BUILDING STRENGTH™

P12D DUR-O-WEB™ SHEER REINFORCEMENT

CONCRETE CONSTRUCTION SOLUTIONS

BROCHURE

DAYTON® SUPERIOR

Product Description

Dayton Superior's Dur-O-Web is a prefabricated structural web reinforcement assembly which has been developed to replace conventional U-shaped and closed stirrups. The vertical steel wires provide reinforcement for the applied shear stresses. The double horizontal side wires at the top and bottom of the assembly develop the required anchorage for the vertical wire reinforcement. The design of Dur-O-Web allows the spacing and size of both the vertical and horizontal wires to vary to meet your design requirements.

Availability

Dur-O-Web is shipped in bundles containing 50 pcs.; 10' lengths are standard. However, other lengths can be supplied up to a maximum of 24'. The standard finish is bright basic. Galvanized wire, hot dipped galvanized and epoxy coated finishes are also available on special order.

Benefits

- Ideal shear reinforcement for use in prestressed/precast double tees or other precast elements having narrow webs or where space is limited.
- Wide variety of wire sizes and spacings.
- Ready to use — reduces costs by eliminating the cutting and bending of standard rebars or mesh.
- Easy to place — can be supplied in various lengths up to a maximum of 24' and a maximum height of 48".
- Serves as a mesh support in double tee flanges.
- Provides composite action in keystone joist/slab systems.
- The ability to vary wire diameters and spacing guarantees the most economical solution to your reinforcement requirements.

Approvals

The use of Dur-O-Web shear reinforcement conforms to both the American Concrete Institute (ACI-318) Standard Building Code Requirements for Concrete Structures, and the Canadian Standards Association Standard CAN3-A23.3 Design of Concrete Structures for Buildings.

To Order

Specify: (1) quantity, (2) overall height, (3) gauge and spacing of vertical wires, (4) gauge of side wires, (5) overall length, (6) finish.

Example

275 pcs., 22" high P12D Dur-O-Web, 1 gauge verticals at 6" centers, 7 gauge double side wires x 10' long, bright basic finish.

Using the Selection Table

The Dur-O-Web selection table shown below shows the diameter and area of the vertical shear reinforcement wires that are available. It also lists the minimum size horizontal anchor wire that ASTM standards require. In addition, the area of shear reinforcement per foot is shown for the various spacing of the vertical shear reinforcement selected.

Example

A required shear steel area of 0.100 sq. in. per foot can be provided by using 1 gauge smooth vertical wires spaced on 7-1/2" centers with 7 gauge longitudinal side wires. This example would provide 0.101 sq. in. of steel reinforcement per foot. Another solution would be the use of 7 gauge vertical wires spaced on 3" centers with 9 gauge longitudinal side wires. This combination would provide 0.100 sq. in. of reinforcement per foot.

P12 D Dur-O-Web Selection Table

Wire Size	Wire Gauge	Wire Dia.	Steel Area	Weight (lb./ft.)	Min. Side Wire Gauge	Area of Steel (sq. in.) per Lineal Foot at Indicated Main Shear Reinforcement Spacing											
						2"	3"	4"	5"	6"	7"	7-1/2"	8"	9"	10"	11"	12"
W-7.4	0	0.306"	0.074 sq. in	0.251	6	0.444	0.296	0.222	0.178	0.148	0.127	0.118	0.111	0.099	0.089	0.081	0.074
W-6.3	1	0.283"	0.063 sq. in.	0.214	7	0.378	0.252	0.189	0.151	0.126	0.108	0.101	0.095	0.084	0.076	0.069	0.063
W-5.4	2	0.263"	0.054 sq. in	0.184	8	0.324	0.216	0.162	0.130	0.108	0.093	0.086	0.081	0.072	0.065	0.059	0.054
W-4.9	1/4"	0.250"	0.049 sq. in.	0.167	9	0.294	0.196	0.147	0.118	0.098	0.084	0.078	0.074	0.065	0.059	0.053	0.049
W-4.7	3	0.244"	0.047 sq. in	0.158	9	0.282	0.188	0.141	0.113	0.094	0.081	0.075	0.071	0.063	0.056	0.051	0.047
W-4.0	4	0.225"	0.040 sq. in.	0.135	9	0.240	0.160	0.120	0.096	0.080	0.069	0.064	0.060	0.053	0.048	0.044	0.040
W-3.4	5	0.207"	0.034 sq. in	0.114	9	0.202	0.136	0.102	0.082	0.068	0.058	0.054	0.051	0.045	0.041	0.037	0.034
W-2.9	6	0.192"	0.029 sq. in.	0.098	9	0.170	0.116	0.087	0.070	0.058	0.050	0.046	0.044	0.039	0.035	0.032	0.029
W-2.5	7	0.177"	0.025 sq. in	0.084	9	0.150	0.100	0.075	0.060	0.050	0.043	0.040	0.038	0.033	0.030	0.027	0.025
W-2.1	8	0.162"	0.021 sq. in.	0.070	9	0.126	0.084	0.062	0.050	0.042	0.036	0.034	0.032	0.028	0.025	0.023	0.021
W-1.7	9	0.148"	0.017 sq. in	0.059	9	0.102	0.068	0.051	0.041	0.034	0.029	0.027	0.026	0.023	0.020	0.019	0.017

Material Specifications

Dur-O-Web is manufactured with smooth round vertical steel wires and smooth round horizontal side wires. All materials and products conform to the latest edition of one or more of the following ASTM specifications:

A-82 Standard Specification for Steel Wire, Plain, for Concrete Reinforcement

A-185 Standard Specification for Steel Welded Wire Fabric, Plain, for Concrete Reinforcement

Weight Calculation

The sample calculation below shows how to calculate the approximate weight of steel used in different Dur-O-Web assemblies.

Vertical wires: 1 gauge at 6" centers

Horizontal side wires: 4 pcs. of 7 gauge

Height: 22" overall

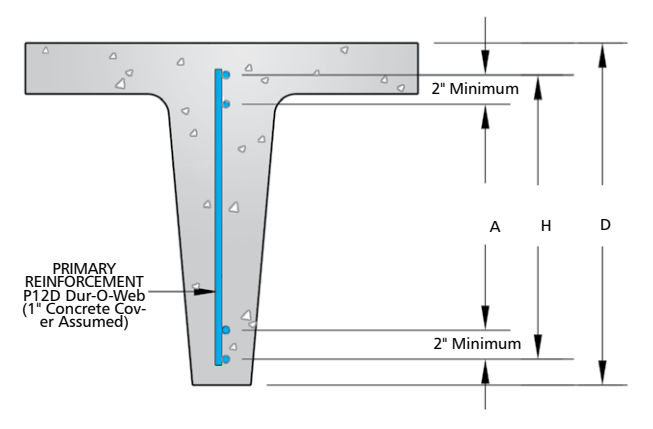
Length: 10'-0"

Vertical wires = 22" ÷ 12" per ft. x 12" per ft. ÷ 6" centers x .214 lb. per ft. x 10 ft. = 7.87 lb.

Side wires = 4 pcs. x 0.084 lb. per ft. x 10 ft. = + 3.36 lb.

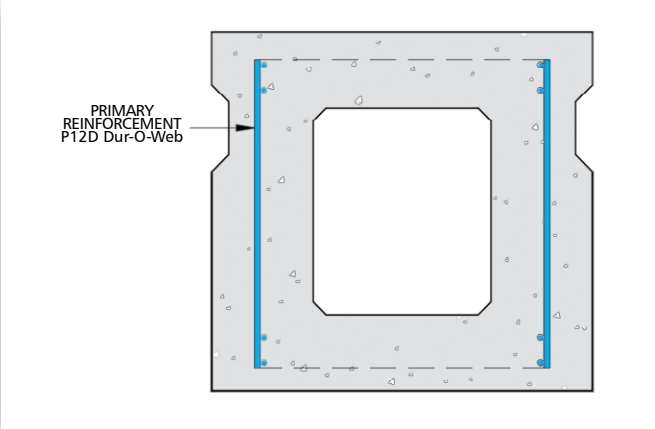
Total weight per 10'. unit = 11.23 lb.

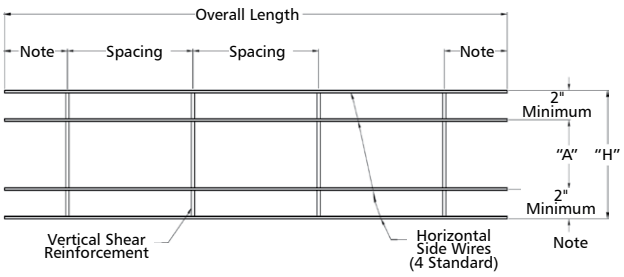
Typical Tee Layout



Depth of Concrete Member "D"	Dimension "A"	P12D DUR-O-WEB Overall Height "H"
8"	2"	6"
10"	4"	8"
12"	6"	10"
14"	8"	12"
16"	10"	14"
18"	12"	16"
20"	14"	18"
22"	16"	20"
24"	18"	22"
32"	26"	30"

Typical Bridge Beam Layout





Note: Standard overhang of horizontal side wires on each end is 1/2 of vertical wire spacing.

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