

Hinged Non-Weld Bow Spring Centralizers

Forum offers a full line of patented, non-weld centralizers. These centralizers feature a unique interlocking adjoinment between the end collar and bow spring, which makes for a strong singular unit. (See size chart next page)

Davis-Lynch™ Non-Weld Type “NW” centralizers are designed to exceed the performance requirements of API Specification 10D for both starting and restoring forces.

The Non-Welded Turbolizer is a centralizer with metal fins installed on the bows to help induce turbulence in the cement slurry during pumping operations. Like the spring bows, the fins are made of heat-treated alloy steel. This makes them flexible, which minimizes damage while moving downhole. The Davis-Lynch Turbolizer incorporates the same nonwelded end collar to spring-bow interlocking adjoinment as the Davis-Lynch centralizer. Turbolizers are available in the same sizes and bow heights as centralizers. As with the Davis-Lynch centralizer, turbolizers can be manufactured with a built-in stop device. These items are available on special order.

Other design features of the Type “NW” Centralizer include:

- Bow springs made of alloy steel which are heat treated and tempered to a hardness of 42-44 Rc ensures proper and consistent spring characteristics.
- End collar hinges that are folded to the inside. This minimizes the collar stretch that tends to occur when centralizers encounter tapers common to some pipe connections.
- A reinforcing rib stamped into the end collar. This strengthens it to ensure maintenance of its round configuration during transport.
- Several different spring bow heights that are available to accommodate most any casing-to-hole configuration.
- Centralizers with built-in stop devices as well as those for unusual sizes available on request.



Hinged Non-Weld Bow Spring Centralizers

Size / Type	No. Of Bows	Bow OD	Hole Size	Starting Force (Lbf)	Drag Force (Lbf)	Restoring Force (Lbf)	Minimum Compressed OD	Item No.
4-1/2 NW1	4	6.500	5-7/8	226	156	876	5.750	044NW1C
4-1/2 NW2	4	7.125	6	361	169	3000+	5.750	044NW2C
4-1/2 NW2	4	7.125	6-1/4	251	100	1140	5.750	044NW2C
4-1/2 NW3	4	7.625	6-1/2	355	147	2070	5.750	044NW3C
4-1/2 NW4	4	9.125	7 7/8	264	116	1040	5.750	044NW4C
4-1/2 NW4	4	9.125	8-1/4	190	94	834	5.750	044NW4C
4-1/2 NW4	4	9.125	8-1/2	146	87	680	5.750	044NW4C
5 NW1	4	7.125	6-1/4	175	82	650	6.250	050NW1C
5 NW2	4	7.625	6-1/2	273	113	3000+	6.250	050NW2C
5 NW2	4	7.625	6-3/4	160	75	1156	6.250	050NW2C
5 NW3	4	8.125	7-7/8	190	94	1020	6.250	050NW3C
5 NW4	4	9.625	8-1/4	495	277	1922	6.250	050NW4C
5 NW4	4	9.625	8-1/2	360	165	1650	6.250	050NW4C
5-1/2 NW1	4	7.625	6-3/4	287	138	2005	6.750	054NW1C
5-1/2 NW3	4	8.625	7-7/8	240	107	650	6.750	054NW3C
5-1/2 NW4	4	10.125	8-1/2	520	208	1210	6.750	054NW4C
5-1/2 NW4	4	10.125	8-3/4	227	93	1310	6.750	054NW4C
5-1/2 NW5	4	11.125	9-7/8	280	123	1180	6.750	054NW5C
5-1/2 NW6	4	13.625	12-1/4	240	118	680	6.750	054NW5C
6-5/8 NW3	6	9.750	8-1/2	449	328	2116	7.875	065NW3C
7 NW1	6	9.125	8-1/4	628	351	3000+	8.250	070NW1C
7 NW2	6	9.625	8-1/2	720	327	3000+	8.250	070NW2C
7 NW3	6	10.125	8-3/4	795	325	3000+	8.250	070NW3C
7 NW4	6	11.625	9-7/8	720	323	1910	8.250	070NW4C
7-5/8 NW3	6	10.750	9-7/8	550	264	1467	8.875	075NW3C
8-5/8 NW3	6	11.750	11	400	168	1470	9.875	085NW3C
8-5/8 NW5	6	14.250	12-1/4	1120	464	1850	9.875	085NW5C
9-5/8 NW3	6	12.750	11"	550	206	4800	10.875	095NW3C
9-5/8 NW4	6	14.250	11-3/4	1508	1107	3900	10.875	095NW4C
9-5/8 NW8	6	14.750	12-1/4"	1389	616	2175	10.875	095NW8C
9-5/8 NW5	6	15.125	12-1/2	1221	716	1850	10.875	095NW5C
9-7/8 NW8	6	15.000	12-1/4	1401	619	3004	11.125	097NW8C
10-3/4 NW2	6	13.375	12-1/4	511	212	2185	12.000	106NW2C
10-3/4 NW4	6	15.375	13-1/2	645	263	1385	12.000	106NW4C
10-3/4 NW5	6	16.375	14-3/4	660	279	1290	12.000	106NW5C
11-3/4 NW4	6	16.375	14-3/4	624	305	1411	13.000	116NW4C
11-3/4" NW5	6	17.375	15-1/2	940	386	1530	13.000	116NW5C
13-3/8 NW3	8	16.500	14-3/4	1467	1372	3660	14.625	133NW3C
13-3/8 NW4	8	18.000	16	1042	563	2480	14.625	133NW4C
13-3/8 NW5	8	19.000	17-1/2	830	408	2330	14.625	133NW5C
13-5/8 NW4	8	18.250	17-1/2	257	132	1666	14.875	135NW4C
14 NW4	8	18.625	17-1/2	431	222	1417	15.250	140NW4C
16 NW5	8	21.625	20"	844	407	1570	17.500	160NW5C
16 NW6	8	24.125	22"	1161	507	2530	17.500	160NW6C
18-5/8" NW5	10	23.250	22	2010	908	3000+	20.125	185NW5C
18-5/8" NW6	10	26.750	23	1758	636	3537	20.125	185NW6C
18-5/8" NW6	10	26.750	24	740	360	1850	20.125	185NW6C
18-5/8" NW7	10	28.750	26	1803	827	1955	20.125	185NW7C
20 NW5	12	25.625	24	1360	574	1930	21.500	200NW5C
20 NW6	12	28.125	26	1220	542	2200	21.500	200NW6C

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