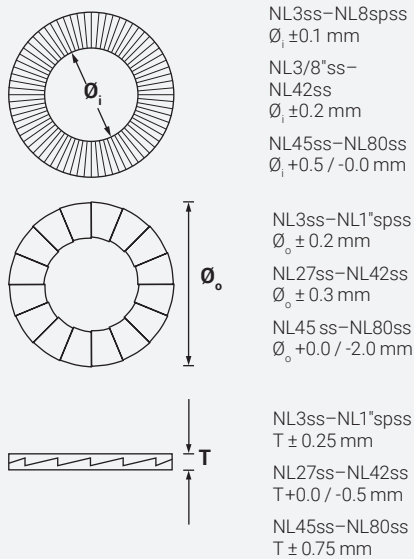




NORD-LOCK ORIGINAL STAINLESS STEEL WASHERS

DIMENSIONS

Surface hardened EN 1.4404
(AISI 316L)



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
www.nord-lock.com/torque
- 2D/3D CAD models:
www.nord-lock.com/cad

Bolt size		Product designation	Ø [mm]	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	2.1	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	2.2	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	2.3	0.37	200
M11	7/16"	NL11ss	11.4	18.5	2.2	0.26	200
M12		NL12ss	13.0	19.5	2.1	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

TORQUE GUIDELINES

Nord-Lock original stainless steel (ss) washers

Bolt size	Washer size	Pitch [mm]	A4-70 Cu/C paste, $G_F=65\%$, $\mu_{th}=0.13$, $\mu_h=0.13$		A4-80 Cu/C paste, $G_F=65\%$, $\mu_{th}=0.13$, $\mu_h=0.13$	
			Torque [Nm]	Clamp load [kN]	Torque [Nm]	Clamp load [kN]
M3	NL3ss	0.50	0.8	1.5	1.1	2.0
M4	NL4ss	0.70	1.8	2.6	2.4	3.4
M5	NL5ss	0.80	3.6	4.1	4.8	5.5
M6	NL6ss	1.00	6.3	5.9	8.4	7.8
M8	NL8ss	1.25	15.0	11.0	20.0	14.0
M10	NL10ss	1.50	30.0	17.0	39.0	23.0
M12	NL12ss	1.75	51.0	25.0	68.0	33.0
M14	NL14ss	2.00	81.0	34.0	108.0	45.0
M16	NL16ss	2.00	124.0	46.0	165.0	61.0
M18	NL18ss	2.50	173.0	56.0	231.0	75.0
M20	NL20ss	2.50	243.0	72.0	323.0	95.0
M22	NL22ss	2.50	330.0	89.0	440.0	118.0
M24	NL24ss	3.00	418.0	103.0	557.0	137.0
M27	NL27ss	3.00	609.0	134.0	812.0	179.0
M30	NL30ss	3.50	831.0	164.0	1108.0	219.0
M36	NL36ss	4.00	1444.0	239.0	1925.0	319.0

Cu/C paste - Nord-Lock stainless steel washers with stainless steel bolt, lubricated with copper/graphite paste (Molykote® 1000).

G_F = ratio of yield point. When tightening according to guidelines and with no deviation, this is the pre-stress achieved expressed as % of yield point.

μ_{th} = thread friction coefficient
 μ_h = under head friction coefficient
 1 N = 0.225 lb
 1 Nm = 0.738 ft-lb

Thread friction coefficients have theoretical values but are verified through testing. Under head friction coefficients have been established by tests.

Torque guidelines for other bolt grades are available through your local Nord-Lock representative.

