

Dimensions for washers and rings



Retaining/lock washers and rings

DIN	Dimensions	108 *	110	112 *	115	117 *	118 *	120	122 *	125	127 *	128 *	
471 normal type	s	4	4	4	4	4	4	4	4	4	4	4	
	d ₃	100	103	105	108	110	110	113	115	118	120	120	
	a	10	10.1	10.3	10.6	10.8	10.8	11	11.2	11.4	11.4	11.4	
	b	9.5	9.6	9.7	9.8	10	10	10.2	10.3	10.4	10.5	10.5	
	d ₅	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4	4	4	4	
	d ₂	104	106	108	111	113	114	116	118	121	123	124	
	m	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15
	n	6	6	6	6	6	6	6	6	6	6	6	6
	d ₄	-	131.2	-	137.3	-	-	143.1	-	149	-	-	-
	Dimensions		130	132 *	135	137 *	138 *	140	142 *	145	147 *	148 *	150
	s	4	4	4	4	4	4	4	4	4	4	4	4
	d ₃	123	125	128	130	130	133	135	138	140	140	142	142
	a	11.6	11.7	11.8	11.9	11.9	12	12.1	12.2	12.3	12.3	13	13
	b	10.7	10.8	11	11	11	11.2	11.3	11.5	11.6	11.6	11.8	11.8
	d ₅	4	4	4	4	4	4	4	4	4	4	4	4
d ₂	126	128	131	133	134	136	138	141	143	144	145	145	
m	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	
n	6	6	6	6	6	6	6	6	6	6	6	7.5	
d ₄	154.4	-	159.8	-	-	165.2	-	170.6	-	-	-	177.3	
Dimensions		155	160	165	168 *	170	175	180	185	190	195	200	
s	4	4	4	4	4	4	4	4	4	4	4	4	
d ₃	146	151	155.5	157.5	160.5	165.5	170.5	175.5	180.5	185.5	190.5	190.5	
a	13	13.3	13.5	13.5	13.5	13.5	14.2	14.2	14.2	14.2	14.2	14.2	
b	12	12.2	12.5	12.9	12.9	12.9	13.5	13.5	14	14	14	14	
d ₅	4	4	4	4	4	4	4	4	4	4	4	4	
d ₂	150	155	160	163	165	170	175	180	185	190	195	195	
m	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	
n	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	
d ₄	182.3	188	193.4	-	198.4	203.4	210	215	220	225	230	230	
Dimensions		210	215 *	220	230	240	250	260	270	280	290	300	
s	5	5	5	5	5	5	5	5	5	5	5	5	
d ₃	198	203	208	218	228	238	245	255	265	275	285	285	
a	14.2	14.2	14.2	14.2	14.2	14.2	16.2	16.2	16.2	16.2	16.2	16.2	
b	14	14	14	14	14	14	16	16	16	16	16	16	
d ₅	4	4	4	4	4	4	5	5	5	5	5	5	
d ₂	204	209	214	224	234	244	252	262	272	282	292	292	
m	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15	
n	9	9	9	9	9	9	12	12	12	12	12	12	
d ₄	240	-	250	260	270	280	294	304	314	324	334	334	

nominal size = for shafts Ø
 * intermediate sizes not included in the standard

DIN	Dimensions	15	16	20	25	30	35	
471 heavy type	s	1.5	1.5	1.75	2	2	2.5	
	d ₃	13.8	14.7	18.5	23.2	27.9	32.2	
	a	4.8	5	5.5	6.4	6.5	6.7	
	b	2.4	2.5	3	3.4	4.1	4.2	
	d ₅	2	2	2	2	2	2.5	
	d ₂	14.3	15.2	19	23.9	28.6	33	
	m	1.6	1.6	1.85	2.15	2.15	2.65	
	n	1.1	1.2	1.5	1.7	2.1	3	
	d ₄	25.1	26.5	31.6	38.5	43.7	49.1	
	Dimensions		40	45	50	55	60	
	s	2.5	2.5	3	3	3		
	d ₃	36.5	41.5	45.8	50.8	55.8		
	a	7	7.5	8	8.5	9		
	b	4.4	4.7	5.1	5.4	5.8		
	d ₅	2.5	2.5	2.5	2.5	2.5		
d ₂	37.5	42.5	47	52	57			
m	2.65	2.65	3.15	3.15	3.15			
n	3.8	3.8	4.5	4.5	4.5			
d ₄	54.7	60.8	66.8	72.9	78.9			

nominal size = for shafts Ø