

Material bar requirements

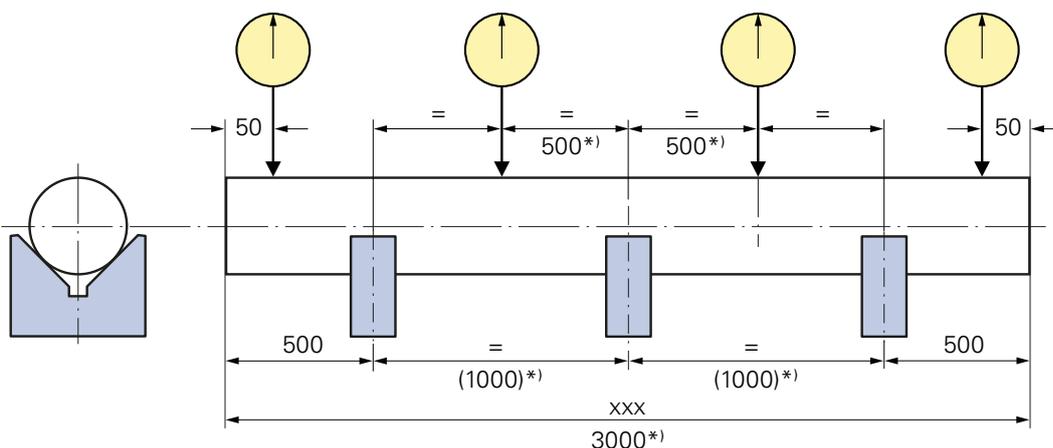


- **INDEX recommends to use appropriate material bars only.**
- **The straightness of the material bar is very decisive for the speeds which can be reached, for vibrations, noise development and for the surface quality and the tolerances of the workpiece.**
 - **You should only process bars whose straightness values do not deviate from the values mentioned below.**
 - **In the region of the bar ends, the material bars must not have short bucklings.**
 - **Bars which do not meet these requirements must be straightened.**
- **The bar circumference must be chamfered below 30°; this does also apply for square-edged material bars.**
- **The bar end must be free of burrs. Please pay especial attention to the cleanliness of the bars!**



If you process tubular material, the bar ends must be tightly sealed with a plug or the like!

Checking the straightness of the bar (in case of round bars)



*) Arrangement of the measurement points and of the prisms in case of a 3 meter bar

- Put the bar which you want to check on prisms in such a way that the first prism is 500 mm away from the beginning of the bar.
- Then arrange further prisms after every meter. Thus, with a bar length of 3 m respectively 4 m, the last 500 mm of the bar i.e. the distance from the last prism to the end of the bar, are free floating, too.

- If a bar has another length, you have to re-arrange the prisms at such regular distances that you get the free floating 500 mm at the end of the bar.
- The measurement happens at points which are outside or at half length between the prisms.
- Install the dial gauges as shown in the two illustrations and rotate the material bar by 360 degrees. During this, read and note down the maximum and the minimum measured value.
- Repeat this measurement along the entire length of the bar.

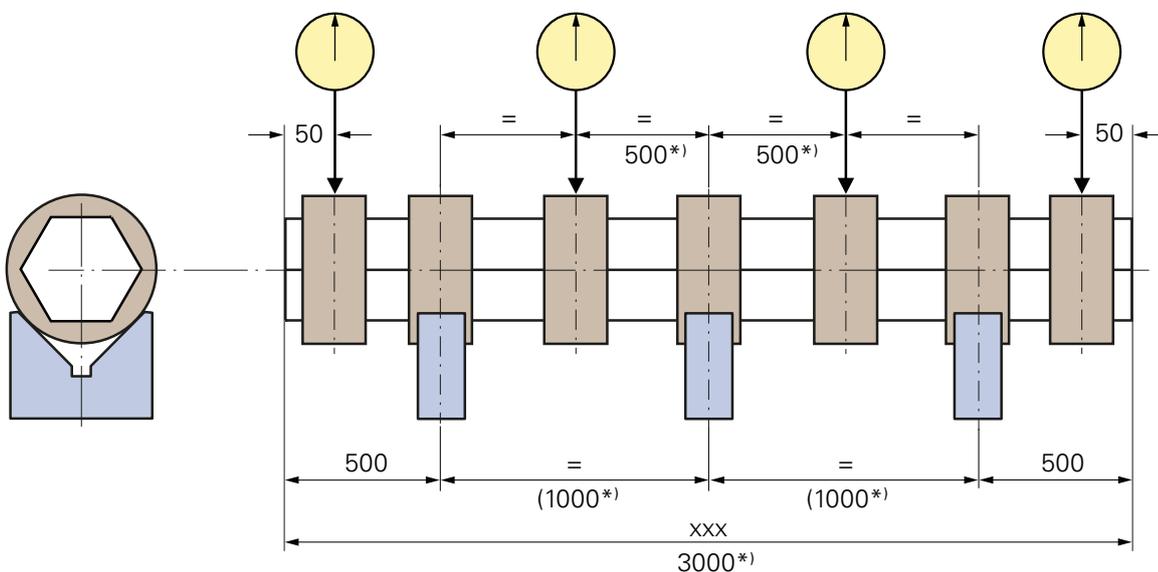
Thereafter, you can evaluate the measured data as follows:

S_{\max} (mm)	Straightness of the bar
$< 0,25$	good
$0,25 < S_{\max} < 0,5$	moderate
$> 0,5$	problematic

Value S_{\max} is the difference between the maximum and the minimum reading at the dial gauge.

Checking the straightness of the bar in case of profiled material

- Profiled material is measured in round bushes. The first bush is supposed to be 50 mm away from the bar start, the second bush 500 mm.
- Arrange the other bushes in such a way, that the too last bushes are 50 respectively 500 mm away from the bar end again.
- Put the bar which is to be checked together with the bushes on prisms in such a way that the bush with the first prism is 500 mm away from the bar start and the bush with the last prism 500 mm from the bar end.
- The measurement happens on bushes which are outside respectively between the prisms.
- The rest of the procedure and the evaluation of the straightness of the bar is the same as described for round bars



*) Arrangement of the measurement points and of the prisms in case of a 3 meter bar