CHANNEL » G382/G382A

1 5/8" X 1 3/8" (1.625" X 1.375") – 12 GAUGE (0.102" THICK)

## ELEMENTS OF SECTION

| STRUT SECTION NUMBER | WEIGHT/ FOOT LBS. | AREA OF SECTION IN. <sup>2</sup> | XX-AXIS                            |                                  |                        | YY-AXIS                            |                                  |                        |
|----------------------|-------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|------------------------------------|----------------------------------|------------------------|
|                      |                   |                                  | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. |
| G382                 | 1.654             | 0.486                            | 0.116                              | 0.147                            | 0.489                  | 0.2                                | 0.246                            | 0.642                  |
| G382A                | 3.308             | 0.972                            | 0.567                              | 0.412                            | 0.764                  | 0.4                                | 0.492                            | 0.642                  |

## G382 BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G382                 | 12                         | 9620                | 2450                             | 0.01                     | -                                     |
|                      | 18                         | 9250                | 1630                             | 0.03                     | -                                     |
|                      | 24                         | 8820                | 1220                             | 0.06                     | -                                     |
|                      | 30                         | 8340                | 980                              | 0.1                      | -                                     |
|                      | 36                         | 7820                | 810                              | 0.14                     | -                                     |
|                      | 42                         | 7250                | 700                              | 0.2                      | 610                                   |
|                      | 48                         | 6630                | 610                              | 0.26                     | 460                                   |
|                      | 54                         | 5970                | 540                              | 0.32                     | 360                                   |
|                      | 60                         | 5260                | 490                              | 0.4                      | 290                                   |
|                      | 66                         | 4490                | 440                              | 0.48                     | 240                                   |
|                      | 72                         | 3780                | 400                              | 0.57                     | 200                                   |
|                      | 84                         | 2770                | 350                              | 0.8                      | 150                                   |
|                      | 96                         | 2120                | 300                              | 1.02                     | 110                                   |
|                      | 108                        | 1680                | 270                              | 1.31                     | 90                                    |
|                      | 120                        | -                   | 240                              | 1.6                      | 70                                    |
|                      | 132                        | -                   | 220                              | 1.95                     | 60                                    |
|                      | 144                        | -                   | 200                              | 2.31                     | 50                                    |
|                      | 156                        | -                   | 180                              | 2.64                     | 40                                    |
|                      | 168                        | -                   | 170                              | 3.12                     | 30                                    |
|                      | 180                        | -                   | 160                              | 3.61                     | 30                                    |
| 192                  | -                          | 150                 | 4.1                              | 20                       |                                       |
| 204                  | -                          | 140                 | 4.6                              | 20                       |                                       |
| 216                  | -                          | 130                 | 5.07                             | 20                       |                                       |
| 228                  | -                          | 120                 | 5.5                              | 20                       |                                       |
| 240                  | -                          | 120                 | 6.42                             | 10                       |                                       |

# G-STRUT® CHANNEL » G382/G382A

1 5/8" X 1 3/8" (1.625" X 1.375") – 12 GAUGE (0.102" THICK)

## G382A BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G382A                | 12                         | 19800               | 6860                             | 0                        | -                                     |
|                      | 18                         | 19480               | 4570                             | 0.02                     | -                                     |
|                      | 24                         | 19110               | 3430                             | 0.03                     | -                                     |
|                      | 30                         | 18710               | 2740                             | 0.05                     | -                                     |
|                      | 36                         | 18280               | 2280                             | 0.08                     | -                                     |
|                      | 42                         | 17810               | 1960                             | 0.11                     | -                                     |
|                      | 48                         | 17310               | 1710                             | 0.14                     | -                                     |
|                      | 54                         | 16790               | 1520                             | 0.18                     | -                                     |
|                      | 60                         | 16230               | 1370                             | 0.23                     | -                                     |
|                      | 66                         | 15650               | 1240                             | 0.28                     | 1200                                  |
|                      | 72                         | 15040               | 1140                             | 0.33                     | 1010                                  |
|                      | 84                         | 12820               | 980                              | 0.45                     | 740                                   |
|                      | 96                         | 10140               | 850                              | 0.59                     | 570                                   |
|                      | 108                        | 8010                | 760                              | 0.75                     | 450                                   |
|                      | 120                        | 6490                | 680                              | 0.93                     | 360                                   |
|                      | 132                        | 5360                | 620                              | 1.12                     | 300                                   |
|                      | 144                        | 4500                | 570                              | 1.34                     | 250                                   |
|                      | 156                        | 3840                | 520                              | 1.56                     | 210                                   |
|                      | 168                        | -                   | 490                              | 1.83                     | 180                                   |
|                      | 180                        | -                   | 450                              | 2.07                     | 160                                   |
| 192                  | -                          | 420                 | 2.35                             | 140                      |                                       |
| 204                  | -                          | 400                 | 2.68                             | 120                      |                                       |
| 216                  | -                          | 380                 | 3.03                             | 110                      |                                       |
| 228                  | -                          | 360                 | 3.37                             | 100                      |                                       |
| 240                  | -                          | 340                 | 3.72                             | 90                       |                                       |

# G-STRUT® CHANNEL » G382/G382A

1 5/8" X 1 3/8" (1.625" X 1.375") – 12 GAUGE (0.102" THICK)

FOR PERFORATED CHANNELS, REDUCE TOTAL BEAM LOAD VALUES AS FOLLOWS:

|   |            |    |     |
|---|------------|----|-----|
| ☰ | G382/G382A | OS | 21% |
|   | G382/G382A | LS | 34% |
|   | G382/G382A | H  | 13% |
|   | G382/G382A | KO | 6%  |

E=29000; Fy=42700; K=0.8

## Beam loads

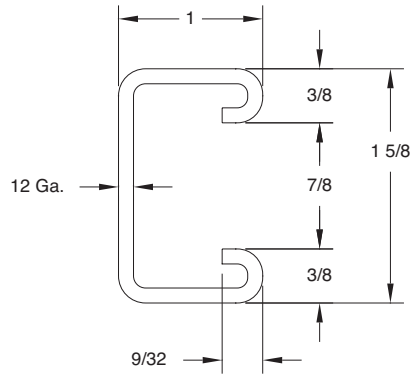
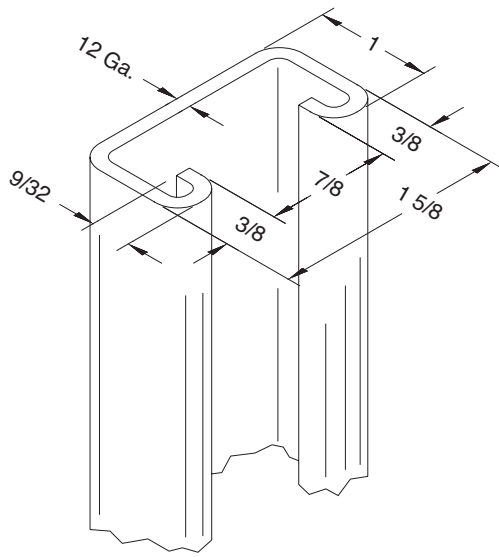
Loads listed are distributed uniformly. For loads concentrated at center of span, multiply uniform load by 0.5 and deflection by 0.8. Where deflection is not a factor, use stress of 25,000 PSI. When deflection is a factor, use deflection of 1/240 span.

## Column loads

Column loads are for allowable axial loads for the unsupported heights listed (*including a K value of 0.80*). Column loads must be reduced for eccentric loading.

# G-STRUT® CHANNEL » G102/G102A

1 5/8" X 1" (1.625" X 1.00") – 12 GAUGE (0.102" THICK)



-  **G102OS (OVAL-SLOT)**  
9/16" X 1 1/8" – 2" ON CTR.
-  **G102LS (LONG-SLOT)**  
13/32" X 3" – 4" ON CTR.
-  **G102H (HOLES)**  
9/16" DIAM. – 1 7/8" ON CTR.
-  **G102A (BACK-TO-BACK) WELDED**
-  **G102AOS (BACK-TO-BACK OVAL SLOT) WELDED**
-  **G102KO (KNOCK-OUT)**  
7/8" DIAM. – 6" ON CTR.

ENGINEERING DATA

|   |                             |       |   |          |                                  |   |
|---|-----------------------------|-------|---|----------|----------------------------------|---|
| THIS DRAWING IS THE PROPERTY OF GREGORY FENCE PRODUCTS AND IS LOANED TO YOU FOR YOUR USE ONLY. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. WITHOUT THE WRITTEN PERMISSION OF GREGORY FENCE PRODUCTS, THIS DRAWING IS NOT TO BE USED IN WHOLE OR IN PART TO ASSIST IN MAKING OR TO IMPROVE ANY INFORMATION FOR THE MAKING OF DRAWINGS, PRINTS, APPARATUS OR PARTS THEREOF. THIS DRAWING SHALL BE RETURNED TO GREGORY FENCE PRODUCTS UPON COMPLETION OF THE PROJECT AND SHALL BE KEPT AS AN INVENTORY OF THESE PRODUCTS. OWNERSHIP IN AND TO THE DRAWING OF GREGORY FENCE PRODUCTS. | ITEM                        | QNT'Y | DESCRIPTION   |          | MATERIAL                         |   |
|   | SCALE FULL                  |       |   | CHK'D BY |                                  | ROLLFORM TOLERANCES<br>LENGTH ± 0.125"<br>ALL OTHER DIMENSIONS ± 0.020" |
|   | DWN BY IDI                  |       | 02-02-02  | APP'D BY |                                  |   |
|   | G-STRUT CHANNEL, PART #G102 |       |   |          |                                  |   |
| CAD FILENAME:<br>G102   |                             |       | <b>GREGORY STRUT PRODUCTS</b><br>Division of Gregory Industries<br>4100 13th Street SW; Canton, OH 44710<br>PH: 330-477-4800 FX: 330-477-0626 |          | REF. No.<br>DRWG No.<br><br>G102 |   |
| LAST PLOT DATE:<br>02-02-02   |                             |       |   |          |                                  |   |

# G-STRUT® CHANNEL » G102/G102A

1 5/8" X 1" (1.625" X 1.00") – 12 GAUGE (0.102" THICK)

## ELEMENTS OF SECTION

| STRUT SECTION NUMBER | WEIGHT/ FOOT LBS. | AREA OF SECTION IN. <sup>2</sup> | XX-AXIS                            |                                  |                        | YY-AXIS                            |                                  |                        |
|----------------------|-------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|------------------------------------|----------------------------------|------------------------|
|                      |                   |                                  | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. |
| G102                 | 1.395             | 0.41                             | 0.051                              | 0.087                            | 0.353                  | 0.156                              | 0.192                            | 0.617                  |
| G102A                | 2.79              | 0.82                             | 0.241                              | 0.241                            | 0.542                  | 0.312                              | 0.384                            | 0.617                  |

## G102 BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G102                 | 12                         | 7530                | 1450                             | 0.02                     | -                                     |
|                      | 18                         | 7060                | 960                              | 0.04                     | -                                     |
|                      | 24                         | 6520                | 720                              | 0.08                     | -                                     |
|                      | 30                         | 5910                | 580                              | 0.13                     | 520                                   |
|                      | 36                         | 5220                | 480                              | 0.19                     | 360                                   |
|                      | 42                         | 4460                | 410                              | 0.26                     | 260                                   |
|                      | 48                         | 3630                | 360                              | 0.35                     | 200                                   |
|                      | 54                         | 2870                | 320                              | 0.44                     | 160                                   |
|                      | 60                         | 2320                | 290                              | 0.55                     | 130                                   |
|                      | 66                         | 1920                | 260                              | 0.65                     | 100                                   |
|                      | 72                         | 1610                | 240                              | 0.78                     | 90                                    |
|                      | 84                         | -                   | 200                              | 1.04                     | 60                                    |
|                      | 96                         | -                   | 180                              | 1.4                      | 50                                    |
|                      | 108                        | -                   | 160                              | 1.77                     | 40                                    |
|                      | 120                        | -                   | 140                              | 2.12                     | 30                                    |
|                      | 132                        | -                   | 130                              | 2.63                     | 20                                    |
|                      | 144                        | -                   | 120                              | 3.15                     | 20                                    |
|                      | 156                        | -                   | 110                              | 3.67                     | 10                                    |
|                      | 168                        | -                   | 100                              | 4.17                     | 10                                    |
|                      | 180                        | -                   | 90                               | 4.62                     | 10                                    |
| 192                  | -                          | 90                  | 5.6                              | 10                       |                                       |
| 204                  | -                          | 80                  | 5.97                             | 10                       |                                       |
| 216                  | -                          | 80                  | 7.09                             | 10                       |                                       |
| 228                  | -                          | 70                  | 7.3                              | 0                        |                                       |
| 240                  | -                          | 70                  | 8.51                             | 0                        |                                       |

# G-STRUT® CHANNEL » G102/G102A

1 5/8" X 1" (1.625" X 1.00") – 12 GAUGE (0.102" THICK)

## G102A BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G102A                | 12                         | 15760               | 4010                             | 0.01                     | -                                     |
|                      | 18                         | 15360               | 2670                             | 0.02                     | -                                     |
|                      | 24                         | 14900               | 2000                             | 0.05                     | -                                     |
|                      | 30                         | 14400               | 1600                             | 0.08                     | -                                     |
|                      | 36                         | 13840               | 1330                             | 0.11                     | -                                     |
|                      | 42                         | 13240               | 1140                             | 0.15                     | -                                     |
|                      | 48                         | 12600               | 1000                             | 0.2                      | -                                     |
|                      | 54                         | 11910               | 890                              | 0.26                     | 760                                   |
|                      | 60                         | 11190               | 800                              | 0.32                     | 620                                   |
|                      | 66                         | 10420               | 730                              | 0.39                     | 510                                   |
|                      | 72                         | 9600                | 660                              | 0.45                     | 430                                   |
|                      | 84                         | 7850                | 570                              | 0.62                     | 310                                   |
|                      | 96                         | 6060                | 500                              | 0.82                     | 240                                   |
|                      | 108                        | 4790                | 440                              | 1.03                     | 190                                   |
|                      | 120                        | 3880                | 400                              | 1.28                     | 150                                   |
|                      | 132                        | 3210                | 360                              | 1.54                     | 120                                   |
|                      | 144                        | -                   | 330                              | 1.83                     | 100                                   |
|                      | 156                        | -                   | 300                              | 2.12                     | 90                                    |
|                      | 168                        | -                   | 280                              | 2.47                     | 70                                    |
|                      | 180                        | -                   | 260                              | 2.82                     | 60                                    |
| 192                  | -                          | 250                 | 3.29                             | 60                       |                                       |
| 204                  | -                          | 230                 | 3.63                             | 50                       |                                       |
| 216                  | -                          | 220                 | 4.13                             | 40                       |                                       |
| 228                  | -                          | 210                 | 4.63                             | 40                       |                                       |
| 240                  | -                          | 200                 | 5.15                             | 30                       |                                       |



# G-STRUT® CHANNEL » G102/G102A

## 1 5/8" X 1" (1.625" X 1.00") – 12 GAUGE (0.102" THICK)

FOR PERFORATED CHANNELS, REDUCE TOTAL BEAM LOAD VALUES AS FOLLOWS:

|   |             |    |     |
|---|-------------|----|-----|
| ☰ | G102/G102A  | OS | 22% |
|   | G102/G102A  | LS | 35% |
|   | G102/G102A  | H  | 13% |
|   | G102 /G102A | KO | 6%  |

E=29000; Fy=42700; K=0.8

### Beam loads

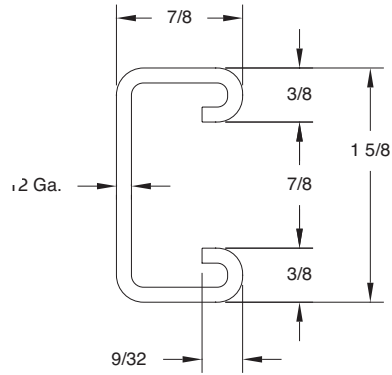
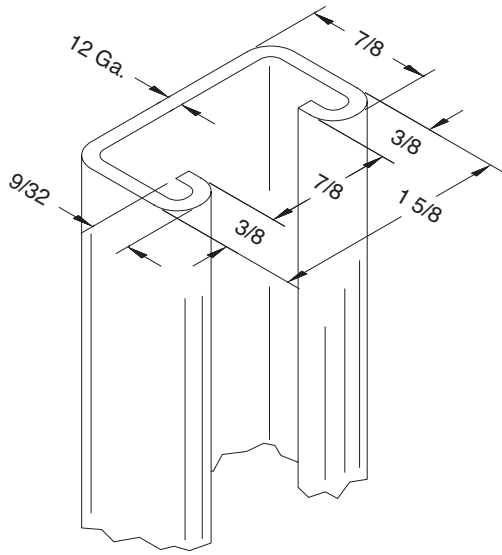
Loads listed are distributed uniformly. For loads concentrated at center of span, multiply uniform load by 0.5 and deflection by 0.8. Where deflection is not a factor, use stress of 25,000 PSI. When deflection is a factor, use deflection of 1/240 span.

### Column loads

Column loads are for allowable axial loads for the unsupported heights listed (*including a K value of 0.80*). Column loads must be reduced for eccentric loading.

# G-STRUT® CHANNEL » G782/G782A

1 5/8" X 7/8" (1.625" X 0.875") – 12 GAUGE (0.102" THICK)



-  **G782OS (OVAL-SLOT)**  
9/16" X 1 1/8" – 2" ON CTR.
-  **G782LS (LONG-SLOT)**  
13/32" X 3" – 4" ON CTR.
-  **G782H (HOLES)**  
9/16" DIAM. – 1 7/8" ON CTR.
-  **G782A (BACK-TO-BACK) WELDED**
-  **G782AOS (BACK-TO-BACK OVAL SLOT) WELDED**
-  **G782KO (KNOCK-OUT)**  
7/8" DIAM. – 6" ON CTR.

ENGINEERING DATA

|  |                             |       |   |  |   |
|--|-----------------------------|-------|---|--|---|
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|  | ROLLFORM TOLERANCES         |       |   |  |   |
|  | SCALE FULL                  |       | CHK'D BY  |  | LENGTH ± 0.125"                         |
|  | DWN BY IDI 02-02-02         |       | APP'D BY  |  | ALL OTHER DIMENSIONS ± 0.020"           |
|  | G-STRUT CHANNEL, PART :G782 |       |   |  |   |
| CAD FILENAME:<br>G782<br><br>LAST PLOT DATE:<br>02-02-02   |                             |       | <b>GREGORY STRUT PRODUCTS</b><br>Division of Gregory Industries<br>4100 13th Street SW; Canton, OH 44710<br>PH: 330-477-4800 FX: 330-477-0626 |  | REF. No.<br>DRWG No.<br><br><b>G782</b> |

# G-STRUT® CHANNEL » G782/G782A

1 5/8" X 7/8" (1.625" X 0.875") – 12 GAUGE (0.102" THICK)

## ELEMENTS OF SECTION

| STRUT SECTION NUMBER | WEIGHT/ FOOT LBS. | AREA OF SECTION IN. <sup>2</sup> | XX-AXIS                            |                                  |                        | YY-AXIS                            |                                  |                        |
|----------------------|-------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|------------------------------------|----------------------------------|------------------------|
|                      |                   |                                  | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. |
| G782                 | 1.307             | 0.384                            | 0.037                              | 0.069                            | 0.306                  | 0.141                              | 0.174                            | 0.606                  |
| G782A                | 2.613             | 0.768                            | 0.168                              | 0.192                            | 0.468                  | 0.282                              | 0.347                            | 0.606                  |

## G782 BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G782                 | 12                         | 6820                | 1150                             | 0.02                     | -                                     |
|                      | 18                         | 6290                | 760                              | 0.05                     | -                                     |
|                      | 24                         | 5680                | 570                              | 0.09                     | -                                     |
|                      | 30                         | 4970                | 460                              | 0.15                     | 370                                   |
|                      | 36                         | 4180                | 380                              | 0.22                     | 250                                   |
|                      | 42                         | 3300                | 320                              | 0.29                     | 180                                   |
|                      | 48                         | 2520                | 280                              | 0.38                     | 140                                   |
|                      | 54                         | 1990                | 250                              | 0.49                     | 110                                   |
|                      | 60                         | 1610                | 230                              | 0.61                     | 90                                    |
|                      | 66                         | 1330                | 200                              | 0.71                     | 70                                    |
|                      | 72                         | 1120                | 190                              | 0.88                     | 60                                    |
|                      | 84                         | -                   | 160                              | 1.18                     | 40                                    |
|                      | 96                         | -                   | 140                              | 1.54                     | 30                                    |
|                      | 108                        | -                   | 120                              | 1.88                     | 20                                    |
|                      | 120                        | -                   | 110                              | 2.37                     | 20                                    |
|                      | 132                        | -                   | 100                              | 2.86                     | 10                                    |
|                      | 144                        | -                   | 90                               | 3.35                     | 10                                    |
|                      | 156                        | -                   | 80                               | 3.78                     | 10                                    |
|                      | 168                        | -                   | 80                               | 4.73                     | 10                                    |
|                      | 180                        | -                   | 70                               | 5.09                     | 10                                    |
| 192                  | -                          | 70                  | 6.17                             | 0                        |                                       |
| 204                  | -                          | 60                  | 6.35                             | 0                        |                                       |
| 216                  | -                          | 60                  | 7.54                             | 0                        |                                       |
| 228                  | -                          | 60                  | 8.86                             | 0                        |                                       |
| 240                  | -                          | 50                  | 8.63                             | 0                        |                                       |

# G-STRUT® CHANNEL » G782/G782A

1 5/8" X 7/8" (1.625" X 0.875") – 12 GAUGE (0.102" THICK)


## G782A BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G782A                | 12                         | 14430               | 3200                             | 0.01                     | -                                     |
|                      | 18                         | 13980               | 2130                             | 0.03                     | -                                     |
|                      | 24                         | 13460               | 1600                             | 0.05                     | -                                     |
|                      | 30                         | 12890               | 1280                             | 0.09                     | -                                     |
|                      | 36                         | 12260               | 1060                             | 0.13                     | -                                     |
|                      | 42                         | 11580               | 910                              | 0.18                     | 880                                   |
|                      | 48                         | 10850               | 800                              | 0.23                     | 670                                   |
|                      | 54                         | 10060               | 710                              | 0.29                     | 530                                   |
|                      | 60                         | 9230                | 640                              | 0.36                     | 430                                   |
|                      | 66                         | 8340                | 580                              | 0.44                     | 350                                   |
|                      | 72                         | 7400                | 530                              | 0.52                     | 300                                   |
|                      | 84                         | 5510                | 450                              | 0.71                     | 220                                   |
|                      | 96                         | 4220                | 400                              | 0.94                     | 160                                   |
|                      | 108                        | 3330                | 350                              | 1.17                     | 130                                   |
|                      | 120                        | -                   | 320                              | 1.47                     | 100                                   |
|                      | 132                        | -                   | 290                              | 1.78                     | 80                                    |
|                      | 144                        | -                   | 260                              | 2.07                     | 70                                    |
|                      | 156                        | -                   | 240                              | 2.43                     | 60                                    |
|                      | 168                        | -                   | 220                              | 2.78                     | 50                                    |
|                      | 180                        | -                   | 210                              | 3.27                     | 40                                    |
| 192                  | -                          | 200                 | 3.78                             | 40                       |                                       |
| 204                  | -                          | 180                 | 4.08                             | 30                       |                                       |
| 216                  | -                          | 170                 | 4.57                             | 30                       |                                       |
| 228                  | -                          | 160                 | 5.06                             | 20                       |                                       |
| 240                  | -                          | 160                 | 5.91                             | 20                       |                                       |

# G-STRUT® CHANNEL » G782/G782A

1 5/8" X 7/8" (1.625" X 0.875") – 12 GAUGE (0.102" THICK)

FOR PERFORATED CHANNELS, REDUCE TOTAL BEAM LOAD VALUES AS FOLLOWS:

|   |            |    |     |
|---|------------|----|-----|
|  | G782/G782A | OS | 22% |
|   | G782/G782A | LS | 46% |
|   | G782/G782A | H  | 20% |
|   | G782/G782A | KO | 11% |

E=29000; Fy=42700; K=0.8

## Beam loads

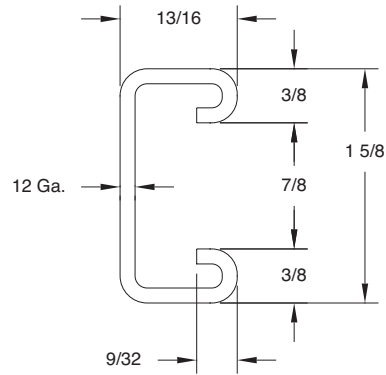
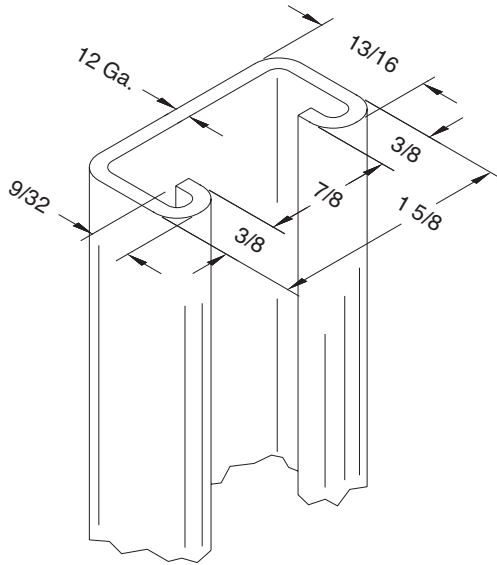
Loads listed are distributed uniformly. For loads concentrated at center of span, multiply uniform load by 0.5 and deflection by 0.8. Where deflection is not a factor, use stress of 25,000 PSI. When deflection is a factor, use deflection of 1/240 span.

## Column loads

Column loads are for allowable axial loads for the unsupported heights listed (*including a K value of 0.80*). Column loads must be reduced for eccentric loading.

# G-STRUT® CHANNEL » G132/G132A

1 5/8" X 13/16" (1.625" X 0.8125") – 12 GAUGE (0.102" THICK)



-  **G132OS (OVAL-SLOT)**  
9/16" X 1 1/8" – 2" ON CTR.
-  **G132LS (LONG-SLOT)**  
13/32" X 3" – 4" ON CTR.
-  **G132H (HOLES)**  
9/16" DIAM. – 1 7/8" ON CTR.
-  **G132A (BACK-TO-BACK) WELDED**
-  **G132AOS (BACK-TO-BACK OVAL SLOT) WELDED**
-  **G132KO (KNOCK-OUT)**  
7/8" DIAM. – 6" ON CTR.

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| ITEM                               | QNT'Y        | DESCRIPTION   | MATERIAL                      |
|------------------------------------|--------------|---|-------------------------------|
|                                    |              | <b>ROLLFORM TOLERANCES</b>  |                               |
| SCALE FULL                         |              | CHK'D BY  | LENGTH ± 0.125"               |
| DWN BY                             | IDI 02-02-02 | APP'D BY  | ALL OTHER DIMENSIONS ± 0.020" |
| <b>G-STRUT CHANNEL, PART :G132</b> |              |   |                               |
| CAD FILENAME:<br>G132              |              | <b>GREGORY STRUT PRODUCTS</b><br>Division of Gregory Industries<br>4100 13th Street SW; Canton, OH 44710<br>PH: 330-477-4800 FX: 330-477-0626 |                               |
| LAST PLOT DATE:<br>02-02-02        |              | REF. No.  | DRWG No.                      |
|                                    |              | <b>G132</b>   |                               |

# G-STRUT® CHANNEL » G132/G132A

1 5/8" X 13/16" (1.625" X 0.8125") – 12 GAUGE (0.102" THICK)

## ELEMENTS OF SECTION

| STRUT SECTION NUMBER | WEIGHT/ FOOT LBS. | AREA OF SECTION IN. <sup>2</sup> | XX-AXIS                            |                                  |                        | YY-AXIS                            |                                  |                        |
|----------------------|-------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|------------------------------------|----------------------------------|------------------------|
|                      |                   |                                  | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. |
| G132                 | 1.262             | 0.371                            | 0.029                              | 0.06                             | 0.28                   | 0.134                              | 0.165                            | 0.601                  |
| G132A                | 2.525             | 0.742                            | 0.137                              | 0.169                            | 0.43                   | 0.268                              | 0.33                             | 0.601                  |

## G132 BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G132                 | 12                         | 6430                | 1000                             | 0.02                     | -                                     |
|                      | 18                         | 5860                | 660                              | 0.05                     | -                                     |
|                      | 24                         | 5180                | 500                              | 0.1                      | -                                     |
|                      | 30                         | 4410                | 400                              | 0.16                     | 290                                   |
|                      | 36                         | 3530                | 330                              | 0.23                     | 200                                   |
|                      | 42                         | 2630                | 280                              | 0.32                     | 150                                   |
|                      | 48                         | 2020                | 250                              | 0.42                     | 110                                   |
|                      | 54                         | 1590                | 220                              | 0.53                     | 90                                    |
|                      | 60                         | 1290                | 200                              | 0.66                     | 70                                    |
|                      | 66                         | 1060                | 180                              | 0.8                      | 60                                    |
|                      | 72                         | -                   | 160                              | 0.92                     | 50                                    |
|                      | 84                         | -                   | 140                              | 1.28                     | 30                                    |
|                      | 96                         | -                   | 120                              | 1.64                     | 20                                    |
|                      | 108                        | -                   | 110                              | 2.14                     | 20                                    |
|                      | 120                        | -                   | 100                              | 2.67                     | 10                                    |
|                      | 132                        | -                   | 90                               | 3.2                      | 10                                    |
|                      | 144                        | -                   | 80                               | 3.69                     | 10                                    |
|                      | 156                        | -                   | 70                               | 4.11                     | 10                                    |
|                      | 168                        | -                   | 70                               | 5.13                     | 0                                     |
|                      | 180                        | -                   | 60                               | 5.41                     | 0                                     |
| 192                  | -                          | 60                  | 6.57                             | 0                        |                                       |
| 204                  | -                          | 50                  | 6.57                             | 0                        |                                       |
| 216                  | -                          | 50                  | 7.8                              | 0                        |                                       |
| 228                  | -                          | 50                  | 9.17                             | 0                        |                                       |
| 240                  | -                          | 50                  | 10.7                             | 0                        |                                       |

# G-STRUT® CHANNEL » G132/G132A

1 5/8" X 13/16" (1.625" X 0.8125") – 12 GAUGE (0.102" THICK)

## G132A BEAM & COLUMN LOADS


| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G132A                | 12                         | 13720               | 2810                             | 0.01                     | -                                     |
|                      | 18                         | 13240               | 1870                             | 0.03                     | -                                     |
|                      | 24                         | 12690               | 1400                             | 0.06                     | -                                     |
|                      | 30                         | 12080               | 1120                             | 0.09                     | -                                     |
|                      | 36                         | 11400               | 930                              | 0.14                     | -                                     |
|                      | 42                         | 10670               | 800                              | 0.19                     | 720                                   |
|                      | 48                         | 9880                | 700                              | 0.25                     | 550                                   |
|                      | 54                         | 9030                | 620                              | 0.31                     | 430                                   |
|                      | 60                         | 8120                | 560                              | 0.39                     | 350                                   |
|                      | 66                         | 7150                | 510                              | 0.48                     | 290                                   |
|                      | 72                         | 6110                | 460                              | 0.56                     | 240                                   |
|                      | 84                         | 4490                | 400                              | 0.77                     | 180                                   |
|                      | 96                         | 3440                | 350                              | 1.01                     | 130                                   |
|                      | 108                        | -                   | 310                              | 1.27                     | 100                                   |
|                      | 120                        | -                   | 280                              | 1.58                     | 80                                    |
|                      | 132                        | -                   | 250                              | 1.88                     | 70                                    |
|                      | 144                        | -                   | 230                              | 2.25                     | 60                                    |
|                      | 156                        | -                   | 210                              | 2.61                     | 50                                    |
|                      | 168                        | -                   | 200                              | 3.1                      | 40                                    |
|                      | 180                        | -                   | 180                              | 3.44                     | 30                                    |
| 192                  | -                          | 170                 | 3.94                             | 30                       |                                       |
| 204                  | -                          | 160                 | 4.45                             | 30                       |                                       |
| 216                  | -                          | 150                 | 4.95                             | 20                       |                                       |
| 228                  | -                          | 140                 | 5.43                             | 20                       |                                       |
| 240                  | -                          | 140                 | 6.34                             | 20                       |                                       |



# G-STRUT® CHANNEL » G132/G132A

1 5/8" X 13/16" (1.625" X 0.8125") – 12 GAUGE (0.102" THICK)

FOR PERFORATED CHANNELS, REDUCE TOTAL BEAM LOAD VALUES AS FOLLOWS:

|   |            |    |     |
|---|------------|----|-----|
|  | G132/G132A | OS | 22% |
|   | G132/G132A | LS | 35% |
|   | G132/G132A | H  | 14% |
|   | G132/G132A | KO | 6%  |

E=29000; Fy=42700; K=0.8

## Beam loads

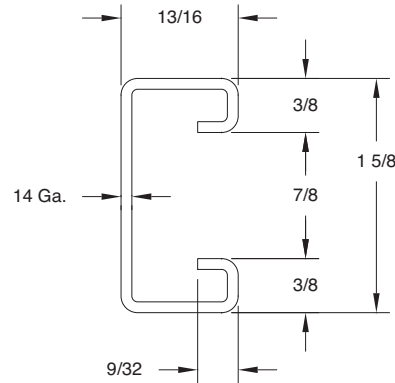
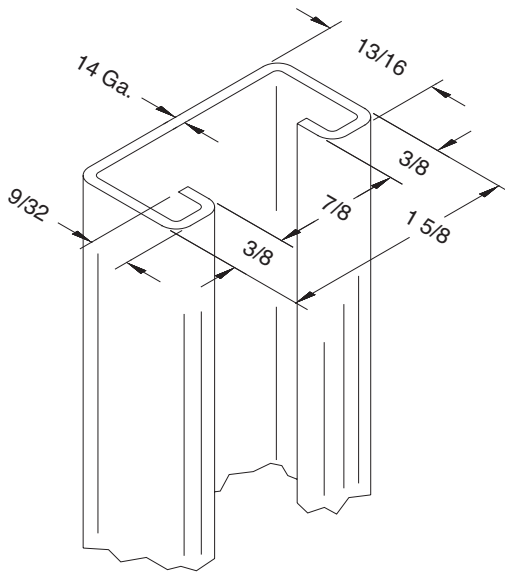
Loads listed are distributed uniformly. For loads concentrated at center of span, multiply uniform load by 0.5 and deflection by 0.8. Where deflection is not a factor, use stress of 25,000 PSI. When deflection is a factor, use deflection of 1/240 span.




## Column loads

Column loads are for allowable axial loads for the unsupported heights listed (*including a K value of 0.80*). Column loads must be reduced for eccentric loading.

# G-STRUT® CHANNEL » G134/G134A

1 5/8" X 13/16" (1.625" X 0.8125") – 14 GAUGE (0.077" THICK)



-  **G134OS (OVAL-SLOT)**  
9/16" X 1 1/8" – 2" ON CTR.
-  **G134LS (LONG-SLOT)**  
13/32" X 3" – 4" ON CTR.
-  **G134H (HOLES)**  
9/16" DIAM. – 1 7/8" ON CTR.
-  **G134A (BACK-TO-BACK)**  
WELDED
-  **G134AOS (BACK-TO-BACK OVAL SLOT)**  
WELDED
-  **G134KO (KNOCK-OUT)**  
7/8" DIAM. – 6" ON CTR.

ENGINEERING DATA

|  |                     |   |             |  |   |
|--|---------------------|---|-------------|--|---|
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|  | ROLLFORM TOLERANCES |   |             |  |   |
|  | SCALE FULL          |   | CHK'D BY    |  | LENGTH ± 0.125"                         |
|  | DWN BY IDI 02-02-02 |   | APP'D BY    |  | ALL OTHER DIMENSIONS ± 0.020"           |
| <b>G-STRUT CHANNEL, PART G134</b>  |                     |   |             |  |   |
| CAD FILENAME:<br>G134  |                     | <b>GREGORY STRUT PRODUCTS</b><br>Division of Gregory Industries<br>4100 13th Street SW; Canton, OH 44710<br>PH: 330-477-4800 FX: 330-477-0626 |             |  | REF. No.<br>DRWG No.<br><br><b>G134</b> |
| LAST PLOT DATE:<br>02-02-02  |                     |   |             |  |   |

# G-STRUT® CHANNEL » G134/G134A

1 5/8" X 13/16" (1.625" X 0.8125") – 14 GAUGE (0.077" THICK)

## ELEMENTS OF SECTION

| STRUT SECTION NUMBER | WEIGHT/ FOOT LBS. | AREA OF SECTION IN. <sup>2</sup> | XX-AXIS                            |                                  |                        | YY-AXIS                            |                                  |                        |
|----------------------|-------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|------------------------------------|----------------------------------|------------------------|
|                      |                   |                                  | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. | MOMENT OF INERTIA IN. <sup>4</sup> | SECTION MODULUS IN. <sup>3</sup> | RADIUS OF GYRATION IN. |
| G134                 | 1.000             | 0.294                            | 0.025                              | 0.052                            | 0.292                  | 0.109                              | 0.134                            | 0.609                  |
| G134A                | 2.001             | 0.588                            | 0.115                              | 0.142                            | 0.442                  | 0.218                              | 0.268                            | 0.609                  |

## G134 BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G134                 | 12                         | 5220                | 860                              | 0.02                     | -                                     |
|                      | 18                         | 4800                | 570                              | 0.05                     | -                                     |
|                      | 24                         | 4300                | 430                              | 0.1                      | -                                     |
|                      | 30                         | 3730                | 340                              | 0.16                     | 250                                   |
|                      | 36                         | 3090                | 280                              | 0.23                     | 170                                   |
|                      | 42                         | 2380                | 240                              | 0.31                     | 130                                   |
|                      | 48                         | 1820                | 210                              | 0.41                     | 100                                   |
|                      | 54                         | 1440                | 190                              | 0.53                     | 70                                    |
|                      | 60                         | 1170                | 170                              | 0.65                     | 60                                    |
|                      | 66                         | 960                 | 150                              | 0.77                     | 50                                    |
|                      | 72                         | -                   | 140                              | 0.93                     | 40                                    |
|                      | 84                         | -                   | 120                              | 1.27                     | 30                                    |
|                      | 96                         | -                   | 100                              | 1.58                     | 20                                    |
|                      | 108                        | -                   | 90                               | 2.03                     | 10                                    |
|                      | 120                        | -                   | 80                               | 2.48                     | 10                                    |
|                      | 132                        | -                   | 70                               | 2.89                     | 10                                    |
|                      | 144                        | -                   | 70                               | 3.75                     | 10                                    |
|                      | 156                        | -                   | 60                               | 4.09                     | 0                                     |
|                      | 168                        | -                   | 60                               | 5.1                      | 0                                     |
|                      | 180                        | -                   | 50                               | 5.23                     | 0                                     |
| 192                  | -                          | 50                  | 6.35                             | 0                        |                                       |
| 204                  | -                          | 50                  | 7.62                             | 0                        |                                       |
| 216                  | -                          | 40                  | 7.23                             | 0                        |                                       |
| 228                  | -                          | 40                  | 8.51                             | 0                        |                                       |
| 240                  | -                          | 40                  | 9.93                             | 0                        |                                       |

# G-STRUT® CHANNEL » G134/G134A

1 5/8" X 13/16" (1.625" X 0.8125") – 14 GAUGE (0.077" THICK)


## G134A BEAM & COLUMN LOADS

| STRUT SECTION NUMBER | BEAM SPAN OR COLUMN HEIGHT | MAXIMUM COLUMN LOAD | TOTAL UNIFORM LOAD AT 25,000 PSI | DEFLECTION AT 25,000 PSI | UNIFORM LOAD AT 1/240 SPAN DEFLECTION |
|----------------------|----------------------------|---------------------|----------------------------------|--------------------------|---------------------------------------|
|                      | IN.                        | LBS.                | LBS.                             | IN.                      | LBS.                                  |
| G134A                | 12                         | 11060               | 2360                             | 0.01                     | -                                     |
|                      | 18                         | 10690               | 1570                             | 0.03                     | -                                     |
|                      | 24                         | 10270               | 1180                             | 0.06                     | -                                     |
|                      | 30                         | 9790                | 940                              | 0.09                     | -                                     |
|                      | 36                         | 9270                | 780                              | 0.14                     | -                                     |
|                      | 42                         | 8700                | 670                              | 0.19                     | 600                                   |
|                      | 48                         | 8090                | 590                              | 0.25                     | 460                                   |
|                      | 54                         | 7440                | 520                              | 0.31                     | 360                                   |
|                      | 60                         | 6740                | 470                              | 0.39                     | 290                                   |
|                      | 66                         | 6000                | 430                              | 0.48                     | 240                                   |
|                      | 72                         | 5170                | 390                              | 0.56                     | 200                                   |
|                      | 84                         | 3790                | 330                              | 0.76                     | 150                                   |
|                      | 96                         | 2900                | 290                              | 1                        | 110                                   |
|                      | 108                        | 2290                | 260                              | 1.27                     | 90                                    |
|                      | 120                        | -                   | 230                              | 1.55                     | 70                                    |
|                      | 132                        | -                   | 210                              | 1.88                     | 60                                    |
|                      | 144                        | -                   | 190                              | 2.21                     | 50                                    |
|                      | 156                        | -                   | 180                              | 2.66                     | 40                                    |
|                      | 168                        | -                   | 160                              | 2.96                     | 30                                    |
|                      | 180                        | -                   | 150                              | 3.41                     | 30                                    |
| 192                  | -                          | 140                 | 3.86                             | 20                       |                                       |
| 204                  | -                          | 130                 | 4.3                              | 20                       |                                       |
| 216                  | -                          | 130                 | 5.11                             | 20                       |                                       |
| 228                  | -                          | 120                 | 5.55                             | 20                       |                                       |
| 240                  | -                          | 110                 | 5.93                             | 10                       |                                       |

# G-STRUT® CHANNEL » G134/G134A

1 5/8" X 13/16" (1.625" X 0.8125") – 14 GAUGE (0.077" THICK)

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