

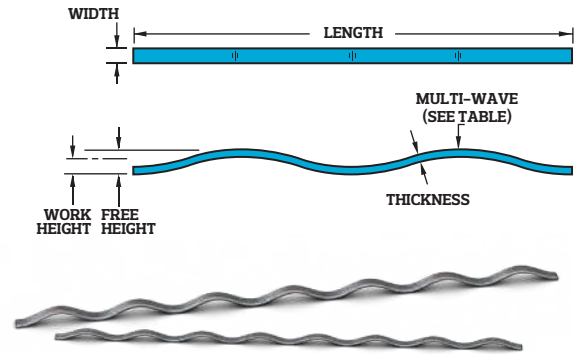
Linear Springs (Imperial)

YLS Series

Smalley Linear Springs are a continuous wave formed (marcelled) wire length produced from spring tempered materials. They act as a load bearing device having approximately the same load/deflection characteristics as a wave spring. Axial pressure is obtained by laying the expander flat in a straight line.

Stock items available in:

- Carbon steel
- 17-7 PH stainless steel



	Part No. ¹	Number of Waves	Thickness	Width	Length	Free Height ²	Load (lb)	Work Height	Spring Rate ³
Imperial (in.)	YLS12188-1	1	0.012	0.188	1.500	0.225	1.5	0.125	11
	YLS12188-2	2	0.012	0.188	3.000	0.225	5.6	0.125	91
	YLS12188-3	3	0.012	0.188	4.500	0.225	10.4	0.125	136
	YLS12188-4	4	0.012	0.188	6.000	0.225	14.8	0.125	182
	YLS12250-1	1	0.012	0.250	1.500	0.225	2.2	0.125	15
	YLS12250-2	2	0.012	0.250	3.000	0.225	7.8	0.125	121
	YLS12250-3	3	0.012	0.250	4.500	0.225	13.9	0.125	181
	YLS12250-4	4	0.012	0.250	6.000	0.225	19.8	0.125	242
	YLS12312-1	1	0.012	0.312	1.500	0.225	2.9	0.125	19
	YLS12312-2	2	0.012	0.312	3.000	0.225	10.2	0.125	151
	YLS12312-3	3	0.012	0.312	4.500	0.225	17.6	0.125	226
	YLS12312-4	4	0.012	0.312	6.000	0.225	26.0	0.125	302
	YLS12375-1	1	0.012	0.375	1.500	0.225	3.5	0.125	23
	YLS12375-2	2	0.012	0.375	3.000	0.225	11.3	0.125	181
	YLS12375-3	3	0.012	0.375	4.500	0.225	20.1	0.125	272
	YLS12375-4	4	0.012	0.375	6.000	0.225	25.2	0.125	362
	YLS20188-1	1	0.020	0.188	1.875	0.250	3.0	0.150	27
	YLS20188-2	2	0.020	0.188	3.750	0.250	11.4	0.150	215
	YLS20188-3	3	0.020	0.188	5.625	0.250	23.5	0.150	323
	YLS20188-4	4	0.020	0.188	7.500	0.250	32.5	0.150	431
	YLS20250-1	1	0.020	0.250	1.875	0.250	5.6	0.150	36
	YLS20250-2	2	0.020	0.250	3.750	0.250	17.6	0.150	286
	YLS20250-3	3	0.020	0.250	5.625	0.250	31.7	0.150	430
	YLS20250-4	4	0.020	0.250	7.500	0.250	44.9	0.150	573
	YLS20312-1	1	0.020	0.312	1.875	0.250	6.0	0.150	45
	YLS20312-2	2	0.020	0.312	3.750	0.250	20.5	0.150	357
	YLS20312-3	3	0.020	0.312	5.625	0.250	34.9	0.150	536
	YLS20312-4	4	0.020	0.312	7.500	0.250	50.8	0.150	715
	YLS20375-1	1	0.020	0.375	1.875	0.250	6.4	0.150	54
	YLS20375-2	2	0.020	0.375	3.750	0.250	23.3	0.150	430
	YLS20375-3	3	0.020	0.375	5.625	0.250	52.0	0.150	644
	YLS20375-4	4	0.020	0.375	7.500	0.250	74.5	0.150	859
YLS25188-1	1	0.025	0.188	2.250	0.275	3.5	0.175	30	
YLS25188-2	2	0.025	0.188	4.500	0.275	15.4	0.175	243	
YLS25188-3	3	0.025	0.188	6.750	0.275	27.9	0.175	365	
YLS25188-4	4	0.025	0.188	9.000	0.275	42.5	0.175	487	
YLS25250-1	1	0.025	0.250	2.250	0.275	6.5	0.175	40	
YLS25250-2	2	0.025	0.250	4.500	0.275	21.7	0.175	324	
YLS25250-3	3	0.025	0.250	6.750	0.275	34.7	0.175	486	
YLS25250-4	4	0.025	0.250	9.000	0.275	50.5	0.175	647	
YLS25312-1	1	0.025	0.312	2.250	0.275	6.6	0.175	51	
YLS25312-2	2	0.025	0.312	4.500	0.275	24.0	0.175	404	
YLS25312-3	3	0.025	0.312	6.750	0.275	43.2	0.175	606	
YLS25312-4	4	0.025	0.312	9.000	0.275	62.0	0.175	808	
YLS25375-1	1	0.025	0.375	2.250	0.275	7.7	0.175	61	
YLS25375-2	2	0.025	0.375	4.500	0.275	29.4	0.175	486	
YLS25375-3	3	0.025	0.375	6.750	0.275	53.8	0.175	728	
YLS25375-4	4	0.025	0.375	9.000	0.275	76.9	0.175	971	

¹ Add suffix "-S17" for 17-7 stainless steel. ² Reference dimension. ³ Theoretical calculation; measured in lb/in.

Linear Springs (Imperial)

YLS Series

Part No. ¹	Number of Waves	Thickness	Width	Length	Free Height ²	Load (lb)	Work Height	Spring Rate ³
YLS38188-1	1	0.038	0.188	2.625	0.300	7.5	0.200	67
YLS38188-2	2	0.038	0.188	5.250	0.300	25.0	0.200	538
YLS38188-3	3	0.038	0.188	7.875	0.300	61.0	0.200	808
YLS38188-4	4	0.038	0.188	10.500	0.300	90.0	0.200	1077
YLS38250-1	1	0.038	0.250	2.625	0.300	11.9	0.200	89
YLS38250-2	2	0.038	0.250	5.250	0.300	45.7	0.200	716
YLS38250-3	3	0.038	0.250	7.875	0.300	74.3	0.200	1074
YLS38250-4	4	0.038	0.250	10.500	0.300	111.5	0.200	1432
YLS38312-1	1	0.038	0.312	2.625	0.300	9.9	0.200	112
YLS38312-2	2	0.038	0.312	5.250	0.300	49.3	0.200	893
YLS38312-3	3	0.038	0.312	7.875	0.300	88.0	0.200	1340
YLS38312-4	4	0.038	0.312	10.500	0.300	160.7	0.200	1787
YLS38375-1	1	0.038	0.375	2.625	0.300	16.9	0.200	134
YLS38375-2	2	0.038	0.375	5.250	0.300	61.7	0.200	1074
YLS38375-3	3	0.038	0.375	7.875	0.300	105.0	0.200	1611
YLS38375-4	4	0.038	0.375	10.500	0.300	153.0	0.200	2148
YLS45188-1	1	0.045	0.188	3.000	0.325	9.0	0.225	75
YLS45188-2	2	0.045	0.188	6.000	0.325	36.0	0.225	599
YLS45188-3	3	0.045	0.188	9.000	0.325	65.0	0.225	898
YLS45188-4	4	0.045	0.188	12.000	0.325	89.0	0.225	1198
YLS45250-1	1	0.045	0.250	3.000	0.325	12.5	0.225	100
YLS45250-2	2	0.045	0.250	6.000	0.325	42.5	0.225	797
YLS45250-3	3	0.045	0.250	9.000	0.325	83.0	0.225	1195
YLS45250-4	4	0.045	0.250	12.000	0.325	120.5	0.225	1593
YLS45312-1	1	0.045	0.312	3.000	0.325	14.7	0.225	124
YLS45312-2	2	0.045	0.312	6.000	0.325	60.3	0.225	994
YLS45312-3	3	0.045	0.312	9.000	0.325	108.9	0.225	1491
YLS45312-4	4	0.045	0.312	12.000	0.325	131.0	0.225	1988
YLS45375-1	1	0.045	0.375	3.000	0.325	20.4	0.225	149
YLS45375-2	2	0.045	0.375	6.000	0.325	73.1	0.225	1195
YLS45375-3	3	0.045	0.375	9.000	0.325	133.5	0.225	1792
YLS45375-4	4	0.045	0.375	12.000	0.325	190.0	0.225	2390
YLS62188-1	1	0.062	0.188	3.375	0.350	14.3	0.250	138
YLS62188-2	2	0.062	0.188	6.750	0.350	67.5	0.250	1100
YLS62188-3	3	0.062	0.188	10.125	0.350	105.5	0.250	1650
YLS62188-4	4	0.062	0.188	13.500	0.350	159.5	0.250	2200
YLS62250-1	1	0.062	0.250	3.375	0.350	22.5	0.250	183
YLS62250-2	2	0.062	0.250	6.750	0.350	104.0	0.250	1463
YLS62250-3	3	0.062	0.250	10.125	0.350	161.0	0.250	2195
YLS62250-4	4	0.062	0.250	13.500	0.350	234.0	0.250	2926
YLS62312-1	1	0.062	0.312	3.375	0.350	27.8	0.250	228
YLS62312-2	2	0.062	0.312	6.750	0.350	104.0	0.250	1826
YLS62312-3	3	0.062	0.312	10.125	0.350	174.5	0.250	2739
YLS62312-4	4	0.062	0.312	13.500	0.350	262.5	0.250	3652
YLS62375-1	1	0.062	0.375	3.375	0.350	42.0	0.250	274
YLS62375-2	2	0.062	0.375	6.750	0.350	139.5	0.250	2195
YLS62375-3	3	0.062	0.375	10.125	0.350	240.0	0.250	3292
YLS62375-4	4	0.062	0.375	13.500	0.350	353.0	0.250	4389

Imperial (in.)

¹ Add suffix "-S17" for 17-7 stainless steel. ² Reference dimension. ³ Theoretical calculation; measured in lb/in.



Rotary Vane Pump

Smalley Linear Springs are used to radially load the bottom of the vanes in the pump. The springs energise the vanes against the bore for better sealing.