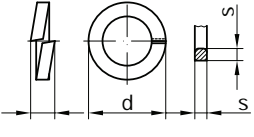


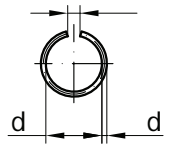
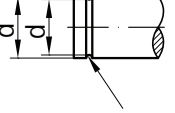


Dimensions for washers and rings

Retaining/lock washers and rings

DIN	Dimensions	0.8	1.2	1.5	1.9	2.3	3.2	4	5	6	
6799		d ₃	2.25	3.25	4.25	4.8	6.3	7.3	9.3	11.3	12.3
		s	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.7	0.7
		for shafts Ø d ₁	1 - 1.4	1.4 - 2	2 - 2.5	2.5 - 3	3 - 4	4 - 5	5 - 7	6 - 8	7 - 9
		m	0.24	0.34	0.44	0.54	0.64	0.64	0.74	0.74	0.74
		n	0.4	0.6	0.8	1	1	1	1.2	1.2	1.2
											
		Dimensions	7	8	9	10	12	15	19	24	
		d ₃	14.3	16.3	18.8	20.4	23.4	29.4	37.6	44.6	
		s	0.9	1	1.1	1.2	1.3	1.5	1.75	2	
		for shafts Ø d ₁	8 - 11	9 - 12	10 - 14	11 - 15	13 - 18	16 - 24	20 - 31	25 - 38	
	m	0.94	1.05	1.15	1.25	1.35	1.55	1.80	2.05		
	n	1.5	1.8	2	2	2.5	3	3.5	4		

DIN	Dimensions	3	4	5	6	8	10	12	
7980		d ₂	5.6	7	8.8	9.9	12.7	16	18
		s	1	1.2	1.6	1.6	2	2.5	2.5
		h	2	2.4	3.2	3.2	4	5	5
		for thread Ø	3	4	5	6	8	10	12
		Dimensions	14	16	18	20	22	24	27
		d ₂	21.1	24.4	26.4	30.6	32.9	35.9	38.9
		s	3	3.5	3.5	4.5	4.5	5	5
		h	6	7	7	9	9	10	10
		for thread Ø	14	16	18	20	22	24	27
		Dimensions	30	33	36	42	48		
		d ₂	44.1	47.1	52.2	60.2	67		
		s	6	6	7	8	8		
		h	12	12	14	16	16		
		for thread Ø	30	33	36	42	48		

DIN	Dimensions	4	5	6	7	8	10	12	
7993A		d ₂	3.1	4.1	5.1	6.1	7.1	9.1	10.8
		d ₄	0.8	0.8	0.8	0.8	0.8	0.8	1
		e	1	1	1	2	2	2	3
		for shafts Ø d ₁	4	5	6	7	8	10	12
		Ø d ₃	3.2	4.2	5.2	6.2	7.2	9.2	11
		r	0.5	0.5	0.5	0.5	0.5	0.5	0.6
									
		Dimensions	16	18	20	22	25	26	28
		d ₂	14.2	16.2	17.7	19.7	22.7	23.7	25.7
		d ₄	1.6	1.6	2	2	2	2	2
		e	3	3	3	3	3	3	3
		for shafts Ø d ₁	16	18	20	22	25	26	28
		Ø d ₃	14.4	16.4	18	20	23	24	26
		r	0.9	0.9	1.1	1.1	1.1	1.1	1.1
		Dimensions	30	35	38	40	45	48	50
		d ₂	27.7	32.1	35.1	37.1	42	45	47
		d ₄	2	2.5	2.5	2.5	2.5	2.5	2.5
		e	3	4	4	4	4	4	4
		for shafts Ø d ₁	30	35	38	40	45	48	50
		Ø d ₃	28	32.5	35.5	37.5	42.5	45.5	47.5
		r	1.1	1.4	1.4	1.4	1.4	1.4	1.4
		Dimensions	55	60	65	70			
		d ₂	51.1	56.1	61.1	66			
		d ₄	3.2	3.2	3.2	3.2			
		e	4	4	4	5			
	for shafts Ø d ₁	55	60	65	70				
	Ø d ₃	51.8	56.8	61.8	66.8				
	r	1.8	1.8	1.8	1.8				