

## Products

### Mechanical Spring Wire

- Springs for the automotive industry, including control cables, precision springs and reinforced hoses
- Agricultural applications, including greenhouse cultivation and bale wire
- As reinforcement of air conditioning flexible ducts
- Screens for mining, plastics, pharmaceuticals and sand industries, among others
- Springs for appliances
- Fabrication of hair barrettes and clips
- Wire for the garment industry
- Spiral springs for handbooks, paper clips, toys' parts and much more

- Ease in manufacturing: Camesa spring wire is designed to support deformations without losing its mechanical properties.
- Consistent performance because of our excellent heat-treating control.
- Surface quality improves adhesion of paints and coatings.
- Surface free of defects and consistent coating ensures performance.
- Manufactured and packaged to your specifications in an ISO 9001:2008 facility.

#### STANDARDS:

- ASTM A-227 for Class 1 and Class 2 tensile strengths
- ASTM A-228 for music wire applications
- ASTM A-679 for Class 3 tensile strengths
- EN 10270-1
- DIN 17223

#### PACKAGING:

- Coils: 441-1,100 lb (200-500 kg)
- Tubular carriers: 1,500-2,000 lb (680-907 kg)
- Spoolless cores: 3,000 or 6,000 lb (1,361-2,722 kg)
- Spoolless cores or steel reels for finer diameters: 110-1,000 lb (50-454 kg)

Mechanical Spring Wire Specifications - Metric						
Diameter	CLASS I / CLASS I		CLASS II / CLASS II		CLASS III / CLASS III	
	min	max	min	max	min	max
0.50	1,960	2,240	2,240	2,520	2,400	2,650
0.55	1,940	2,220	2,220	2,500	2,380	2,620
0.60	1,920	2,200	2,200	2,480	2,350	2,600
0.65	1,900	2,180	2,180	2,460	2,320	2,580
0.70	1,870	2,140	2,140	2,410	2,300	2,550
0.80	1,930	2,100	2,100	2,370	2,250	2,500
0.90	1,800	2,070	2,070	2,340	2,200	2,450
1.00	1,770	2,040	2,040	2,310	2,450	2,400
1.10	1,740	2,000	2,000	2,260	2,120	2,380
1.20	1,720	1,980	1,980	2,240	2,100	2,350
1.40	1,670	1,930	1,930	2,180	2,050	2,300
1.60	1,640	1,880	1,880	2,120	2,000	2,250
1.80	1,600	1,840	1,840	2,080	1,980	2,220
2.00	1,580	1,810	1,810	2,040	1,950	2,200
2.20	1,550	1,780	1,780	2,010	1,900	2,160
2.50	1,510	1,730	1,730	1,960	1,850	2,100
2.80	1,480	1,700	1,700	1,920	1,820	2,050
3.00	1,460	1,680	1,680	1,900	1,800	2,000
3.50	1,420	1,630	1,630	1,840	1,750	1,950
4.00	1,380	1,590	1,600	1,700	1,700	1,900
4.50	1,350	1,550	1,550	1,750	1,680	1,880
5.00	1,320	1,510	1,510	1,700	1,650	1,850
5.50	1,300	1,490	1,490	1,670	-	-
6.00	1,280	1,470	1,470	1,650	-	-
6.50	1,250	1,440	1,440	1,630	-	-
7.00	1,220	1,410	1,410	1,600	-	-
7.50	1,200	1,390	1,390	1,580	-	-
8.00	1,190	1,370	1,370	1,550	-	-
9.00	1,160	1,340	-	-	-	-
10.00	1,130	1,310	-	-	-	-
11.00	1,110	1,280	-	-	-	-
12.00	1,090	1,260	-	-	-	-
14.00	1,020	1,210	-	-	-	-

16.00	1,010	1,170	-	-	-	-
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Diameter mm	Permissible Variation Plus and Minus mm	Permissible Out of Round mm
0.51-0.70	0.02	0.02
0.71-2.00	0.03	0.03
2.01-9.00	0.05	0.05
9.01-15.80	0.08	0.08

Mechanical Spring Wire Specifications - Imperial						
Diameter in	CLASS I / CLASS I		CLASS II / CLASS II		CLASS III / CLASS III	
	min	max	min	max	min	max
0.020	238	323.0	324	364.0	350.0	387.0
0.023	279	319.0	320	360.0	343.0	380.0
0.026	275	315.0	316	353.0	337.0	373.0
0.029	271	311.0	312	352.0	331.0	366.0
0.032	266	306.0	307	347.0	327.0	361.0
0.035	261	301.0	302	342.0	322.0	356.0
0.041	255	293.0	294	332.0	314.0	347.0
0.048	248	286.0	287	325.0	306.0	339.0
0.054	243	279.0	208	316.0	300.0	331.0
0.062	237	272.0	273	308.0	293.0	324.0
0.072	232	266.0	267	301.0	287.0	317.0
0.080	227	261.0	262	296.0	282.0	312.0
0.092	220	253.0	254	287.0	275.0	304.0
0.106	216	248.0	249	281.0	268.0	296.0
0.120	210	241.0	242	273.0	263.0	290.0
0.135	206	237.0	238	269.0	258.0	285.0
0.148	203	234.0	235	266.0	253.0	279.0
0.162	200	230.0	231	264.0	249.0	275.0
0.177	195	225.0	226	256.0	245.0	270.0
0.192	192	221.0	222	251.0	241.0	267.0
0.207	190	218.0	219	247.0	238.0	264.0
0.225	186	214.0	215	243.0		
0.250	182	210.0	211	239.0		
0.312	174	200.0	201	227.0		
0.175	167	193.0	194	220.0		
0.138	165	190.0	191	216.0		
0.500	156	180.0	181	205.0		
0.562	152	176.0	177	201.0		
0.625	147	170.0	171	191.0		

Diameter in	Permissible Variation Plus and Minus in	Permissible Out of Round in
0.020-0.028	0.0008	0.0008
0.029-0.075	0.001	0.001
0.076-0.375	0.002	0.002
0.376-0.625	0.003	0.003