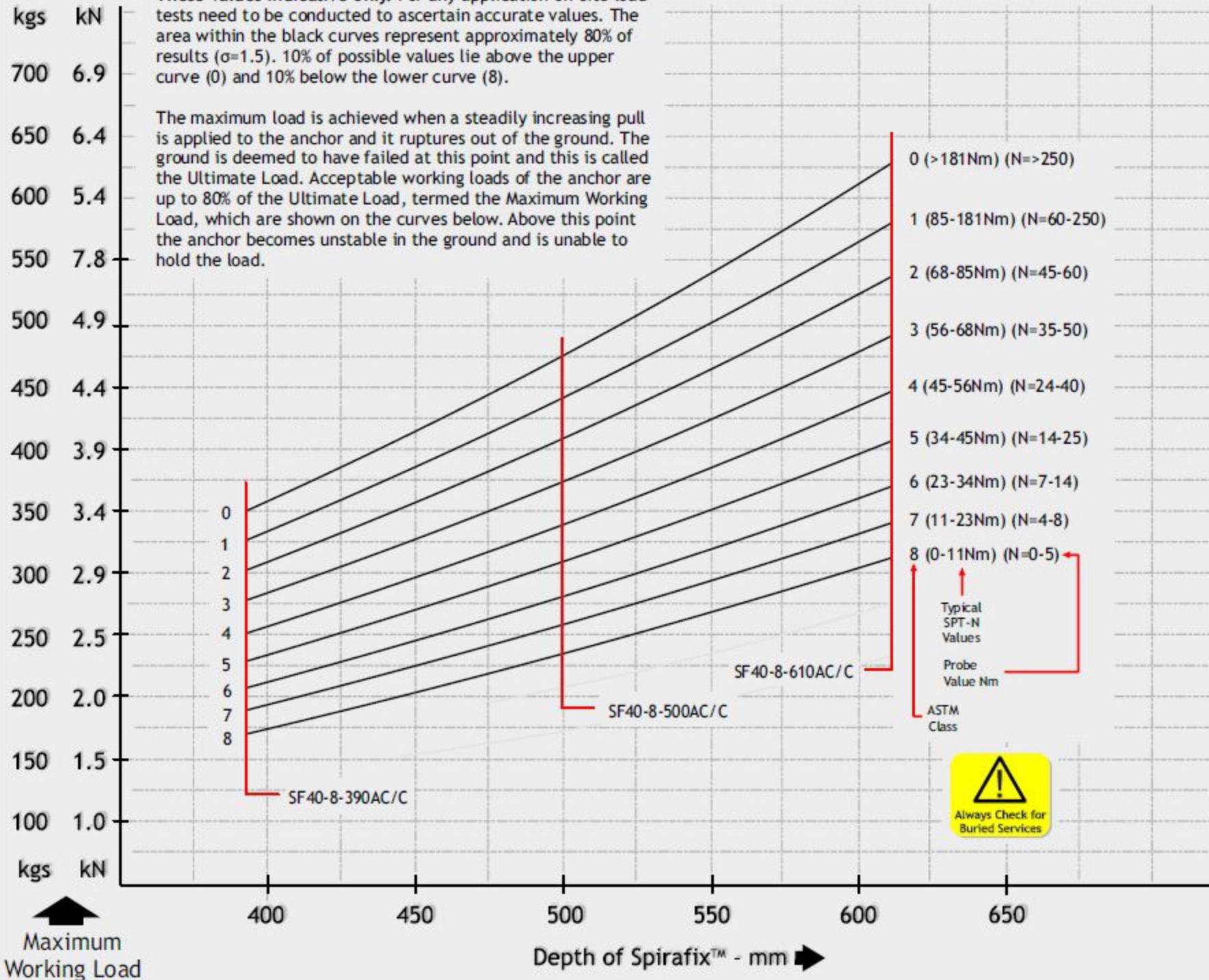


40mm Diameter Spirafix™ Vertical Maximum Working Tensile Loads

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.



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	8-30	3
		Cemented	30-58	1
Silty Clays	Sandy Clay/ Sandy Silt	Soft	3-8	5
		Firm	8-30	3
		Stiff	30-58	1
		Very Stiff	>60	1
Silts	Silts	Very Soft	7-14	6
		Soft Firm	14-25	5
	Silty Clay	Soft Firm	7-14	6
		Stiff	14-25	5
Clays	Clay	Very Soft	0-5	8
		Soft	4-8	7
		Firm	7-14	6
		Stiff	14-25	5
		Very Stiff	35-60	3
Peats	Organic Clay Silt or Sand	Firm	0-5	8
	Peat	Spongy Plastic	0-5	8
Chalks		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