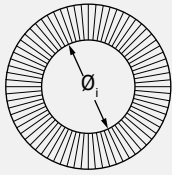


# STEEL ORIGINAL WASHERS

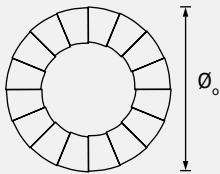
## DIMENSIONS

Delta Protekt® Zinc Flake Coating

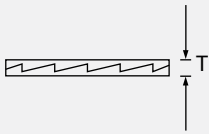
Through hardened EN 1.7182



NL3-NL8sp  
Ø<sub>i</sub>±0.1 mm  
NL3/8"-NL42  
Ø<sub>i</sub>±0.2 mm  
NL45-NL130  
Ø<sub>i</sub>+0.5 / -0.0 mm



NL3-NL1"sp  
Ø<sub>o</sub>±0.2 mm  
NL27-NL42  
Ø<sub>o</sub>±0.3 mm  
NL45-NL130  
Ø<sub>o</sub>+0.0 / -2.0 mm



NL3-NL42  
T±0.25 mm  
NL45-NL130  
T±0.75 mm

Note that washers with thickness 6.6 mm have a thickness tolerance +0.0 / -0.5 mm

Nord-Lock steel washers in sizes NL3-NL52 with zinc flake coating are standard stock items.

Torque guidelines



2D/3D CAD models



- Torque guidelines:  
Web app: [torquelator.nord-lock.com](http://torquelator.nord-lock.com)  
[www.nord-lock.com/torque](http://www.nord-lock.com/torque)

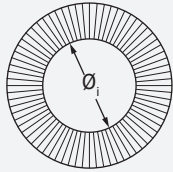
- 2D/3D CAD models:  
[www.nord-lock.com/cad](http://www.nord-lock.com/cad)

Bolt size	Metric	UNC	Product designation	Ø <sub>i</sub> [mm]	Ø <sub>o</sub> [mm]	Thickness T [mm]	Approx. weight kg/100 pairs	Min. Package [pairs]
M3	#5		NL3	3.4	7.0	1.8	0.03	200
M3.5	#6		NL3.5	3.9	7.6	1.8	0.04	200
M3.5	#6		NL3.5sp	3.9	9.0	1.8	0.06	200
M4	#8		NL4	4.4	7.6	1.8	0.04	200
M4	#8		NL4sp	4.4	9.0	1.8	0.06	200
M5	#10		NL5	5.4	9.0	1.8	0.05	200
M5	#10		NL5sp	5.4	10.8	1.8	0.11	200
M6			NL6	6.5	10.8	1.8	0.07	200
M6			NL6sp	6.5	13.5	2.5	0.20	200
		1/4"	NL1/4"	7.2	11.5	2.5	0.08	200
		1/4"	NL1/4"sp	7.2	13.5	2.5	0.18	200
M8	5/16"		NL8	8.7	13.5	2.5	0.15	200
M8	5/16"		NL8sp	8.7	16.6	2.5	0.28	200
		3/8"	NL3/8"	10.3	16.6	2.5	0.23	200
		3/8"	NL3/8"sp	10.3	21.0	2.5	0.48	200
M10			NL10	10.7	16.6	2.5	0.22	200
M10			NL10sp	10.7	21.0	2.5	0.47	200
M11	7/16"		NL11	11.4	18.5	2.5	0.29	200
M12			NL12	13.0	19.5	2.5	0.29	200
M12			NL12sp	13.0	25.4	3.4	0.93	100
		1/2"	NL1/2"	13.5	19.5	2.5	0.27	200
		1/2"	NL1/2"sp	13.5	25.4	3.4	0.90	100
M14	9/16"		NL14	15.2	23.0	3.4	0.56	100
M14	9/16"		NL14sp	15.2	30.7	3.4	1.41	100
M16	5/8"		NL16	17.0	25.4	3.4	0.67	100
M16	5/8"		NL16sp	17.0	30.7	3.4	1.28	100
M18			NL18	19.5	29.0	3.4	0.89	100
M18			NL18sp	19.5	34.5	3.4	1.58	100
		3/4"	NL3/4"	20.0	30.7	3.4	1.05	100
		3/4"	NL3/4"sp	20.0	39.0	3.4	2.21	100
M20			NL20	21.4	30.7	3.4	0.93	100
M20			NL20sp	21.4	39.0	3.4	2.09	100
M22	7/8"		NL22	23.4	34.5	3.4	1.25	100
M22	7/8"		NL22sp	23.4	42.0	4.6	3.19	50
M24			NL24	25.3	39.0	3.4	1.74	100
M24			NL24sp	25.3	48.5	4.6	4.51	50
		1"	NL1"	27.9	39.0	3.4	1.53	100
		1"	NL1"sp	27.9	48.5	4.6	4.20	50
M27			NL27	28.4	42.0	5.8	3.14	50
M27			NL27sp	28.4	48.5	5.8	5.27	25
M30	1 1/8"		NL30	31.4	47.0	5.8	4.10	50
M30	1 1/8"		NL30sp	31.4	55.0	5.8	7.00	25
M33	1 1/4"		NL33	34.4	48.5	5.8	3.89	25
M33	1 1/4"		NL33sp	34.4	58.5	5.8	8.00	25
M36	1 3/8"		NL36	37.4	55.0	5.8	5.49	25
M36	1 3/8"		NL36sp	37.4	63.0	5.8	8.58	25
M39	1 1/2"		NL39	40.4	58.5	5.8	5.89	25
M42			NL42	43.2	63.0	5.8	7.97	25
M45	1 3/4"		NL45	46.2	70.0	7.0	10.20	25
M48			NL48	49.6	75.0	7.0	12.00	25
M52	2"		NL52	53.6	80.0	7.0	13.00	25
M56	2 1/4"		NL56	59.1	85.0	7.0	13.50	10
M60			NL60	63.1	90.0	7.0	15.20	10
M64	2 1/2"		NL64	67.1	95.0	7.0	16.70	10
M68			NL68	71.1	100.0	9.5	28.20	1
M72			NL72	75.1	105.0	9.5	30.70	1
M76	3"		NL76	79.1	110.0	9.5	33.30	1
M80	3 1/8"		NL80	83.1	115.0	9.5	36.00	1
M85			NL85	88.1	120.0	9.5	37.80	1
M90			NL90	92.4	130.0	9.5	47.70	1
M95			NL95	97.4	135.0	9.5	49.80	1
M100	4"		NL100	103.4	145.0	9.5	58.90	1
M105			NL105	108.4	150.0	9.5	61.30	1
M110			NL110	113.4	155.0	9.5	63.50	1
M115			NL115	118.4	165.0	9.5	75.30	1
M120			NL120	123.4	170.0	9.5	77.90	1
M125			NL125	128.4	173.0	9.5	76.60	1
M130	5"		NL130	133.4	178.0	9.5	79.20	1

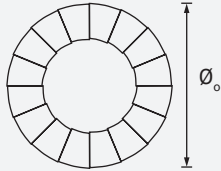
# STAINLESS STEEL ORIGINAL WASHERS

## DIMENSIONS

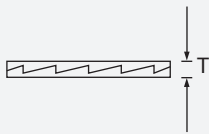
Surface hardened EN 1.4404  
(AISI 316L)



NL3ss-NL8spss  
 $\text{Ø}_i \pm 0.1 \text{ mm}$   
NL3/8"ss-NL42ss  
 $\text{Ø}_i \pm 0.2 \text{ mm}$   
NL45ss-NL80ss  
 $\text{Ø}_i +0.5 / -0.0 \text{ mm}$



NL3ss-NL1"spss  
 $\text{Ø}_o \pm 0.2 \text{ mm}$   
NL27ss-NL42ss  
 $\text{Ø}_o \pm 0.3 \text{ mm}$   
NL45ss-NL80ss  
 $\text{Ø}_o +0.0 / -2.0 \text{ mm}$



NL3ss-NL1"spss  
 $T \pm 0.25 \text{ mm}$   
NL27ss-NL42ss  
 $T +0.0 / -0.5 \text{ mm}$   
NL45ss-NL80ss  
 $T \pm 0.75 \text{ mm}$

EN 1.4404 is an austenitic chromium-nickel stainless steel containing molybdenum. EN 1.4404 is one of the most commonly used stainless steel grades. This stainless steel also has extra-low carbon content in order to reduce the risk of chromium-carbide precipitation.

Nord-Lock washers made of EN 1.4404 are suitable for most applications where no chlorides or acids are present.

Nord-Lock washers made of stainless steel are standard stock items, yet subject to prior sale.

### - Torque guidelines:

Web app: [torquelator.nord-lock.com](http://torquelator.nord-lock.com)  
[www.nord-lock.com/torque](http://www.nord-lock.com/torque)

### - 2D/3D CAD models:

[www.nord-lock.com/cad](http://www.nord-lock.com/cad)

Bolt size		Product designation	$\text{Ø}_i$ [mm]	$\text{Ø}_o$ [mm]	Thickness T [mm]	Approx. weight kg/100 pairs	Min. Package [pairs]
Metric	UNC						
M3	#5	NL3ss	3.4	7.0	2.2	0.04	200
M3.5	#6	NL3.5ss	3.9	7.6	2.2	0.04	200
M3.5	#6	NL3.5spss	3.9	9.0	2.2	0.07	200
M4	#8	NL4ss	4.4	7.6	2.2	0.04	200
M4	#8	NL4spss	4.4	9.0	2.2	0.07	200
M5	#10	NL5ss	5.4	9.0	2.2	0.06	200
M5	#10	NL5spss	5.4	10.8	2.2	0.11	200
M6		NL6ss	6.5	10.8	2.2	0.09	200
M6		NL6spss	6.5	13.5	2.0	0.16	200
	1/4"	NL1/4"ss	7.2	11.5	2.2	0.09	200
	1/4"	NL1/4"spss	7.2	13.5	2.2	0.15	200
M8	5/16"	NL8ss	8.7	13.5	2.0	0.12	200
M8	5/16"	NL8spss	8.7	16.6	2.0	0.23	200
	3/8"	NL3/8"ss	10.3	16.6	2.0	0.19	200
	3/8"	NL3/8"spss	10.3	21.0	2.0	0.38	200
M10		NL10ss	10.7	16.6	2.0	0.18	200
M10		NL10spss	10.7	21.0	2.0	0.37	200
M11	7/16"	NL11ss	11.4	18.5	2.2	0.26	200
M12		NL12ss	13.0	19.5	2.0	0.23	200
M12		NL12spss	13.0	25.4	3.0	0.82	100
	1/2"	NL1/2"ss	13.5	19.5	2.0	0.22	200
	1/2"	NL1/2"spss	13.5	25.4	3.2	0.80	100
M14	9/16"	NL14ss	15.2	23.0	3.0	0.49	100
M14	9/16"	NL14spss	15.2	30.7	3.2	1.31	100
M16	5/8"	NL16ss	17.0	25.4	3.0	0.59	100
M16	5/8"	NL16spss	17.0	30.7	3.2	1.13	100
M18		NL18ss	19.5	29.0	3.2	0.80	100
M18		NL18spss	19.5	34.5	3.2	1.56	100
	3/4"	NL3/4"ss	20.0	30.7	3.2	0.96	100
	3/4"	NL3/4"spss	20.0	39.0	3.2	2.10	100
M20		NL20ss	21.4	30.7	3.0	0.82	100
M20		NL20spss	21.4	39.0	3.2	2.06	100
M22	7/8"	NL22ss	23.4	34.5	3.2	1.23	100
M22	7/8"	NL22spss	23.4	42.0	3.2	2.22	50
M24		NL24ss	25.3	39.0	3.2	1.59	100
M24		NL24spss	25.3	48.5	4.5	4.47	50
	1"	NL1"ss	27.9	39.0	3.2	1.42	100
	1"	NL1"spss	27.9	48.5	3.2	2.79	50
M27		NL27ss	28.4	42.0	6.8	3.45	50
M27		NL27spss	28.4	48.5	6.8	5.34	25
M30	1 1/8"	NL30ss	31.4	47.0	6.8	4.49	50
M30	1 1/8"	NL30spss	31.4	58.5	6.8	9.18	25
M33	1 1/4"	NL33ss	34.4	48.5	6.8	4.28	25
M36	1 3/8"	NL36ss	37.4	55.0	6.8	5.96	25
M39	1 1/2"	NL39ss	40.4	58.5	6.8	6.74	25
M42		NL42ss	43.2	63.0	6.8	7.50	25
M45	1 3/4"	NL45ss	46.2	70.0	6.8	10.20	25
M48		NL48ss	49.6	75.0	6.8	12.00	25
M52	2"	NL52ss	53.6	80.0	9.0	18.04	1
M56	2 1/4"	NL56ss	59.1	85.0	9.0	21.30	1
M60		NL60ss	63.1	90.0	9.0	23.50	1
M64	2 1/2"	NL64ss	67.1	95.0	9.0	25.80	1
M68		NL68ss	71.1	100.0	9.0	28.20	1
M72		NL72ss	75.1	105.0	9.0	30.70	1
M76	3"	NL76ss	79.1	110.0	9.0	33.30	1
M80	3 1/8"	NL80ss	83.1	115.0	9.0	36.00	1