



50mm Diameter Spirafix™ Vertical Maximum Working Tensile Loads



These values indicative only. For any application on-site load tests need to be conducted to ascertain accurate values. The area within the black curves represent approximately 80% of results ($\sigma=1.5$). 10% of possible values lie above the upper curve (0) and 10% below the lower curve (8).

The maximum load is achieved when a steadily increasing pull is applied to the anchor and it ruptures out of the ground. The ground is deemed to have failed at this point and this is called the Ultimate Load. Acceptable working loads of the anchor are up to 80% of the Ultimate Load, termed the Maximum Working Load, which are shown on the curves below. Above this point the anchor becomes unstable in the ground and is unable to hold the load.

Quick Reference Load Chart		
Anchor Code	Tensile Load kgs	Tensile Load kN
SF50-10-0490	250 to 500	2.4 to 4.9
SF50-10-0630	350 to 700	3.4 to 6.9
SF50-10-0840	550 to 1100	5.4 to 10.8
SF50-10-1050	800 to 1600	7.8 to 15.7
SF50-10-1260	1100 to 2200	10.8 to 21.6

- 0 (>181Nm) → >300 (N=>250)
- 1 (85-181Nm) → 200-300 (N=60-250)
- 2 (68-85Nm) → 100-200 (N=45-60)
- 3 (56-68Nm) → 50-100 (N=35-50)
- 4 (45-56Nm) → 20-50 (N=24-40)
- 5 (34-45Nm) → 10-20 (N=14-25)
- 6 (23-34Nm) → 6-10 (N=7-14)
- 7 (11-23Nm) → 3-6 (N=4-8)
- 8 (0-11Nm) → 0-3 (N=0-5)



Soil Classification				
Basic Soil Type	Sub Group	Compaction/Strength	SPT-N	ASTM Class
Sands	Sand	Very Loose	0-3	8
		Loose	3-8	5
		Compact Cemented	8-30	3
Sands	Sandy Clay/ Sandy Silt	Soft	3-8	5
		Firm Stiff	8-30	3
Sands	Sandy Clay/ Sandy Silt	Stiff	30-58	1
		Cemented	30-58	1
Silts	Silts	Very Soft	7-14	6
		Soft	14-25	5
		Firm	25-60	4
Silts	Silty Clay	Soft	7-14	6
		Firm Stiff	14-25	5
Silts	Silty Clay	Stiff	25-60	4
		Hard	25-60	4
Clays	Clay	Very Soft	0-5	8
		Soft	4-8	7
		Firm	7-14	6
		Stiff	14-25	5
		Very Stiff	14-25	5
Clays	Clay	Hard	35-60	3
		Very Hard	>60	1
Peats	Organic Clay Silt or Sand	Firm	0-5	8
	Peat	Spongy Plastic	0-5	8
Chalks	Very Weak Weak Moderately Weak Moderately strong to very strong	Very Weak	0-25	6
		Weak	25-100	2
		Moderately Weak	100-250	1
		Moderately strong to very strong	>250	0

Notes:

The above classifications are outlined in BS 5930 with the exception of chalk and the "Sands" and "Clays" sections have been expanded. Also chalk is not covered in the ASTM classification, but for the purposes of predicting loads it has been assigned values. The range of pull out loads in strong chalks can be considerably higher than shown on the chart and field tests need to be carried out to obtain accurate values.

The Standard Penetration Test (SPT) N values quoted above are in accordance with BS1377:1990 Part9, ASTM Standard D1586-84 and AS 1289.6.3.1-1993