


Universal Group®





The Universal Group, LLC 1025 Thomas Busch Memorial Highway  Pennsauken, New Jersey 08110


1120 Eden Road, Suite 100  Arlington, Texas 76001

Trailer Springs

Measurement Guide

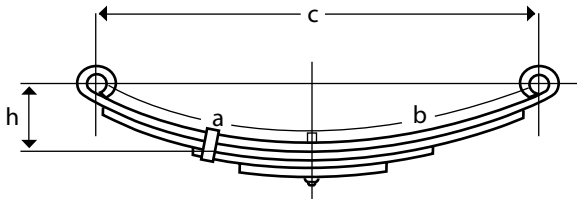


NJ Phone: (800) 225-1845  (856) 488-1800  NJ Fax: (800) 360-9636

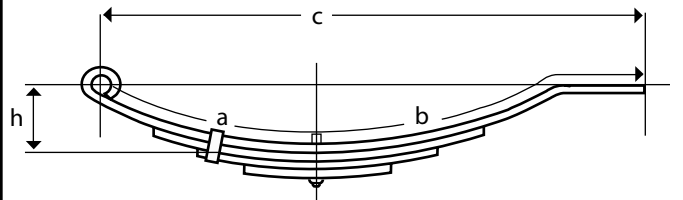
 TX Phone: (800) 637-4422

SPRING SPECIFICATIONS

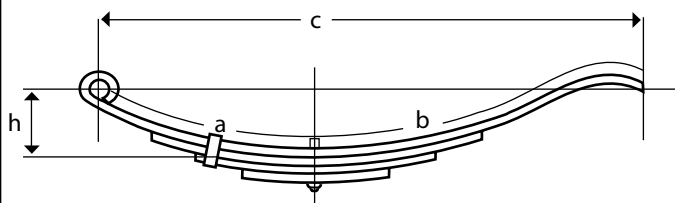
DOUBLE EYE SPRING



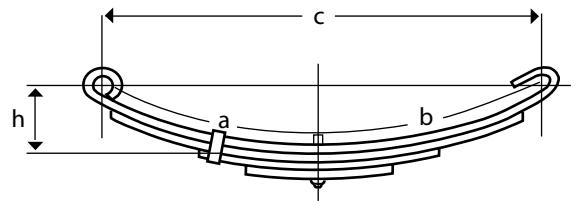
SLIPPER SPRING - FLAT END



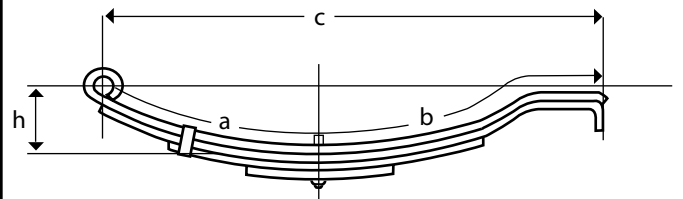
SLIPPER SPRING - RADIUS END



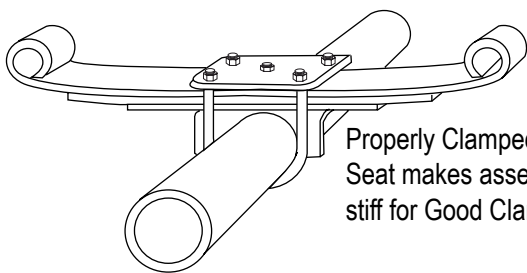
SLIPPER SPRING - OPEN EYE



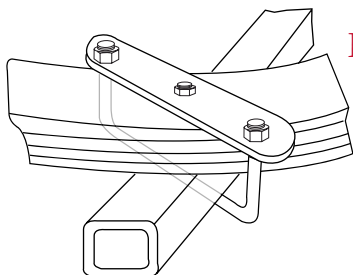
SLIPPER SPRING - HOOK END



RECOMMENDED MOUNTING

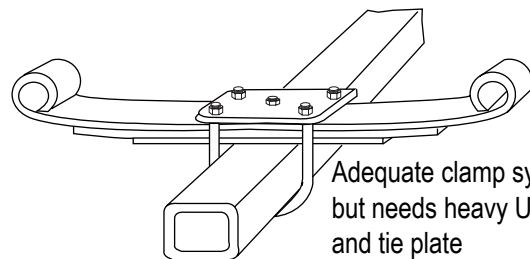


Properly Clamped Spring Seat makes assembly stiff for Good Clamping



NOT RECOMMENDED

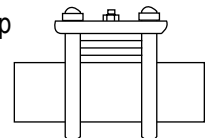
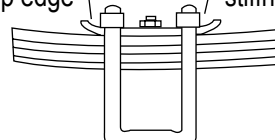
Unreliable Method, Max load stress occurs at center hole, **TO BE AVOIDED AT ALL COSTS**



Adequate clamp system, but needs heavy U-bolts and tie plate

Radius reduces abrasion at clamp edge

Formed edge increases clamp stiffness



Clearance kept to minimum between Leaves and U-Bolts



DOUBLE EYE SPRINGS

PART NO	NO. LVS	WIDTH	STEEL THK.	FREE LENGTH c	ARC a**	LENGTH b**	FREE OPEN h	CAPACITY (lbs)* per spring	EYE I.D.	BUSHING I.D.	BUSHING	WEIGHT (lbs)	SIMILAR TO:
UNA-072	3	1.75	0.323	18.31	10.12	10.12	3.00	1650	7/8	9/16N	PE-225	8.75	TS-503-3
UNA-030	4	1.75	0.259	19.92	10.75	10.75	3.25	1290	11/16	1/2N	PE-226	9.25	
UNA-041	3	1.75	0.323	20.00	11.10	11.10	3.25	1500	7/8	9/16N	PE-225	9.39	4332-13; DE-041
UNA-168	3	1.75	3/237	20.31	11.00	11.00	3.38	700	11/16	9/16N	PE-227	5.67	72-16; DX-720
UNA-169	3	1.75	0.262	20.38	11.00	11.00	3.19	1000	11/16	9/16N	PE-227	6.89	72-17; DX-1020; 8117; TS511-3; 4332-10
UNA-167	4	1.75	2/291 2/262	20.50	11.13	11.13	3.35	1400	11/16	9/16N	PE-227	9.25	72-13; TS512-4
UNA-033	2	1.75	0.197	22.75	12.31	12.31	3.81	300	7/8	9/16N	PE-225	4.35	
UNA-135	3	1.75	2/323 1/291	23.13	12.50	12.50	3.63	1250	11/16	9/16N	PE-227	9.00	72-06; 93182-12; 8119
UNA-216	3	1.75	0.360	23.13	12.41	12.41	3.50	1750	11/16	9/16N	PE-227	10.64	72-09; 124-3L; WAH-3; 93180; 1750; 1724; 8116; TS524-3; 4332-13L
UNA-079	4	1.75	0.360	23.13	12.56	12.56	3.63	2500	11/16	9/16N	PE-227	13.34	72-20; 93183; WAH-4; TS524-4
UNA-113	3	1.75	0.291	23.50	12.63	12.63	3.50	1000	11/16	9/16N	PE-227	9.30	545-3L; 125-3
UNA-114	4	1.75	0.291	23.50	12.68	12.68	3.56	1500	11/16	9/16N	PE-227	10.80	545-4L; 125-4; UNA-175
UNA-188	5	1.75	0.291	24.00	12.64	12.64	3.19	1625	11/16	1/2N	PE-226	13.65	545-5; 125-5
UNA-222	6	1.75	3/360 3/323	24.88	13.25	13.25	3.38	2650	11/16	9/16N	PE-227	17.34	UNA-112; 72-27; 1769; SW-6; 93160
UNA-219	3	1.75	2/323 1/291	25.13	13.29	13.29	3.18	1250	11/16	9/16N	PE-227	9.54	UNA-107; 72-22; 93101; SW-3B; 1760; PP3A; 8101; PR-722; 4332-12
UNA-212	4	1.75	0.323	25.13	13.19	13.19	3.25	1750	11/16	9/16N	PE-227	11.40	UNA-108; SW-4B; 72-42; 93168; UNA-157; 4342-17; 8103; PR-4B; 93184
UNA-221	4	1.75	3/401 1/360	25.13	13.29	13.29	3.12	3000	11/16	9/16N	PE-227	15.15	UNA-117; 72-26; ML-4; 93115; 8106; 4342-30
UNA-217	3	1.75	2/360 1/323	25.25	13.13	13.13	3.00	1500	11/16	9/16N	PE-227	10.67	72-23; UNA-108; 1761; 8102
UNA-220	3	1.75	2/401 1/360	25.25	13.25	13.25	3.00	2000	11/16	9/16N	PE-227	11.46	UNA-109; 72-24; 1762; 93102; SW-3; PP3; PR-3 33839; 8115
UNA-218	4	1.75	2/401 2/360	25.25	13.25	13.25	3.00	2500	11/16	9/16N	PE-227	14.10	UNA-110; 72-25; 1763; 93181; 93103; SW-4; 8104; PR-4; 4342-24; 125213; 148160

The information contained on this page is intended to aid in identification of available double eye springs. This is not intended for design purposes.

DOUBLE EYE SPRINGS

PART NO	NO. LVS	WIDTH	STEEL THK.	FREE LENGTH c	ARC a**	LENGTH b**	FREE OPEN h	CAPACITY (lbs)* per spring	EYE I.D.	BUSHING I.D.	BUSHING	WEIGHT (lbs)	SIMILAR TO:
UNA-111	5	1.75	0.360	25.25	13.33	13.33	3.12	3000	11/16	9/16N	PE-227	16.20	1764; SW-5; 93163; 33600; PR-5; 8108; TS534-5; 4352-29
UNA-115	1T	1.75	0.850	25.25	13.20	13.20	3.00	3000	0.59	NONE	NONE	9.00	72-40; TE-30; MD-35; 93118
UNA-223	6	1.75	0.360	25.25	13.39	13.39	3.50	3380	11/16	9/16N	PE-227	19.25	93160
UNA-121	2	1.75	0.259	26.00	14.03	14.03	4.13	500	11/16	9/16N	PE-227	6.62	26-350; AS-2; 5015-2; UNA-287; DE26350
UNA-122	3	1.75	0.237	26.00	14.07	14.07	4.12	690	11/16	9/16N	PE-227	7.32	26-500; AS-3; UNA-238; 5015-3; DE26500
UNA-123	4	1.75	0.237	26.00	14.07	14.07	4.12	750	11/16	9/16N	PE-227	9.62	26-750, UNA-239
UNA-124	4	1.75	0.259	26.00	14.07	14.07	4.00	1000	11/16	9/16N	PE-227	10.53	26-1000; UNA-021; AS-4; 5015-4; UNA-156; DE261000
UNA-049	2	1.75	0.360	26.00	14.00	14.00	4.25	1000	11/16	9/16N	PE-227	9.91	AWS-2; 9318204; 4332-8
UNA-050	3	1.75	0.360	26.00	14.00	14.00	4.25	1500	11/16	9/16N	PE-227	11.62	AWS-3; 9318206; TS544-3; 4332-11
UNA-051	4	1.75	0.360	26.00	14.00	14.00	4.25	2000	11/16	9/16N	PE-227	14.13	AWS-4; 033000; TS544-4; 4342-16
UNA-052	5	1.75	0.360	26.00	14.00	14.00	4.25	2500	11/16	9/16N	PE-227	16.49	AWS-5; W-526HD; TS544-5; 4352-18
UNA-053	6	1.75	0.360	26.00	14.00	14.00	4.25	3000	11/16	9/16N	PE-227	19.64	AWS-6; SW-626HD; 8114; TS544-6; 4362-22
UNA-054	7	1.75	0.360	26.00	14.00	14.00	4.25	3500	11/16	9/16N	PE-227	25.00	AWS-7; 93154; 4372-26
UNA-055	8	1.75	0.360	26.00	14.00	14.00	4.25	4000	11/16	9/16N	PE-227	27.90	AWS-8; 4382-30
UNA-144	3	1.75	1/291 2/262	27.00	14.21	14.21	3.50	750	11/16	9/16N	PE-227	8.60	33611; 15327; 33611; 4332-75
UNA-141	3	1.75	2/323 1.291	27.00	13.98	13.98	2.83	1000	11/16	9/16N	PE-227	9.79	20327; 33612; SW327; 4332-10-27
UNA-210	4	1.75	3/360 1/323	27.00	13.98	13.98	2.75	1750	11/16	9/16N	PE-227	13.75	UNA-031; 354277; 33613; SW-427; 4342-15
UNA-234	5	1.75	0.360	27.00	13.98	13.98	2.75	2250	11/16	9/16N	PE-227	17.26	45527; 2250
UNA-142	6	1.75	4/401 2/360	27.00	14.14	14.14	3.25	3000	11/16	9/16N 9/16N	PE-227	22.00	60627; 33617; UNA-023; 125209; 4362-30



DOUBLE EYE SPRINGS

PART NO	NO. LVS	WIDTH	STEEL THK.	FREE LENGTH c	ARC a**	LENGTH b**	FREE OPEN h	CAPACITY (lbs)* per spring	EYE I.D.	BUSHING I.D.	BUSHING	WEIGHT (lbs)	SIMILAR TO:
UNA-189	3	1.75	0.259	28.00	14.88	14.88	4.25	700	11/16	9/16N	PE-227	9.08	
UNA-190	4	1.75	0.259	28.00	14.88	14.88	4.25	925	11/16	9/16N	PE-227	11.86	
UNA-191	5	1.75	0.259	28.00	14.88	14.88	4.25	1150	11/16	9/16N	PE-227	14.10	
UNA-084	4	1.75	0.237	28.00	15.12	15.12	4.25	650	7/8	9/16N	PE-225	10.71	
UNA-085	5	1.75	0.262	28.13	15.24	15.24	4.50	1000	7/8	9/16N	PE-225	14.11	
UNA-035	3	1.75	0.259	29.70	15.63	15.63	4.00	650	7/8	9/16N	PE-225	9.62	
UNA-036	5	1.75	0.259	29.70	15.63	15.63	4.00	1250	7/8	9/16N	PE-225	15.16	UNA-224
UNA-032	7	1.75	0.259	29.70	15.63	15.63	4.00	1500	7/8	9/16N	PE-225	18.95	
UNA-224	3	1.75	0.360	29.75	15.87	15.87	4.38	1250	11/16	9/16N	PE-227	12.93	UNA-118; 72-34; DE-3L
UNA-022	6	1.75	0.360	30.00	16.38	16.38	5.00	2480	7/8	9/16N	PE-225	25.20	

SLIPPER SPRINGS - FLAT END

PART NO	NO. LVS	WIDTH	STEEL THK.	FREE LENGTH c	ARC a**	LENGTH b**	FREE OPEN h	CAPACITY (lbs)* per spring	EYE I.D.	BUSHING I.D.	BUSHING	WEIGHT (lbs)	SIMILAR TO:
UNA-193	2	1.75	0.237	19.00	10.06	11.88	4.62	600	11/16	9/16N	PE-227	4.47	
UNA-018	1	1.75	0.262	24.00	12.20	14.12	4.38	300	7/8	9/16N	PE-225	4.31	UNA-176
UNA-267	3	1.75	0.262	24.50	12.20	14.25	4.00	850	7/8	9/16N	PE-225	7.65	UNA-020; UNA-178
UNA-043	4	1.75	0.237	24.50	12.20	14.13	4.00	1000	7/8	9/16N	PE-225	9.08	UNA-179
UNA-047	3	1.75	0.360	24.50	11.88	14.50	4.12	1653	7/8	9/16N	PE-225	10.80	
UNA-202	2	1.75	0.259	25.00	12.10	14.50	3.50	600	11/16	9/16N	PE-227	5.62	BT-25-6; TS721-2
UNA-203	3	1.75	0.259	25.00	12.10	14.50	3.50	900	11/16	9/16N	PE-227	7.52	BT-25-9; TS721-3
UNA-204	4	1.75	0.259	25.00	12.10	14.50	3.50	1200	11/16	9/16N	PE-227	9.40	BT-25-12; TS721-4
UNA-205	3	1.75	0.323	25.00	12.10	14.50	3.50	1400	11/16	9/16N	PE-227	9.39	BT-25-15; TS723-3
UNA-206	3	1.75	0.360	25.00	12.10	14.50	3.50	1720	11/16	9/16N	PE-227	10.49	BT-25-22; TS724-3
UNA-207	5	1.75	0.323	25.00	12.10	14.50	3.50	2300	11/16	9/16N	PE-227	14.10	BT-25-25; TS723-5
UNA-208	4	1.75	0.360	25.00	12.10	14.50	3.50	2300	11/16	9/16N	PE-227	13.14	BT-25-30; TS724-4
UNA-013	2	1.75	0.237	25.13	13.00	15.50	5.00	470	11/15	9/16N	PE-227	5.95	
UNA-014	3	1.75	0.237	25.13	13.00	15.50	5.00	705	11/16	9/16N	PE-227	7.73	
UNA-015	4	1.75	0.237	25.13	13.00	15.50	5.00	940	11/16	9/16N	PE-227	9.34	
UNA-016	5	1.75	0.237	25.13	13.00	15.50	5.00	1184	7/8	9/16N	PE-225	11.46	
UNA-017	6	1.75	0.237	25.13	13.00	15.50	5.00	1415	7/8	9/16N	PE-225	13.30	
UNA-037	2	1.75	0.323	30.00	15.00	17.75	4.88	705	7/8	9/16N	PE-225	8.88	UNA-184
UNA-038	2	1.75	0.360	30.00	15.00	17.75	4.88	880	7/8	9/16N	PE-225	9.92	WID-2; 4321-10
UNA-039	3	1.75	0.360	30.00	15.00	17.75	4.88	1430	7/8	9/16N	PE-225	12.20	WIF-3; 4331-15; TS754-3
UNA-040	4	1.75	0.360	30.00	15.00	17.75	4.88	1837	7/8	9/16N	PE-225	15.88	WIG-4; 4341-17; TS754-4
UNA-040N	5	1.75	0.360	30.00	15.00	17.75	4.88	2293	7/8	9/16N	PE-225	17.45	4341-18
UNA-057	6	1.75	0.360	30.00	15.00	17.75	4.88	3000	7/8	9/16N	PE-225	21.92	

The information contained on this page is intended to aid in identification of available double eye springs & slipper springs. This is not intended for design purposes.

SLIPPER SPRINGS - OPEN EYE

PART NO	NO. LVS	WIDTH	STEEL THK.	FREE LENGTH c	ARC a**	LENGTH b**	FREE OPEN h	CAPACITY (lbs)* per spring	EYE I.D.	BUSHING I.D.	BUSHING	WEIGHT (lbs)	SIMILAR TO:
UNA-262	3	1.75	0.323	26.25	13.75	14.10	3.50	1500	1.03	9/16	PE-228	10.91	C-2; TS633-3
UNA-263	3	1.75	0.360	26.25	13.75	14.10	3.50	1625	1.03	9/16	PE-228	12.07	C-3; UNA-045; UNA-065; TS634-3; C3WB
UNA-264	4	1.75	0.360	26.25	13.75	14.10	3.50	2150	1.03	9/16	PE-228	14.61	C-4; UNA-075; UNA-066; TS634-4; C4WB
UNA-265	5	1.75	0.360	26.25	13.75	14.10	3.50	2750	1.03	9/16	PE-228	17.06	C-5; UNA-076; UNA-067; TS634-5; C5WB

SLIPPER SPRINGS - RADIUS END

PART NO	NO. LVS	WIDTH	STEEL THK.	FREE LENGTH c	ARC a**	LENGTH b**	FREE OPEN h	CAPACITY (lbs)* per spring	EYE I.D.	BUSHING I.D.	BUSHING	WEIGHT (lbs)	SIMILAR TO:
UNA-026	3	1.75	0.323	20.75	9.45	12.97	3.25	1000	7/8	9/16N	PE-225	8.35	
UNA-080	2	1.75	0.262	21.13	11.42	13.58	4.50	590	11/16	9/16N	PE-227	5.50	
UNA-176	1+ P	1.75	0.237	24.62	12.00	14.50	4.00	230	11/16	1/2N	PE-226	3.88	WIA-2; 4321-03
UNA-177	2	1.75	0.237	24.62	12.00	14.50	4.00	500	11/16	9/16N	PE-227	5.16	WIC-2; UNA-202; 4321-05
UNA-178	3	1.75	0.237	24.62	12.00	14.50	4.00	750	11/16	9/16N	PE-227	6.94	WIE-3; 4331-07; UNA-203; TS820-3
UNA-179	4	1.75	0.237	24.62	12.00	14.50	4.00	1000	11/16	9/16N	PE-227	8.62	WIH-4; 4341-10; UNA-204; UNA-206; TS820-4
UNA-180	5	1.75	0.237	24.62	12.00	14.50	4.00	1240	11/16	1/2N	PE-226	10.32	WI-5; 4351-12
UNA-133	2	1.75	0.291	27.50	13.62	16.75	4.81	700	11/16	9/16N	PE-227	8.50	72-03
UNA-132	2	1.75	1/360 1/323	27.50	13.62	16.50	4.63	1000	11/16	9/16N	PE-227	10.07	72-02
UNA-268	5	3.00	0.401	30.50	14.57	18.10	3.94	5000	1.96	1RB	14-69	39.30	72-43; TS894-5
UNA-269	6	3.00	0.401	30.50	14.57	18.10	3.94	6000	1.96	1RB	14-69	46.45	72-44; TS894-6
UNA-270	7	3.00	0.401	30.50	14.57	18.10	4.00	7500	1.96	1RB	14-69	54.00	72-45; TS894-7
UNA-298	5	2.50	3/447 2/401	30.48	14.77	18.21	4.00	5000	2	3/4RB	SRB-7280	33.73	72-80, UNA-252; UNA-297; US-3089; TS885-5
UNA-028	2	1.75	0.291	32.00	14.50	19.50	4.25	600	11/16	1/2N	PE-226	7.79	UNA-201; 24722
UNA-034	3	1.75	0.291	32.00	14.50	19.50	4.25	800	11/16	1/2N	PE-226	10.76	UNA-195; 24723
UNA-024	4	1.75	0.291	32.00	14.50	19.50	4.25	1100	11/16	1/2N	PE-226	12.18	UNA-196
UNA-029	5	1.75	0.291	32.00	14.50	19.50	4.25	1200	11/16	1/2N	PE-226	14.38	UNA-197
UNA-029N	6	1.75	0.291	32.00	14.50	19.50	4.25	1400	11/16	1/2N	PE-226	18.13	

The information contained on this page is intended to aid in identification of available slipper springs. This is not intended for design purposes.



SLIPPER SPRINGS - HOOK END

PART NO	NO. LVS	WIDTH	STEEL THK.	FREE			FREE		CAPACITY (lbs)* per spring	EYE I.D.	BUSHING		WEIGHT (lbs)	SIMILAR TO:	HOOK LOCATION
				LENGTH c	ARC a**	LENGTH b**	OPEN h	I.D.			BUSHING				
UNA-009	3	1.75	0.237	24.74	12.00	15.13	4.00	800	11/16	9/16N	PE-227	7.15	UNA-178, ATZ-009	HK#1	
UNA-010	4	1.75	1/262 3/237	24.74	12.00	15.13	4.00	1000	11/16	9/16N	PE-227	9.82	UNA-179	HK#1	
UNA-128	4	2.00	1/360 3/323	26.25	11.75	15.75	2.50	2000	1.28	9/16N	14-54	16.23	93167; 80-3T3	HK#2	
UNA-229	4	2.00	0.291	26.63	12.00	16.06	3.19	1500	11/16	9/16N	PE-229	13.93	72-29; 60-3T3; TS962-4	HK#2	
UNA-301	4	2.00	0.291	26.63	12.00	16.06	3.19	1500	1.28	5/8RB	RB1	14.00	72-29; 60-3T3, UNA-229; TS9624RB	HK#2	
UNA-230	4	2.00	1/360 3/323	26.63 26.63	12.00 12.00	16.06 16.06	3.00	2000	11/16	9/16N	PE-229	16.05	UNA-128; 72-30; 93167,80-313, 8112,TS963-4	HK#2	
UNA-231	4	2.00	0.360	26.63	12.00	16.06	3.06	2500	11/16	9/16N	PE-229	17.22	72-31; UNA-251; UNA-129; 100-3T3; TS964-4	HK#2	
UNA-232	5	2.00	0.360	26.63	12.00	16.06	3.19	3500	11/16	9/16N	PE-229	19.99	72-32; UNA-610S; 120-3T3; 9312011; 8109; TS964-5	HK#2	
UNA-299	5	2.00	0.360	26.63	12.00	16.06	3.19	3500	1.28	5/8RB	RB1	20.64	UNA-232; UNA610; 120-3T3; 9312010; TS964-5RB	HK#2	
UNA-315	5	2.00	0.360	26.63	12.00	16.06	3.19	3500	1.28	9/16RB	RB1916	20.64		HK#2	
UNA-302	5	2.00	0.360	26.63	12.00	16.06	3.19	3500	11/16	9/16N	14-54	20.41	UNA-232; UNA-299	HK#2	
UNA-233	7	2.00	0.360	26.63	12.00	16.06	3.19	4000	11/16	9/16N	PE-229	26.57	UNA-131; 9316501; 72-33; 140-3T3; UNA-611S; 8111; TS964-7	HK#2	
UNA-285	7	2.00	0.360	26.63	12.00	16.06	3.00	4000	1.28	9/16N	14-54	27.00	72-51, UNA-300; UNA-611; 140-3T3; 93165	HK#2	
UNA-300	7	2.00	0.360	26.63	12.00	16.06	3.19	4000	1.28	5/8RB	RB1	27.30	UNA-285; UNA- 611; 140-3T3; 93165; TS964-7RB	HK#2	
UNA-317	7	2.00	0.360	26.63	12.00	16.06	3.19	4000	1.28	9/16RB	RB1916	27.30		HK#2	
UNA-160	5	2.00	0.360	26.98	12.75	15.75	3.50	3000	11/16	9/16N	PE-229	20.37	E-5226; UNA-104; 33611; 8113; TS974-5; 4531-30	HK#2	
UNA-161	6	2.00	0.401	29.50	14.13	16.53	3.50	4000	11/16	9/16N	PE-229	27.90	93170; E-5115; UNA-186; 8110; TS976-6; 4361-40	HK#1	
UNA-196	4	1.75	0.291	30.62	14.75	18.94	4.31	1000	11/16	9/16N	PE-227	12.32	UNA-024	HK#1	
UNA-197	5	1.75	0.291	30.62	14.75	18.94	4.31	1250	11/16	9/16N	PE-227	14.81	UNA-029, UNA- 277; TS942-5	HK#1	
UNA-195	3	1.75	0.291	30.75	14.61	18.94	4.13	750	11/16	9/16N	PE-227	10.00	UNA-034	HK#2	

T = Taper Leaf (parabolic)

N = Nylon


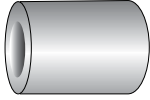
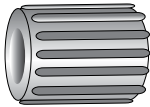
S = Spacer

SB = Steel backed bronze

* The capacities given are for reference only. The actual capacity is dependent on the spring mounting (center clamp) and service requirements.

** These lengths are for reference purposes only.

BUSHINGS

NYLON BUSHINGS for Small Trailer Springs				
	Part No.	O.D.	I.D.	Length
	PE-182	7/8	1/2	11/16
	PE-224	7/8	1/2	1 3/4
	PE-225	7/8	9/16	1 3/4
	PE-226	11/16	1/2	1 3/4
	PE-227	11/16	9/16	1 3/4
	PE-228	1	9/16	1 3/4
	PE-229	11/16	9/16	2
	14-54	1 5/16	9/16	2

Steel Backed Bronze Bushings (SB)

Part No.	O.D.	I.D.	Length	Similar To
SBB-ECB	11/16	9/16	1 3/4	
SBB-JFE	1	3/4	2 1/2	JFE, SBB-7221

Rubber Encased Bushings (RB)

Part No.	O.D.	I.D.	Length	Similar To
RB1	1.28	5/8	2	
14-69	2	1	3 1/8	014-069

The information contained on this page is intended to aid in identification of available nylon bushings. This is not intended for design purposes.

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