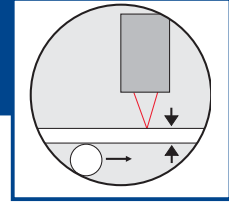


# Tube & Pipe



The new LaserSpeed gauge manufactured by Beta LaserMike has a dimension of 26.25 X 20.67 centimeters and weights only 1.4 Kilograms.

LaserSpeed gauges are ideally suited for all pipe and tube application. The gauge can be used in conjunction with wall thickness gauge on seamless tubes to obtain a complete tube profile for total quality control. The wall thickness gauge measures the tube's wall thickness along the length of the tube and the LaserSpeed gauge provides the position of the wall thickness measurement. Combining the two will provide a complete profile of the seamless tube.



LaserSpeed gauges can also be used on reduction mills to provide the speed measurements between each mill stand. This allows better control of the mill and better reduction control.

In addition LaserSpeed gauge can be used to control the shear on a welded tube mill eliminating the slippage and mechanical problems associated with tachometer and roller measurement devices.

Table 1 shows measurement results using a Laserspeed gauge to control the shear on a seamless tube line. The first column in table 1 show the tube length measured by hand. The second column shows the length measured by the LaserSpeed gauge. Column A shows the difference between the hand measurement and the LaserSpeed measurement. Column B shows the percentage difference between the hand measurement and the LaserSpeed measurement. As seen in the table the LaserSpeed gauge did an excellent job of controlling the cutter to obtain accurate tube lengths. The benefits to using a LaserSpeed gauge are.

1. The gauge never has to be recalibrated once the gauge is setup properly
2. The cut length will be correct from the first tube to the last tube because there no slippage errors
3. There are no moving parts to wear out.
4. There are no error due to mechanical slippage

**Table 1- Controlling Shear with LaserSpeed Gauge**

**Table 1**

Hand Measured Length	Laser Measured Length	A	B
115.4922	115.4894	0.0028	0.002%
113.6295	113.6164	0.0131	0.012%
114.787	114.7658	0.0212	0.018%
115.2791	115.2708	0.0083	0.007%
115.6015	115.593	0.0085	0.007%
115.0416	115.0334	0.0082	0.007%
114.4515	114.4286	0.0229	0.020%
114.821	114.8035	0.0175	0.015%
115.1302	115.1144	0.0158	0.014%
115.8786	115.8549	0.0237	0.020%
114.7456	114.7338	0.0118	0.010%
114.3308	114.3212	0.0096	0.008%
115.9465	115.9359	0.0106	0.009%
114.706	114.6867	0.0193	0.017%
115.0133	114.9957	0.0176	0.015%
114.7493	114.7376	0.0117	0.010%
114.3478	114.3343	0.0135	0.012%
115.9522	115.9265	0.0257	0.022%
114.7852	114.7621	0.0231	0.020%
114.7154	114.698	0.0174	0.015%
115.1302	115.105	0.0252	0.022%
115.1339	115.1031	0.0308	0.027%
114.7418	114.73	0.0118	0.010%
115.3998	115.512	-0.1122	-0.097%
114.6947	114.5341	0.1606	0.140%
114.7267	114.7074	0.0193	0.017%
115.9767	115.9717	0.005	0.004%
114.7324	114.7187	0.0137	0.012%
115.1603	115.1182	0.0421	0.037%
114.7701	114.7451	0.025	0.022%
114.7248	114.7018	0.023	0.020%
115.3847	115.3669	0.0178	0.015%
114.804	114.7753	0.0287	0.025%
114.7625	114.7451	0.0174	0.015%
114.7267	114.6961	0.0306	0.027%
115.8202	115.7852	0.035	0.030%
114.7625	114.7376	0.0249	0.022%
114.7663	114.7413	0.025	0.022%
114.7437	114.7112	0.0325	0.028%
115.5563	115.5214	0.0349	0.030%
115.0171	114.9995	0.0176	0.015%



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