



# The Nord-Lock combi bolt

Efficient. Accurate. Cost effective.



Mayura Engineering & Consultancy Sdn Bhd

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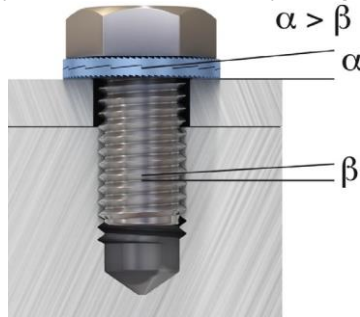
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# Improving your efficiency, accuracy and cost effectiveness



The Nord-Lock combi bolt is a bolt with an integrated pair of Nord-Lock washers. With the Nord-Lock combi bolt, you will be able to increase the efficiency, accuracy and safety of your assembly, while at the same time keeping inventory and part count at a minimum. Based on our proven wedge-locking technology, the Nord-Lock combi bolt secures bolted joints and maintains a high clamp force even under severe operating conditions.



*The Nord-Lock combi bolt secures bolted joints by using tension instead of friction.*

*The cam angle 'α' is greater than 'β', creating a wedge effect that prevents any unintentional loosening of the bolt.*

## Your business benefits

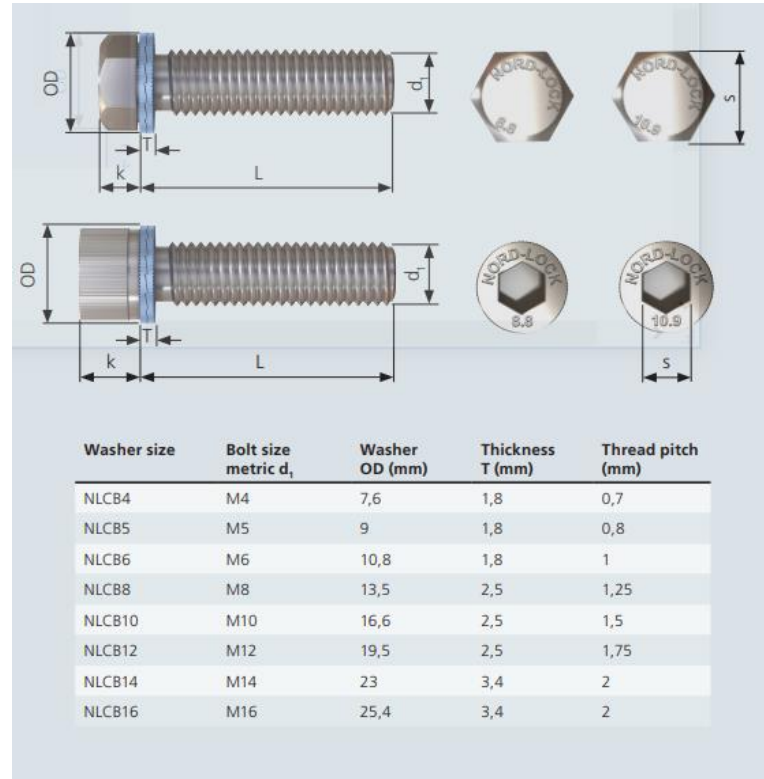
The concept of bolts with captivated washers brings numerous advantages to assembly lines and MRO (maintenance, repair, operations) settings in all kinds of industries. Nord-Lock takes the combi bolt concept to a whole new dimension, by incorporating the superior safety functions of our wedge locking washers. The Nord-Lock combi bolt is offered as a custom made product, where the fasteners are adapted to your specific applications.

Loose parts damaging or shutting down assembly lines during manufacturing or maintenance can be very costly. With the Nord-Lock combi bolt, you can rest assured that your parts are not only safely secured, but also correctly assembled. Furthermore, the Nord-Lock combi bolt is an easy-to-use product in field operations, as well as in confined spaces or areas where access is difficult.

# The Nord-Lock combi bolt - custom made for your applications

We offer the Nord-Lock combi bolt in the following washer and bolt dimensions, in accordance with the standards described below:

<b>Bolt diameter, <math>d_1</math></b>	M4-M16
<b>Bolt length L</b>	10-120mm
<b>Thread tolerance</b>	6g
<b>Washer material</b>	EN 1.5528 or equivalent
<b>Bolt grades</b>	8.8, 10.9
<b>Bolt head</b>	Hex head cap according to ISO4017 Socket head cap according to ISO4762
<b>Surface coating</b>	Zinc-Nickel
<b>Corrosion resistance</b>	400 hours in salt spray test (according to ISO9227)
<b>Washer hardness</b>	425 HV1
<b>Temperature range</b>	-50°C through 200°C
<b>Lubrication</b>	The bolts are pre-lubricated to give an even and low friction condition
<b>Environmental approvals and certificates</b>	ELV & RoHS compliant Reach compliant ISO14001, ISO9001 certificates



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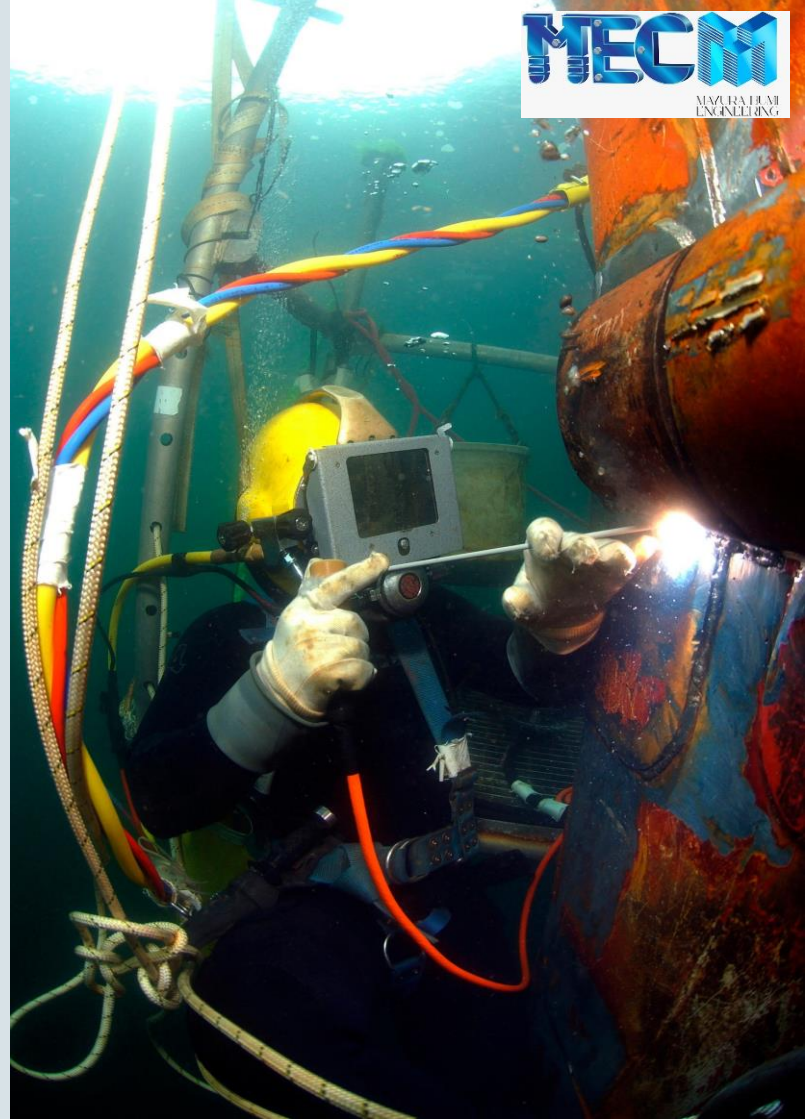
### Hex head cap bolts (ISO4017)

$d_1$	k	s	$L_{min}$	$L_{max}$
M4	2,8	7	10	50
M5	3,5	8	10	60
M6	4	10	10	60
M8	5,3	13	16	80
M10	6,4	16	20	100
M12	7,5	18	20	100
M14	8,8	21	30	120
M16	10	24	30	120

### Socket head cap bolts (ISO4762)

$d_1$	k	s	$L_{min}$	$L_{max}$
M4	4	3	10	50
M5	5	4	10	60
M6	6	5	10	60
M8	8	6	16	80
M10	10	8	20	100
M12	12	10	20	100
M14	14	12	30	120
M16	16	14	30	120

Every batch of Nord-Lock combi bolts is delivered with customer specific torque guidelines for the ordered dimensions.

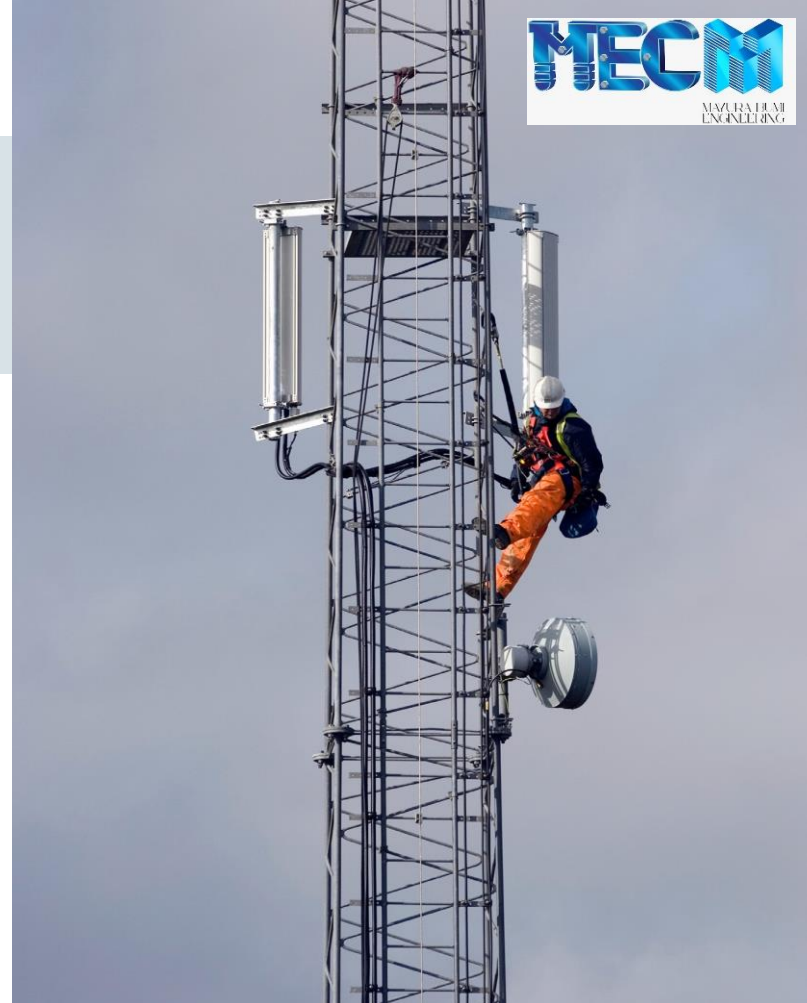


# Advantages of the Nord-Lock combi bolt

Nord-Lock offers a new type of combi bolt, incorporating our original wedge locking technology. A tightened Nord-Lock combi bolt cannot loosen by itself.

With the Nord-Lock combi bolt you are able to:

- Ensure faster product assembly, thanks to pre-assembled and pre-lubricated parts
- Decrease failures related to human error; incorrect mounting or forgetting to put on the washers
- Facilitate product assembly with very small sizes
- Maintain and repair in either difficult surroundings or areas of limited access faster, easier and safer
- Facilitate inventory and logistical savings due to reduced item numbers
- Make disassembly faster and easier as loose washers can be difficult to remove (especially from counter bore holes)





## Partner up with an expert in bolted assemblies

When you choose Nord-Lock you do not only choose a manufacturer and a supplier; you also choose an expert in bolted joints as a partner. Every day we meet our clients locally all over the world, working together to solve bolt securing problems in the most demanding applications.

By allowing Nord-Lock to analyze and optimize your bolted connections you can increase the profitability and productivity of your company by reducing the life cycle cost of your joints.

Authorized distributor:

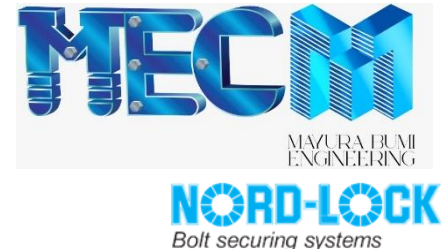
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