

Spring data list Type 424, 440, 441, 442

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1 Purpose

This LESER Global Standard (LGS) contains the information about pressure range of all springs, which are installed in valve types 424, 440, 441, 442.

2 Scope

This LGS applies to all members of the LESER Quality Cluster listed in the Global Management Handbook.

3 References

LDeS 3060.01, LDeS 3265.01

4 Introduction

Springs for LESER safety valves of Type 424, 440, 441 and 442 are the same for the same pressure ranges, as long not noted differently in this document.

The pressure ranges of the various types are given first in pressure unit [bar]. This is followed by the pressure unit [psi].

There are different spring data lists for DIN version (e.g. DN 25) and ANSI versions (e.g. NPS 1”).

For inlet sizes DN 250 – 400 there are different spring data lists, depending on body (casted or welded) and on approval (AD 2000, DIN EN / ASME). This is connected to the LESER article number (see also chapters 10 and 17).

5 Legend / Indices

- do = smallest inner inlet diameter
- S = special order
- O = use upper spindle groove
- FT oder / or SP = special spring plate
- blue marking = thrust bearing use
- DS = pressure adjusting screw
- V150= spring model V150

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6 DN 20 to DN 32 in [bar]

DN 20, do 18											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,19	540.8004.0000		0,10	-0,19	540.8004.0000		0,10	-0,19	540.8004.0000	
0,20	-0,26	540.8014.0000		0,20	-0,26	540.8014.0000		0,20	-0,26	540.8014.0000	
0,27	-0,37	540.8034.0000		0,27	-0,37	540.8034.0000		0,27	-0,37	540.8034.0000	
0,38	-0,54	540.8044.0000		0,38	-0,54	540.8044.0000		0,38	-0,54	540.8044.0000	
0,55	-0,84	540.8054.0000		0,55	-0,84	540.8054.0000		0,55	-0,84	540.8054.0000	
0,85	-1,30	540.4004.0000		0,85	-1,30	540.4004.0000		0,85	-1,30	540.4004.0000	
1,31	-1,79	540.4014.0000		1,31	-1,79	540.4014.0000		1,31	-1,79	540.4014.0000	
1,80	-2,25	540.5021.0190		1,80	-2,25	540.4024.0000		1,80	-2,25	540.4024.0000	
2,26	-3,24	540.5031.0190		2,26	-3,24	540.4034.0000		2,26	-3,24	540.4034.0000	
3,25	-4,50	540.5041.0190		3,25	-4,50	540.4044.0000		3,25	-4,50	540.4044.0000	
4,51	-6,50	540.5051.0190		4,51	-6,50	540.4054.0000		4,51	-6,50	540.4054.0000	
6,51	-9,40	540.5062.0000		6,51	-9,40	540.5062.0000		6,51	-9,40	540.4064.0000	
9,41	-15,2	540.5072.0000		9,41	-15,2	540.5072.0000		9,41	-15,2	540.4074.0000	
15,21	-21,7	540.5082.0000		15,21	-21,7	540.5082.0000		15,21	-21,7	540.4084.0000	
21,71	-27,4	540.5092.0000		21,71	-27,4	540.5092.0000		21,71	-27,4	540.4094.0000	
27,41	-32,2	540.5102.0000		27,41	-32,2	540.5102.0000		27,41	-32,2	540.4104.0000	
32,21	-40,0	540.5112.0000		32,21	-40,0	540.5112.0000		32,21	-38,0	540.4114.0000	
								38,01	-40,0	540.5124.0000	

DN 25, do 23											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,19	540.8124.0000		0,10	-0,19	540.8124.0000		0,10	-0,19	540.8124.0000	
0,20	-0,37	540.8134.0000		0,20	-0,37	540.8134.0000		0,20	-0,37	540.8134.0000	
0,38	-0,50	540.4154.0000		0,38	-0,50	540.4154.0000		0,38	-0,50	540.4154.0000	
0,51	-0,69	540.4164.0000		0,51	-0,69	540.4164.0000		0,51	-0,69	540.4164.0000	
0,70	-0,97	540.4174.0000		0,70	-0,97	540.4174.0000		0,70	-0,97	540.4174.0000	
0,98	-1,38	540.5171.0190		0,98	-1,38	540.4184.0000		0,98	-1,38	540.4184.0000	
1,39	-2,07	540.5181.0190		1,39	-2,07	540.4194.0000		1,39	-2,07	540.4194.0000	
2,08	-2,62	540.5191.0190		2,08	-2,62	540.4204.0000		2,08	-2,62	540.4204.0000	
2,63	-3,33	540.9251.0190		2,63	-3,33	540.9254.0000		2,63	-3,33	540.9254.0000	
3,34	-5,34	540.5201.0190		3,34	-5,34	540.4214.0000		3,34	-5,34	540.4214.0000	
5,35	-9,00	540.5211.0190		5,35	-9,00	540.4224.0000		5,35	-9,00	540.4224.0000	
9,01	-12,0	540.5221.0190		9,01	-12,0	540.4234.0000		9,01	-12,0	540.4234.0000	
12,01	-15,2	540.5221.0190	O	12,01	-15,2	540.4234.0000	O	12,01	-15,2	540.4234.0000	O
15,21	-19,5	540.5232.0000		15,21	-19,5	540.5232.0000		15,21	-19,5	540.5234.0000	
19,51	-22,1	540.5232.0000	O	19,51	-22,1	540.5232.0000	O	19,51	-22,1	540.5234.0000	O
22,11	-27,0	540.5242.0000		22,11	-27,0	540.5242.0000		22,11	-27,0	540.5244.0000	
27,01	-33,0	540.5252.0000		27,01	-33,0	540.5252.0000		27,01	-33,0	540.5254.0000	
33,01	-40,0	540.5262.0000		33,01	-40,0	540.5262.0000		33,01	-40,0	540.4294.0000	

DN 32, do 29											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,19	540.8214.0000		0,10	-0,19	540.8214.0000		0,10	-0,19	540.8214.0000	
0,20	-0,26	540.8224.0000		0,20	-0,26	540.8224.0000		0,20	-0,26	540.8224.0000	
0,27	-0,33	540.8234.0000		0,27	-0,33	540.8234.0000		0,27	-0,33	540.8234.0000	
0,34	-0,50	540.4354.0000		0,34	-0,50	540.4354.0000		0,34	-0,50	540.4354.0000	
0,51	-0,59	540.4364.0000		0,51	-0,59	540.4364.0000		0,51	-0,59	540.4364.0000	
0,60	-0,85	540.4374.0000		0,60	-0,85	540.4374.0000		0,60	-0,85	540.4374.0000	
0,86	-1,40	540.5311.0190		0,86	-1,40	540.4384.0000		0,86	-1,40	540.4384.0000	
1,41	-2,25	540.5321.0190		1,41	-2,25	540.4394.0000		1,41	-2,25	540.4394.0000	
2,26	-3,00	540.5331.0190		2,26	-3,00	540.4404.0000		2,26	-3,00	540.4404.0000	
3,01	-4,20	540.9431.0190		3,01	-4,20	540.9434.0000		3,01	-4,20	540.9434.0000	
4,21	-6,20	540.5341.0190		4,21	-6,20	540.4414.0000		4,21	-6,20	540.4414.0000	
6,21	-8,50	540.5351.0190		6,21	-8,50	540.4424.0000		6,21	-8,50	540.4424.0000	
8,51	-10,0	540.4434.0000		8,51	-10,0	540.4434.0000		8,51	-10,0	540.4434.0000	
10,01	-12,8	540.5361.0190		10,01	-12,8	540.4434.0000		10,01	-12,8	540.4434.0000	
12,81	-16,5	540.5372.0000				540.9474.0205				540.9474.0205	
16,51	-21,0	540.5382.0000		12,81	-16,5	540.5372.0000		12,81	-16,5	540.4444.0000	
21,01	-27,0	540.5392.0000		16,51	-21,0	540.5382.0000				540.9474.0205	
27,01	-34,0	540.5402.0000		21,01	-27,0	540.5392.0000		16,51	-21,0	540.4464.0000	
34,01	-37,0	540.8242.0000		27,01	-34,0	540.5402.0000				540.9474.0205	
37,01	-40,0	540.8262.0000		34,01	-37,0	540.8242.0000		21,01	-27,0	540.4484.0000	
				37,01	-40,0	540.8262.0000		27,01	-31,6	540.4484.0000	
										540.9484.0205	
								31,61	-37,0	540.5404.0000	
										540.9484.0205	
								37,01	-40,0	540.8254.0000	
										540.9484.0205	

7 DN 40 to DN 65 in [bar]

DN 40, do 37											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,1	-0,21	540.8314.0000		0,1	-0,21	540.8314.0000		0,1	-0,21	540.8314.0000	
0,22	-0,32	540.8334.0000		0,22	-0,32	540.8334.0000		0,22	-0,32	540.8334.0000	
0,33	-0,5	540.4504.0000		0,33	-0,5	540.4504.0000		0,33	-0,5	540.4504.0000	
0,51	-0,8	540.4514.0000		0,51	-0,8	540.4514.0000		0,51	-0,8	540.4514.0000	
0,81	-1,1	540.5441.0190		0,81	-1,1	540.4524.0000		0,81	-1,1	540.4524.0000	
1,11	-1,75	540.5451.0190		1,11	-1,75	540.4534.0000		1,11	-1,75	540.4534.0000	
1,76	-2,2	540.5461.0190		1,76	-2,2	540.4544.0000		1,76	-2,2	540.4544.0000	
2,21	-2,9	540.5471.0190		2,21	-2,9	540.4554.0000		2,21	-2,9	540.4554.0000	
2,91	-4,1	540.5481.0190		2,91	-4,1	540.4564.0000		2,91	-4,1	540.4564.0000	
4,11	-6,2	540.9561.0190		4,11	-6,2	540.9564.0000		4,11	-6,2	540.9564.0000	
6,21	-10	540.5491.0190		6,21	-10	540.4584.0000		6,21	-10	540.4584.0000	
10	-15,5	540.5501.0190		10	-15,5	540.4594.0000		10	-15,5	540.4594.0000	
15,5	-20	540.5512.0000		15,5	-20	540.5512.0000		15,5	-20	540.4604.0000	
20	-27	540.5522.0000		20	-27	540.5522.0000		20	-25,5	540.4604.0000	
27	-33,5	540.5542.0000		27	-33,5	540.5542.0000				540.4634.0000	
33,5	-40	540.8342.0000		33,5	-40	540.8342.0000		25,5	-26,6	540.9574.0000	
								26,6	-33,5	540.9574.0000	
										540.4634.0000	
								33,5	-36,6	540.9594.0000	
										540.4634.0000	
								36,6	-40	540.9594.0000	
										540.8394.0000	

DN 50, do 46											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,12		S	0,10	-0,12		S	0,10	-0,12		S
0,13	-0,22	540.8404.0000		0,13	-0,22	540.8404.0000		0,13	-0,22	540.8404.0000	
0,23	-0,50	540.8434.0000		0,23	-0,50	540.8434.0000		0,23	-0,50	540.8434.0000	
0,51	-0,80	540.4664.0000		0,51	-0,80	540.4664.0000		0,51	-0,80	540.4664.0000	
0,81	-1,20	540.5581.0190		0,81	-1,20	540.4674.0000		0,81	-1,20	540.4674.0000	
1,21	-1,80	540.5591.0190		1,21	-1,80	540.4684.0000		1,21	-1,80	540.4684.0000	
1,81	-2,60	540.5601.0190		1,81	-2,60	540.4694.0000		1,81	-2,60	540.4694.0000	
2,61	-3,90	540.5611.0190		2,61	-3,90	540.4704.0000		2,61	-3,90	540.4704.0000	
3,91	-5,80	540.5621.0190		3,91	-5,80	540.4714.0000		3,91	-5,80	540.4714.0000	
5,81	-8,60	540.8492.0000		5,81	-8,60	540.8492.0000		5,81	-8,60	540.8494.0000	
8,61	-11,3	540.5632.0000		8,61	-11,3	540.5632.0000		8,61	-10,7	540.9604.0000	
11,31	-15,6	540.5642.0000		11,31	-15,6	540.5642.0000		10,71	-14,5	540.4694.0000	
15,61	-20,0	540.5652.0000		15,61	-20,0	540.5652.0000				540.9604.0000	
20,01	-23,1	540.5662.0000		20,01	-23,1	540.5662.0000		14,51	-19,0	540.8494.0000	
23,11	-28,2	540.5672.0000		23,11	-28,2	540.5672.0000				540.9604.0000	
28,21	-34,4	540.5682.0000		28,21	-34,4	540.5682.0000		19,01	-21,5	540.4734.0000	
34,41	-40,0	540.5682.0000		34,41	-40,0	540.5682.0000				540.9604.0000	
		540.9602.0000				540.9602.0000		21,51	-26,5	540.9634.0000	
										540.9604.0000	
								26,51	-33,0	540.9644.0000	
										540.9604.0000	
									-37,0		S

DN 65, do 60											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,12		S	0,10	-0,12		S	0,10	-0,21		S
0,13	-0,16	540.8514.0000		0,13	-0,16	540.8514.0000		0,22	-0,28	540.8544.0000	
0,17	-0,19	540.8532.0000		0,17	-0,19	540.8532.0000		0,29	-0,50	540.5704.0000	
0,20	-0,26	540.8542.0000		0,20	-0,26	540.8542.0000		0,51	-0,61	540.5714.0000	
0,27	-0,50	540.5702.0000		0,27	-0,50	540.5702.0000		0,62	-0,89	540.5724.0000	
0,51	-0,61	540.5712.0000		0,51	-0,61	540.5712.0000		0,90	-1,49	540.5734.0000	
0,62	-0,89	540.5722.0000		0,62	-0,89	540.5722.0000		1,50	-2,49	540.5744.0000	
0,90	-1,49	540.5732.0000		0,90	-1,49	540.5732.0000		2,50	-3,35	540.5754.0000	
1,50	-2,49	540.5742.0000		1,50	-2,49	540.5742.0000		3,36	-4,99	540.5764.0000	
2,50	-3,35	540.5752.0000		2,50	-3,35	540.5752.0000		5,00	-9,00	540.5774.0000	
3,36	-4,99	540.5762.0000		3,36	-4,99	540.5762.0000		9,01	-13,9	540.5784.0000	
5,00	-9,00	540.5772.0000		5,00	-9,00	540.5772.0000		13,91	-16,0	540.5784.0000	
9,01	-13,9	540.5782.0000		9,01	-13,9	540.5782.0000				540.9924.0205	
13,91	-18,3	540.5792.0000		13,91	-18,3	540.5792.0000		16,01	-18,3	540.4944.0000	
18,31	-23,1	540.5802.0000		18,31	-23,1	540.5802.0000		18,31	-23,1	540.4944.0000	
23,11	-34,7	540.5802.0000		23,11	-34,7	540.5802.0000				540.9924.0205	
		540.9722.0205				540.9722.0205		23,11	-28,0	540.4944.0000	
34,71	-40,0	540.9492.0000		34,71	-40,0	540.9492.0000				540.9724.0205	
		540.4962.0205				540.4962.0205					

8 DN 80 to DN 125 in [bar]

DN 80, do 74											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,1	-0,14	540.8602.0000		0,1	-0,14	540.8602.0000		0,1	-0,14		S
0,15	-0,25	540.8624.0000		0,15	-0,25	540.8624.0000		0,15	-0,25	540.8624.0000	
0,26	-0,35	540.8642.0000		0,26	-0,35	540.8642.0000		0,26	-0,35	540.8644.0000	
0,36	-0,49	540.8652.0000		0,36	-0,49	540.8652.0000		0,36	-0,49	540.8654.0000	
0,5	-0,64	540.5812.0000		0,5	-0,64	540.5812.0000		0,5	-0,64	540.5814.0000	
0,65	-1,04	540.5822.0000		0,65	-1,04	540.5822.0000		0,65	-1,04	540.5824.0000	
1,05	-1,5	540.5832.0000		1,05	-1,5	540.5832.0000		1,05	-1,5	540.5834.0000	
1,51	-2,3	540.5842.0000		1,51	-2,3	540.5842.0000		1,51	-2,3	540.5844.0000	
2,31	-3,2	540.5852.0000		2,31	-3,2	540.5852.0000		2,31	-3,2	540.5854.0000	
3,21	-5,5	540.5862.0000		3,21	-5,5	540.5862.0000		3,21	-5,5	540.5864.0000	
5,51	-7,5	540.5872.0000		5,51	-7,5	540.5872.0000		5,51	-7,5	540.5874.0000	
7,51	-10,6	540.5882.0000		7,51	-10,6	540.5882.0000		7,51	-10,6	540.5884.0000	
10,61	-15,5	540.5892.0000		10,61	-15,5	540.5892.0000		10,61	-13,6	540.5884.0000	
15,51	-22,5	540.5882.0000		15,51	-22,5	540.5882.0000				540.9884.0000	
		540.9872.0000				540.9872.0000		13,61	-25		S
22,51	-32	540.9862.0000		22,51	-32	540.9862.0000					
		540.9872.0000				540.9872.0000					
32,01	-40		S	32,01	-40		S				

DN 100, do 92											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,19	540.8732.0000	DS1	0,10	-0,19	540.8732.0000	DS1	0,10	-0,21	540.8624.0000	O; V80
0,20	-0,32	540.8742.0000	DS1	0,20	-0,32	540.8742.0000	DS1	0,22	-0,32	540.8644.0000	O; V80
0,33	-0,49	540.8752.0000	DS1	0,33	-0,49	540.8752.0000	DS1	0,33	-0,49	540.8654.0000	O; V80
0,50	-0,76	540.5912.0000	DS1	0,50	-0,76	540.5912.0000	DS1	0,50	-0,76	540.5814.0000	O; V80
0,77	-1,17	540.5922.0000	DS1	0,77	-1,17	540.5922.0000	DS1	0,77	-1,17	540.5834.0000	O; V80
1,18	-1,79	540.5942.0000	DS1	1,18	-1,79	540.5942.0000	DS1	1,18	-1,79	540.5854.0000	O; V80
1,80	-2,73	540.5952.0000	DS1	1,80	-2,73	540.5952.0000	DS1	1,80	-2,73	540.5864.0000	O; V80
2,74	-4,15	540.5962.0000	DS1	2,74	-4,15	540.5962.0000	DS1	2,74	-4,15	540.5874.0000	O; V80
4,16	-5,93	540.5972.0000	DS1	4,16	-5,93	540.5972.0000	DS1	4,16	-5,93	540.5884.0000	O; V80
5,94	-8,40	540.9952.0000	DS2	5,94	-8,40	540.9952.0000	DS2	5,94	-8,40	540.9954.0000	
8,41	-10,7	540.5982.0000	DS2	8,41	-10,7	540.5982.0000	DS2	8,41	-10,4	540.5984.0000	
10,71	-14,0	540.5942.0000	DS2	10,71	-14,0	540.5942.0000	DS2	10,41	-16,0	540.9954.0000	
		540.9982.0205				540.9982.0205				540.9714.0000	
14,01	-19,2	540.5972.0000	DS2	14,01	-19,2	540.5972.0000	DS2	16,01	-20,0	540.5984.0000	
		540.9982.0205				540.9982.0205				540.9984.0205	
19,21	-24,5	540.5982.0000	DS2	19,21	-24,5	540.5982.0000	DS2	20,01	-26,0		S
		540.9982.0205				540.9982.0205					
24,51	-35,0	540.9842.0000	DS2	24,51	-35,0	540.9842.0000	DS2				
		540.9982.0205				540.9982.0205					
35,01	-40,0	540.9842.0000	DS2	35,01	-40,0	540.9842.0000	DS2				
		540.9542.0205				540.9542.0205					

DS1 = 270.3639.0000	DS1 = 270.4849.0023 (with collar)	
DS2 = 270.3739.0000	DS2 = 270.0849.0023 (with collar)	

DN 125, do 98											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,1	-0,19	540.8722.0000		0,1	-0,19	540.8722.0000		0,1	-0,19	540.8624.0000	V80
0,2	-0,24	540.8732.0000		0,2	-0,24	540.8732.0000		0,2	-0,24	540.8634.0000	V80
0,25	-0,35	540.8742.0000		0,25	-0,35	540.8742.0000		0,25	-0,35	540.8644.0000	V80
0,36	-0,51	540.8752.0000		0,36	-0,51	540.8752.0000		0,36	-0,51	540.8654.0000	V80
0,52	-0,67	540.5912.0000		0,52	-0,67	540.5912.0000		0,52	-0,67	540.5814.0000	V80
0,68	-0,9	540.5922.0000		0,68	-0,9	540.5922.0000		0,68	-0,9	540.5834.0000	V80
0,91	-1,4	540.5932.0000		0,91	-1,4	540.5932.0000		0,91	-1,4	540.5844.0000	V80
1,41	-2	540.5942.0000		1,41	-2	540.5942.0000		1,41	-2	540.5854.0000	V80
2,01	-2,9	540.5952.0000		2,01	-2,9	540.5952.0000		2,01	-2,9	540.5864.0000	V80
2,91	-4,5	540.5962.0000		2,91	-4,5	540.5962.0000		2,91	-4,5	540.5864.0000	V80
4,51	-6	540.5972.0000		4,51	-6	540.5972.0000				540.9884.0000	
6,01	-7,5	540.9952.0000		6,01	-7,5	540.9952.0000		4,51	-6	540.5884.0000	V80
7,51	-9,5	540.5982.0000		7,51	-9,5	540.5982.0000		6,01	-7,5	540.9954.0000	
9,51	-14	540.9962.0000		9,51	-14	540.9962.0000		7,51	-10,4	540.5984.0000	
14,01	-18,5	540.5972.0000		14,01	-18,5	540.5972.0000		10,4	-15	540.9954.0000	
		540.9982.0205				540.9982.0205				540.9714.0000	
18,5	-22	540.5982.0000		18,5	-22	540.5982.0000		15,01	-17,7	540.5974.0000	
		540.9982.0205				540.9982.0205				540.9984.0205	
22,01	-28	540.9552.0000		22,01	-28	540.9552.0000		17,7	-24		S
		540.9982.0205				540.9982.0205					

9 DN 150 to 200 in [bar]

DN 150, do 125											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,21	540.8732.0000	FT	0,10	-0,21	540.8732.0000	FT	0,10	-0,21		S
0,22	-0,29	540.8832.0000		0,22	-0,29	540.8832.0000		0,22	-0,29		S
0,30	-0,49	540.8842.0000		0,30	-0,49	540.8842.0000		0,30	-0,49	540.8844.0000	
0,50	-0,69	540.8852.0000		0,50	-0,69	540.8852.0000		0,50	-0,69	540.8854.0000	
0,70	-0,99	540.8862.0000		0,70	-0,99	540.8862.0000		0,70	-0,99	540.8864.0000	
1,00	-1,44	540.8872.0000		1,00	-1,44	540.8872.0000		1,00	-1,44	540.8874.0000	
1,45	-1,8	540.8882.0000		1,45	-1,8	540.8882.0000		1,45	-1,8	540.8884.0000	
1,81	-2,6	540.8892.0000		1,81	-2,6	540.8892.0000		1,81	-2,6	540.8894.0000	
2,61	-3,8	540.8902.0000		2,61	-3,8	540.8902.0000		2,61	-3,8	540.8904.0000	
3,81	-5,5	540.8912.0000		3,81	-5,5	540.8912.0000		3,81	-5,5	540.8884.0000	
5,51	-7	540.8922.0000		5,51	-7	540.8922.0000				540.8974.0205	
7,01	-8	540.8932.0000		7,01	-8	540.8932.0000		5,51	-7	540.8904.0000	
8,01	-10	540.8942.0000		8,01	-10	540.8942.0000				540.8984.0205	
10,01	-11,5	540.8952.0000		10,01	-11,5	540.8952.0000			-10		S
11,51	-13	540.8912.0000		11,5	-13	540.8912.0000					
		540.9912.0205				540.9912.0205					
13,01	-15	540.8922.0000		13,01	-15	540.8922.0000					
		540.9912.0205				540.9912.0205					
15,01	-17	540.8952.0000		15,01	-17	540.8952.0000					
		540.9912.0205				540.9912.0205					
	-25		S		-25		S				

DN 200, do 165											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,19		S	0,10	-0,19		S	0,20	-0,29		S
0,20	-0,32	540.8832.0000	O; V150	0,20	-0,32	540.8832.0000	O; V150	0,30	-0,41	540.8844.0000	O; V150
0,33	-0,43	540.8842.0000	O; V150	0,33	-0,43	540.8842.0000	O; V150	0,42	-0,59	540.8854.0000	O; V150
0,44	-0,59	540.8852.0000	O; V150	0,44	-0,59	540.8852.0000	O; V150	0,60	-0,82	540.8864.0000	O; V150
0,60	-0,82	540.8862.0000	O; V150	0,60	-0,82	540.8862.0000	O; V150	0,83	-1,15	540.8874.0000	O; V150
0,83	-1,15	540.8872.0000	O; V150	0,83	-1,15	540.8872.0000	O; V150	1,16	-1,45	540.8884.0000	O; V150
1,16	-1,48	540.8882.0000	O; V150	1,16	-1,48	540.8882.0000	O; V150		-10		S
1,49	-2,0	540.8892.0000	O; V150	1,49	-2,0	540.8892.0000	O; V150				
2,01	-2,6	540.9082.0205		2,01	-2,6	540.9082.0205					
2,61	-3,4	540.9092.0205		2,61	-3,4	540.9092.0205					
3,41	-4,2	540.9102.0000		3,41	-4,2	540.9102.0000					
4,21	-5,25	540.9162.0000		4,21	-5,25	540.9162.0000					
5,26	-6,45	540.9172.0000		5,26	-6,45	540.9172.0000					
6,46	-8,1	540.9182.0000		6,46	-8,1	540.9182.0000					
8,11	-10	540.9192.0000		8,11	-10	540.9192.0000					
10,01	-11	540.9192.0000		10,01	-11	540.9192.0000					
		540.9052.0205				540.9052.0205					
11,01	-12,6	540.9132.0000		11,01	-12,6	540.9132.0000					
		540.9072.0205				540.9072.0205					
12,61	-14	540.9132.0000		12,61	-14	540.9132.0000					
		540.9092.0205				540.9092.0205					
14,01	-16,8	540.9132.0000		14,01	-16,8	540.9132.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
16,81	-19,8	540.9152.0000		16,81	-19,8	540.9152.0000					
		540.9082.0205				540.9082.0205					
		540.9222.0000				540.9222.0000					
19,81	-25		S	19,81	-25,0		S				

10 DN 250 to DN 400 in [bar]

Spring data for Type 441 DN 250 to DN 400 is differentiated between three options, which are made out by different article numbers.

1. 441 DN 250 – 400 with casted body and PED approval according DIN EN 4126-1 and ASME approval
2. 441 DN 250 – 400 with casted body and PED approval according to AD 2000 standard
3. 441 XXL DN 250 – 400 obsolete type with welded body (spring data for repair and exchange only)

Disclosure cat.:	I	proofread by:	BBü	publish date:	10/24/22	effect. date:	10/22
author:	ChK	released by:	JR	replaces:	initial	status:	Published
resp. depart.:	TD	date of release:	10/24/22	revision No.:	0		
doc. type:	LGS	change rep. No.:	200915	retention period:	10y.	prot. class:	public

10.1 Casted Body – PED (DIN EN) / ASME Approval

DN 250, do 200, article no.: 4412.502*, 4422.5025, 4414.505*											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,20	0,29	540.9032.0205		0,20	0,29	540.9032.0205		0,20	0,29	540.9034.0205	
0,30	0,45	540.9042.0205		0,30	0,45	540.9042.0205		0,30	0,45	540.9044.0205	
0,45	0,65	540.9052.0205		0,45	0,65	540.9052.0205		0,45	0,65	540.9054.0205	
0,65	0,95	540.9062.0205		0,65	0,95	540.9062.0205		0,65	0,95	540.9064.0205	
0,95	1,28	540.9072.0205		0,95	1,28	540.9072.0205		0,95	1,28	540.9074.0205	
1,29	1,54	540.9082.0205		1,29	1,54	540.9082.0205		1,29	1,54	540.9084.0205	
1,55	1,84	540.9092.0205		1,55	1,84	540.9092.0205		1,55	1,84	540.9094.0205	
1,85	2,20	540.3872.0205		1,85	2,20	540.3872.0205		1,85	2,20	540.3874.0205	
2,21	2,79	540.9102.0000		2,21	2,79	540.9102.0000		2,21	2,79	540.9104.0000	
2,80	3,90	540.9112.0000		2,80	3,90	540.9112.0000		2,80	3,90	540.9114.0000	
3,91	5,00	540.9122.0000		3,91	5,00	540.9122.0000		3,91	5,00	540.9114.0000	
5,01	7,20	540.9132.0000		5,01	7,20	540.9132.0000				540.9074.0205	
7,21	9,53	540.9132.0000		7,21	9,53	540.9132.0000		5,01	7,00	540.0764.0000	
		540.9092.0205				540.9092.0205				540.9094.0205	
9,54	11,20	540.9152.0000		9,54	11,20	540.9152.0000					
		540.9072.0205				540.9072.0205					
11,21	13,40	540.9152.0000		11,21	13,40	540.9152.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
13,41	15,50	540.0992.0000		13,41	15,50	540.0992.0000					
		540.9072.0205				540.9072.0205					
15,51	18,00	540.0992.0000		15,51	18,00	540.0992.0000					
		540.0442.0205				540.0442.0205					

DN 300, do 235, article no.: 4412.503*, 4422.5035, 4414.506*											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,20	0,27	540.9022.0205		0,20	0,27	540.9022.0205		0,20	0,27	540.9024.0205	
0,28	0,37	540.9032.0205		0,28	0,37	540.9032.0205		0,28	0,37	540.9034.0205	
0,38	0,50	540.9042.0205		0,38	0,50	540.9042.0205		0,38	0,50	540.9044.0205	
0,51	0,68	540.9052.0205		0,51	0,68	540.9052.0205		0,51	0,68	540.9054.0205	
0,69	0,85	540.9062.0205		0,69	0,85	540.9062.0205		0,69	0,85	540.9064.0205	
0,86	1,15	540.9072.0205		0,86	1,15	540.9072.0205		0,86	1,15	540.9074.0205	
1,16	1,45	540.9082.0205		1,16	1,45	540.9082.0205		1,16	1,45	540.9084.0000	
1,46	1,60	540.9092.0205		1,46	1,60	540.9092.0205		1,46	1,60	540.9094.0000	
1,61	1,83	540.3872.0205		1,61	1,83	540.3872.0205		1,61	1,83	540.3874.0000	
1,84	2,20	540.9102.0000		1,84	2,20	540.9102.0000		1,84	2,20	540.9104.0000	
2,21	2,80	540.1082.0000		2,21	2,80	540.1082.0000		2,21	2,80	540.1084.0000	
2,81	3,30	540.9112.0000		2,81	3,30	540.9112.0000		2,81	3,30	540.1084.0000	
3,31	4,30	540.9112.0000		3,31	4,30	540.9112.0000				540.9054.0205	
		540.9072.0205				540.9072.0205					
4,31	5,80	540.9132.0000		4,31	5,80	540.9132.0000					
5,81	7,85	540.9132.0000		5,81	7,85	540.9132.0000					
		540.9092.0205				540.9092.0205					
7,86	9,50	540.1102.0000		7,86	9,50	540.1102.0000					
		540.1202.0205				540.1202.0205					
9,51	11,50	540.1102.0000		9,51	11,50	540.1102.0000					
		540.1212.0205				540.1212.0205					
11,51	13,20	540.1102.0000		11,51	13,20	540.1102.0000					
		540.1212.0205				540.1212.0205					
		540.1222.0000				540.1222.0000					

DN 400, do 295, article no.: 4412.504*, 4422.5045, 4414.507*											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,20	0,28	540.9032.0205		0,20	0,28	540.9032.0205		0,20	0,28	540.2014.0205	
0,29	0,38	540.9042.0205		0,29	0,38	540.9042.0205		0,29	0,38	540.2024.0205	
0,39	0,49	540.9052.0205		0,39	0,49	540.9052.0205		0,39	0,49	540.2034.0205	
0,50	0,65	540.9062.0205		0,50	0,65	540.9062.0205		0,50	0,65	540.2044.0205	
0,66	0,88	540.7152.0000		0,66	0,88	540.7152.0000		0,66	0,88	540.2054.0205	
0,89	1,20	540.7162.0000		0,89	1,20	540.7162.0000		0,89	1,20	540.2064.0000	
1,21	1,49	540.7172.0000		1,21	1,49	540.7172.0000		1,21	1,49	540.2074.0000	
1,50	1,70	540.9102.0000		1,50	1,70	540.9102.0000		1,50	1,70	540.2084.0000	
1,71	2,15	540.1082.0000		1,71	2,15	540.1082.0000		1,71	2,15	540.2094.0000	
2,16	2,75	540.1082.0000		2,16	2,75	540.1082.0000		2,16	2,75	540.2104.0000	
		540.7122.0205				540.7122.0205		2,76	3,50	540.2104.0000	
2,76	3,50	540.7182.0000		2,76	3,50	540.7182.0000				540.2054.0205	
3,51	4,60	540.7192.0000		3,51	4,60	540.7192.0000					
4,61	6,10	540.7142.0000		4,61	6,10	540.7142.0000					
6,11	8,20	540.7142.0000		6,11	8,20	540.7142.0000					
		540.7112.0205				540.7112.0205					
8,21	10,00	540.7132.0000		8,21	10,00	540.7132.0000					
		540.7102.0205				540.7102.0205					

10.2 Casted Body – PED (AD 2000) Approval

DN 250, do 200, article no.: 4412.492*, 4422.4925, 4414.495*											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,20	0,29	540.9032.0205		0,20	0,29	540.9032.0205		0,20	0,29	540.9034.0205	
0,30	0,39	540.9042.0205		0,30	0,39	540.9042.0205		0,30	0,39	540.9044.0205	
0,40	0,57	540.9052.0205		0,40	0,57	540.9052.0205		0,40	0,57	540.9054.0205	
0,58	0,82	540.9062.0205		0,58	0,82	540.9062.0205		0,58	0,82	540.9064.0205	
0,83	1,09	540.9072.0205		0,83	1,09	540.9072.0205		0,83	1,09	540.9074.0205	
1,10	1,47	540.9082.0205		1,10	1,47	540.9082.0205		1,10	1,47	540.9084.0205	
1,48	1,76	540.9092.0205		1,48	1,76	540.9092.0205		1,48	1,76	540.9094.0205	
1,77	2,39	540.9102.0000		1,77	2,39	540.9102.0000		1,77	2,39	540.9104.0000	
2,40	3,00	540.9112.0000		2,40	3,00	540.9112.0000		2,40	3,00	540.9114.0000	
3,01	3,70	540.9122.0000		3,01	3,70	540.9122.0000		3,01	3,70	540.9114.0000	
3,71	5,15	540.9132.0000		3,71	5,15	540.9132.0000				540.9074.0205	
5,16	7,40	540.9132.0000		5,16	7,40	540.9132.0000		3,71	5,15	540.0764.0000	
		540.9092.0205				540.9092.0205				540.9094.0205	
7,41	9,52	540.9152.0000		7,41	9,52	540.9152.0000					
		540.9072.0205				540.9072.0205					
9,53	11,30	540.9152.0000		9,53	11,30	540.9152.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
11,31	14,50	540.0992.0000		11,31	14,50	540.0992.0000					
		540.9062.0205				540.9062.0205					
14,51	18,00	540.0992.0000		14,51	18,00	540.0992.0000					
		540.0442.0205				540.0442.0205					

DN 300, do 235, article no.: 4412.493*, 4422.4935, 4414.496*											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,20	0,25	540.9022.0205		0,20	0,25	540.9022.0205		0,20	0,25	540.9024.0205	
0,26	0,33	540.9032.0205		0,26	0,33	540.9032.0205		0,26	0,33	540.9034.0205	
0,34	0,45	540.9042.0205		0,34	0,45	540.9042.0205		0,34	0,45	540.9044.0205	
0,46	0,59	540.9052.0205		0,46	0,59	540.9052.0205		0,46	0,59	540.9054.0205	
0,60	0,75	540.9062.0205		0,60	0,75	540.9062.0205		0,60	0,75	540.9064.0205	
0,76	0,92	540.9072.0205		0,76	0,92	540.9072.0205		0,76	0,92	540.9074.0205	
0,93	1,20	540.9082.0205		0,93	1,20	540.9082.0205		0,93	1,20	540.9084.0000	
1,21	1,55	540.9092.0205		1,21	1,55	540.9092.0205		1,21	1,55	540.9094.0000	
1,56	2,05	540.9102.0000		1,56	2,05	540.9102.0000		1,56	2,05	540.9104.0000	
2,06	2,65	540.9112.0000		2,06	2,65	540.9112.0000		2,06	2,65	540.1084.0000	
2,66	3,30	540.9112.0000		2,66	3,30	540.9112.0000				540.9054.0205	
		540.9072.0205				540.9072.0205					
3,31	4,30	540.9132.0000		3,31	4,30	540.9132.0000					
4,31	5,80	540.9132.0000		4,31	5,80	540.9132.0000					
		540.9092.0205				540.9092.0205					
5,81	7,80	540.1102.0000		5,81	7,80	540.1102.0000					
		540.1202.0205				540.1202.0205					
7,81	9,80	540.1102.0000		7,81	9,80	540.1102.0000					
		540.1212.0205				540.1212.0205					
9,81	11,50	540.1102.0000		9,81	11,50	540.1102.0000					
		540.1092.0205				540.1092.0205					
11,51	14,30	540.2982.0000		11,51	14,30	540.2982.0000					
		540.2992.0205				540.2992.0205					
14,31	16,50	540.2982.0000		14,31	16,50	540.2982.0000					
		540.2992.0205				540.2992.0205					
		540.1232.0000				540.1232.0000					

DN 400, do 295, article no.: 4412.494*, 4422.4945, 4414.497*											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,20	0,28	540.9032.0205		0,20	0,28	540.9032.0205		0,20	0,28	540.2014.0205	
0,29	0,38	540.9042.0205		0,29	0,38	540.9042.0205		0,29	0,38	540.2024.0205	
0,39	0,49	540.9052.0205		0,39	0,49	540.9052.0205		0,39	0,49	540.2034.0205	
0,50	0,65	540.9062.0205		0,50	0,65	540.9062.0205		0,50	0,65	540.2044.0205	
0,66	0,80	540.9072.0205		0,66	0,80	540.9072.0205		0,66	0,80	540.2054.0205	
0,81	1,00	540.9082.0205		0,81	1,00	540.9082.0205		0,81	1,00	540.2064.0000	
1,01	1,25	540.9092.0205		1,01	1,25	540.9092.0205		1,01	1,25	540.2074.0000	
1,26	1,50	540.9102.0000		1,26	1,50	540.9102.0000		1,26	1,50	540.2084.0000	
1,51	1,85	540.9162.0000		1,51	1,85	540.9162.0000		1,51	1,85	540.2094.0000	
1,86	2,30	540.7202.0000		1,86	2,30	540.7202.0000		1,86	2,30	540.2104.0000	
2,31	2,70	540.7202.0000		2,31	2,70	540.7202.0000		2,31	2,70	540.2104.0000	
		540.9072.0205				540.9072.0205				540.2054.0205	
2,71	3,26	540.7202.0000		2,71	3,26	540.7202.0000		2,71	3,26	540.2104.0000	
		540.9092.0205				540.9092.0205				540.2114.0205	
3,27	4,40	540.7142.0000		3,27	4,40	540.7142.0000					
4,41	6,50	540.7142.0000		4,41	6,50	540.7142.0000					
		540.7112.0205				540.7112.0205					
6,51	9,00	540.7212.0000		6,51	9,00	540.7212.0000					
		540.7112.0205				540.7112.0205					
9,01	10,00	540.7212.0000		9,01	10,00	540.7212.0000					
		540.7222.0205				540.7222.0205					

10.3 XXL / Welded Body – PED (AD 2000) / ASME Approval (obsolete)

DN 250, do 200, article no.: 4412.476*, 4422.4765, 4414.480* (obsolete Type 441XXL, welded body)											
spring material											
Standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,2	0,29	540.9022.0205		0,2	0,29	540.9022.0205		0,2	6		S
0,3	0,39	540.9032.0205		0,3	0,39	540.9032.0205					
0,4	0,53	540.9042.0205		0,4	0,53	540.9042.0205					
0,54	0,72	540.9052.0205		0,54	0,72	540.9052.0205					
0,73	0,97	540.9062.0205		0,73	0,97	540.9062.0205					
0,98	1,33	540.9072.0205		0,98	1,33	540.9072.0205					
1,34	1,8	540.9082.0205		1,34	1,8	540.9082.0205					
1,81	2,4	540.9092.0205		1,81	2,4	540.9092.0205					
2,41	3,2	540.9102.0000		2,41	3,2	540.9102.0000					
3,21	4,2	540.9112.0000		3,21	4,2	540.9112.0000					
4,21	5,3	540.9122.0000		4,21	5,3	540.9122.0000					
5,31	7,5	540.9132.0000		5,31	7,5	540.9132.0000					
7,51	9,8	540.9132.0000		7,51	9,8	540.9132.0000					
		540.9092.0205				540.9092.0205					
9,81	11	540.9152.0000		9,81	11	540.9152.0000					
		540.9072.0205				540.9072.0205					
11	12,9	540.9152.0000		11	12,9	540.9152.0000					
		540.9092.0205				540.9092.0205					
12,9	13,4	540.9152.0000		12,9	13,4	540.9152.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
	16		S		16		S				

DN 300, do 235, article no.: 4412.477*, 4422.4775, 4414.490* (obsolete Type 441XXL, welded body)											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,2	0,25	540.9022.0205		0,2	0,25	540.9022.0205		0,18	3,57		S
0,26	0,33	540.9032.0205		0,26	0,33	540.9032.0205					
0,34	0,45	540.9042.0205		0,34	0,45	540.9042.0205					
0,46	0,61	540.9052.0205		0,46	0,61	540.9052.0205					
0,62	0,83	540.9062.0205		0,62	0,83	540.9062.0205					
0,84	1,11	540.9072.0205		0,84	1,11	540.9072.0205					
1,12	1,53	540.9082.0205		1,12	1,53	540.9082.0205					
1,54	2,04	540.9092.0205		1,54	2,04	540.9092.0205					
2,05	2,72	540.9102.0000		2,05	2,72	540.9102.0000					
2,73	3,57	540.9112.0000		2,73	3,57	540.9112.0000					
3,58	4,51	540.9112.0000		3,58	4,51	540.9112.0000					
		540.9072.0205				540.9072.0205					
4,52	6,3	540.9132.0000		4,52	6,3	540.9132.0000					
6,31	8,25	540.9132.0000		6,31	8,25	540.9132.0000					
		540.9092.0205				540.9092.0205					
8,26	9,25	540.9132.0000		8,26	9,25	540.9132.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
	16		S		16		S				

DN 400, do 295, article no.: 4412.478*, 4422.4785, 4414.491* (obsolete Type 441XXL, welded body)											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,2	0,25	540.9032.0205		0,2	0,25	540.9032.0205		0,2	2,3		S
0,26	0,36	540.9042.0205		0,26	0,36	540.9042.0205					
0,37	0,48	540.9052.0205		0,37	0,48	540.9052.0205					
0,49	0,66	540.9062.0205		0,49	0,66	540.9062.0205					
0,67	0,84	540.9072.0205		0,67	0,84	540.9072.0205					
0,85	1,1	540.9082.0205		0,85	1,1	540.9082.0205					
1,11	1,25	540.9092.0205		1,11	1,25	540.9092.0205					
	8		S		8		S				

11 NPS 1" to NPS 1 1/2" in [bar]

NPS 1", do 23											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,24	540.8114.0000		0,10	-0,24	540.8114.0000		0,10	-0,24	540.8114.0000	
0,25	-0,35	540.8134.0000		0,25	-0,35	540.8134.0000		0,25	-0,35	540.8134.0000	
0,36	-0,50	540.4154.0000		0,36	-0,50	540.4154.0000		0,36	-0,50	540.4154.0000	
0,51	-0,70	540.4164.0000		0,51	-0,70	540.4164.0000		0,51	-0,70	540.4164.0000	
0,71	-1,00	540.4174.0000		0,71	-1,00	540.4174.0000		0,71	-1,00	540.4174.0000	
1,01	-1,40	540.5171.0190		1,01	-1,40	540.4184.0000		1,01	-1,40	540.4184.0000	
1,41	-2,00	540.5181.0190		1,41	-2,00	540.4194.0000		1,41	-2,00	540.4194.0000	
2,01	-2,30	540.5191.0190		2,01	-2,30	540.4204.0000		2,01	-2,30	540.4204.0000	
2,31	-2,50	540.9251.0190		2,31	-2,50	540.9254.0000		2,31	-2,50	540.9254.0000	
2,51	-3,60	540.5201.0190		2,51	-3,60	540.4214.0000		2,51	-3,60	540.4214.0000	
3,61	-5,90	540.5211.0190		3,61	-5,90	540.4224.0000		3,61	-5,90	540.4224.0000	
5,91	-9,20	540.5221.0190		5,91	-9,20	540.4234.0000		5,91	-9,20	540.4234.0000	
9,21	-15,0	540.5232.0000		9,21	-15,0	540.5232.0000		9,21	-15,0	540.5234.0000	
15,01	-22,0	540.5242.0000		15,01	-22,0	540.5242.0000		15,01	-22,0	540.5244.0000	
22,01	-30,0	540.5252.0000		22,01	-30,0	540.5252.0000		22,01	-30,0	540.5254.0000	
30,01	-40,0	540.5262.0000		30,01	-40,0	540.5262.0000		30,01	-39,0	540.4284.0000	
40,01	-49,0	540.8142.0000		40,01	-49,0	540.8142.0000		39,01	-42,5	540.4294.0000	
	-51,0		S		-51,0		S		-51,0		S

NPS 1 1/2", do 29											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,19	540.8214.0000		0,10	-0,19	540.8214.0000					
0,20	-0,35	540.8224.0000		0,20	-0,35	540.8224.0000					
0,36	-0,50	540.8234.0000		0,36	-0,50	540.8234.0000					
0,51	-0,65	540.4364.0000		0,51	-0,65	540.4364.0000					
0,66	-1,00	540.4374.0000		0,66	-1,00	540.4374.0000					
1,01	-1,40	540.5311.0190		1,01	-1,40	540.4384.0000					
1,41	-1,80	540.5321.0190		1,41	-1,80	540.4394.0000					
1,81	-2,30	540.5331.0190		1,81	-2,30	540.4404.0000					
2,31	-2,70	540.9431.0190		2,31	-2,70	540.9434.0000					
2,71	-3,20	540.5341.0190		2,71	-3,20	540.4414.0000					
3,21	-4,30	540.5331.0190		3,21	-4,30	540.4404.0000					
		540.9474.0205				540.9474.0205					
4,31	-5,50	540.5351.0190		4,31	-5,50	540.4424.0000					
5,51	-8,00	540.4434.0000		5,51	-8,00	540.4434.0000					
8,01	-11,0	540.5361.0190		8,01	-11,0	540.4444.0000					
11,01	-15,0	540.5372.0000		11,01	-15,0	540.5372.0000					
15,01	-22,5	540.5382.0000		15,01	-22,5	540.5382.0000					
22,51	-30,0	540.5392.0000		22,51	-30,0	540.5392.0000					
30,01	-40,0	540.5392.0000		30,01	-40,0	540.5392.0000					
		540.9484.0205				540.9484.0205					
40,01	-45,0	540.8252.0000		40,01	-45,0	540.8252.0000					
45,01	-48,0	540.8242.0000		45,01	-48,0	540.8242.0000					
		540.9484.0205				540.9484.0205					

NPS 1 1/2", do 37											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,19	540.8324.0000		0,10	-0,19	540.8324.0000		0,10	-0,19	540.8324.0000	S
0,20	-0,40	540.8334.0000		0,20	-0,40	540.8334.0000		0,20	-0,40	540.8334.0000	
0,41	-0,60	540.4504.0000		0,41	-0,60	540.4504.0000		0,41	-0,60	540.4504.0000	
0,61	-0,80	540.4514.0000		0,61	-0,80	540.4514.0000		0,61	-0,80	540.4514.0000	
0,81	-1,10	540.5441.0190		0,81	-1,10	540.4524.0000		0,81	-1,10	540.4524.0000	
1,11	-1,50	540.5451.0190		1,11	-1,50	540.4534.0000		1,11	-1,50	540.4534.0000	
1,51	-2,00	540.5461.0190		1,51	-2,00	540.4544.0000		1,51	-2,00	540.4544.0000	
2,01	-2,80	540.5471.0190		2,01	-2,80	540.4554.0000		2,01	-2,80	540.4554.0000	
2,81	-4,00	540.5481.0190		2,81	-4,00	540.4564.0000		2,81	-4,00	540.4564.0000	
4,01	-5,00	540.9561.0190		4,01	-5,00	540.9564.0000		4,01	-5,00	540.9564.0000	
5,01	-6,20	540.5491.0190		5,01	-6,20	540.4584.0000		5,01	-6,20	540.4584.0000	
6,21	-7,70	540.5461.0190		6,21	-7,70	540.4544.0000		6,21	-7,70	540.4544.0000	
		540.4634.0000				540.4634.0000				540.4634.0000	
7,71	-9,60	540.5501.0190		7,71	-9,60	540.4594.0000		7,71	-9,60	540.4594.0000	
9,61	-12,5	540.9561.0190		9,61	-12,5	540.9564.0000		9,61	-12,5	540.9564.0000	
		540.4634.0000				540.4634.0000				540.4634.0000	
12,51	-17,0	540.5512.0000		12,51	-17,0	540.5512.0000		12,51	-17,0	540.4604.0000	
17,01	-23,0	540.5522.0000		17,01	-23,0	540.5522.0000		17,01	-23,0	540.4604.0000	
23,01	-30,0	540.5532.0000		23,01	-30,0	540.5532.0000				540.4634.0000	
30,01	-34,7	540.5542.0000		30,01	-34,7	540.5542.0000		23,01	-27,0	540.9574.0000	
34,71	-40,0	540.5542.0000		34,71	-40,0	540.5542.0000		27,01	-33,0	540.9574.0000	
		540.4634.0000				540.4634.0000				540.4634.0000	
40,01	-46,0	540.8372.0000		40,01	-46,0	540.8372.0000		33,01	-37,0	540.9594.0000	
		540.8392.0000				540.8392.0000				540.4634.0000	
								37,01	-40,0	540.9594.0000	
										540.8394.0000	

12 NPS 2" to NPS 4" in [bar]

NPS 2", do 46											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,17		S	0,10	-0,17		S	0,10	-0,17		S
0,18	-0,24	540.8424.0000		0,18	-0,24	540.8424.0000		0,18	-0,24	540.8424.0000	
0,25	-0,45	540.8434.0000		0,25	-0,45	540.8434.0000		0,25	-0,45	540.8434.0000	
0,46	-0,65	540.4654.0000		0,46	-0,65	540.4654.0000		0,46	-0,65	540.4654.0000	
0,66	-0,90	540.4664.0000		0,66	-0,90	540.4664.0000		0,66	-0,90	540.4664.0000	
0,91	-1,10	540.5581.0190		0,91	-1,10	540.4674.0000		0,91	-1,10	540.4674.0000	
1,11	-1,60	540.5591.0190		1,11	-1,60	540.4684.0000		1,11	-1,60	540.4684.0000	
1,61	-2,40	540.5601.0190		1,61	-2,40	540.4694.0000		1,61	-2,40	540.4694.0000	
2,41	-3,40	540.5611.0190		2,41	-3,40	540.4704.0000		2,41	-3,40	540.4704.0000	
3,41	-4,80	540.5621.0190		3,41	-4,80	540.4714.0000		3,41	-4,80	540.4714.0000	
4,81	-6,00	540.8492.0000		4,81	-6,00	540.8492.0000		4,81	-6,00	540.8494.0000	
6,01	-8,50	540.5632.0000		6,01	-8,50	540.5632.0000		6,01	-8,50	540.8424.0000	
8,51	-13,5	540.5642.0000		8,51	-13,5	540.5642.0000				540.9604.0000	
13,51	-21,0	540.5652.0000		13,51	-21,0	540.5652.0000		8,51	-13,5	540.4734.0000	
21,01	-25,0	540.5662.0000		21,01	-25,0	540.5662.0000		13,51	-21,0	540.8494.0000	
25,01	-35,0	540.5672.0000		25,01	-35,0	540.5672.0000				540.9604.0000	
35,01	-43,0	540.5682.0000		35,01	-43,0	540.5682.0000		21,01	-25,0	540.4734.0000	
43,01	-51,0	540.5682.0000		43,01	-51,0	540.5682.0000				540.9604.0000	
		540.9602.0000				540.9602.0000		25,01	-32,0	540.9634.0000	
										540.9604.0000	
									-40,0		S

NPS 3", do 60											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-0,19		S	0,10	-0,19		S	0,10	-0,19		S
0,20	-0,25	540.8532.0000		0,20	-0,25	540.8532.0000		0,20	-0,26		S
0,26	-0,35	540.8542.0000		0,26	-0,35	540.8542.0000		0,27	-0,35	540.8544.0000	
0,36	-0,50	540.5702.0000		0,36	-0,50	540.5702.0000		0,36	-0,50	540.5704.0000	
0,51	-0,70	540.5712.0000		0,51	-0,70	540.5712.0000		0,51	-0,70	540.5714.0000	
0,71	-1,00	540.5722.0000		0,71	-1,00	540.5722.0000		0,71	-1,00	540.5724.0000	
1,01	-1,40	540.5732.0000		1,01	-1,40	540.5732.0000		1,01	-1,40	540.5734.0000	
1,41	-1,90	540.5742.0000		1,41	-1,90	540.5742.0000		1,41	-1,90	540.5744.0000	
1,91	-2,50	540.5752.0000		1,91	-2,50	540.5752.0000		1,91	-2,50	540.5754.0000	
2,51	-4,00	540.5762.0000		2,51	-4,00	540.5762.0000		2,51	-4,00	540.5764.0000	
4,01	-6,10	540.5772.0000		4,01	-6,10	540.5772.0000		4,01	-6,10	540.5774.0000	
6,11	-8,40	540.5782.0000		6,11	-8,40	540.5782.0000		6,11	-8,40	540.5784.0000	
8,41	-10,5	540.5772.0000		8,41	-10,5	540.5772.0000		8,41	-11,5	540.5784.0000	
		540.9722.0205				540.9722.0205				540.9924.0205	
10,51	-16,0	540.5792.0000		10,51	-16,0	540.5792.0000		11,51	-17,0	540.5784.0000	
16,01	-21,5	540.5802.0000		16,01	-21,5	540.5802.0000				540.9724.0205	
21,51	-30,0	540.5802.0000		21,51	-30,0	540.5802.0000		17,01	-22,0	540.4944.0000	
		540.9722.0205				540.9722.0205				540.9924.0205	
30,01	-35,0	540.9492.0000		30,01	-35,0	540.9492.0000		22,01	-27,0	540.4944.0000	
		540.4962.0205				540.4962.0205				540.9724.0205	
35,01	-40,0	540.9492.0000		35,01	-40,0	540.9492.0000					
		540.4982.0205				540.4982.0205					

NPS 4", do 92											
spring material											
standard				heat-resistant steel				stainless steel			
p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices	p [bar]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
0,10	-	540.8712.0000	DS1	0,10	-	540.8712.0000	DS1	0,10	-	540.8624.0000	O; V80
	0,14				0,14				0,14		
0,15	-	540.8732.0000	DS1	0,15	-	540.8732.0000	DS1	0,15	-	540.8634.0000	O; V80
	0,25				0,25				0,25		
0,26	-	540.8752.0000	DS1	0,26	-	540.8752.0000	DS1	0,26	-	540.8654.0000	O; V80
	0,45				0,45				0,45		
0,46	-	540.5912.0000	DS1	0,46	-	540.5912.0000	DS1	0,46	-	540.5814.0000	O; V80
	0,60				0,60				0,60		
0,61	-	540.5922.0000	DS1	0,61	-	540.5922.0000	DS1	0,61	-	540.5834.0000	O; V80
	0,80				0,80				0,80		
0,81	-	540.5932.0000	DS1	0,81	-	540.5932.0000	DS1	0,81	-	540.5844.0000	O; V80
	1,10				1,10				1,10		
1,11	-	540.5942.0000	DS1	1,11	-	540.5942.0000	DS1	1,11	-	540.5854.0000	O; V80
	1,60				1,60				1,60		
1,61	-	540.5952.0000	DS1	1,61	-	540.5952.0000	DS1	1,61	-	540.5864.0000	O; V80
	2,20				2,20				2,20		
2,21	-	540.5962.0000	DS1	2,21	-	540.5962.0000	DS1	2,21	-	540.5874.0000	O; V80
	3,10				3,10				3,10		
3,11	-	540.5972.0000	DS1	3,11	-	540.5972.0000	DS1	3,11	-	540.5884.0000	O; V80
	4,50				4,50				4,50		
4,51	-	540.9952.0000	DS1	4,51	-	540.9952.0000	DS1	4,51	-	540.9954.0000	
	6,00				6,00				6,00		
6,01	-	540.5982.0000	DS2	6,01	-	540.5982.0000	DS2	6,01	-	540.5984.0000	
	10,5				10,5				10,5		
10,51	-	540.9962.0000	DS2	10,51	-	540.9962.0000	DS2	10,51	-	540.5984.0000	
	15,0				15,0				15,0		
15,01	-	540.5982.0000	DS2	15,01	-	540.5982.0000	DS2			540.9714.0000	
	20,0				20,0						
		540.9982.0205				540.9982.0205		15,01	-	540.5984.0000	
									20,0		
20,01	-	540.9552.0000	DS2	20,01	-	540.9552.0000	DS2			540.9534.0000	
	28,8				28,8						
		540.9982.0205				540.9982.0205					S
									25,0		
28,81	-	540.9842.0000	DS2	28,81	-	540.9842.0000	DS2				
	34,0				34,0						
		540.9982.0205				540.9982.0205					

DS1 = 270.3639.0000	DS1 = 270.4849.0023 (with collar)	
DS2 = 270.3739.0000	DS2 = 270.0849.0023 (with collar)	

13 DN 20 to DN 32 in [psi]

DN 20, do 18											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3	540.8004.0000		1	-3	540.8004.0000		1	-3	540.8004.0000	
3	-4	540.8014.0000		3	-4	540.8014.0000		3	-4	540.8014.0000	
4	-6	540.8034.0000		4	-6	540.8034.0000		4	-6	540.8034.0000	
6	-8	540.8044.0000		6	-8	540.8044.0000		6	-8	540.8044.0000	
8	-12	540.8054.0000		8	-12	540.8054.0000		8	-12	540.8054.0000	
12	-19	540.4004.0000		12	-19	540.4004.0000		12	-19	540.4004.0000	
19	-26	540.4014.0000		19	-26	540.4014.0000		19	-26	540.4014.0000	
26	-33	540.5021.0190		26	-33	540.4024.0000		26	-33	540.4024.0000	
33	-47	540.5031.0190		33	-47	540.4034.0000		33	-47	540.4034.0000	
47	-65	540.5041.0190		47	-65	540.4044.0000		47	-65	540.4044.0000	
65	-94	540.5051.0190		65	-94	540.4054.0000		65	-94	540.4054.0000	
94	-136	540.5062.0000		94	-136	540.5062.0000		94	-136	540.4064.0000	
136	-221	540.5072.0000		136	-221	540.5072.0000		136	-221	540.4074.0000	
221	-315	540.5082.0000		221	-315	540.5082.0000		221	-315	540.4084.0000	
315	-397	540.5092.0000		315	-397	540.5092.0000		315	-397	540.4094.0000	
397	-467	540.5102.0000		397	-467	540.5102.0000		397	-467	540.4104.0000	
467	-580	540.5112.0000		467	-580	540.5112.0000		467	-551	540.4114.0000	
								551	-580	540.5124.0000	

DN 25, do 23											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3	540.8124.0000		1	-3	540.8124.0000		1	-3	540.8124.0000	
3	-6	540.8134.0000		3	-6	540.8134.0000		3	-6	540.8134.0000	
6	-7	540.4154.0000		6	-7	540.4154.0000		6	-7	540.4154.0000	
7	-10	540.4164.0000		7	-10	540.4164.0000		7	-10	540.4164.0000	
10	-14	540.4174.0000		10	-14	540.4174.0000		10	-14	540.4174.0000	
14	-20	540.5171.0190		14	-20	540.4184.0000		14	-20	540.4184.0000	
20	-30	540.5181.0190		20	-30	540.4194.0000		20	-30	540.4194.0000	
30	-38	540.5191.0190		30	-38	540.4204.0000		30	-38	540.4204.0000	
38	-48	540.9251.0190		38	-48	540.9254.0000		38	-48	540.9254.0000	
48	-78	540.5201.0190		48	-78	540.4214.0000		48	-78	540.4214.0000	
78	-131	540.5211.0190		78	-131	540.4224.0000		78	-131	540.4224.0000	
131	-174	540.5221.0190		131	-174	540.4234.0000		131	-174	540.4234.0000	
174	-221	540.5221.0190	O	174	-221	540.4234.0000	O	174	-221	540.4234.0000	O
221	-283	540.5232.0000		221	-283	540.5232.0000		221	-283	540.5234.0000	
283	-321	540.5232.0000	O	283	-321	540.5232.0000	O	283	-321	540.5234.0000	O
321	-392	540.5242.0000		321	-392	540.5242.0000		321	-392	540.5244.0000	
392	-479	540.5252.0000		392	-479	540.5252.0000		392	-479	540.5254.0000	
479	-580	540.5262.0000		479	-580	540.5262.0000		479	-580	540.4294.0000	

DN 32, do 29											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3	540.8214.0000		1	-3	540.8214.0000		1	-3	540.8214.0000	
3	-4	540.8224.0000		3	-4	540.8224.0000		3	-4	540.8224.0000	
4	-5	540.8234.0000		4	-5	540.8234.0000		4	-5	540.8234.0000	
5	-7	540.4354.0000		5	-7	540.4354.0000		5	-7	540.4354.0000	
7	-9	540.4364.0000		7	-9	540.4364.0000		7	-9	540.4364.0000	
9	-12	540.4374.0000		9	-12	540.4374.0000		9	-12	540.4374.0000	
12	-20	540.5311.0190		12	-20	540.4384.0000		12	-20	540.4384.0000	
20	-33	540.5321.0190		20	-33	540.4394.0000		20	-33	540.4394.0000	
33	-44	540.5331.0190		33	-44	540.4404.0000		33	-44	540.4404.0000	
44	-61	540.9431.0190		44	-61	540.9434.0000		44	-61	540.9434.0000	
61	-90	540.5341.0190		61	-90	540.4414.0000		61	-90	540.4414.0000	
90	-123	540.5351.0190		90	-123	540.4424.0000		90	-123	540.4424.0000	
123	-145	540.4434.0000		123	-145	540.4434.0000		123	-145	540.4434.0000	
145	-186	540.5361.0190		145	-186	540.4434.0000		145	-186	540.4434.0000	
186	-239	540.5372.0000				540.9474.0205				540.9474.0205	
239	-305	540.5382.0000		186	-239	540.5372.0000		186	-239	540.4444.0000	
305	-392	540.5392.0000		239	-305	540.5382.0000				540.9474.0205	
392	-493	540.5402.0000		305	-392	540.5392.0000		239	-305	540.4464.0000	
493	-537	540.8242.0000		392	-493	540.5402.0000				540.9474.0205	
537	-580	540.8262.0000		493	-537	540.8242.0000		305	-392	540.4484.0000	
				537	-580	540.8262.0000		392	-458	540.4484.0000	
										540.9484.0205	
								458	-537	540.5404.0000	
										540.9484.0205	
								537	-580	540.8254.0000	
										540.9484.0205	

14 DN 40 to DN 65 in [psi]

DN 40, do 37											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3	540.8314.0000		1	-3	540.8314.0000		1	-3	540.8314.0000	
3	-5	540.8334.0000		3	-5	540.8334.0000		3	-5	540.8334.0000	
5	-7	540.4504.0000		5	-7	540.4504.0000		5	-7	540.4504.0000	
7	-12	540.4514.0000		7	-12	540.4514.0000		7	-12	540.4514.0000	
12	-16	540.5441.0190		12	-16	540.4524.0000		12	-16	540.4524.0000	
16	-26	540.5451.0190		16	-26	540.4534.0000		16	-26	540.4534.0000	
26	-32	540.5461.0190		26	-32	540.4544.0000		26	-32	540.4544.0000	
32	-42	540.5471.0190		32	-42	540.4554.0000		32	-42	540.4554.0000	
42	-60	540.5481.0190		42	-60	540.4564.0000		42	-60	540.4564.0000	
60	-90	540.9561.0190		60	-90	540.9564.0000		60	-90	540.9564.0000	
90	-145	540.5491.0190		90	-145	540.4584.0000		90	-145	540.4584.0000	
145	-225	540.5501.0190		145	-225	540.4594.0000		145	-225	540.4594.0000	
225	-290	540.5512.0000		225	-290	540.5512.0000		225	-290	540.4604.0000	
290	-392	540.5522.0000		290	-392	540.5522.0000		290	-370	540.4604.0000	
392	-486	540.5542.0000		392	-486	540.5542.0000				540.4634.0205	
486	-580	540.8342.0000		486	-580	540.8342.0000		370	-386	540.9574.0000	
								386	-486	540.9574.0000	
										540.4634.0205	
								486	-531	540.9594.0000	
										540.4634.0205	
								531	-580	540.9594.0000	
										540.8394.0205	

DN 50, do 46											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1,5	-2,0		S	1,5	-1,8		S	1,5	-1,8		S
1,9	-3,2	540.8404.0000		1,9	-3,2	540.8404.0000		1,9	-3,2	540.8404.0000	
3,3	-7,4	540.8434.0000		3,3	-7,4	540.8434.0000		3,3	-7,4	540.8434.0000	
7,4	-11,7	540.4664.0000		7,4	-11,7	540.4664.0000		7,4	-11,7	540.4664.0000	
11,7	-17,5	540.5581.0190		11,7	-17,5	540.4674.0000		11,7	-17,5	540.4674.0000	
17,5	-26,2	540.5591.0190		17,5	-26,2	540.4684.0000		17,5	-26,2	540.4684.0000	
26,2	-37,8	540.5601.0190		26,2	-37,8	540.4694.0000		26,2	-37,8	540.4694.0000	
37,8	-56,7	540.5611.0190		37,8	-56,7	540.4704.0000		37,8	-56,7	540.4704.0000	
56,7	-84,2	540.5621.0190		56,7	-84,2	540.4714.0000		56,7	-84,2	540.4714.0000	
84,2	-124,8	540.8492.0000		84,2	-124,8	540.8492.0000		84,2	-124,8	540.8494.0000	
124,8	-164,0	540.5632.0000		124,8	-164,0	540.5632.0000		124,8	-155,3	540.9604.0205	
164,0	-226,0	540.5642.0000		164,0	-226,0	540.5642.0000		155,3	-210,0	540.4694.0000	
226,0	-290,0	540.5652.0000		226,0	-290,0	540.5652.0000				540.9604.0205	
290,0	-335,0	540.5662.0000		290,0	-335,0	540.5662.0000		210,0	-276,0	540.8494.0000	
335,0	-409,0	540.5672.0000		335,0	-409,0	540.5672.0000				540.9604.0205	
409,0	-499,0	540.5682.0000		409,0	-499,0	540.5682.0000		276,0	-312,0	540.4734.0000	
499,0	-580,0	540.5682.0000		499,0	-580,0	540.5682.0000				540.9604.0205	
		540.9602.0205				540.9602.0205		312,0	-384,0	540.9634.0000	
										540.9604.0205	
								384,0	-479,0	540.9644.0000	
										540.9604.0205	

DN 65, do 60											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1,5	-1,8		S	1,5	-1,8		S	1,5	-2,8		s
1,9	-2,4	540.8514.0000		1,9	-2,4	540.8514.0000		2,9	-3,9	540.8544.0000	
2,5	-2,8	540.8532.0000		2,5	-2,8	540.8532.0000		3,9	-7,4	540.5704.0000	
2,9	-3,9	540.8542.0000		2,9	-3,9	540.8542.0000		7,4	-9,0	540.5714.0000	
4,0	-7,4	540.5702.0000		3,9	-7,4	540.5702.0000		9,0	-13,0	540.5724.0000	
7,4	-9,0	540.5712.0000		7,4	-9,0	540.5712.0000		13,1	-21,7	540.5734.0000	
9,0	-13,0	540.5722.0000		9,0	-13,0	540.5722.0000		21,8	-36,2	540.5744.0000	
13,1	-21,7	540.5732.0000		13,1	-21,7	540.5732.0000		36,3	-48,7	540.5754.0000	
21,8	-36,2	540.5742.0000		21,8	-36,2	540.5742.0000		48,7	-72,5	540.5764.0000	
36,3	-48,7	540.5752.0000		36,3	-48,7	540.5752.0000		72,5	-130,6	540.5774.0000	
48,7	-72,5	540.5762.0000		48,7	-72,5	540.5762.0000		130,6	-201,7	540.5784.0000	
72,5	-130,6	540.5772.0000		72,5	-130,6	540.5772.0000		202,0	-232,0	540.5784.0000	
130,6	-201,7	540.5782.0000		130,6	-201,7	540.5782.0000				540.9924.0205	
202,0	265,0	540.5792.0000		202,0	-265,0	540.5792.0000		232,0	-265,0	540.4944.0000	
265,0	335,0	540.5802.0000		265,0	-335,0	540.5802.0000		265,0	-335,0	540.4944.0000	
335,0	503,0	540.5802.0000		335,0	-503,0	540.5802.0000				540.9924.0205	
		540.9722.0205				540.9722.0205		335,0	-406,0	540.4944.0000	
503,0	580,0	540.9492.0000		503,0	-580,0	540.9492.0000				540.9724.0205	
		540.4962.0205				540.4962.0205					

15 DN 80 to DN 125 in [psi]

DN 80, do 74											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-2	540.8602.0000		1	-2	540.8602.0000		1	-2		S
2	-4	540.8624.0000		2	-4	540.8624.0000		2	-4	540.8624.0000	
4	-5	540.8642.0000		4	-5	540.8642.0000		4	-5	540.8644.0000	
5	-7	540.8652.0000		5	-7	540.8652.0000		5	-7	540.8654.0000	
7	-9	540.5812.0000		7	-9	540.5812.0000		7	-9	540.5814.0000	
9	-15	540.5822.0000		9	-15	540.5822.0000		9	-15	540.5824.0000	
15	-22	540.5832.0000		15	-22	540.5832.0000		15	-22	540.5834.0000	
22	-33	540.5842.0000		22	-33	540.5842.0000		22	-33	540.5844.0000	
33	-47	540.5852.0000		33	-47	540.5852.0000		33	-47	540.5854.0000	
47	-80	540.5862.0000		47	-80	540.5862.0000		47	-80	540.5864.0000	
80	-109	540.5872.0000		80	-109	540.5872.0000		80	-109	540.5874.0000	
109	-154	540.5882.0000		109	-154	540.5882.0000		109	-154	540.5884.0000	
154	-225	540.5892.0000		154	-225	540.5892.0000		154	-197	540.5884.0000	
225	-326	540.5882.0000		225	-326	540.5882.0000				540.9884.0205	
		540.9872.0000				540.9872.0000		197	-363		S
326	-464	540.9862.0000		326	-464	540.9862.0000					
		540.9872.0000				540.9872.0000					
464	-580		S	464	-580		S				

DN 100, do 92											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3	540.8732.0000	DS1	1	-3	540.8732.0000	DS1	1	-3	540.8624.0000	O; V80
3	-5	540.8742.0000	DS1	3	-5	540.8742.0000	DS1	3	-5	540.8644.0000	O; V80
5	-7	540.8752.0000	DS1	5	-7	540.8752.0000	DS1	5	-7	540.8654.0000	O; V80
7	-11	540.5912.0000	DS1	7	-11	540.5912.0000	DS1	7	-11	540.5814.0000	O; V80
11	-17	540.5922.0000	DS1	11	-17	540.5922.0000	DS1	11	-17	540.5834.0000	O; V80
17	-26	540.5942.0000	DS1	17	-26	540.5942.0000	DS1	17	-26	540.5854.0000	O; V80
26	-40	540.5952.0000	DS1	26	-40	540.5952.0000	DS1	26	-40	540.5864.0000	O; V80
40	-60	540.5962.0000	DS1	40	-60	540.5962.0000	DS1	40	-60	540.5874.0000	O; V80
60	86	540.5972.0000	DS1	60	86	540.5972.0000	DS1	60	-86	540.5884.0000	O; V80
86	-122	540.9952.0000	DS2	86	-122	540.9952.0000	DS2	86	-122	540.9954.0000	
122	-155	540.5982.0000	DS2	122	-155	540.5982.0000	DS2	122	-151	540.5984.0000	
155	-203	540.5942.0000	DS2	155	-203	540.5942.0000	DS2	151	-232	540.9954.0000	
		540.9982.0205				540.9982.0205				540.9714.0205	
203	-279	540.5972.0000	DS2	203	-279	540.5972.0000	DS2	232	-290	540.5984.0000	
		540.9982.0205				540.9982.0205				540.9984.0205	
279	-355	540.5982.0000	DS2	279	-355	540.5982.0000	DS2	290	-377		S
		540.9982.0205				540.9982.0205					
355	-508	540.9842.0000	DS2	355	-508	540.9842.0000	DS2				
		540.9982.0205				540.9982.0205					
508	-580	540.9842.0000	DS2	508	-580	540.9842.0000	DS2				
		540.9542.0205				540.9542.0205					

DS1 = 270.3639.0000	DS1 = 270.4849.0023 (with collar)	
DS2 = 270.3739.0000	DS2 = 270.0849.0023 (with collar)	

DN 125, do 98											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3	540.8722.0000		1	-3	540.8722.0000		1	-3	540.8624.0000	V80
3	-4	540.8732.0000		3	-4	540.8732.0000		3	-4	540.8634.0000	V80
4	-5	540.8742.0000		4	-5	540.8742.0000		4	-5	540.8644.0000	V80
5	-8	540.8752.0000		5	-8	540.8752.0000		5	-8	540.8654.0000	V80
8	-10	540.5912.0000		8	-10	540.5912.0000		8	-10	540.5814.0000	V80
10	-13	540.5922.0000		10	-13	540.5922.0000		10	-13	540.5834.0000	V80
13	-20	540.5932.0000		13	-20	540.5932.0000		13	-20	540.5844.0000	V80
20	-29	540.5942.0000		20	-29	540.5942.0000		20	-29	540.5854.0000	V80
29	-42	540.5952.0000		29	-42	540.5952.0000		29	-42	540.5864.0000	V80
42	-65	540.5962.0000		42	-65	540.5962.0000		42	-65	540.5864.0000	V80
65	-87	540.5972.0000		65	-87	540.5972.0000				540.9884.0205	
87	-109	540.9952.0000		87	-109	540.9952.0000		65	-87	540.5884.0000	V80
109	-138	540.5982.0000		109	-138	540.5982.0000		87	-109	540.9954.0000	
138	-203	540.9962.0000		138	-203	540.9962.0000		109	-151	540.5984.0000	
203	-269	540.5972.0000		203	-269	540.5972.0000		151	-218	540.9954.0000	
		540.9982.0205				540.9982.0205				540.9714.0205	
269	-319	540.5982.0000		269	-319	540.5982.0000		218	-257	540.5974.0000	
		540.9982.0205				540.9982.0205				540.9984.0205	
319	-406	540.9552.0000		319	-406	540.9552.0000		257	-348		S
		540.9982.0205				540.9982.0205					

16 DN 150 to 200 in [psi]

DN 150, do 125											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3	540.8732.0000	SP	1	-3	540.8732.0000	SP	1	-3		S
3	-4	540.8832.0000		3	-4	540.8832.0000		3	-4		S
4	-7	540.8842.0000		4	-7	540.8842.0000		4	-7	540.8844.0000	
7	-10	540.8852.0000		7	-10	540.8852.0000		7	-10	540.8854.0000	
10	-14	540.8862.0000		10	-14	540.8862.0000		10	-14	540.8864.0000	
15	-21	540.8872.0000		15	-21	540.8872.0000		15	-21	540.8874.0000	
21	-26	540.8882.0000		21	-26	540.8882.0000		21	-26	540.8884.0000	
26	-38	540.8892.0000		26	-38	540.8892.0000		26	-38	540.8894.0000	
38	-55	540.8902.0000		38	-55	540.8902.0000		38	-55	540.8904.0000	
55	-80	540.8912.0000		55	-80	540.8912.0000		55	-80	540.8884.0000	
80	-102	540.8922.0000		80	-102	540.8922.0000				540.8974.0205	
102	-116	540.8932.0000		102	-116	540.8932.0000		80	-102	540.8904.0000	
116	-145	540.8942.0000		116	-145	540.8942.0000				540.8984.0205	
145	-167	540.8952.0000		145	-167	540.8952.0000			-145		S
167	-189	540.8912.0000		167	-189	540.8912.0000					
		540.9912.0205				540.9912.0205					
189	-218	540.8922.0000		189	-218	540.8922.0000					
		540.9912.0205				540.9912.0205					
218	-247	540.8952.0000		218	-247	540.8952.0000					
		540.9912.0205				540.9912.0205					
	-363		S		-363		S				

DN 200, do 165											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3		S	1	-3		S	3	-4		S
3	-4	540.8832.0000	0; V150	3	-4	540.8832.0000	0; V150	4	-6	540.8844.0000	0; V150
4	-6	540.8842.0000	0; V150	4	-6	540.8842.0000	0; V150	6	-9	540.8854.0000	0; V150
6	-9	540.8852.0000	0; V150	6	-9	540.8852.0000	0; V150	9	-12	540.8864.0000	0; V150
9	-12	540.8862.0000	0; V150	9	-12	540.8862.0000	0; V150	12	-17	540.8874.0000	0; V150
12	-17	540.8872.0000	0; V150	12	-17	540.8872.0000	0; V150	17	-21	540.8884.0000	0; V150
17	-21	540.8882.0000	0; V150	17	-21	540.8882.0000	0; V150		-145		S
21	-29	540.8892.0000	0; V150	21	-29	540.8892.0000	0; V150				
29	-38	540.9082.0205		29	-38	540.9082.0205					
38	-49	540.9092.0205		38	-49	540.9092.0205					
49	-61	540.9102.0000		49	-61	540.9102.0000					
61	-76	540.9162.0000		61	-76	540.9162.0000					
76	-94	540.9172.0000		76	-94	540.9172.0000					
94	-118	540.9182.0000		94	-118	540.9182.0000					
118	-145	540.9192.0000		118	-145	540.9192.0000					
145	-160	540.9192.0000		145	-160	540.9192.0000					
		540.9052.0205				540.9052.0205					
160	-183	540.9132.0000		160	-183	540.9132.0000					
		540.9072.0205				540.9072.0205					
183	-203	540.9132.0000		186	-203	540.9132.0000					
		540.9092.0205				540.9092.0205					
203	-244	540.9132.0000		203	-244	540.9132.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
244	-287	540.9152.0000		244	-287	540.9152.0000					
		540.9082.0205				540.9082.0205					
		540.9222.0000				540.9222.0000					
	-363		S		-363		S				

17 DN 250 to DN 400 in [psi]

Spring data for Type 441 DN 250 to DN 400 is differentiated between three options, which are made out by different article numbers.

1. 441 DN 250 – 400 with casted body and PED approval according to DIN EN 4126-1 and ASME approval
2. 441 DN 250 – 400 with casted body and PED approval according to AD 2000 standard
3. 441 XXL DN 250 – 400 obsolete type with welded body (spring data for repair and exchange only)

Disclosure cat.:	I	proofread by:	BBü	publish date:	10/24/22	effect. date:	10/22
author:	ChK	released by:	JR	replaces:	initial	status:	Published
resp. depart.:	TD	date of release:	10/24/22	revision No.:	0		
doc. type:	LGS	change rep. No.:	200915	retention period:	10y.	prot. class:	public

17.1 Casted Body – PED (DIN EN) / ASME Approval

DN 250, do 200, article no.: 4412.524*, 4422.5245, 4414.824*											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
3	4	540.9032.0205		3	4	540.9032.0205		3	4	540.9034.0205	
4	7	540.9042.0205		4	7	540.9042.0205		4	7	540.9044.0205	
7	9	540.9052.0205		7	9	540.9052.0205		7	9	540.9054.0205	
9	14	540.9062.0205		9	14	540.9062.0205		9	14	540.9064.0205	
14	19	540.9072.0205		14	19	540.9072.0205		14	19	540.9074.0205	
19	22	540.9082.0205		19	22	540.9082.0205		19	22	540.9084.0205	
22	27	540.9092.0205		22	27	540.9092.0205		22	27	540.9094.0205	
27	32	540.3872.0205		27	32	540.3872.0205		27	32	540.3874.0205	
32	40	540.9102.0000		32	40	540.9102.0000		32	40	540.9104.0000	
40	57	540.9112.0000		40	57	540.9112.0000		40	57	540.9114.0000	
57	73	540.9122.0000		57	73	540.9122.0000		57	73	540.9114.0000	
73	104	540.9132.0000		73	104	540.9132.0000				540.9074.0205	
104	138	540.9132.0000		104	138	540.9132.0000		73	102	540.0764.0000	
		540.9092.0205				540.9092.0205				540.9094.0205	
138	162	540.9152.0000		138	162	540.9152.0000					
		540.9072.0205				540.9072.0205					
162	194	540.9152.0000		162	194	540.9152.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
194	225	540.0992.0000		194	225	540.0992.0000					
		540.9072.0205				540.9072.0205					
225	261	540.0992.0000		225	261	540.0992.0000					
		540.0442.0205				540.0442.0205					

DN 300, do 235, article no.: 4412.525*, 4422.5255, 4414.825*											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
3	4	540.9022.0205		3	4	540.9022.0205		3	4	540.9024.0205	
4	5	540.9032.0205		4	5	540.9032.0205		4	5	540.9034.0205	
6	7	540.9042.0205		6	7	540.9042.0205		5	7	540.9044.0205	
7	10	540.9052.0205		7	10	540.9052.0205		7	10	540.9054.0205	
10	12	540.9062.0205		10	12	540.9062.0205		10	12	540.9064.0205	
12	17	540.9072.0205		12	17	540.9072.0205		12	17	540.9074.0205	
17	21	540.9082.0205		17	21	540.9082.0205		17	21	540.9084.0000	
21	23	540.9092.0205		21	23	540.9092.0205		21	23	540.9094.0000	
23	27	540.3872.0205		23	27	540.3872.0205		23	27	540.3874.0000	
27	32	540.9102.0000		27	32	540.9102.0000		27	32	540.9104.0000	
32	41	540.1082.0000		32	41	540.1082.0000		32	41	540.1084.0000	
41	48	540.9112.0000		41	48	540.9112.0000		41	48	540.1084.0000	
48	62	540.9112.0000		48	62	540.9112.0000				540.9054.0205	
		540.9072.0205				540.9072.0205					
63	84	540.9132.0000		63	84	540.9132.0000					
84	114	540.9132.0000		84	114	540.9132.0000					
		540.9092.0205				540.9092.0205					
114	138	540.1102.0000		114	138	540.1102.0000					
		540.1202.0205				540.1202.0205					
138	167	540.1102.0000		138	167	540.1102.0000					
		540.1212.0205				540.1212.0205					
167	191	540.1102.0000		167	191	540.1102.0000					
		540.1212.0205				540.1212.0205					
		540.1222.0000				540.1222.0000					

DN 400, do 295, article no.: 4412.526*, 4422.5265, 4414.826*											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
3	4	540.9032.0205		3	4	540.9032.0205		3	4	540.2014.0205	
4	6	540.9042.0205		4	6	540.9042.0205		4	6	540.2024.0205	
6	7	540.9052.0205		6	7	540.9052.0205		6	7	540.2034.0205	
7	9	540.9062.0205		7	9	540.9062.0205		7	9	540.2044.0205	
10	13	540.7152.0000		10	13	540.7152.0000		10	13	540.2054.0205	
13	17	540.7162.0000		13	17	540.7162.0000		13	17	540.2064.0000	
18	22	540.7172.0000		18	22	540.7172.0000		18	22	540.2074.0000	
22	25	540.9102.0000		22	25	540.9102.0000		22	25	540.2084.0000	
25	31	540.1082.0000		25	31	540.1082.0000		25	31	540.2094.0000	
31	40	540.1082.0000		31	40	540.1082.0000		31	40	540.2104.0000	
		540.7122.0205				540.7122.0205		40	51	540.2104.0000	
40	51	540.7182.0000		40	51	540.7182.0000				540.2054.0205	
51	67	540.7192.0000		51	67	540.7192.0000					
67	88	540.7142.0000		67	88	540.7142.0000					
89	119	540.7142.0000		89	119	540.7142.0000					
		540.7112.0205				540.7112.0205					
119	145	540.7132.0000		119	145	540.7132.0000					
		540.7102.0205				540.7102.0205					

17.2 Casted Body – PED (AD 2000) Approval

DN 250, do 200, article no.: 4412.521*, 4422.5215, 4414.821*											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
3	4	540.9032.0205		3	4	540.9032.0205		3	4	540.9034.0205	
4	6	540.9042.0205		4	6	540.9042.0205		4	6	540.9044.0205	
6	8	540.9052.0205		6	8	540.9052.0205		6	8	540.9054.0205	
8	12	540.9062.0205		8	12	540.9062.0205		8	12	540.9064.0205	
12	16	540.9072.0205		12	16	540.9072.0205		12	16	540.9074.0205	
16	21	540.9082.0205		16	21	540.9082.0205		16	21	540.9084.0205	
21	26	540.9092.0205		21	26	540.9092.0205		21	26	540.9094.0205	
26	35	540.9102.0000		26	35	540.9102.0000		26	35	540.9104.0000	
35	44	540.9112.0000		35	44	540.9112.0000		35	44	540.9114.0000	
44	54	540.9122.0000		44	54	540.9122.0000		44	54	540.9114.0000	
54	75	540.9132.0000		54	75	540.9132.0000				540.9074.0205	
75	107	540.9132.0000		75	107	540.9132.0000		54	75	540.0764.0000	
		540.9092.0205				540.9092.0205				540.9094.0205	
107	138	540.9152.0000		107	138	540.9152.0000					
		540.9072.0205				540.9072.0205					
138	164	540.9152.0000		138	164	540.9152.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
164	210	540.0992.0000		164	210	540.0992.0000					
		540.9062.0205				540.9062.0205					
210	261	540.0992.0000		210	261	540.0992.0000					
		540.0442.0205				540.0442.0205					

DN 300, do 235, article no.: 4412.522*, 4422.5225, 4414.822*											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
3	4	540.9022.0205		3	4	540.9022.0205		3	4	540.9024.0205	
4	5	540.9032.0205		4	5	540.9032.0205		4	5	540.9034.0205	
5	7	540.9042.0205		5	7	540.9042.0205		5	7	540.9044.0205	
7	9	540.9052.0205		7	9	540.9052.0205		7	9	540.9054.0205	
9	11	540.9062.0205		9	11	540.9062.0205		9	11	540.9064.0205	
11	13	540.9072.0205		11	13	540.9072.0205		11	13	540.9074.0205	
13	17	540.9082.0205		13	17	540.9082.0205		13	17	540.9084.0000	
18	22	540.9092.0205		18	22	540.9092.0205		18	22	540.9094.0000	
22	30	540.9102.0000		22	30	540.9102.0000		22	30	540.9104.0000	
30	38	540.9112.0000		30	38	540.9112.0000		30	38	540.1084.0000	
38	48	540.9112.0000		38	48	540.9112.0000				540.9054.0205	
		540.9072.0205				540.9072.0205					
48	62	540.9132.0000		48	62	540.9132.0000					
62	84	540.9132.0000		62	84	540.9132.0000					
		540.9092.0205				540.9092.0205					
84	113	540.1102.0000		84	113	540.1102.0000					
		540.1202.0205				540.1202.0205					
113	142	540.1102.0000		113	142	540.1102.0000					
		540.1212.0205				540.1212.0205					
142	167	540.1102.0000		142	167	540.1102.0000					
		540.1092.0205				540.1092.0205					
167	207	540.2982.0000		167	207	540.2982.0000					
		540.2992.0205				540.2992.0205					
207	239	540.2982.0000		207	239	540.2982.0000					
		540.2992.0205				540.2992.0205					
		540.1232.0000				540.1232.0000					

DN 400, do 295, article no.: 4412.523*, 4422.5235, 4414.823*											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
3	4	540.9032.0205		3	4	540.9032.0205		3	4	540.2014.0205	
4	6	540.9042.0205		4	6	540.9042.0205		4	6	540.2024.0205	
6	7	540.9052.0205		6	7	540.9052.0205		6	7	540.2034.0205	
7	9	540.9062.0205		7	9	540.9062.0205		7	9	540.2044.0205	
9	12	540.9072.0205		9	12	540.9072.0205		9	12	540.2054.0205	
12	15	540.9082.0205		12	15	540.9082.0205		12	15	540.2064.0000	
15	18	540.9092.0205		15	18	540.9092.0205		15	18	540.2074.0000	
18	22	540.9102.0000		18	22	540.9102.0000		18	22	540.2084.0000	
22	27	540.9162.0000		22	27	540.9162.0000		22	27	540.2094.0000	
27	33	540.7202.0000		27	33	540.7202.0000		27	33	540.2104.0000	
33	39	540.7202.0000		33	39	540.7202.0000		33	39	540.2104.0000	
		540.9072.0205				540.9072.0205				540.2054.0205	
39	47	540.7202.0000		39	47	540.7202.0000		39	47	540.2104.0000	
		540.9092.0205				540.9092.0205				540.2114.0205	
47	64	540.7142.0000		47	64	540.7142.0000					
64	94	540.7142.0000		64	94	540.7142.0000					
		540.7112.0205				540.7112.0205					
94	131	540.7212.0000		94	131	540.7212.0000					
		540.7112.0205				540.7112.0205					
131	145	540.7212.0000		131	145	540.7212.0000					
		540.7222.0205				540.7222.0205					

17.3 XXL / Welded Body – PED (AD 2000) / ASME Approval

DN 250, do 200, article no.: 4412.476*, 4422.4765, 4414.480* (obsolete Type 441XXL, welded body)											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
3	4	540.9022.0205		3	4	540.9022.0205		3	87		S
4	6	540.9032.0205		4	6	540.9032.0205					
6	8	540.9042.0205		6	8	540.9042.0205					
8	11	540.9052.0205		8	11	540.9052.0205					
11	14	540.9062.0205		11	14	540.9062.0205					
14	19	540.9072.0205		14	19	540.9072.0205					
19	26	540.9082.0205		19	26	540.9082.0205					
26	35	540.9092.0205		26	35	540.9092.0205					
35	47	540.9102.0000		35	47	540.9102.0000					
47	61	540.9112.0000		47	61	540.9112.0000					
61	77	540.9122.0000		61	77	540.9122.0000					
77	109	540.9132.0000		77	109	540.9132.0000					
109	142	540.9132.0000		109	142	540.9132.0000					
		540.9092.0205				540.9092.0205					
142	160	540.9152.0000		142	160	540.9152.0000					
		540.9072.0205				540.9072.0205					
160	187	540.9152.0000		160	187	540.9152.0000					
		540.9092.0205				540.9092.0205					
187	194	540.9152.0000		187	194	540.9152.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
	232		S		232		S				

DN 300, do 235, article no.: 4412.477*, 4422.4775, 4414.490*											
(obsolete Type 441XXL, welded body)											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
3	4	540.9022.0205		3	4	540.9022.0205		3	52		S
4	5	540.9032.0205		4	5	540.9032.0205					
5	7	540.9042.0205		5	7	540.9042.0205					
7	9	540.9052.0205		7	9	540.9052.0205					
9	12	540.9062.0205		9	12	540.9062.0205					
12	16	540.9072.0205		12	16	540.9072.0205					
16	22	540.9082.0205		16	22	540.9082.0205					
22	30	540.9092.0205		22	30	540.9092.0205					
30	40	540.9102.0000		30	40	540.9102.0000					
40	52	540.9112.0000		40	52	540.9112.0000					
52	66	540.9112.0000		52	66	540.9112.0000					
		540.9072.0205				540.9072.0205					
66	91	540.9132.0000		66	91	540.9132.0000					
91	120	540.9132.0000		91	120	540.9132.0000					
		540.9092.0205				540.9092.0205					
120	134	540.9132.0000		120	134	540.9132.0000					
		540.9092.0205				540.9092.0205					
		540.9222.0000				540.9222.0000					
	232				232		S				

DN 400, do 295, article no.: 4412.478*, 4422.4785, 4414.491* (obsolete Type 441XXL, welded body)											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
3	4	540.9032.0205		3	4	540.9032.0205		3	33		S
4	5	540.9042.0205		4	5	540.9042.0205					
5	7	540.9052.0205		5	7	540.9052.0205					
7	10	540.9062.0205		7	10	540.9062.0205					
10	12	540.9072.0205		10	12	540.9072.0205					
12	16	540.9082.0205		12	16	540.9082.0205					
16	18	540.9092.0205		16	18	540.9092.0205					
	116		S		116		S				

18 NPS 1" to NPS 1 1/2" in [psi]

NPS 1", do 23											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-4	540.8114.0000		1	-4	540.8114.0000		1	-4	540.8114.0000	
4	-5	540.8134.0000		4	-5	540.8134.0000		4	-5	540.8134.0000	
5	-7	540.4154.0000		5	-7	540.4154.0000		5	-7	540.4154.0000	
7	-10	540.4164.0000		7	-10	540.4164.0000		7	-10	540.4164.0000	
10	-15	540.4174.0000		10	-15	540.4174.0000		10	-15	540.4174.0000	
15	-20	540.5171.0190		15	-20	540.4184.0000		15	-20	540.4184.0000	
20	-29	540.5181.0190		20	-29	540.4194.0000		20	-29	540.4194.0000	
29	-33	540.5191.0190		29	-33	540.4204.0000		29	-33	540.4204.0000	
33	-36	540.9251.0190		33	-36	540.9254.0000		33	-36	540.9254.0000	
36	-52	540.5201.0190		36	-52	540.4214.0000		36	-52	540.4214.0000	
52	-86	540.5211.0190		52	-86	540.4224.0000		52	-86	540.4224.0000	
86	-134	540.5221.0190		86	-134	540.4234.0000		86	-134	540.4234.0000	
134	-218	540.5232.0000		134	-218	540.5232.0000		134	-218	540.5234.0000	
218	-319	540.5242.0000		218	-319	540.5242.0000		218	-319	540.5244.0000	
319	-435	540.5252.0000		319	-435	540.5252.0000		319	-435	540.5254.0000	
435	-580	540.5262.0000		435	-580	540.5262.0000		435	-566	540.4284.0000	
580	-711	540.8142.0000		580	-711	540.8142.0000		566	-616	540.4294.0000	
	-740		S		-740		S		-740		S

NPS 1 1/2", do 29											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3	540.8214.0000		1	-3	540.8214.0000					
3	-5	540.8224.0000		3	-5	540.8224.0000					
5	-7	540.8234.0000		5	-7	540.8234.0000					
7	-10	540.4364.0000		7	-10	540.4364.0000					
10	-15	540.4374.0000		10	-15	540.4374.0000					
15	-20	540.5311.0190		15	-20	540.4384.0000					
20	-26	540.5321.0190		20	-26	540.4394.0000					
26	-33	540.5331.0190		26	-33	540.4404.0000					
33	-39	540.9431.0190		33	-39	540.9434.0000					
39	-47	540.5341.0190		39	-47	540.4414.0000					
47	-62	540.5331.0190		47	-62	540.4404.0000					
		540.9474.0205				540.9474.0205					
62	-80	540.5351.0190		62	-80	540.4424.0000					
80	-116	540.4434.0000		80	-116	540.4434.0000					
116	-160	540.5361.0190		116	-116	540.4444.0000					
160	-218	540.5372.0000		116	-218	540.5372.0000					
218	-326	540.5382.0000		218	-326	540.5382.0000					
326	-435	540.5392.0000		326	-435	540.5392.0000					
435	-580	540.5392.0000		435	-580	540.5392.0000					
		540.9484.0205				540.9484.0205					
580	-653	540.8252.0000		580	-653	540.8252.0000					
653	-696	540.8242.0000		653	-696	540.8242.0000					
		540.9484.0205				540.9484.0205					

NPS 1 1/2", do 37											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-3	540.8324.0000		1	-3	540.8324.0000		1	-3	540.8324.0000	
3	-6	540.8334.0000		3	-6	540.8334.0000		3	-6	540.8334.0000	
6	-9	540.4504.0000		6	-9	540.4504.0000		6	-9	540.4504.0000	
9	-12	540.4514.0000		9	-12	540.4514.0000		9	-12	540.4514.0000	
12	-16	540.5441.0190		12	-16	540.4524.0000		12	-16	540.4524.0000	
16	-22	540.5451.0190		16	-22	540.4534.0000		16	-22	540.4534.0000	
22	-29	540.5461.0190		22	-29	540.4544.0000		22	-29	540.4544.0000	
29	-41	540.5471.0190		29	-41	540.4554.0000		29	-41	540.4554.0000	
41	-58	540.5481.0190		41	-58	540.4564.0000		41	-58	540.4564.0000	
58	-73	540.9561.0190		58	-73	540.9564.0000		58	-73	540.9564.0000	
73	-90	540.5491.0190		73	-90	540.4584.0000		73	-90	540.4584.0000	
90	-112	540.5461.0190		90	-112	540.4544.0000		90	-112	540.4544.0000	
		540.4634.0205				540.4634.0205				540.4634.0205	
112	-139	540.5501.0190		112	-139	540.4594.0000		112	-139	540.4594.0000	
139	-181	540.9561.0190		139	-181	540.9564.0000		139	-181	540.9564.0000	
		540.4634.0205				540.4634.0205				540.4634.0205	
181	-247	540.5512.0000		181	-247	540.5512.0000		181	-247	540.4604.0000	
247	-334	540.5522.0000		247	-334	540.5522.0000		247	-334	540.4604.0000	
334	-435	540.5532.0000		334	-435	540.5532.0000				540.4634.0205	
435	-503	540.5542.0000		435	-503	540.5542.0000		334	-392	540.9574.0000	
503	-580	540.5542.0000		503	-580	540.5542.0000		392	-479	540.9574.0000	
		540.4634.0205				540.4634.0205				540.4634.0205	
580	-667	540.8372.0000		580	-667	540.8372.0000		479	-537	540.9594.0000	
		540.8392.0205				540.8392.0205				540.4634.0205	
								537	-580	540.9594.0000	
										540.8394.0205	

19 NPS 2" to NPS 4" in [psi]

NPS 2", do 46											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1,5	-2,5		S	1,5	-2,5		S	1,5	-2,5		S
2,6	-3,5	540.8424.0000		2,6	-3,5	540.8424.0000		2,6	-3,5	540.8424.0000	
3,6	-6,6	540.8434.0000		3,6	-6,6	540.8434.0000		3,6	-6,6	540.8434.0000	
6,7	-9,6	540.4654.0000		6,7	-9,6	540.4654.0000		6,7	-9,6	540.4654.0000	
9,6	-13,2	540.4664.0000		9,6	-13,2	540.4664.0000		9,6	-13,2	540.4664.0000	
13,2	-16,1	540.5581.0190		13,2	-16,1	540.4674.0000		13,2	-16,1	540.4674.0000	
16,1	-23,3	540.5591.0190		16,1	-23,3	540.4684.0000		16,1	-23,3	540.4684.0000	
23,3	-34,9	540.5601.0190		23,3	-34,9	540.4694.0000		23,3	-34,9	540.4694.0000	
34,9	-49,4	540.5611.0190		34,9	-49,4	540.4704.0000		34,9	-49,4	540.4704.0000	
49,4	-69,7	540.5621.0190		49,4	-69,7	540.4714.0000		49,4	-69,7	540.4714.0000	
69,7	-87,1	540.8492.0000		69,7	-87,1	540.8492.0000		69,7	-87,1	540.8494.0000	
87,1	-123,4	540.5632.0000		87,1	-123,4	540.5632.0000		87,1	123,4	540.8424.0000	
123,4	-195,9	540.5642.0000		123,4	-195,9	540.5642.0000				540.9604.0205	
196,0	-305,0	540.5652.0000		196,0	-305,0	540.5652.0000		123,4	-196,0	540.4734.0000	
305,0	-363,0	540.5662.0000		305,0	-363,0	540.5662.0000		196,0	-305,0	540.8494.0000	
363,0	-508,0	540.5672.0000		363,0	-508,0	540.5672.0000				540.9604.0205	
508,0	-624,0	540.5682.0000		508,0	-624,0	540.5682.0000		305,0	-363,0	540.4734.0000	
624,0	-740,0	540.5682.0000		624,0	-740,0	540.5682.0000				540.9604.0205	
		540.9602.0205				540.9602.0205		363,0	-464,0	540.9634.0000	
										540.9604.0205	
									-580,0		S

NPS 3", do 60											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1,5	-2,9		S	1,5	-2,9		S	1,5	-3,8		S
2,9	-3,6	540.8532.0000		2,9	-3,6	540.8532.0000		3,9	-5,2	540.8544.0000	
3,7	-5,2	540.8542.0000		3,7	-5,2	540.8542.0000		5,2	-7,4	540.5704.0000	
5,2	-7,4	540.5702.0000		5,2	-7,4	540.5702.0000		7,4	-10,3	540.5714.0000	
7,4	-10,3	540.5712.0000		7,4	-10,3	540.5712.0000		10,3	-14,6	540.5724.0000	
10,3	-14,6	540.5722.0000		10,3	-14,6	540.5722.0000		14,6	-20,4	540.5734.0000	
14,6	-20,4	540.5732.0000		14,6	-20,4	540.5732.0000		20,4	-27,7	540.5744.0000	
20,4	-27,7	540.5742.0000		20,4	-27,7	540.5742.0000		27,7	-36,4	540.5754.0000	
27,7	-36,4	540.5752.0000		27,7	-36,4	540.5752.0000		36,4	-58,1	540.5764.0000	
36,4	-58,1	540.5762.0000		36,4	-58,1	540.5762.0000		58,1	-88,6	540.5774.0000	
58,1	-88,6	540.5772.0000		58,1	-88,6	540.5772.0000		88,6	-121,9	540.5784.0000	
88,6	-121,9	540.5782.0000		88,6	-121,9	540.5782.0000		121,9	-167,0	540.5784.0000	
121,9	-152,0	540.5772.0000		121,9	-152,0	540.5772.0000				540.9924.0205	
		540.9722.0205				540.9722.0205		167,0	-247,0	540.5784.0000	
152,0	-232,0	540.5792.0000		152,0	-232,0	540.5792.0000				540.9724.0205	
232,0	-312,0	540.5802.0000		232,0	-312,0	540.5802.0000		247,0	-319,0	540.4944.0000	
312,0	-435,0	540.5802.0000		312,0	-435,0	540.5802.0000				540.9924.0205	
		540.9722.0205				540.9722.0205		319,0	-392,0	540.4944.0000	
435,0	-508,0	540.9492.0000		435,0	-508,0	540.9492.0000				540.9724.0205	
		540.4962.0205				540.4962.0205					
508,0	-580,0	540.9492.0000		508,0	-580,0	540.9492.0000					
		540.4982.0205				540.4982.0205					

NPS 4", do 92											
spring material											
standard				heat-resistant steel				stainless steel			
p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices	p [psi]		spring stock no.	indices
from	to			from	to			from	to		
p1	p2			p1	p2			p1	p2		
1	-2	540.8712.0000	DS1	1	-2	540.8712.0000	DS1	1	-2	540.8624.0000	O V80
2	-4	540.8732.0000	DS1	2	-4	540.8732.0000	DS1	2	-4	540.8634.0000	O V80
4	-7	540.8752.0000	DS1	4	-7	540.8752.0000	DS1	4	-7	540.8654.0000	O V80
7	-9	540.5912.0000	DS1	7	-9	540.5912.0000	DS1	7	-9	540.5814.0000	O V80
9	-12	540.5922.0000	DS1	9	-12	540.5922.0000	DS1	9	-12	540.5834.0000	O V80
12	-16	540.5932.0000	DS1	12	-16	540.5932.0000	DS1	12	-16	540.5844.0000	O V80
16	-23	540.5942.0000	DS1	16	-23	540.5942.0000	DS1	16	-23	540.5854.0000	O V80
23	-32	540.5952.0000	DS1	23	-32	540.5952.0000	DS1	23	-32	540.5864.0000	O V80
32	-45	540.5962.0000	DS1	32	-45	540.5962.0000	DS1	32	-45	540.5874.0000	O V80
45	-65	540.5972.0000	DS1	45	-65	540.5972.0000	DS1	45	-65	540.5884.0000	O V80
65	87	540.9952.0000	DS1	65	87	540.9952.0000	DS1	65	-87	540.9954.0000	
87	-152	540.5982.0000	DS2	87	-152	540.5982.0000	DS2	87	-152	540.5984.0000	
152	-218	540.9962.0000	DS2	152	-218	540.9962.0000	DS2	152	-218	540.5984.0000	
218	-290	540.5982.0000	DS2	218	-290	540.5982.0000	DS2			540.9714.0205	
		540.9982.0205				540.9982.0205		218	-290	540.5984.0000	
290	-418	540.9552.0000	DS2	290	-418	540.9552.0000	DS2			540.9534.0205	
		540.9982.0205				540.9982.0205			-363		S
418	-493	540.9842.0000	DS2	418	-493	540.9842.0000	DS2				
		540.9982.0205				540.9982.0205					

DS1 = 270.3639.0000	DS1 = 270.4849.0023 (with collar)	
DS2 = 270.3739.0000	DS2 = 270.0849.0023 (with collar)	