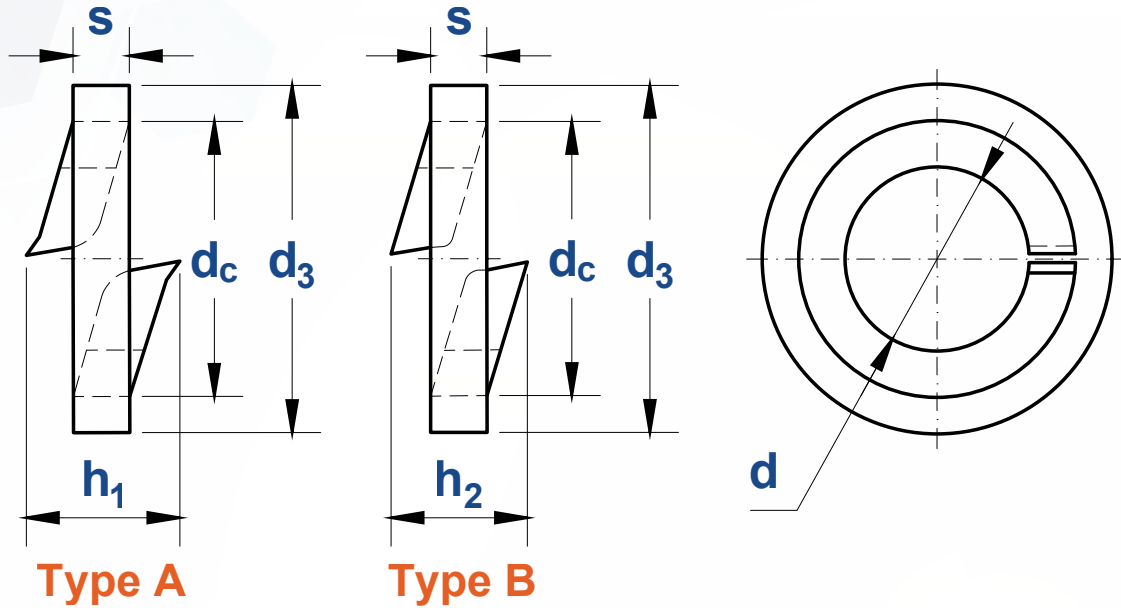




Size		$\Phi 3$ ①	$\Phi 4$	$\Phi 5$	$\Phi 6$	$\Phi 8$	$\Phi 10$	$\Phi 12$	$\Phi 14$	$\Phi 16$	$\Phi 18$
d	min	3.1	4.1	5.1	6.1	8.2	10.2	12.2	14.2	16.2	18.2
d_c		5.4	6.7	8.25	9.5	12.5	15	17.5	21	24	27
d₃	max	7	9	11	12	16	19	22	27	30	34
	min	6.7	8.7	10.6	11.6	15.6	18.5	21.5	26.5	29.5	33.5
s		1.25	1.75	2	2.25	2.75	3	3.5	4.5	5	5.5
h₁	max	3	4.2	4.8	5.4	6.6	7.2	8.4	10.8	12	13.2
	min	2	2.8	3.2	3.6	4.4	4.8	5.6	7.2	8	8.8
h₂	max	3	3.9	4.5	5	6	6.6	7.6	10	11.2	12.4
	min	2	2.5	2.9	3.2	3.8	4.2	4.8	6.4	7	8
per 1000 units ≈ kg		0.3	0.68	1.18	1.49	3.18	4.7	7.28	14.5	19.8	27.6

①, Test values for the spring force test as described in DIN 267 Part 26 have not yet been specified for this nominal size.

②, Test values for the test for permanent set as described in DIN 267 Part 26 have not yet been specified for this nominal size.

③, Technical delivery conditions:

DIN 267 Part 26 shall apply with regard to the technical delivery conditions for spring lock washers made of spring steel. The technical delivery conditions for spring lock washers made of copper-zinc alloys shall be the subject of agreement.

Material:

FSt = spring steel as specified in DIN 267 Part 26, or CuSn 8 as specified in DIN 17662 (only up to nominal size 22).

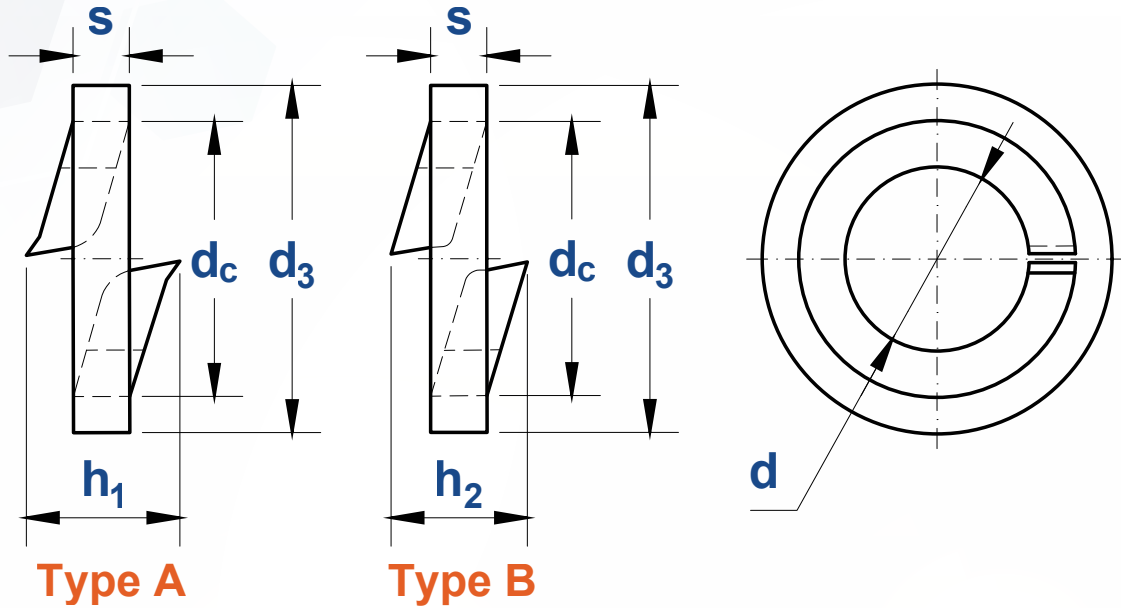
safety ring: St = steel.

CuZn = copper-zinc alloy.

④, Explanatory notes:

By maintaining a sufficiently high preloading in a bolt/nut assembly, spring washers are designed to prevent loosening of the assembly, which may be caused, for instance, by the effect of setting in the assembly. The specification of residual spring forces in DIN 267 Part 26 has made it possible for the first time to assess the performance of spring washers. Owing to the spring forces which may be achieved (see DIN 267 Part 26) by using spring lock washers as covered in the present standard, such washers are only suitable for bolt/nut assemblies involving bolts of property class 5.8 or less.

When spring lock washers with safety rings were developed, the heat treatment methods available at the time were not able to ensure that the washers would not fracture during service. The purpose of the safety ring was to retain the fragments of the washer should it break and thus to prevent further damage occurring, particularly in the case of electrical installations. The problem has now been resolved, and it is intended to withdraw this standard after a transitional period of five years. It is recommended that spring lock washers, as specified in DIN 128, should be used instead of those specified in the present standard.



Size		Φ20	Φ22	Φ24	Φ27	Φ30	Φ33	Φ36	Φ39 ^②	Φ42 ^②
d	min	20.2	22.5	24.5	27.5	30.5	33.5	36.5	39.5	42.5
	d_c	30	34	34	39	42	48	52	56	60
d₃	max	38	42	42	48	52	58	62	70	75
	min	37.2	41.2	41.2	47.2	51	57	61	69	74
s		6.1	6.6	7.1	7.1	7.1	8.1	9.1	10.1	11.1
h₁	max	14.6	15.8	17	17	17	19.4	21.8	24.2	26.6
	min	9.8	10.6	11.4	11.4	11.4	13	14.6	16.2	17.8
h₂	max	13.8	15	16	16	15.4	17.8	20.2	23	25
	min	9	9.8	10.4	10.4	9.8	11.4	13	14.6	16.2
per 1000 units ≈ kg		38.3	46.6	46.1	67.4	76.3	105	141	208	269

①, Test values for the spring force test as described in DIN 267 Part 26 have not yet been specified for this nominal size.

②, Test values for the test for permanent set as described in DIN 267 Part 26 have not yet been specified for this nominal size.

③, Technical delivery conditions:

DIN 267 Part 26 shall apply with regard to the technical delivery conditions for spring lock washers made of spring steel. The technical delivery conditions for spring lock washers made of copper-zinc alloys shall be the subject of agreement.

Material:

FSt = spring steel as specified in DIN 267 Part 26, or CuSn 8 as specified in DIN 17662 (only up to nominal size 22).

safety ring: St = steel.

CuZn = copper-zinc alloy.

④, Explanatory notes:

By maintaining a sufficiently high preloading in a bolt/nut assembly, spring washers are designed to prevent loosening of the assembly, which may be caused, for instance, by the effect of setting in the assembly. The specification of residual spring forces in DIN 267 Part 26 has made it possible for the first time to assess the performance of spring washers. Owing to the spring forces which may be achieved (see DIN 267 Part 26) by using spring lock washers as covered in the present standard, such washers are only suitable for bolt/nut assemblies involving bolts of property class 5.8 or less. When spring lock washers with safety rings were developed, the heat treatment methods available at the time were not able to ensure that the washers would not fracture during service. The purpose of the safety ring was to retain the fragments of the washer should it break and thus to prevent further damage occurring, particularly in the case of electrical installations. The problem has now been resolved, and it is intended to withdraw this standard after a transitional period of five years. It is recommended that spring lock washers, as specified in DIN 128, should be used instead of those specified in the present standard.