

### Tubular Stainless Steel Braid for Metal Hose

Universal has the capability to manufacture tubular wire braid for metal or non-metallic hose reinforcement from 1/4" through 30" inside diameter. A wide range of materials are available including aluminum, austenitic stainless steel, bronze, galvanized steel, high nickel alloys and Monel®. Plain and diamond beamed wire weave configurations are available through 9" diameter. Plain weave braided braid is available for diameters over 2".

Standard weaves are available as specified in the table below. A complete inventory of type 304 braid is maintained as well as most sizes of type 316/316L and type 321.



Plain Weave Beamed Wire



Diamond Weave Beamed Wire

### Standard Metal Hose Braid Construction

Nominal Hose I.D. (IN.)	Typical Hose O.D. (IN.)	Braid I.D. (IN.)	Braid Construction	Braid Angle (DEG)	Coverage (%)	Working Pressure (PSIG)	Weight (LB/FT)
1/4	0.49	1/2	24x6x.0126	50	93	3022	0.08
3/8	0.69	3/4	24x9x.0126	57	92	2422	0.11
1/2	0.84	3/4	24x9x.0126	38	97	1112	0.15
5/8	1.03	1	24x10x.0126	45	87	1297	0.15
3/4	1.23	1-1/4	36x8x.014	54	87	1100	0.19
1	1.53	1-1/2	36x9x.014	50	85	719	0.23
1-1/4	1.83	1-3/4	48x7x.016	49	84	655	0.31
1-1/2	2.19	2-1/4	48x9x.016	51	87	603	0.39
2	2.75	2-3/4	48x10x.020	50	92	620	0.69
2-1/2	3.17	3	48x11x.020	46	93	447	0.73
3	3.74	3-3/4	48x11x.020	46	86	316	0.81
3-1/2	4.29	4-3/4	96x8x.020	57	89	402	1.00
4	4.82	4-3/4	96x8x.020	52	87	295	1.07
5	6.05	6	96x7x.025	52	81	256	1.46
(5)	6.05	6	96x(17x.020)	54	95	392	2.19
6	6.94	6-3/4	96x8x.025	47	83	200	1.79
(6)	6.94	6-3/4	96x(17x.020)	53	90	279	2.25
8	9.00	9	96x9x.028	52	79	174	2.36
(8)	9.00	9	96x(17x.025)	55	89	261	3.39
(10)	11.25	11-1/4	96x(29x.020)	57	84	186	3.64
(12)	13.25	13-1/4					
(14)	14.50	14-1/2	96x(29x.025)	50	95	149	6.16
(16)	16.50	16-1/2	96x(29x.025)	48	92	111	6.37
(18)	19.00	19	96x(29x.028)	47	89	106	8.12
(20)	21.00	21	96x(29x.028)	48	84	87	8.09
(24)	25.00	25	96x(29x.028)	39	83	52	9.42
(26)	27.00	27	96x(29x.028)	48	71	52	8.03
(30)	31.00	31	96x(29x.028)	48	65	40	8.03
1	2	3	4	5	6	7	8

See reverse side of page for explanation of table and ordering instructions



Plain Weave Braided Braid

## Explanation of Table

**Construction (Column 4):** Construction is specified as the *number of carriers x number of wires per carrier x wire diameter* in inches. All nominal hose sizes (Column 1) and construction enclosed in parenthesis indicate braided braid construction.

All construction is plain weave beamed or braided wire with the exception of 5/8" hose (1" I.D. braid), 3/4" hose (1-1/4" I.D. braid) and 1" hose (1-1/2" braid) which are diamond weave beamed wire.

**Braid Angle (Column 5):** The braid angle is measured between a line perpendicular to the braid longitudinal centerline and a line that is projected parallel to a carrier.

**Braid Coverage (Column 6):** The percent of area covered by the braid wire compared to the surface area calculated on the basis of the braid inside diameter (Column 3).

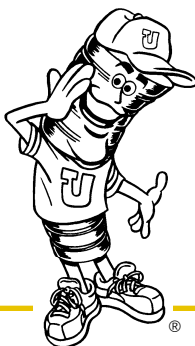
**Working Pressure:** The working pressure values (Column 7) are for all austenitic stainless steel alloys at 70°F (21°C). These values are based on a factor of safety of four relative to the burst pressure. The pressure rating is for the braid only. The method of end attachment must be considered for the overall pressure rating, and is the responsibility of individual users.

The working pressure values for Monel 400 is 0.80 times the tabulated values in Column 7.

**Temperature Correction:** The working pressure values (Column 7) are reduced in accordance with the following temperature correction factors.

Temperature °F	Temperature °C	UTS (KSI)	Correction Factor
70	21	100	1.00
400	205	72	0.72
600	315	68	0.68
800	427	64	0.64
1000	538	56	0.56

*UTS – Ultimate Tensile Strength. Multiply the correction factor times the working pressure at 70°F for the value at the specified temperature.*



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## Ordering Instructions

To order bulk braid, specify the Part Number listed in the Braid Part Number tabulation for the size and alloy selected. Consult the factory for mill coil lengths. You may also specify cut lengths.

**Example:**

*P/N 46399 specifies 1/2" I.D. braid for 1/4" I.D. hose made from type 304 stainless steel. Length required must be specified separately.*

## Braid Part Numbers

Hose I.D. (in.)	Type 304 Stn. Stl.	316/316L Stn. Stl.	Type 321 Stn. Stl.	Monel 400
1/4	46399	46409	46404	46556
3/8	46400	46410	46405	46557
1/2	46400	46410	46405	46557
5/8	46401	46411	46406	
3/4	46005	45004	46010	46419
1	46006	45005	46011	46561
1-1/4	22790	45006	22791	46558
1-1/2	22792	45007	22793	46559
2	22794	45008	22795	46560
2-1/2	22796	45009	22797	46567
3	24000	45010	24001	46568
3-1/2	24002	45012	24003	47024
4	24002	45012	24003	47024
5	22954	45013	22955	
(5)	46402	46412	46407	
6	22956	45015	22957	
(6)	46650	46652	46651	
8	46403	46413	46408	
(8)	19217	45018	24392	
(10)	46653	46655	46654	
(12)	46656	46658	46657	
(14)	22964	46012	22965	
(16)	22966	46013	24394	

Type 316/316L is dual certified

**Note: Refer to Universal Bulletin 301 for Bronze Braid construction, and Bulletin 304 for Galvanized Steel Braid construction.**