

### Bronze Annular Corrugated Hose & Braid, Standard and Close Pitch



Universal annular bronze hose is an industrial-weight, high quality corrugated hose which is available with a "U" shaped convolution profile as standard pitch, and with a close pitch "omega" shaped convolution profile for higher pressure ratings and flexibility. Both types are made from bronze alloy C50500 per ASTM B508 for superior welding and brazing. Bronze beamed wire diamond weave braid has been custom designed to match the hose pressure and flexibility requirements.

**TABLE 1: Close Pitch Annular Corrugated Bronze Hose**

Nominal Inside Dia. (inches)	Part Number	Outside Diameter (inches)	Corrugations Per Foot	Weight Per Ft. (lbs.)	Working Pressure (PSIG)	Minimum C Bend Radius		
						Static (inches)	Intermittent (inches)	
1/4	U-250B-008	0.50	116	0.17	100	0.75	5.75	
	U-251B-008	0.55		0.26				1380
3/8	U-250B-012	0.69	98	0.22	55	1.13	6.75	
	U-251B-012	0.74		0.35				1000
1/2	U-250B-016	0.86	84	0.27	40	1.25	7.50	
	U-251B-016	0.91		0.41				605
	U-252B-016	0.96		0.54				1175
3/4	U-250B-024	1.24	70	0.60	30	2.00	9.38	
	U-251B-024	1.30		0.81				485
	U-252B-024	1.36		1.02				945
1	U-250B-032	1.55	56	0.71	20	2.50	11.00	
	U-251B-032	1.61		0.99				375
	U-252B-032	1.68		1.28				730
1 1/4	U-250B-040	1.87	50	0.90	16	3.00	13.00	
	U-251B-040	1.93		1.27				345
	U-252B-040	1.99		1.63				675
1 1/2	U-250B-048	2.20	44	1.20	14	3.25	14.00	
	U-251B-048	2.26		1.62				270
	U-252B-048	2.32		2.04				525
2	U-250B-064	2.84	40	1.78	13	4.63	17.63	
	U-251B-064	2.92		2.49				280
	U-252B-064	3.00		3.23				545

**TABLE 2: Standard Pitch Annular Corrugated Bronze Hose**

Nominal Inside Dia. (inches)	Part Number	Outside Diameter (inches)	Corrugations Per Foot	Weight Per Ft. (lbs.)	Working Pressure (PSIG)	Minimum C Bend Radius	
						Static (inches)	Intermittent (inches)
1/4	U-260B-008	0.50	96	0.14	115	1.00	6.50
	U-261B-008	0.55		0.23			
3/8	U-260B-012	0.68	68	0.16	60	1.50	8.75
	U-261B-012	0.73		0.29			
1/2	U-260B-016	0.85	62	0.20	50	1.88	9.00
	U-261B-016	0.90		0.34			
3/4	U-260B-024	1.23	55	0.47	40	2.75	13.00
	U-261B-024	1.29		0.68			
1	U-260B-032	1.54	44	0.56	30	3.50	13.75
	U-261B-032	1.60		0.85			
1 1/4	U-260B-040	1.84	37	0.66	25	4.00	15.00
	U-261B-040	1.90		1.03			
1 1/2	U-260B-048	2.17	34	0.93	20	4.50	16.00
	U-261B-048	2.23		1.35			
2	U-260B-064	2.80	30	1.34	15	6.00	19.00
	U-261B-064	2.88		2.05			
1	2	3	4	5	6	7	8

See reverse side of page for more information and ordering instructions

**Table 3: Braid Construction**

Nominal Hose Dia. (inches)	Part Number	Construction	Percent Coverage	Working Pressure (PSIG)	Weight Per Foot (lbs)
1/4	U-46556	24x6x.0126	91	1382	0.086
3/8	U-46557	24x9x.0126	95	1013	0.133
1/2	U-46557	24x9x.0126	88	605	0.136
3/4	U-46419	36x8x.014	86	488	0.212
1	U-46561	36x8x.016	84	376	0.286
1 1/4	U-46558	48x8x.016	87	349	0.367
1 1/2	U-46559	48x9x.016	86	272	0.424
2	U-46560	48x10x.020	88	283	0.713
1	2	3	4	5	6

**Note:**

1. Wire conforms to ASTM B134 alloy C22000.
2. Construction is beamed wire diamond weave (one over one under)

## Specifications

1. **Tables 1&2 Column 2:** Part numbers U-250B and U-260B are unbraided construction, U-251B and U-261B are single braided, and U-252B and U-262B are double braided.
2. **Tables 1&2 Column 6:** The working pressures tabulated are for the hose or braided hose at 70°F. These values must be reduced by the user to account for the joint efficiency of the method of attachment used.
3. **Tables 1&2 Column 6:** If the service conditions exceed 70°F the working pressure ratings must be reduced by the following factors;

Temperature (°F)	Multiply By
70	1.00
150	.92
200	.89
250	.86
300	.83
350	.81
400	.78
450	.75

The maximum service temperature is 450°F.

4. **Tables 1&2 Column 6:** The working pressure is the maximum unrestrained operating pressure of the hose. It is established as 25% of the burst pressure for braided assemblies. It is the maximum pressure that does not result in permanent elongation for unbraided hose. The test pressure should not exceed 150% of the working pressure. All sizes are satisfactory for full vacuum.



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## Specifications, Continued

5. **Tables 1&2 Column 7:** The static bend radius is the minimum hose centerline radius that the hose can be bent for installation purposes. No additional motions other than vibration can be imposed.
6. **Tables 1&2 Column 8:** The intermittent bend radius is the minimum hose centerline radius that the hose can be bent for cyclic motions. These motions occur on a slow and constant basis such as thermal expansion.
7. **Tables 3 Column 3:** The construction is given as the number of groups of wires or carriers by the number of wires per group by the diameter of the wire in inches.
8. **Tables 3 Column 4:** The braid coverage is the percent of surface area covered by the braid wire when installed at the diameters tabulated in Column 3 of Tables 1 & 2.
9. **Tables 3 Columns 4,5&6:** The values in these columns are calculated for the hose specified in Tables 1&2 on the reverse side of the page. Specifications 2, 3 & 4 apply to the braid working pressure as well as the hose.

## Ordering Instructions

To order unbraided hose, hose with braid or braid only refer to the specific part numbers tabulated in Column 2 of Tables 1, 2 or 3.

**Examples:**

*P/N U-250B-008 specifies unbraided 1/4" inside diameter close pitch annular bronze hose.*

*P/N U-261B-008 specifies 1/4" inside diameter standard pitch annular hose with a single layer braid. P/N U-46556 specifies bronze braid for 1/4" hose.*

All hose is leaked tested at 100 PSIG with air under water.

A light petroleum base oil is used on the exterior only of the hose.

Mill run lengths of the hose is 38-42 feet, braid only is 95-100 feet.

## Optional Material

Universal manufactures helically corrugated bronze hose to similar material specifications in the size range 1/4" through 6". Refer to Bulletin 302 & 303 for details on this material.