

Technical Bulletin 3a: Gator-Max®, Gator-Laid®, Gator-Flex® and Tri-Flex® Slings D/d Ratios

The D/d ratio refers to the ratio between the diameter of the load, pin or hardware that the sling is attached to (D) and the diameter of the sling itself (d). For Slingmax® multi-part slings, the diameter of the sling is the total finished diameter of the combined component ropes. To achieve the full working load of the wire rope sling the recommended minimum D/d ratios are in Table 1.

	D/d in Eye	D/d in Body
Gator-Laid	1:1	5:1
Gator-Max	1:1	5:1
Gator-Flex Grommet	N/A	5:1
Tri-Flex	1.5:1	5:1

Table 1 – D/d ratios for multi-part slings

If it is necessary to rig with a D/d in the body of less than 5:1, the rated load of the sling must be reduced to account for the smaller value. Table 2 shows the reductions for D/d ratios when using Gator-Flex Grommets or in the body of Gator-Laid/Gator-Max or Tri-Flex Slings. D/d ratios of less than 1:1 are not recommended.

D/d ratio in body	Strength Efficiency
5:1	100%
4:1	92%
3:1	84%
2:1	73%
1:1	50%

Table 2 – D/d reductions for the body of multi-part slings

Table 3 shows the D/d reductions when rigging in the eye of a Gator-Laid or Gator-Max sling. D/d ratios of less than 0.25:1 are not recommended.

Gator D/d ratio in eye	Strength Efficiency
1:1	100%
0.75:1	90%
0.5:1	75%
0.33:1	66%
0.25:1	50%

Table 3 – D/d reductions for the eye of Gator-Max and Gator-Laid slings

Table 4 shows the D/d reductions when rigging in the eye of a Tri-Flex sling. D/d ratios of less than 0.5:1 are not recommended.

Tri-Flex D/d ratio in eye	Strength Efficiency
1.5:1	100%
1.25:1	90%
1:1	80%
0.75:1	70%
0.5:1	50%

Table 4 – D/d reductions for the eye of Tri-Flex slings