Slip-On Close-Tolerance Welded Bow Spring Centralizer

In applications for running casing in close-tolerance wellbores or slim holes, Forum offers a special bow spring centralizer for these requirements. To provide optimum performance in close-tolerance wellbores, these centralizers feature low starting forces and high restoring forces. These centralizers consist of a solid type end collar for slipping over the pin end of the casing joint.

- Available with set screws in the lower end collar for an integrated stop device (standard), so that no separate stop collar is necessary. The end collar with set screws should be run down (toward the bottom of the hole) so that the centralizer is pulled into the wellbore to optimize starting/drag forces.
- Can be optionally run between stop collars for applications that require rotating casing.
- Bows are welded flush with end collar to provide maximum strength with minimum clearance.
- Bows are made of alloy steel and are heat-treated and tempered to a hardness of 42-44 Rc ensuring proper and consistent spring characteristics.
- Typical applications include 5" casing in 6" hole, 7-5/8" casing in 8-1/2" hole, and 9-5/8" casing inside 10-5/8" hole.
- Recommended set screw torque is 20-25 ft-lbs.

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Size / Type	No. Of Bows	Bow OD	Hole Size	Starting Force (Lbf)	Drag Force (Lbf)	Restoring Force (Lbf)	Minimum Compressed OD	Item No.
2-7/8 CT1	4	5.125	4.67	229	159	808	4.250	027CTSS1
3-1/2 CT1	4	5.625	4-1/2	688	247	2188	4.250	034CTSS1
3-1/2 CT1	4	5.625	4-3/4	529	222	1803	4.250	034CTSS1
3-1/2 CT1	4	5.625	5	131	40	786	4.250	034CTSS1
4 CT1	4	6.125	4.95	511	131	1362	4.750	040CTSS1
4-1/2 CT1	4	6.625	5-1/2	733	685	997	5.250	044CTSS1
4-1/2 CT1	4	6.625	5-3/4	524	181	866	5.250	044CTSS1
4-1/2 CT1	4	6.625	6	138	68	743	5.250	044CTSS1
4-1/2 CT2	4	7.125	6-1/4	437	291	3411	5.250	044CTSS2
5 CT1	4	7.125	5-3/4	795	450	2877	5.750	050CTSS1
5 CT1	4	7.125	5-7/8	578	244	1560	5.750	050CTSS1
5 CT1	4	7.125	6	515	229	1294	5.750	050CTSS1
5 CT2	4	7.625	6-1/2	593	276	3606	5.750	050CTSS2
5 CT2	4	7.625	6-3/4	404	255	1722	5.750	050CTSS2
5 CT2	4	7.625	7	275	130	748	5.750	050CTSS2
5-1/2 CT1	4	7.625	6-1/2	463	244	3070	6.250	054CTSS1
5-1/2 CT1	4	7.625	6-3/4	455	193	823	6.250	054CTSS1
5-1/2 CT2	4	8.125	7-7/8	289	168	1175	6.250	054CTSS2
5-1/2 CT3	4	8.625	8-1/2	256	153	1489	6.250	054CTSS3
6-5/8 CT2	6	9.250	8	1393	1161	3500	7.500	065CTSS2
6-5/8 CT2	6	9.250	8-1/2	372	223	2182	7.500	065CTSS2
7 CT1	6	9.125	7.90	903	488	3136	7.780	070CTSS1
7 CT2	6	9.625	8-1/2	471	285	3120	7.780	070CTSS2
7 CT2	6	9.625	8-3/4	358	213	1926	7.780	070CTSS2
7-5/8 CT1	6	9.750	8-1/2	920	348	2429	8.375	075CTSS1
7-5/8 CT1	6	9.750	8-3/4	734	360	1814	8.375	075CTSS1
7-5/8 CT2	6	10.250	9-1/2	734	360	1689	8.375	075CTSS2
7-5/8 CT2	6	10.250	9-7/8	141	43	1155	8.375	075CTSS2
7-3/4 CT1	6	9.875	8-3/4	807	392	1959	8.500	076CTSS1
7-3/4 CT2	6	9.875	10-3/8	327	162	1224	8.500	076CTSS2
7-3/4 CT3	6	11.125	10-5/8	414	307	1780	8.500	076CTSS3
8-5/8 CT1	6	10.750	9-1/2	574	480	1458	9.500	085CTSS1
8-5/8 CT1	6	10.750	9-7/8	383	248	1210	9.500	085CTSS1
8-5/8 CT2	6	11.250	10-5/8	281	126	1488	9.500	085CTSS2
8-5/8 CT2	6	11.250	12-1/4	0	0	1017	9.500	085CTSS2
9-3/8 CT2	6	12.000	10-5/8	1491	1238	1744	10.250	093CTSS2
9-3/8 CT2	6	12.000	12-1/4	0	0	1196	10.250	093CTSS2
9-5/8 CT2L	6	12.250	10-5/8	559	137	2631	10.500	095CTSS2L
9-5/8 CT2L	6	12.250	10-7/8	487	124	2229	10.500	095CTSS2L
9-5/8 CT3	6	12.750	12-1/4	329	205	1147	10.500	095CTSS3
9-5/8 CT4	6	14.250	12-1/4	1015	467	1804	10.500	094CTSS4
9-7/8 CT1	6	12.000	10-5/8	977	659	2083	10.625	097CTSS1
9-7/8 CT2	6	12.500	10-7/8	1542	828	2145	10.625	097CTSS2
9-7/8 CT3	6	13.000	12-1/4	905	519	1911	10.625	097CTSS3
10-3/4 CT2	6	13.375	12-1/4	1331	909	3049	11.625	106CTSS2
11-3/4 CT2	6	14.375	13-1/2	537	361	3308	12.625	116CTSS2
11-7/8 CT2	6	14.500	13-1/2	1029	847	3754	12.750	117CTSS2
13-3/8 CT2L	8	16.000	14-1/2	1146	1094	2123	14.375	133CTSS2L
13-3/8 CT2L	8	16.000	14-3/4	979	788	1830	14.375	133CTSS2L
13-3/8 CT3	8	16.750	15-1/2	1082	731	1877	14.375	133CTSS3
13-3/8 CT5	8	19.000	17-1/2	1709	653	2713	14.375	133CTSS5
13-5/8 CT2L	8	16.750	14-1/2	1400	1206	3044	14.500	135CTSS2L
13-5/8 CT2L	8	16.750	14-3/4	1029	493	2906	14.500	135CTSS2L
13-5/8 CT4	8	18.250	17-1/2	461	290	2375	14.500	135CTSS4
16 CT2	8	18.625	17-1/2	976	618	3955	17.250	160CTSS2
18 CT4	10	22.625	19.81	3246	1615	3703	19.250	180CTSS4
20 CT3	12	23.375	22	2834	1003	3392	21.380	200CTSS3
20 CT3	12	23.375	24	0	0	1687	21.380	200CTSS3
20 CT6	12	28.125	26	1507	643	4598	21.380	200CTSS6

All measurements are in inches
Restoring forces at 67% standoff as per API standard

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