

## Southwest Fireproofing Type 5 GP, 5 MD, 7 GP and 7 HD

### Design Y725 - Column

Minimum Thickness, in., Required on Column for Size and Rating Indicated

| Member  | W/D  | 1 Hr  | 1.5 Hr | 2 Hr  | 3 Hr  | 4 Hr  |
|---------|------|-------|--------|-------|-------|-------|
| W4x13   | 0.73 | 0.598 | 0.896  | 1.195 | 1.793 | 2.390 |
| W5x16   | 0.54 | 0.674 | 1.011  | 1.348 | 2.022 | 2.696 |
| W5x19   | 0.64 | 0.632 | 0.947  | 1.263 | 1.895 | 2.526 |
| W6x9    | 0.33 | 0.785 | 1.178  | 1.563 | 2.356 | 3.141 |
| W6x12   | 0.44 | 0.723 | 1.084  | 1.446 | 2.168 | 2.891 |
| W6x16   | 0.57 | 0.661 | 0.991  | 1.313 | 1.982 | 2.625 |
| W6x20   | 0.56 | 0.665 | 0.998  | 1.330 | 1.995 | 2.661 |
| W6x26   | 0.68 | 0.616 | 0.924  | 1.232 | 1.848 | 2.464 |
| W8x10   | 0.32 | 0.791 | 1.187  | 1.583 | 2.374 | 3.166 |
| W8x13   | 0.41 | 0.739 | 1.108  | 1.478 | 2.216 | 2.955 |
| W8x15   | 0.47 | 0.707 | 1.061  | 1.415 | 2.122 | 2.830 |
| W8x18   | 0.49 | 0.698 | 1.046  | 1.395 | 2.093 | 2.790 |
| W8x21   | 0.57 | 0.661 | 0.991  | 1.313 | 1.982 | 2.625 |
| W8x24   | 0.58 | 0.656 | 0.985  | 1.313 | 1.969 | 2.625 |
| W8x28   | 0.67 | 0.620 | 0.930  | 1.240 | 1.859 | 2.479 |
| W8x31   | 0.65 | 0.628 | 0.941  | 1.255 | 1.883 | 2.510 |
| W8x35   | 0.73 | 0.598 | 0.896  | 1.195 | 1.793 | 2.390 |
| W8x40   | 0.83 | 0.564 | 0.846  | 1.125 | 1.688 | 2.250 |
| W8x48   | 0.98 | 0.520 | 0.780  | 1.040 | 1.560 | 2.080 |
| W8x58   | 1.17 | 0.473 | 0.710  | 0.946 | 1.420 | 1.893 |
| W8x67   | 1.34 | 0.438 | 0.657  | 0.876 | 1.314 | 1.752 |
| W10x12  | 0.34 | 0.779 | 1.169  | 1.558 | 2.337 | 3.116 |
| W10x15  | 0.42 | 0.733 | 1.100  | 1.467 | 2.200 | 2.934 |
| W10x17  | 0.48 | 0.702 | 1.054  | 1.405 | 2.107 | 2.810 |
| W10x19  | 0.53 | 0.679 | 1.018  | 1.357 | 2.036 | 2.715 |
| W10x22  | 0.51 | 0.688 | 1.032  | 1.376 | 2.064 | 2.752 |
| W10x26  | 0.60 | 0.648 | 0.972  | 1.296 | 1.944 | 2.592 |
| W10x30  | 0.69 | 0.612 | 0.918  | 1.224 | 1.837 | 2.449 |
| W10x33  | 0.65 | 0.628 | 0.941  | 1.255 | 1.883 | 2.510 |
| W10x39  | 0.76 | 0.587 | 0.881  | 1.174 | 1.761 | 2.348 |
| W10x46  | 0.87 | 0.551 | 0.827  | 1.103 | 1.654 | 2.206 |
| W10x49  | 0.83 | 0.564 | 0.846  | 1.125 | 1.688 | 2.250 |
| W10x54  | 0.91 | 0.540 | 0.809  | 1.079 | 1.619 | 2.158 |
| W10x60  | 1.00 | 0.515 | 0.772  | 1.029 | 1.544 | 2.058 |
| W10x68  | 1.13 | 0.482 | 0.724  | 0.965 | 1.447 | 1.929 |
| W10x77  | 1.26 | 0.454 | 0.681  | 0.908 | 1.362 | 1.816 |
| W10x88  | 1.43 | 0.421 | 0.632  | 0.843 | 1.264 | 1.686 |
| W10x100 | 1.60 | 0.393 | 0.590  | 0.787 | 1.180 | 1.573 |
| W10x112 | 1.78 | 0.367 | 0.551  | 0.735 | 1.102 | 1.469 |
| W12x14  | 0.36 | 0.767 | 1.151  | 1.534 | 2.301 | 3.068 |
| W12x16  | 0.41 | 0.739 | 1.108  | 1.478 | 2.216 | 2.955 |
| W12x19  | 0.48 | 0.702 | 1.054  | 1.405 | 2.107 | 2.810 |
| W12x22  | 0.55 | 0.670 | 1.004  | 1.339 | 2.009 | 2.678 |
| W12x26  | 0.52 | 0.683 | 1.025  | 1.367 | 2.050 | 2.733 |
| W12x30  | 0.60 | 0.648 | 0.972  | 1.296 | 1.944 | 2.592 |

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| <b>Member</b> | <b>W/D</b> | <b>1 Hr</b> | <b>1.5 Hr</b> | <b>2 Hr</b> | <b>3 Hr</b> | <b>4 Hr</b> |
|---------------|------------|-------------|---------------|-------------|-------------|-------------|
| W12x35        | 0.69       | 0.612       | 0.918         | 1.224       | 1.837       | 2.449       |
| W12x40        | 0.72       | 0.601       | 0.902         | 1.202       | 1.804       | 2.405       |
| W12x45        | 0.81       | 0.570       | 0.856         | 1.141       | 1.711       | 2.281       |
| W12x50        | 0.89       | 0.500       | 0.818         | 1.091       | 1.636       | 2.182       |
| W12x53        | 0.84       | 0.500       | 0.841         | 1.122       | 1.682       | 2.243       |
| W12x54        | 0.84       | 0.500       | 0.841         | 1.122       | 1.682       | 2.243       |
| W12x58        | 0.91       | 0.500       | 0.809         | 1.079       | 1.619       | 2.158       |
| W12x65        | 0.91       | 0.500       | 0.809         | 1.079       | 1.619       | 2.158       |
| W12x72        | 1.01       | 0.500       | 0.768         | 1.024       | 1.536       | 2.048       |
| W12x79        | 1.09       | 0.492       | 0.738         | 0.984       | 1.476       | 1.967       |
| W12x87        | 1.20       | 0.467       | 0.700         | 0.933       | 1.400       | 1.866       |
| W12x96        | 1.32       | 0.442       | 0.663         | 0.884       | 1.326       | 1.768       |
| W12x106       | 1.44       | 0.420       | 0.629         | 0.839       | 1.259       | 1.679       |
| W12x120       | 1.61       | 0.392       | 0.588         | 0.783       | 1.175       | 1.567       |
| W12x136       | 1.82       | 0.362       | 0.543         | 0.724       | 1.086       | 1.448       |
| W12x152       | 2.01       | 0.339       | 0.508         | 0.677       | 1.016       | 1.355       |
| W12x170       | 2.22       | 0.316       | 0.474         | 0.632       | 0.949       | 1.265       |
| W12x190       | 2.46       | 0.294       | 0.441         | 0.588       | 0.882       | 1.176       |
| W12x210       | 2.69       | 0.250       | 0.413         | 0.551       | 0.826       | 1.101       |
| W12x230       | 2.92       | 0.250       | 0.388         | 0.518       | 0.777       | 1.036       |
| W12x262       | 3.15       | 0.250       | 0.367         | 0.489       | 0.733       | 0.978       |
| W12x279       | 3.43       | 0.250       | 0.343         | 0.457       | 0.686       | 0.915       |
| W12x305       | 3.70       | 0.250       | 0.323         | 0.431       | 0.646       | 0.862       |
| W12x336       | 4.01       | 0.250       | 0.303         | 0.404       | 0.606       | 0.808       |
| W14x22        | 0.47       | 0.707       | 1.061         | 1.415       | 2.122       | 2.830       |
| W14x26        | 0.55       | 0.670       | 1.004         | 1.339       | 2.009       | 2.678       |
| W14x30        | 0.55       | 0.670       | 1.004         | 1.339       | 2.009       | 2.678       |
| W14x34        | 0.63       | 0.636       | 0.953         | 1.271       | 1.907       | 2.542       |
| W14x38        | 0.70       | 0.609       | 0.913         | 1.217       | 1.826       | 2.434       |
| W14x43        | 0.73       | 0.598       | 0.896         | 1.195       | 1.793       | 2.390       |
| W14x48        | 0.82       | 0.567       | 0.851         | 1.134       | 1.701       | 2.268       |
| W14x53        | 0.90       | 0.500       | 0.814         | 1.085       | 1.628       | 2.170       |
| W14x61        | 0.91       | 0.500       | 0.809         | 1.079       | 1.619       | 2.158       |
| W14x68        | 1.01       | 0.500       | 0.768         | 1.024       | 1.536       | 2.048       |
| W14x74        | 1.09       | 0.492       | 0.738         | 0.984       | 1.476       | 1.967       |
| W14x82        | 1.21       | 0.464       | 0.697         | 0.929       | 1.393       | 1.858       |
| W14x90        | 1.06       | 0.499       | 0.749         | 0.998       | 1.498       | 1.997       |
| W14x99        | 1.15       | 0.478       | 0.717         | 0.956       | 1.433       | 1.911       |
| W14x109       | 1.26       | 0.454       | 0.681         | 0.908       | 1.362       | 1.816       |
| W14x120       | 1.39       | 0.429       | 0.643         | 0.857       | 1.286       | 1.715       |
| W14x132       | 1.52       | 0.406       | 0.609         | 0.812       | 1.218       | 1.624       |
| W14x145       | 1.61       | 0.392       | 0.588         | 0.783       | 1.175       | 1.567       |
| W14x159       | 1.75       | 0.371       | 0.557         | 0.743       | 1.114       | 1.485       |
| W14x176       | 1.93       | 0.348       | 0.522         | 0.696       | 1.044       | 1.392       |
| W14x193       | 2.09       | 0.330       | 0.495         | 0.660       | 0.989       | 1.319       |

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|---------------|------------|-------------|---------------|-------------|-------------|-------------|
| W14x211       | 2.28       | 0.310       | 0.465         | 0.621       | 0.931       | 1.241       |
| W14x228       | 2.49       | 0.250       | 0.437         | 0.583       | 0.874       | 1.188       |
| W14x233       | 2.50       | 0.250       | 0.436         | 0.563       | 0.872       | 1.188       |
| W14x257       | 2.72       | 0.250       | 0.410         | 0.546       | 0.819       | 1.092       |
| W14x283       | 2.97       | 0.250       | 0.383         | 0.511       | 0.767       | 1.022       |
| W14x311       | 3.23       | 0.250       | 0.360         | 0.479       | 0.719       | 0.959       |
| W14x342       | 3.51       | 0.250       | 0.337         | 0.449       | 0.674       | 0.899       |
| W14x370       | 3.76       | 0.250       | 0.319         | 0.425       | 0.638       | 0.851       |
| W14x398       | 4.00       | 0.250       | 0.304         | 0.405       | 0.607       | 0.809       |
| W14x426       | 4.24       | 0.250       | 0.290         | 0.386       | 0.579       | 0.772       |
| W14x455       | 4.48       | 0.250       | 0.277         | 0.369       | 0.553       | 0.738       |
| W14x500       | 4.86       | 0.250       | 0.259         | 0.345       | 0.517       | 0.690       |
| W14x550       | 5.25       | 0.250       | 0.250         | 0.323       | 0.485       | 0.646       |
| W14x605       | 5.71       | 0.250       | 0.250         | 0.301       | 0.451       | 0.601       |
| W14x730       | 6.62       | 0.250       | 0.250         | 0.265       | 0.375       | 0.500       |
| W16x26        | 0.49       | 0.698       | 1.046         | 1.395       | 2.093       | 2.790       |
| W16x31        | 0.58       | 0.656       | 0.985         | 1.313       | 1.969       | 2.625       |
| W16x36        | 0.61       | 0.644       | 0.966         | 1.287       | 1.931       | 2.575       |
| W16x40        | 0.67       | 0.620       | 0.930         | 1.240       | 1.859       | 2.479       |
| W16x45        | 0.76       | 0.587       | 0.881         | 1.174       | 1.761       | 2.348       |
| W16x50        | 0.83       | 0.500       | 0.846         | 1.125       | 1.688       | 2.250       |
| W16x67        | 0.92       | 0.500       | 0.805         | 1.073       | 1.610       | 2.147       |
| W16x77        | 1.05       | 0.500       | 0.753         | 1.003       | 1.505       | 2.007       |
| W16x89        | 1.20       | 0.467       | 0.700         | 0.933       | 1.400       | 1.866       |
| W16x100       | 1.34       | 0.438       | 0.657         | 0.876       | 1.314       | 1.752       |
| W18x35        | 0.59       | 0.652       | 0.978         | 1.304       | 1.956       | 2.609       |
| W18x40        | 0.68       | 0.616       | 0.924         | 1.232       | 1.848       | 2.464       |
| W18x46        | 0.78       | 0.580       | 0.870         | 1.161       | 1.741       | 2.321       |
| W18x50        | 0.77       | 0.584       | 0.875         | 1.167       | 1.751       | 2.335       |
| W18x55        | 0.84       | 0.500       | 0.841         | 1.122       | 1.682       | 2.243       |
| W18x60        | 0.91       | 0.500       | 0.809         | 1.079       | 1.619       | 2.158       |
| W18x65        | 0.98       | 0.500       | 0.780         | 1.040       | 1.560       | 2.080       |
| W18x71        | 1.07       | 0.497       | 0.745         | 0.993       | 1.490       | 1.987       |
| W18x76        | 0.95       | 0.500       | 0.792         | 1.056       | 1.585       | 2.113       |
| W18x88        | 1.07       | 0.497       | 0.745         | 0.993       | 1.490       | 1.987       |
| W18x97        | 1.20       | 0.467       | 0.700         | 0.933       | 1.400       | 1.866       |
| W18x106       | 1.30       | 0.446       | 0.669         | 0.892       | 1.337       | 1.783       |
| W18x119       | 1.46       | 0.416       | 0.624         | 0.832       | 1.248       | 1.665       |
| W21x44        | 0.66       | 0.624       | 0.936         | 1.247       | 1.871       | 2.495       |
| W21x50        | 0.75       | 0.591       | 0.886         | 1.181       | 1.772       | 2.362       |
| W21x57        | 0.85       | 0.500       | 0.836         | 1.115       | 1.673       | 2.231       |
| W21x62        | 0.84       | 0.500       | 0.841         | 1.122       | 1.682       | 2.243       |
| W21x68        | 0.91       | 0.500       | 0.809         | 1.079       | 1.619       | 2.158       |
| W21x83        | 1.10       | 0.489       | 0.734         | 0.979       | 1.468       | 1.958       |
| W21x93        | 1.23       | 0.460       | 0.690         | 0.920       | 1.381       | 1.841       |
| W21x101       | 1.11       | 0.487       | 0.731         | 0.974       | 1.461       | 1.948       |
| W21x111       | 1.21       | 0.464       | 0.697         | 0.929       | 1.393       | 1.858       |

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|---------------|------------|-------------|---------------|-------------|-------------|-------------|
| W21x122       | 1.33       | 0.440       | 0.660         | 0.880       | 1.320       | 1.760       |
| W21x132       | 1.43       | 0.421       | 0.632         | 0.843       | 1.264       | 1.686       |
| W21x147       | 1.59       | 0.395       | 0.592         | 0.790       | 1.184       | 1.579       |
| W24x55        | 0.74       | 0.594       | 0.891         | 1.188       | 1.782       | 2.376       |
| W24x62        | 0.83       | 0.564       | 0.846         | 1.128       | 1.692       | 2.250       |
| W24x68        | 0.82       | 0.567       | 0.851         | 1.134       | 1.701       | 2.268       |
| W24x76        | 0.92       | 0.537       | 0.805         | 1.073       | 1.610       | 2.147       |
| W24x84        | 1.01       | 0.512       | 0.768         | 1.024       | 1.536       | 2.048       |
| W24x94        | 1.12       | 0.485       | 0.727         | 0.969       | 1.454       | 1.939       |
| W24x104       | 1.06       | 0.499       | 0.749         | 0.998       | 1.498       | 1.997       |
| W24x117       | 1.19       | 0.469       | 0.703         | 0.938       | 1.406       | 1.875       |
| W24x131       | 1.32       | 0.442       | 0.663         | 0.884       | 1.326       | 1.768       |
| W24x146       | 1.46       | 0.416       | 0.624         | 0.832       | 1.248       | 1.665       |
| W24x162       | 1.61       | 0.392       | 0.588         | 0.783       | 1.175       | 1.567       |
| W27x84        | 0.91       | 0.540       | 0.809         | 1.079       | 1.619       | 2.158       |
| W27x94        | 1.01       | 0.512       | 0.768         | 1.024       | 1.536       | 2.048       |
| W27x102       | 1.09       | 0.492       | 0.738         | 0.984       | 1.476       | 1.967       |
| W27x114       | 1.21       | 0.464       | 0.697         | 0.929       | 1.393       | 1.858       |
| W27x146       | 1.33       | 0.440       | 0.660         | 0.880       | 1.320       | 1.760       |
| W27x161       | 1.47       | 0.414       | 0.622         | 0.829       | 1.243       | 1.658       |
| W27x178       | 1.61       | 0.392       | 0.588         | 0.783       | 1.175       | 1.567       |
| W30x99        | 0.99       | 0.517       | 0.776         | 1.035       | 1.552       | 2.069       |
| W30x108       | 1.07       | 0.497       | 0.745         | 0.993       | 1.490       | 1.987       |
| W30x116       | 1.15       | 0.478       | 0.717         | 0.956       | 1.433       | 1.911       |
| W30x124       | 1.23       | 0.460       | 0.690         | 0.920       | 1.381       | 1.841       |
| W30x132       | 1.30       | 0.446       | 0.669         | 0.892       | 1.337       | 1.783       |
| W30x173       | 1.44       | 0.420       | 0.629         | 0.839       | 1.259       | 1.679       |
| W30x191       | 1.59       | 0.395       | 0.592         | 0.790       | 1.184       | 1.579       |
| W30x211       | 1.74       | 0.373       | 0.559         | 0.746       | 1.118       | 1.491       |
| W33x118       | 1.07       | 0.497       | 0.745         | 0.993       | 1.490       | 1.987       |
| W33x130       | 1.17       | 0.473       | 0.710         | 0.946       | 1.420       | 1.893       |
| W33x141       | 1.27       | 0.452       | 0.678         | 0.904       | 1.356       | 1.807       |
| W33x152       | 1.35       | 0.436       | 0.654         | 0.872       | 1.308       | 1.744       |
| W33x201       | 1.56       | 0.400       | 0.599         | 0.799       | 1.199       | 1.598       |

These column protection thicknesses have been determined for the convenience of users, in accordance with the table and proprietary equation in Design Y725, as detailed in the UL Fire Resistance Directory - Volume 1, 2007. While we have taken care to be as accurate as possible, we will not be held responsible for errors or omissions. If any discrepancy is found between these tables and the UL Design information, the UL Design information shall govern.