

SECTIONAL AREAS OF WELDED WIRE REINFORCEMENT

This month's technical blog presents a useful tabulation containing the sectional unit cross-sectional areas of WWR when utilized and various spacing. A version of this table was originally published in the WRI Manual of Standard Practice prior to the 2021 Edition.

SECTIONAL AREAS OF WELDED WIRE REINFORCEMENT								
Wire Size	Nominal Wire Diameter (in.)	Cross-Sectional Steel Area, in ² per ft of width, For Various Wire Spacing						
		Center-to-Center Wire Spacing						
		3"	4"	6"	8"	10"	12"	18"
31	0.628	1.240	0.930	0.620	0.465	0.372	0.310	0.206
25	0.564	1.000	0.750	0.500	0.375	0.300	0.250	0.166
23	0.541	0.920	0.690	0.460	0.345	0.276	0.230	0.153
20	0.505	0.800	0.600	0.400	0.300	0.240	0.200	0.133
18	0.479	0.720	0.540	0.360	0.270	0.216	0.180	0.120
16	0.451	0.640	0.480	0.320	0.240	0.192	0.160	0.106
15	0.437	0.600	0.450	0.300	0.225	0.180	0.150	0.100
14	0.422	0.560	0.420	0.280	0.210	0.168	0.140	0.093
12	0.391	0.480	0.360	0.240	0.180	0.144	0.120	0.080
11	0.374	0.440	0.330	0.220	0.165	0.132	0.110	0.073
10.5	0.357	0.420	0.315	0.210	0.157	0.126	0.105	0.070
10	0.357	0.400	0.300	0.200	0.150	0.120	0.100	0.066
9.5	0.348	0.380	0.285	0.190	0.142	0.114	0.095	0.063
9	0.338	0.360	0.270	0.180	0.135	0.108	0.090	0.060
8.5	0.329	0.340	0.255	0.170	0.127	0.102	0.085	0.056
8	0.319	0.320	0.240	0.160	0.120	0.096	0.080	0.053
7.5	0.309	0.300	0.225	0.150	0.112	0.090	0.075	0.050
7	0.299	0.280	0.210	0.140	0.105	0.084	0.070	0.046
6.5	0.288	0.260	0.195	0.130	0.097	0.078	0.065	0.043
6	0.276	0.240	0.180	0.120	0.090	0.072	0.060	0.040
5.5	0.265	0.220	0.165	0.110	0.082	0.066	0.055	0.036
5	0.252	0.200	0.150	0.100	0.075	0.060	0.050	0.033
4.5	0.239	0.180	0.135	0.090	0.067	0.054	0.045	0.030
4	0.226	0.160	0.120	0.080	0.060	0.048	0.040	0.026
3.5	0.211	0.140	0.105	0.070	0.052	0.042	0.035	0.023
3	0.195	0.120	0.090	0.060	0.045	0.036	0.030	0.020
2.9	0.192	0.116	0.087	0.058	0.043	0.034	0.029	0.019
2.5	0.178	0.100	0.075	0.050	0.037	0.030	0.025	0.016
2.1	0.162	0.084	0.063	0.042	0.031	0.025	0.021	0.014
2	0.16	0.080	0.060	0.040	0.030	0.024	0.020	0.013
1.5	0.138	0.060	0.045	0.030	0.022	0.018	0.015	0.010
1.4	0.134	0.056	0.042	0.028	0.021	0.016	0.014	0.009

Notes

1. The above listing of wire sizes represents wires normally selected to manufacture welded wire reinforcement styles to specific areas of reinforcement. Wires may be deformed using prefix D or plain using prefix W.
2. Wire sizes other than those listed above may be available if the quantity required is sufficient to justify manufacture. Contact your local WWR manufacturer for availability.
3. Plain wire diameters are indicated in the table. The nominal diameter of a deformed wire is equivalent to the diameter of a plain wire having the same weight per foot as the deformed wire.

For more information visit www.wirereinforcementinstitute.org.