

spinlock



RIG-sense



INTRODUCTION

Rig-Sense by Spinlock is a new Rig tension device for measuring the loads in wire and rope standing rigging used on boats.

Rig-Sense is a simple to use device, measuring the tension directly in kilogrammes to eliminate any conversions. Rig-Sense also benefits from being able to be operated one handed and can support itself on the rig whilst being used. It uses quality parts for long term performance and consistent accurate readings over time.

KEY INFORMATION



- Direct measurement of tension in KG
- Compatible with both wire and rope
- RGS0205 2-5mm diameter lines
- RGS0508 5-8mm diameter lines
- Consistent, repeatable output
- Single handed operation
- Easily readable scale from turnbuckle
- Robust design
- Carry bag included

HOW TO USE

Rig-Sense is simple to use, but requires a procedure to get a consistent and accurate measurement.

1. Pull the top slider down fully.
2. Attach the Rig-Sense to the wire or cable making sure the slider is pushed fully up to connect with the wire. At this point, the Rig-Sense will be able to hang on the rig unsupported.
3. Using your thumb, push the bottom of the leaf spring so the wheel hooks on to the wire.
4. To get consistent results, push the base so the pointer goes towards 0kg and release.
5. Your measurement can be read in KG from the pointer on the leaf spring.

Please refer to conversion charts at the back of this document to convert from Loos or LBS.

CAUTION

- Do not push the leaf spring beyond the scale.
- Do not leave out in direct sun light for prolonged periods.
- Wash the Rig-Sense off in fresh water if in contact with salt water.
- Do not leave Rig-Sense attached to a rig for long periods (i.e. days).
- Do not disassemble the Rig-Sense due to calibration.

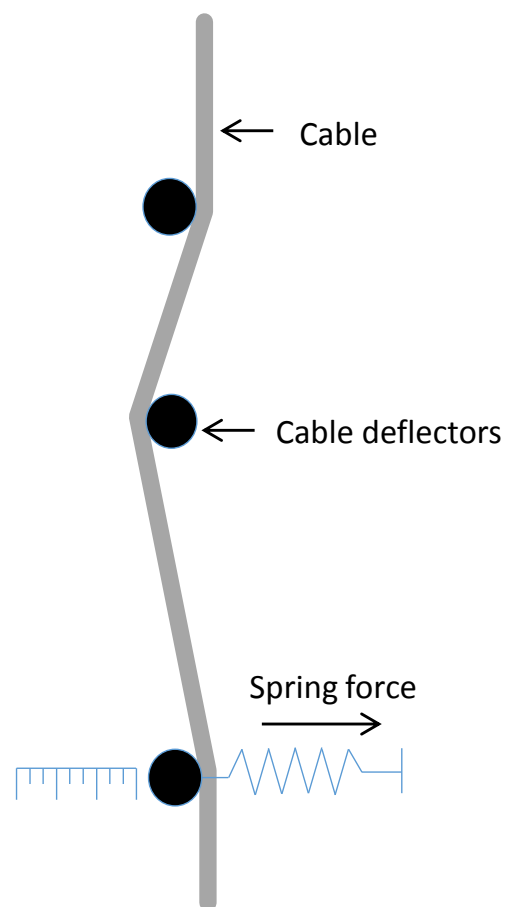


BACKGROUND

Cable tension gauges generally operate using the same principle; bend the cable between three points and measure the reactive force on one of those points:

- Mechanically with a spring
- Electronically with strain

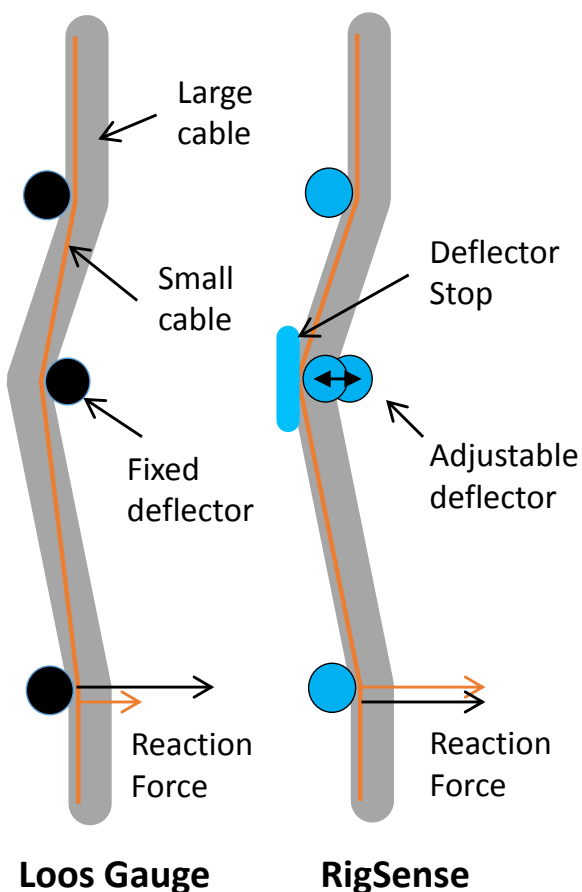
Rig-Sense uses a mechanical principle similar to other rig gauges, but with four distinct improvements to achieve the key features.



1. ADJUSTABLE CABLE DEFLECTOR

Rig-Sense uses an adjustable central deflector, same deflection for all cable sizes. So output does not vary with cable size.

The other rig tension gauges have a fixed central deflector which means larger diameter cable will have larger deflection than smaller cable diameter, so output varies with cable size.



2. WHY MEASURE IN KG?

With the **Rig-Sense** scale, we've kept the scale true, so there's no need for conversion. We believe it's important not hide this as rig tuning can be massively effected.

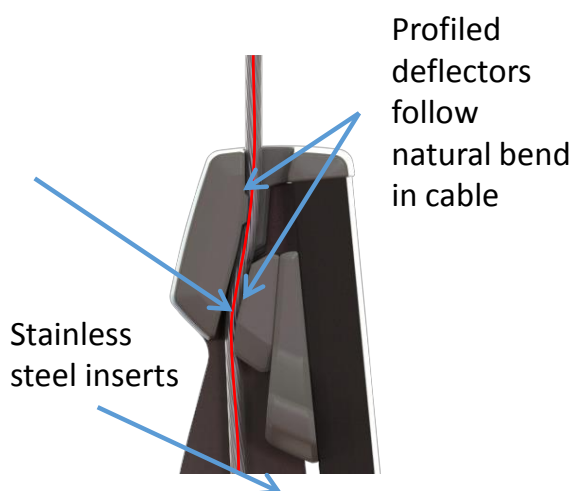
All cable sizes use the whole scale and works with both imperial and metric cable, fibre and even rope. Other gauge scales are linear, but it is misleading.

- At bottom of scale 3mm, 1 increment = 5kg
- At top of scale 3mm, 1 increment = 35kg

Also, each cable size only uses half of the scale.



3. PROFILED STAINLESS STEEL DEFLECTORS



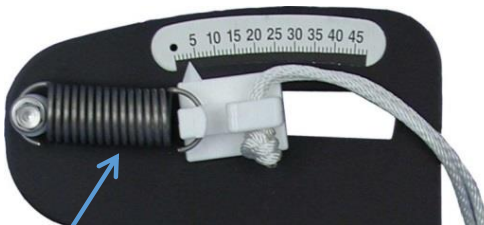
Rig-Sense uses large radius stainless steel deflectors which follows the natural bend in cable. This cancels out differences in cable bending stiffness. Tension will measure the same for different sizes and materials.

Hard material supports cable over larger area – with no indentation and consistent repeatable output.

4. COMPOSITE LEAF SPRING

Rig-Sense uses a composite leaf spring. The advantages are:

- High precision control of spring rate
- Compact shape allows slender design less likely to be damaged
- Cannot over-stretch
- Allows for calibration during assembly
- No corrosion.



SS Coil spring

Other gauges use stainless steel coil springs. There are a number of disadvantages to this:

- Makes it difficult to keep consistent spring rate over production runs.
- No way to adjust or calibrate.
- Can over-stretch without knowing.
- Friction.



THE RIG-SENSE APP

The Rig-Sense App is a simple mobile application for logging rig settings. By using the App you can store multiple settings, for multiple boats and share with the crew, training partners, clubs, classes, coaches or the rest of the world.

The intuitive and easy-to-use interface of the App makes it simple to use and understand. You can log many types of information including shroud settings, type of spinnaker and the wind range you choose. The App allows you to customise any aspect of your Tuning Guide and save it as a 'Template' and from there you can create any number of 'Files' for different boats.

All the information is stored on your Phone or Tablet.

If you are sailing a boat for the first time you can go to the class or sailmakers website to input directly to the Spinlock RIG App. You always have the information at your fingertips so you can focus sailing the boat!

Available on Android and iOS devices.



CONVERSION TABLE – LOOS TO KG

Wire Dia.	2.5mm		3mm		4mm		5mm		6mm		7mm			8mm
Loos Gauge	Model A	PT1	Model A	PT1	Model A	PT1	Model B	PT2	Model B	PT2	Model B	PT2	PT3	PT3
5	36													
6	39													
7	42													
8	45	50												
9	48	54												
10	50	58					109						300	
11	54	62					116	95					330	
12	58	66		57			123	110					360	200
13	62	70		60			130	120					400	220
14	65	75		65			137	140					440	240
15	68	82	54	70			145	150					480	270
16	73	90	58	75			154	170					515	300
17	78	100	62	82			163	180					550	330
18	83	110	66	90			172	200					590	360
19	88	120	70	100			181	220					630	400
20	91	130	73	110			190	240	136				684	430
21	97	140	78	120		70	204	260	146				738	460
22	103		82	130		76	218	280	163	160			790	500
23	108		86	140		83	232	310	175	180			845	540
24	113		91	150		90	245	340	186	200			900	590
25	120		95	160		100	263	370	202	210			1000	630
26	127		100	170		115	281	400	218	230			1100	680
27	134		105	180		127	309	440	236	250				720
28	141		109	190		140	336	490	254	270				770
29	150		114	210		150	368	550	277	290				850
30	159		119	220		160	400	620	300	320		220		920
31	170		127	235		170	445		327	350		240		1000
32	181		136	250	91	180	490		354	380		270		1100
33			145	270	100	195	562		395	420		290		1240
34			154	295	110	210	635		435	460		320		1400
35			165	330	118	225			493	510		350		
36			177	370	127	240			550	570		370		
37			190		136	260			638	640		400		
38			204		145	280			725	730	180	440		
39			226		154	320			840		210	470		
40			250		164	360					240	510		
41			283		178						272	550		
42			317		191						304	620		
43					213						340			
44					236						385			
45					273						444			
46					318						508			
47					364						600			
48					432						900			

CONVERSION TABLE – LBS TO KG

LBS	KG		LBS	KG		LBS	KG
66	30		1124	510		2183	990
88	40		1146	520		2205	1000
110	50		1168	530		2227	1010
132	60		1190	540		2249	1020
154	70		1213	550		2271	1030
176	80		1235	560		2293	1040
198	90		1257	570		2315	1050
220	100		1279	580		2337	1060
243	110		1301	590		2359	1070
265	120		1323	600		2381	1080
287	130		1345	610		2403	1090
309	140		1367	620		2425	1100
331	150		1389	630		2447	1110
353	160		1411	640		2469	1120
375	170		1433	650		2491	1130
397	180		1455	660		2513	1140
419	190		1477	670		2535	1150
441	200		1499	680		2557	1160
463	210		1521	690		2579	1170
485	220		1543	700		2601	1180
507	230		1565	710		2623	1190
529	240		1587	720		2646	1200
551	250		1609	730		2668	1210
573	260		1631	740		2690	1220
595	270		1653	750		2712	1230
617	280		1676	760		2734	1240
639	290		1698	770		2756	1250
661	300		1720	780		2778	1260
683	310		1742	790		2800	1270
705	320		1764	800		2822	1280
728	330		1786	810		2844	1290
750	340		1808	820		2866	1300
772	350		1830	830		2888	1310
794	360		1852	840		2910	1320
816	370		1874	850		2932	1330
838	380		1896	860		2954	1340
860	390		1918	870		2976	1350
882	400		1940	880		2998	1360
904	410		1962	890		3020	1370
926	420		1984	900		3042	1380
948	430		2006	910		3064	1390
970	440		2028	920		3086	1400
992	450		2050	930			
1014	460		2072	940			
1036	470		2094	950			
1058	480		2116	960			
1080	490		2138	970			
1102	500		2161	980			

CONTACT

Spinlock Ltd

41 Birmingham Road
Cowes
Isle of Wight
PO31 7BH

Telephone: +44 (0) 1983 295555

www.spinlock.co.uk
prosupport@spinlock.co.uk