Load calculation for rollers

The theoretical maximum load that a given type of roller can withstand without the die suffering damage depends on the hardness of the die's inner plate. The following tables give the maximum acceptable load for a roller without it or the die suffering any damage.

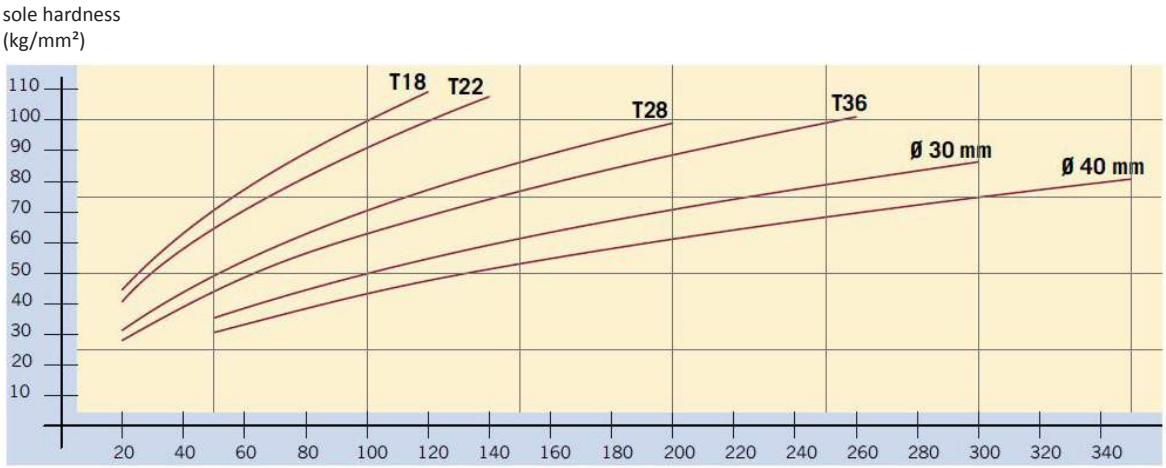
Calculate the minimum number of rollers in contact with the load at all times, and divide the total weight by this value. Use the intersecting point of the roller curve and the hardness of the sole. The X axis gives the theoretical maximum load with no marking, to be compared with the preceding value.

Please note that in most cases, especially for medium hard steels, an overload is acceptable because of hardening phenomena. There will be slight marking, but the superficial hardening will prevent the damage from spreading. To take this into account, 120% of the load from the tables can be used.

The die hardness is usually the limiting factor, the rollers can withstand much more. If necessary, a sheet metal tread can be included on the die to improve the maximum load.

DIN T18 - T36 roller bar

Bolster extensions with diameter 30 and 40 mm rollers

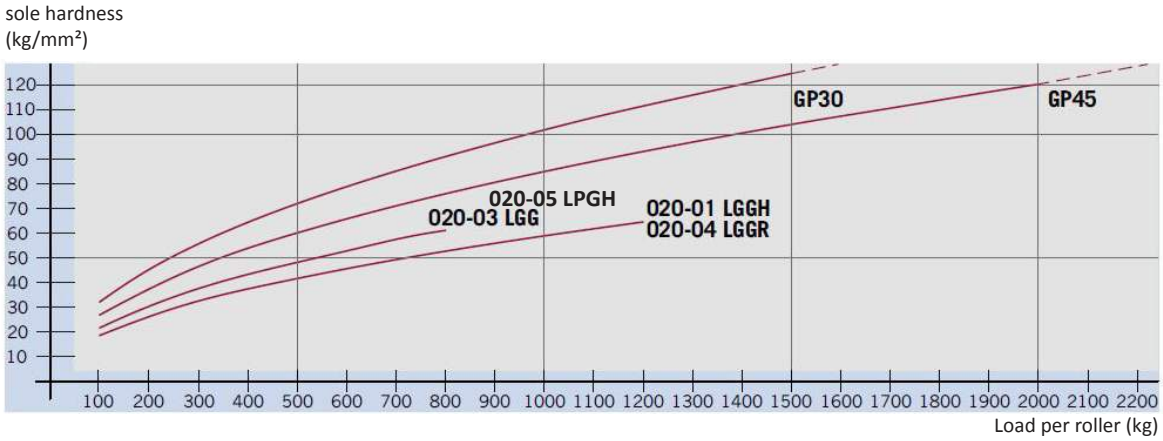


Curve Ø 30 mm : CSL 1000, CSN 1000, CSM 1000

Curve Ø 40 mm : CSL 3000, CSN 3000, CSM 3000, CSP, CSQ and CSR all models, LG

GP30 and GP45 load bearing rollers

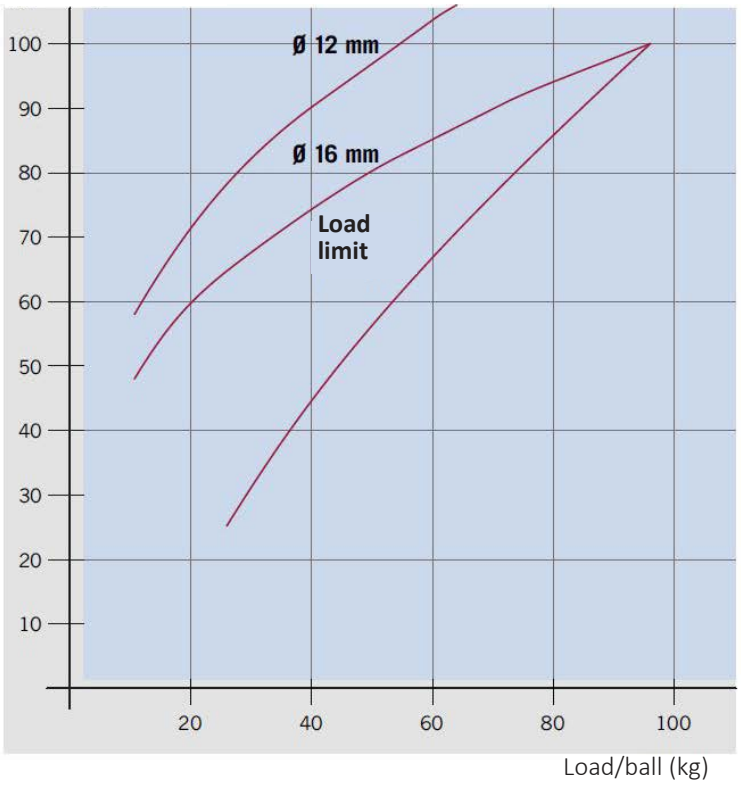
heavy load roller bar, product group 20

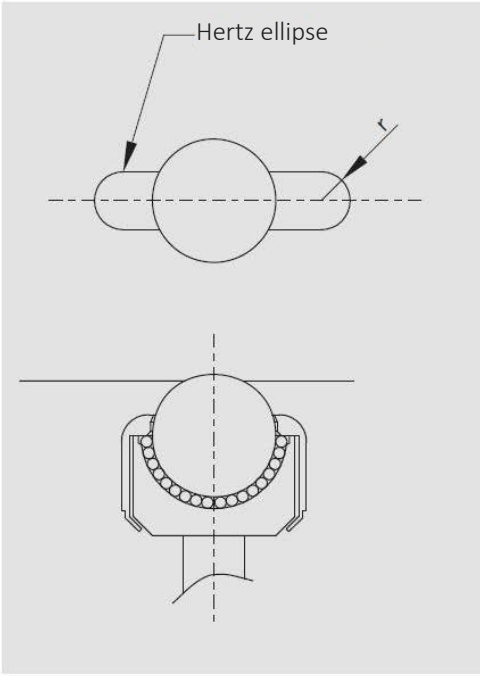


Load calculation for balls

When a ball rolls under a heavy load, it leaves a mark (Hertz ellipse) on the die corresponding to the deformation at the point of contact. The plastic or elastic deformation is also the cause of resistance to rolling.

The graphs show the allowable load values for diameter 12 mm and 16 mm balls, leaving only a minimum mark (r < 0.3 mm). The graph shows the load values not to exceed.





Curve Ø 12 mm : LBR/LBH 22, 24
Curve Ø 16 mm : LBR/LBH 28, 36

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