

BXUV.X795
Structural Pipe Columns
GCP APPLIED TECHNOLOGIES INC — Types Z-146, Z-146 NPP, Z-146PC, Z-146T, Z-156, Z-156PC, Z-156T

| Member | | | 1 hr | 1.5 hr | 2 hr | 3 hr | 4 hr |
|-----------------------|----------------|-------|--------|--------|---------|---------|---------|
| Nominal Pipe Diameter | Wall Thickness | A/P | | | | | |
| 1 1/2 | 0.2 | 0.173 | 1 1/16 | 1 3/4 | 2 3/8 | 3 11/16 | NR |
| 2 | 0.218 | 0.194 | 15/16 | 1 9/16 | 2 1/8 | 3 5/16 | NR |
| 2 | 0.436 | 0.341 | 9/16 | 7/8 | 1 1/4 | 1 7/8 | 2 9/16 |
| 2 1/2 | 0.203 | 0.187 | 1 | 1 5/8 | 2 3/16 | 3 7/16 | NR |
| 2 1/2 | 0.276 | 0.246 | 3/4 | 1 1/4 | 1 11/16 | 2 5/8 | 3 1/2 |
| 2 1/2 | 0.552 | 0.430 | 7/16 | 11/16 | 1 | 1 1/2 | 2 |
| 3 | 0.216 | 0.200 | 15/16 | 1 1/2 | 2 1/16 | 3 3/16 | NR |
| 3 | 0.3 | 0.270 | 11/16 | 1 1/8 | 1 9/16 | 2 3/8 | 3 3/16 |
| 3 | 0.6 | 0.480 | 3/8 | 5/8 | 7/8 | 1 3/8 | 1 13/16 |
| 3 1/2 | 0.226 | 0.211 | 7/8 | 1 7/16 | 1 15/16 | 3 | NR |
| 3 1/2 | 0.318 | 0.289 | 5/8 | 1 1/16 | 1 7/16 | 2 3/16 | 3 |
| 4 | 0.237 | 0.223 | 13/16 | 1 3/8 | 1 13/16 | 2 5/8 | 3 1/2 |
| 4 | 0.337 | 0.309 | 5/8 | 1 | 1 3/8 | 2 1/16 | 2 13/16 |
| 4 | 0.674 | 0.560 | 3/8 | 9/16 | 3/4 | 1 3/16 | 1 9/16 |
| 5 | 0.258 | 0.245 | 3/4 | 1 1/4 | 1 11/16 | 2 5/8 | 3 9/16 |
| 5 | 0.375 | 0.347 | 9/16 | 7/8 | 1 3/16 | 1 7/8 | 2 1/2 |
| 5 | 0.75 | 0.638 | 5/16 | 1/2 | 11/16 | 1 | 1 3/8 |
| 6 | 0.28 | 0.267 | 11/16 | 1 1/8 | 1 9/16 | 2 3/8 | 3 1/4 |
| 6 | 0.432 | 0.401 | 1/2 | 3/4 | 1 1/16 | 1 5/8 | 2 3/16 |
| 6 | 0.864 | 0.740 | 1/4 | 7/16 | 9/16 | 7/8 | 1 3/16 |
| 6 | 0.864 | 0.740 | 1/4 | 7/16 | 9/16 | 7/8 | 1 3/16 |
| 8 | 0.322 | 0.309 | 5/8 | 1 | 1 3/8 | 2 1/16 | 2 13/16 |
| 8 | 0.5 | 0.469 | 7/16 | 11/16 | 7/8 | 1 3/8 | 1 7/8 |
| 8 | 0.875 | 0.779 | 1/4 | 7/16 | 9/16 | 13/16 | 1 1/8 |
| 10 | 0.365 | 0.352 | 9/16 | 7/8 | 1 3/16 | 1 13/16 | 2 7/16 |
| 10 | 0.5 | 0.475 | 3/8 | 5/8 | 7/8 | 1 3/8 | 1 13/16 |
| 12 | 0.375 | 0.363 | 1/2 | 13/16 | 1 1/8 | 1 3/4 | 2 3/8 |
| 12 | 0.5 | 0.479 | 3/8 | 5/8 | 7/8 | 1 3/8 | 1 13/16 |
| Other | 0.180 | | 1 | 1 7/16 | 1 13/16 | 2 9/16 | 3 5/16 |
| Other | 0.190 | | 1 | 1 7/16 | 1 13/16 | 2 9/16 | 3 5/16 |
| Other | 0.200 | | 15/16 | 1 7/16 | 1 13/16 | 2 9/16 | 3 5/16 |
| Other | 0.210 | | 7/8 | 1 7/16 | 1 13/16 | 2 9/16 | 3 5/16 |
| Other | 0.220 | | 7/8 | 1 3/8 | 1 13/16 | 2 9/16 | 3 5/16 |
| Other | 0.230 | | 13/16 | 1 5/16 | 1 13/16 | 2 9/16 | 3 5/16 |
| Other | 0.240 | | 13/16 | 1 1/4 | 1 3/4 | 2 9/16 | 3 5/16 |
| Other | 0.250 | | 3/4 | 1 3/16 | 1 11/16 | 2 9/16 | 3 5/16 |
| Other | 0.260 | | 3/4 | 1 3/16 | 1 5/8 | 2 7/16 | 3 5/16 |
| Other | 0.270 | | 11/16 | 1 1/8 | 1 9/16 | 2 3/8 | 3 3/16 |
| Other | 0.280 | | 5/8 | 1 1/16 | 1 7/16 | 2 3/16 | 2 15/16 |

| Member | | 1 hr | 1.5 hr | 2 hr | 3 hr | 4 hr |
|--------|-------|-------|--------|--------|---------|---------|
| Other | 0.280 | 5/8 | 1 1/16 | 1 7/16 | 2 3/16 | 2 15/16 |
| Other | 0.290 | 5/8 | 1 1/16 | 1 7/16 | 2 3/16 | 2 15/16 |
| Other | 0.300 | 5/8 | 1 | 1 3/8 | 2 1/8 | 2 7/8 |
| Other | 0.310 | 5/8 | 1 | 1 5/16 | 2 1/16 | 2 13/16 |
| Other | 0.320 | 5/8 | 15/16 | 1 5/16 | 2 | 2 11/16 |
| Other | 0.330 | 9/16 | 7/8 | 1 1/4 | 1 7/8 | 2 9/16 |
| Other | 0.340 | 9/16 | 7/8 | 1 1/4 | 1 7/8 | 2 9/16 |
| Other | 0.350 | 9/16 | 7/8 | 1 3/16 | 1 13/16 | 2 1/2 |
| Other | 0.360 | 9/16 | 7/8 | 1 3/16 | 1 13/16 | 2 7/16 |
| Other | 0.370 | 1/2 | 13/16 | 1 1/8 | 1 3/4 | 2 3/8 |
| Other | 0.380 | 1/2 | 13/16 | 1 1/8 | 1 11/16 | 2 5/16 |
| Other | 0.39 | 1/2 | 13/16 | 1 1/16 | 1 5/8 | 2 1/4 |
| Other | 0.40 | 1/2 | 3/4 | 1 1/16 | 1 5/8 | 2 3/16 |
| Other | 0.41 | 1/2 | 3/4 | 1 | 1 9/16 | 2 1/8 |
| Other | 0.42 | 16/37 | 11/16 | 15/16 | 1 7/16 | 2 |
| Other | 0.43 | 16/37 | 11/16 | 15/16 | 1 7/16 | 2 |
| Other | 0.44 | 16/37 | 11/16 | 15/16 | 1 7/16 | 2 |
| Other | 0.45 | 16/37 | 11/16 | 15/16 | 1 7/16 | 1 15/16 |
| Other | 0.46 | 16/37 | 11/16 | 15/16 | 1 3/8 | 1 7/8 |
| Other | 0.47 | 16/37 | 5/8 | 7/8 | 1 3/8 | 1 7/8 |
| Other | 0.48 | 16/37 | 5/8 | 7/8 | 1 3/8 | 1 13/16 |
| Other | 0.49 | 3/8 | 5/8 | 7/8 | 1 5/16 | 1 13/16 |
| Other | 0.50 | 3/8 | 5/8 | 7/8 | 1 5/16 | 1 3/4 |
| Other | 0.51 | 3/8 | 5/8 | 13/16 | 1 1/4 | 1 11/16 |
| Other | 0.52 | 3/8 | 5/8 | 13/16 | 1 1/4 | 1 11/16 |
| Other | 0.53 | 3/8 | 9/16 | 13/16 | 1 1/4 | 1 5/8 |
| Other | 0.54 | 3/8 | 9/16 | 13/16 | 1 3/16 | 1 5/8 |
| Other | 0.55 | 3/8 | 9/16 | 3/4 | 1 3/16 | 1 9/16 |
| Other | 0.56 | 3/8 | 9/16 | 3/4 | 1 3/16 | 1 9/16 |
| Other | 0.57 | 3/8 | 9/16 | 3/4 | 1 1/8 | 1 9/16 |
| Other | 0.58 | 5/16 | 9/16 | 3/4 | 1 1/8 | 1 1/2 |
| Other | 0.59 | 5/16 | 1/2 | 3/4 | 1 1/8 | 1 1/2 |
| Other | 0.60 | 5/16 | 1/2 | 11/16 | 1 1/16 | 1 7/16 |
| Other | 0.51 | 3/8 | 5/8 | 13/16 | 1 1/4 | 1 11/16 |
| Other | 0.62 | 5/16 | 1/2 | 11/16 | 1 1/16 | 1 7/16 |
| Other | 0.63 | 5/16 | 1/2 | 11/16 | 1 1/16 | 1 3/8 |
| Other | 0.64 | 5/16 | 1/2 | 11/16 | 1 | 1 3/8 |
| Other | 0.65 | 5/16 | 1/2 | 11/16 | 1 | 1 3/8 |
| Other | 0.66 | 5/16 | 1/2 | 5/8 | 1 | 1 5/16 |
| Other | 0.67 | 5/16 | 1/2 | 5/8 | 1 | 1 5/16 |
| Other | 0.68 | 5/16 | 7/16 | 5/8 | 15/16 | 1 5/16 |
| Other | 0.69 | 5/16 | 7/16 | 5/8 | 15/16 | 1 1/4 |
| Other | 0.70 | 1/4 | 3/8 | 9/16 | 7/8 | 1 3/16 |
| Other | 0.71 | 1/4 | 3/8 | 9/16 | 7/8 | 1 3/16 |
| Other | 0.72 | 1/4 | 3/8 | 9/16 | 7/8 | 1 3/16 |
| Other | 0.73 | 1/4 | 3/8 | 9/16 | 7/8 | 1 3/16 |

| Member | | 1 hr | 1.5 hr | 2 hr | 3 hr | 4 hr |
|--------|------|------|--------|------|-------|--------|
| Other | 0.74 | 1/4 | 3/8 | 9/16 | 7/8 | 1 3/16 |
| Other | 0.75 | 1/4 | 3/8 | 9/16 | 7/8 | 1 3/16 |
| Other | 0.76 | 1/4 | 3/8 | 9/16 | 7/8 | 1 3/16 |
| Other | 0.77 | 1/4 | 3/8 | 9/16 | 7/8 | 1 1/8 |
| Other | 0.78 | 1/4 | 3/8 | 9/16 | 13/16 | 1 1/8 |
| Other | 0.79 | 1/4 | 3/8 | 9/16 | 13/16 | 1 1/8 |
| Other | 0.80 | 1/4 | 3/8 | 9/16 | 13/16 | 1 1/8 |
| Other | 0.81 | 1/4 | 3/8 | 9/16 | 13/16 | 1 1/16 |
| Other | 0.82 | 1/4 | 3/8 | 1/2 | 13/16 | 1 1/16 |
| Other | 0.83 | 1/4 | 3/8 | 1/2 | 13/16 | 1 1/16 |
| Other | 0.84 | 1/4 | 3/8 | 1/2 | 13/16 | 1 1/16 |
| Other | 0.85 | 1/4 | 3/8 | 1/2 | 3/4 | 1 1/16 |
| Other | 0.86 | 1/4 | 3/8 | 1/2 | 3/4 | 1 |
| Other | 0.87 | 1/4 | 3/8 | 1/2 | 3/4 | 1 |
| Other | 0.89 | 1/4 | 3/8 | 1/2 | 3/4 | 1 |
| Other | 0.90 | 1/4 | 3/8 | 1/2 | 3/4 | 1 |
| Other | 0.91 | 1/4 | 3/8 | 1/2 | 3/4 | 1 |
| Other | 0.92 | 1/4 | 3/8 | 1/2 | 11/16 | 15/16 |
| Other | 0.93 | 1/4 | 3/8 | 7/16 | 11/16 | 15/16 |
| Other | 0.94 | 1/4 | 5/16 | 7/16 | 11/16 | 15/16 |
| Other | 0.95 | 1/4 | 5/16 | 7/16 | 11/16 | 15/16 |
| Other | 0.96 | 1/4 | 5/16 | 7/16 | 11/16 | 15/16 |
| Other | 0.97 | 1/4 | 5/16 | 7/16 | 11/16 | 15/16 |
| Other | 0.98 | 1/4 | 5/16 | 7/16 | 11/16 | 15/16 |
| Other | 0.99 | 1/4 | 5/16 | 7/16 | 11/16 | 7/8 |
| Other | 1.00 | 1/4 | 5/16 | 7/16 | 11/16 | 7/8 |
| Other | 1.01 | 1/4 | 5/16 | 7/16 | 11/16 | 7/8 |
| Other | 1.02 | 1/4 | 5/16 | 7/16 | 5/8 | 7/8 |
| Other | 1.03 | 1/4 | 5/16 | 7/16 | 5/8 | 7/8 |
| Other | 1.04 | 1/4 | 5/16 | 7/16 | 5/8 | 7/8 |
| Other | 1.00 | 1/4 | 5/16 | 7/16 | 11/16 | 7/8 |
| Other | 1.05 | 1/4 | 5/16 | 7/16 | 5/8 | 7/8 |
| Other | 1.06 | 1/4 | 5/16 | 7/16 | 5/8 | 13/16 |
| Other | 1.07 | 1/4 | 5/16 | 7/16 | 5/8 | 13/16 |
| Other | 1.08 | 1/4 | 5/16 | 7/16 | 5/8 | 13/16 |
| Other | 1.09 | 1/4 | 5/16 | 3/8 | 5/8 | 13/16 |
| Other | 1.10 | 1/4 | 5/16 | 3/8 | 5/8 | 13/16 |
| Other | 1.11 | 1/4 | 5/16 | 3/8 | 5/8 | 13/16 |
| Other | 1.12 | 1/4 | 5/16 | 3/8 | 5/8 | 13/16 |
| Other | 1.13 | 1/4 | 5/16 | 3/8 | 9/16 | 13/16 |
| Other | 1.14 | 1/4 | 5/16 | 3/8 | 9/16 | 13/16 |
| Other | 1.15 | 1/4 | 5/16 | 3/8 | 9/16 | 3/4 |
| Other | 1.16 | 1/4 | 5/16 | 3/8 | 9/16 | 3/4 |
| Other | 1.17 | 1/4 | 5/16 | 3/8 | 9/16 | 3/4 |
| Other | 1.18 | 1/4 | 1/4 | 3/8 | 9/16 | 3/4 |
| Other | 1.20 | 1/4 | 1/4 | 3/8 | 9/16 | 3/4 |

| Member | | 1 hr | 1.5 hr | 2 hr | 3 hr | 4 hr |
|--------|------|------|--------|------|------|-------|
| Other | 1.21 | 1/4 | 1/4 | 3/8 | 9/16 | 3/4 |
| Other | 1.22 | 1/4 | 1/4 | 3/8 | 9/16 | 3/4 |
| Other | 1.23 | 1/4 | 1/4 | 3/8 | 9/16 | 3/4 |
| Other | 1.24 | 1/4 | 1/4 | 3/8 | 9/16 | 3/4 |
| Other | 1.25 | 1/4 | 1/4 | 3/8 | 9/16 | 11/16 |
| Other | 1.26 | 1/4 | 1/4 | 3/8 | 9/16 | 11/16 |
| Other | 1.27 | 1/4 | 1/4 | 3/8 | 1/2 | 11/16 |
| Other | 1.28 | 1/4 | 1/4 | 3/8 | 1/2 | 11/16 |
| Other | 1.29 | 1/4 | 1/4 | 3/8 | 1/2 | 11/16 |
| Other | 1.30 | 1/4 | 1/4 | 3/8 | 1/2 | 11/16 |
| Other | 1.31 | 1/4 | 1/4 | 5/16 | 1/2 | 11/16 |
| Other | 1.32 | 1/4 | 1/4 | 5/16 | 1/2 | 11/16 |
| Other | 1.33 | 1/4 | 1/4 | 5/16 | 1/2 | 11/16 |
| Other | 1.34 | 1/4 | 1/4 | 5/16 | 1/2 | 11/16 |
| Other | 1.35 | 1/4 | 1/4 | 5/16 | 1/2 | 11/16 |
| Other | 1.36 | 1/4 | 1/4 | 5/16 | 1/2 | 11/16 |
| Other | 1.37 | 1/4 | 1/4 | 5/16 | 1/2 | 11/16 |
| Other | 1.38 | 1/4 | 1/4 | 5/16 | 1/2 | 5/8 |
| Other | 1.39 | 1/4 | 1/4 | 5/16 | 1/2 | 5/8 |
| Other | 1.40 | 1/4 | 1/4 | 5/16 | 1/2 | 5/8 |
| Other | 1.41 | 1/4 | 1/4 | 5/16 | 1/2 | 5/8 |
| Other | 1.42 | 1/4 | 1/4 | 5/16 | 1/2 | 5/8 |
| Other | 1.43 | 1/4 | 1/4 | 5/16 | 1/2 | 5/8 |
| Other | 1.44 | 1/4 | 1/4 | 5/16 | 1/2 | 5/8 |
| Other | 1.45 | 1/4 | 1/4 | 5/16 | 7/16 | 5/8 |
| Other | 1.46 | 1/4 | 1/4 | 5/16 | 7/16 | 5/8 |
| Other | 1.47 | 1/4 | 1/4 | 5/16 | 7/16 | 5/8 |
| Other | 1.48 | 1/4 | 1/4 | 5/16 | 7/16 | 5/8 |
| Other | 1.49 | 1/4 | 1/4 | 5/16 | 7/16 | 5/8 |
| Other | 1.50 | 1/4 | 1/4 | 5/16 | 7/16 | 5/8 |
| Other | 1.51 | 1/4 | 1/4 | 5/16 | 7/16 | 5/8 |
| Other | 1.52 | 1/4 | 1/4 | 5/16 | 7/16 | 5/8 |
| Other | 1.53 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.54 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.55 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.56 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.57 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.58 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.59 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.60 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.61 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.62 | 1/4 | 1/4 | 5/16 | 7/16 | 9/16 |
| Other | 1.63 | 1/4 | 1/4 | 1/4 | 7/16 | 9/16 |
| Other | 1.64 | 1/4 | 1/4 | 1/4 | 7/16 | 9/16 |
| Other | 1.65 | 1/4 | 1/4 | 1/4 | 7/16 | 9/16 |
| Other | 1.66 | 1/4 | 1/4 | 1/4 | 7/16 | 9/16 |

| Member | | 1 hr | 1.5 hr | 2 hr | 3 hr | 4 hr |
|--------|------|------|--------|------|------|------|
| Other | 1.77 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.68 | 1/4 | 1/4 | 1/4 | 7/16 | 9/16 |
| Other | 1.69 | 1/4 | 1/4 | 1/4 | 3/8 | 9/16 |
| Other | 1.70 | 1/4 | 1/4 | 1/4 | 3/8 | 9/16 |
| Other | 1.71 | 1/4 | 1/4 | 1/4 | 3/8 | 9/16 |
| Other | 1.72 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.73 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.74 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.75 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.76 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.77 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.78 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.79 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.80 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.81 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.82 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.83 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.84 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.85 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.86 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.87 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.88 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.89 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.90 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.91 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.92 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.93 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.94 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.95 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.96 | 1/4 | 1/4 | 1/4 | 3/8 | 1/2 |
| Other | 1.97 | 1/4 | 1/4 | 1/4 | 3/8 | 7/16 |
| Other | 1.98 | 1/4 | 1/4 | 1/4 | 3/8 | 7/16 |
| Other | 1.99 | 1/4 | 1/4 | 1/4 | 3/8 | 7/16 |
| Other | 2.00 | 1/4 | 1/4 | 1/4 | 3/8 | 7/16 |

The information contained in these tables are provided for the convenience of our Monokote customers and while we have taken care to be as accurate as possible and update as listings are modified, GCP will not be held responsible for errors or inaccuracies. In case of discrepancy, values from the applicable design listings and rules associated with adjustment of thickness shall govern.

This table is intended to be used in conjunction with the specified UL Design BXUV.X795. All required components specified in that UL Design shall remain a required component to achieve the hourly ratings. Only the version of UL Design BXUV.X795 as shown on UL.com is considered current.