



**MUSTAD**

SCREWS TECHNOLOGY



**100% MADE IN ITALY**

**english  
version**



Panelvit® lubricated LUBEX®

Universal screws

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Inox

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Panelvit® lubricated LUBEX®

Wood decking



PF TX INOX for decking

TX



p. 49



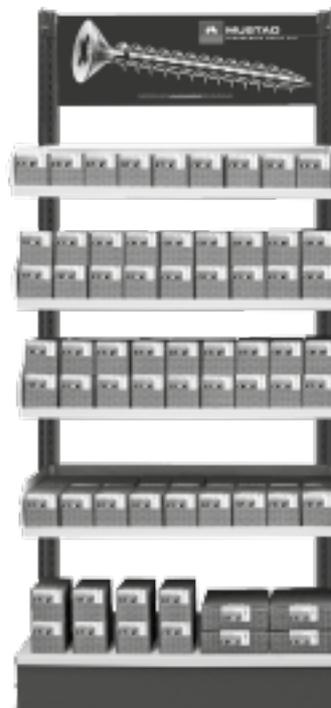
AF PT No splitting for wood massive parquet

TX



p. 45

Display



Mustad Expo display

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Metallic assorted case



Mustad Box Metallic assorted case

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**Screws for PVC frames**

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## Kovervit® for roofing



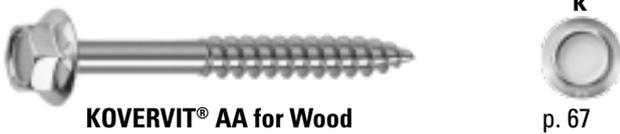
**KOVERVIT® BS Self-tapping**

p. 65



**KOVERVIT® DX Self-drilling**

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**KOVERVIT® AA for Wood**

p. 67

## Formex® three-lobe for aluminium



**FORMEX® Pan Head Lubricated LUBEX®**

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## Screws for plastic materials

Customized solutions are available for fixings of plastic materials.  
Please contact the sales department for technical support about threads and specific geometries.

## General informations

**TECHNICAL DATA** p. 71

**SURFACE TREATMENTS** p. 77



### **MUSTAD SPA**

- **Made in Italy** since 1912
- One of the **leading** hardened screw **manufacturers in Europe**
- **2 plants** with a total covered surface of over **20.000 m<sup>2</sup>**
- **110 highly skilled workers**
- **30 sales agents**

### **BALANGERO PLANT**

---

Via S. Anna, 59/21 10070 Balangero (TO) - Italy  
Tel. 0123.346625 - 346222 (r.a.) - Fax 0123.346041

Distribution sales:	<a href="mailto:commercio@mustad.it">commercio@mustad.it</a>
Industrial sales:	<a href="mailto:industria@mustad.it">industria@mustad.it</a>
Customer accounting:	<a href="mailto:contabilita@mustad.it">contabilita@mustad.it</a>
Management:	<a href="mailto:direzione@mustad.it">direzione@mustad.it</a>
website:	<a href="http://www.mustad.it">www.mustad.it</a>

### **PINEROLO PLANT**

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Via Saluzzo, 66 - 10064 Pinerolo (TO) - Italy  
VAT Number: IT05801010017  
Tax Code: 09347030158





- **Carbon steel** purchased from the best European steelworks
- **Thousands of tons** processed every year



- More than **150 headers, threading machines, point forming machines, packing machines**
- **Millions of items** made every day



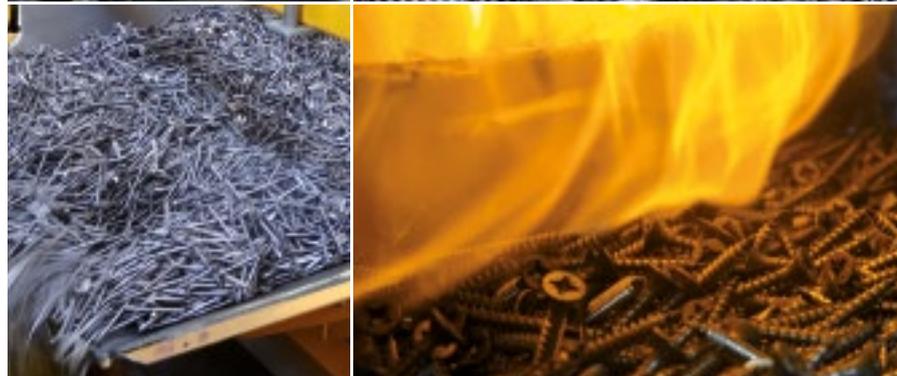
- Highly specialised **in-house maintenance and tooling**



- All production batches **undergo in-process, statistic and final checks**



- **Controlled atmosphere furnaces** for case hardening treatments





- **Finishing treatments** for protection and appearance
- **LUBEX® lubrication treatment** to reduce fastening torque



- **Final inspection** in salt spray chamber to test corrosion resistance



- **Packaging** with labels containing full information and traceability of each single manufactured batch



- **Screws in stock = over 99% availability**
- **5,000** items in stock
- **Dedicated storage areas**
- **Thousands of pallets** ready for delivery



- **Specialised technical support**
  - Studies for specific applications
  - Production line ramp-ups
  - Cost saving strategy definition by optimising applications and screwing operations
  - Fastener rationalisation
  - Technical and sales force training
  - After-sales assistance



## A TRADEMARK OF QUALITY AND SAFETY

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- **The MUSTAD logo printed on the head** of all screws guarantees quality, reliability and safety.
- All production lots undergo **SPC (Statistical Product Control) inspections**.
- Lot numbers printed on labels for **total traceability of all production steps**.
- High quality standards maintained constant over time guarantee **screws suitable for automatic or critical assembly**.

## CERTIFICATIONS

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- ISO 9001 - 2000 (n. LRC 160285)  
ISO/TS 16949 - 2002 (n. 160285) certification **issued by Lloyd's** as screw manufacturer specific for automotive applications.
- **EIFI (n. E1013) European Production Guarantee**.
- **AQP (Product Quality Assurance) certification** conferred by automotive companies authorising MUSTAD to deliver directly to the production line without further acceptance inspections (**Free-Pass**).
- **Direct MUSTAD Quality System Certification by primary companies** in various sectors: automotive, household appliances, mechanical, constructions, door and window fixtures etc.
- **CE marking** for assembly elements for making load-bearing timber structures, according to EN 14592:2009 (conferred by CSTB Centre Scientifique du Bâtiment, Paris, France).
- **DoP (Declaration of Performance)** according to European Constructions Regulation 305/2011.
- Rigorous respect of **standards** for protecting workers, the environment and customers.

## TRADE ASSOCIATION

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Leading the history of our country for **over one hundred years**.



European product guarantee



2012  
EN 14592 : 2009  
CSTB - PARIS



A CENTURY-OLD ITALIAN COMPANY



FEDERMECCANICA

ASSOCIATO  
Unione Industriale Torino





### COMMERCIAL BOX

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- **Content:** 200 / 500 pieces
- **Drawer-like opening**, can be closed again after use.  
Possibility of picking content from stacked boxes
- **All boxes are the same width** for tidier storage
- **High crushing strength**

### LABEL

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- **Three different colours** for identifying product families
- **Visual identification of product features**, with a description of use
- **Indication of the tool to be used for fastening**
- **Lot reference number** allowing total traceability of process documentation and testing compliant with ISO 9001 and ISO/TS 169499
- **CE Mark** for all the screws for load-bearing timber assembly elements, according to EN 14592:2009
- **EAN 13 barcode**

### COMPLETE PACKAGING OF AN ITEM

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- Complete pre-packaging of commercial boxes **proportional to the sales turnover** of the various items
- **Storage and handling ease**
- **Clear identification of contents** with label affixed on the outside



**Blue:**  
Self-tapping, Drillex®,  
Kovervit®, Framex®



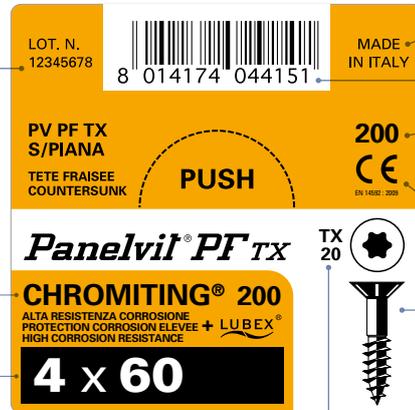
**Gray:**  
Panelvit® INOX



All packaging is made of  
recyclable cardboard

**Orange:** Panelvit®

Lot reference  
number



100% Made in Italy

EAN 13 Barcodes

Content

CE marking, according  
to EN 14592:2009

Finishing

Item picture

Screw size

Fastening tool





Lubricated universal screw suitable for **screwing without pre-boring** in: chipboard panels, wood, hardware, thin plates, plastic and plugs.

**DEEPER RECESS**

to ensure correct coupling with the screwdriver bit. **A deep recess with a perfect geometry** means that **one bit can be used for thousands of screwing operations.**



**REINFORCED HEAD**

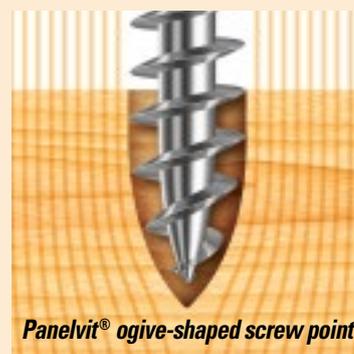
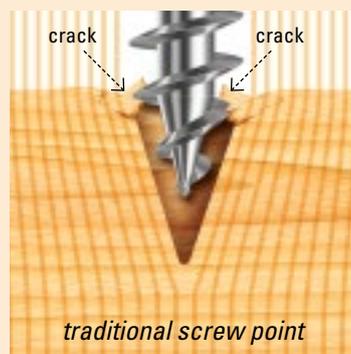
to allow **high screwing torque transmission.**

**SMOOTH, BITING PROFILE THREAD**

to ensure fast advancement with minimum effort, **reducing the risk of splitting the wood.**

**OGIVE-SHAPED POINT**

**(all-threaded)**, guarantees safe gripping without slipping and gradual, constant screw penetration. The results is **better penetration** ease and lower material cracking risk because there are no discontinuities.



- △ *Technical specifications and sizes, page 71.*
- △ *Thermal, protective and lubrication treatment specifications, page 77-78.*



## CASE HARDENING TREATMENT

This confers two properties to the screw:

- **very hard surface**, for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

## PROTECTIVE TREATMENT

To protect the screw from rust and corrosion, guaranteeing reliability over time and providing appearance suited to all uses.

## LUBEX® LUBRICATION

This is a specific MUSTAD anti-friction treatment which reduces the fastening force by up to 50% with respect to a non-lubricated screw.

## IN-PROCESS INSPECTIONS

The entire production process is subjected to **SPC (Statistical Product Control) inspections**, to make sure the **high quality level is maintained constant over time**.

The lot number printed on the labels ensures **total traceability** of all production steps and of the respective inspection/test documents.

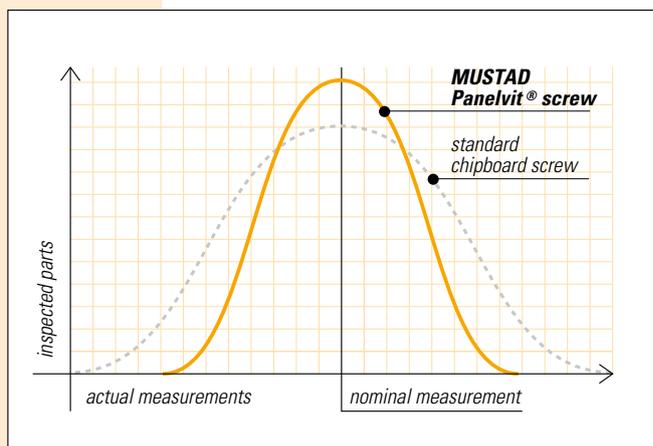
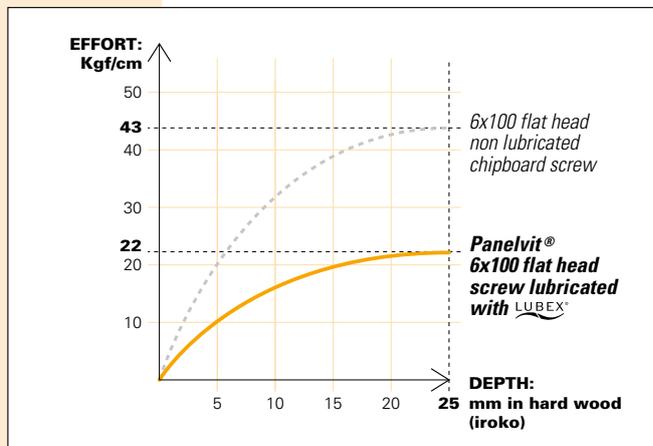
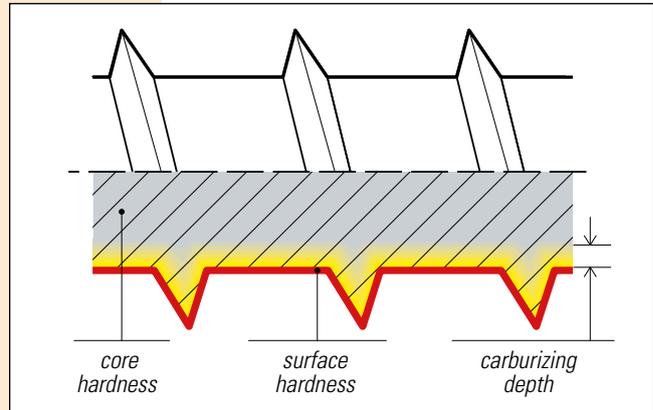
## CALIBRATED SCREWS

Panelvit® Mustad screws are made respecting tolerances which are stricter than those of standard fasteners. They can be defined "calibrated", i.e. suitable for automatic screwing systems.

## CE MARKING

For load-bearing timber assembly elements, according to EN 14592:2009 (awarded by CSTB Centre Scientifique du Bâtiment, Paris). Issue of DoP (Declaration of Performance), according to European Construction Products Regulation 305/2011.

⚠ See page 71 for an overview of screw diameters and lengths subject to marking.



2012  
EN 14592 : 2009  
CSTB - PARIS



Countersunk Head  
**TSP**

Recess  
**PZ**



## WHITE ZINC PLATED 100 H LUBRICATED LUBEX®

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diameters [mm]	2,5	3	3,5	4	4,5	5	6
PZ Recess	Z 1	Z 1	Z 2	Z 2	Z 2	Z 2	Z 3
Length/Thread [mm]							
<b>10</b>	•	•					
<b>12</b>	•	•	•	•			
<b>16</b>	•	•	•	•	•		
<b>18</b>	•	•	•	•			
<b>20</b>	•	•	•	•	•	•	
<b>25</b>	•	•	•	•	•	•	
<b>30</b>	•	•	•	•	•	•	•
<b>35</b>		•	•	•	•	•	
<b>40</b>		•	•	•	•	•	•
<b>45</b>		•	•	•	•	•	
<b>50</b>			•	•	•	•	•
<b>55</b>			•	•	•	•	
<b>60</b>				•	•	•	•
<b>70</b>				•	•	•	•
<b>80/63</b>				•	•	•	•
<b>90/63</b>				•	•	•	•
<b>100/63</b>						•	•
<b>110/70</b>						•	•
<b>120/70</b>						•	•
<b>130/70</b>							•
<b>140/70</b>							•
<b>150/70</b>							•
<b>160/70</b>							•
Boxes	500 pieces		200 pieces			100 pieces	



Items code: PVACZP Diameter x Length B8C



Countersunk Head  
**TSP**

Recess  
**PZ**



## YELLOW ZINC PLATED LUBRICATED LUBEX®

(description of yellow zinc plating: page 78)

Diameters [mm]	2,5	3	3,5	4	4,5	5	6
PZ Recess	Z 1	Z 1	Z 2	Z 2	Z 2	Z 2	Z 3
Length/Thread [mm]							
<b>10</b>	•						
<b>12</b>	•	•					
<b>16</b>	•	•	•	•			
<b>18</b>		•	•	•			
<b>20</b>	•	•	•	•	•	•	
<b>25</b>	•	•	•	•	•	•	
<b>30</b>	•	•	•	•	•	•	
<b>35</b>		•	•	•	•	•	
<b>40</b>		•	•	•	•	•	•
<b>45</b>			•	•	•	•	
<b>50</b>			•	•	•	•	•
<b>60</b>				•	•	•	•
<b>70</b>				•	•	•	•
<b>80/63</b>				•	•	•	•
<b>90/63</b>						•	•
<b>100/63</b>						•	•
<b>110/70</b>							•
<b>120/70</b>						•	•
<b>130/70</b>							•
<b>140/70</b>							•
<b>160/70</b>							•
<b>180/70</b>							•
<b>200/70</b>							•
Boxes	500 pieces		200 pieces			100 pieces	



Items code: PVACZP Diameter x Length G8C



Countersunk Head  
**TSP**

Recess  
**PZ**



## BRONZED LUBRICATED LUBEX®

(description of bronze plating: page 78)

Diameters [mm]	2,5	3	3,5	4	4,5	5	6
PZ Recess	Z 1	Z 1	Z 2	Z 2	Z 2	Z 2	Z 3
Length/Thread [mm]							
<b>10</b>	•	•					
<b>12</b>	•	•	•				
<b>16</b>	•	•	•	•			
<b>18</b>	•	•	•	•			
<b>20</b>	•	•	•	•	•	•	
<b>25</b>	•	•	•	•	•	•	
<b>30</b>	•	•	•	•	•	•	•
<b>35</b>		•	•	•	•	•	
<b>40</b>		•	•	•	•	•	•
<b>45</b>		•	•	•	•	•	
<b>50</b>			•	•	•	•	•
<b>60</b>				•	•	•	•
<b>70</b>				•	•	•	•
<b>80/63</b>				•	•	•	•
<b>90/63</b>				•	•	•	•
<b>100/63</b>						•	•
<b>110/70</b>						•	•
<b>120/70</b>						•	•
<b>130/70</b>							•
<b>140/70</b>							•
<b>150/70</b>							•
<b>160/70</b>							•
<b>180/70</b>							•
<b>200/70</b>							•
Boxes	500 pieces		200 pieces			100 pieces	



Items code: PVACZP Diameter x Length BZC

Countersunk Head  
**TSP**

Recess  
**PZ**



## BRASS-PLATED

(description of brass-plating: page 78)

Diameters [mm]	2,5	3	3,5	4	4,5	5
PZ Recess	Z 1	Z 1	Z 2	Z 2	Z 2	Z 2
Length/Thread [mm]						
<b>12</b>	•					
<b>16</b>	•	•	•			
<b>20</b>	•	•	•	•		
<b>25</b>		•	•	•		
<b>30</b>		•	•	•		
<b>35</b>			•	•		
<b>40</b>			•	•	•	
<b>50</b>				•	•	•
<b>60</b>				•	•	•
<b>70</b>						•
<b>80/63</b>						•
Boxes	500 pieces			200 pieces		



Items code: PVACZP Diameter x Length OTC

Countersunk Head  
**TSP**

Recess  
**PZ**



## NEROPLUS® LUBRICATED

(description of NeroPlus® treatment: page 78)



Diameters [mm]	3	3,5	4	4,5
PZ Recess	Z 1	Z 2	Z 2	Z 2
Length [mm]				
<b>16</b>	•	•		
<b>20</b>	•	•	•	
<b>25</b>		•	•	
<b>30</b>		•	•	
<b>35</b>			•	•
<b>40</b>			•	•
<b>50</b>				•
Boxes	500 pieces		200 pieces	



Items code: PVACZP Diameter x Length KNC

**PF**  
Partially Threaded  
PZ Recess

**Panelvit® PF**  
PARTIALLY THREADED PZ RECESS

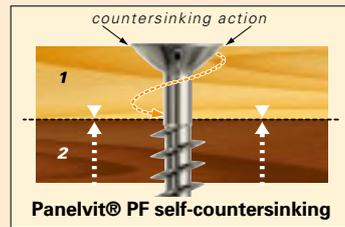


Screw recommended for **fixing thick parts** without pre-boring.

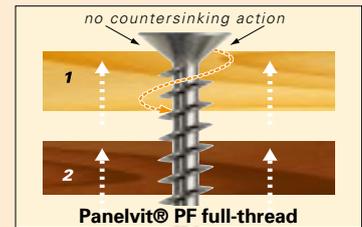
**Self-countersinking ribs under the head** perform a **milling action during tightening** and create a housing for the screw for a perfectly flushed alignment with the surface of the material.

**The smooth portion of the shank** (40% of the screw length) provides a **pulling effect** on the two parts to obtain correct alignment.

Fastening differences between a full-thread Panelvit® and a Panelvit® PF.



The smooth shank can turn free in the above part (1). The thread pull the underneath part (2) against the above.



The thread works in the same way on both the parts. The underneath part (2) can not pull against the above part (1).

**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

**PROTECTIVE TREATMENT**

To protect the screw from rust and corrosion, guaranteeing reliability over time and providing appearance suited to all uses.

**LUBRICATION LUBEX®**

MUSTAD antifriction treatment for reducing fastening force by up to 50%.



- △ Technical specifications and sizes, page 71.
- △ Thermal, protective and lubrication treatment specifications, page 77-78.



# Panelvit® PF

PARTIALLY THREADED PZ RECESS



Countersunk Head  
**TSP**

Recess  
**PZ**



## CHROMITING® LUBRICATED LUBEX®

(description of Chromiting® treatment: page 78)

Diameters [mm]	3,5	4	4,5	5	6
PZ Recess	Z 2	Z 2	Z 2	Z 2	Z 3
Length/Thread [mm]					
<b>30/18</b>	•	•			
<b>35/20</b>	•	•			
<b>40/25</b>	•	•	•		
<b>45/28</b>		•	•		
<b>50/30</b>	•	•	•	•	
<b>60/34</b>		•	•	•	•
<b>70/43</b>		•	•	•	•
<b>80/47</b>				•	•
Boxes	500 pieces		200 pieces		



PANELVIT® PF more than length 80 are only available without self-countersinking ribs under the head (ref. page 15)

Items code: PFACZP Diameter x Length C8C

Countersunk Head  
**TSP**

Recess  
**PZ**



## BRONZED LUBRICATED LUBEX®

(description of bronze plating: page 78)

Diameters [mm]	3,5	4	4,5	5	6
PZ Recess	Z 2	Z 2	Z 2	Z 2	Z 3
Length/Thread [mm]					
<b>30/18</b>	•	•			
<b>35/20</b>	•	•	•		
<b>40/25</b>	•	•	•	•	
<b>45/28</b>	•	•	•	•	
<b>50/30</b>	•	•	•	•	
<b>60/34</b>		•	•	•	•
<b>70/43</b>		•	•	•	•
<b>80/47</b>			•	•	•
Boxes	500 pieces		200 pieces		



PANELVIT® PF more than length 80 are only available without self-countersinking ribs under the head (ref. page 17)

Items code: PFACZP Diameter x Length BZC

**PF TX**  
Partially Threaded  
TX Recess

**Panelvit® PF TX**  
PARTIALLY THREADED TX RECESS



Screw recommended for **fastening hard or thick wood**. Applications in carpentry and constructions and for building timber structures.

**The screwing force is entirely transferred by the very deep, vertical wall TX head.** This avoids stripping of the bit and wear of the recess.

**Only three tools to screw all the range:**

Diameter 3	T10 Recess
Diameter 3,5 - 4 - 4,5 - 5	T20 Recess
Diameter 6	T30 Recess

**Self-countersinking ribs under the head** perform a **milling action during tightening** and create a housing for the screw for a perfectly flushed alignment with the surface of the material.

**The smooth portion of the shank** - 40% of the screw length - provides a **pulling effect** on the two parts to obtain correct alignment.

**CASE HARDENING TREATMENT**

This confers two properties to the screw:  
 - **very hard surface** for biting into the fibres of the hardest wood;  
 - **tough, elastic core**, needed to avoid breakage of screws.

**CHROMITING® PROTECTIVE TREATMENT**

This iridescent white treatment guarantees **a much better rust protection than normal galvanisation treatments**.

**LUBRICATION LUBEX®**

MUSTAD antifriction treatment for **reducing fastening force by up to 50%**.



- △ *Technical specifications and sizes, page 71.*
- △ *Thermal, protective and lubrication treatment specifications, page 77-78.*



# Panelvit® PF TX

PARTIALLY THREADED TX RECESS



Countersunk Head  
**TSP**

Recess  
**TX**



**CHROMITING® LUBRICATED LUBEX®**

(description of Chromiting® treatment: page 78)

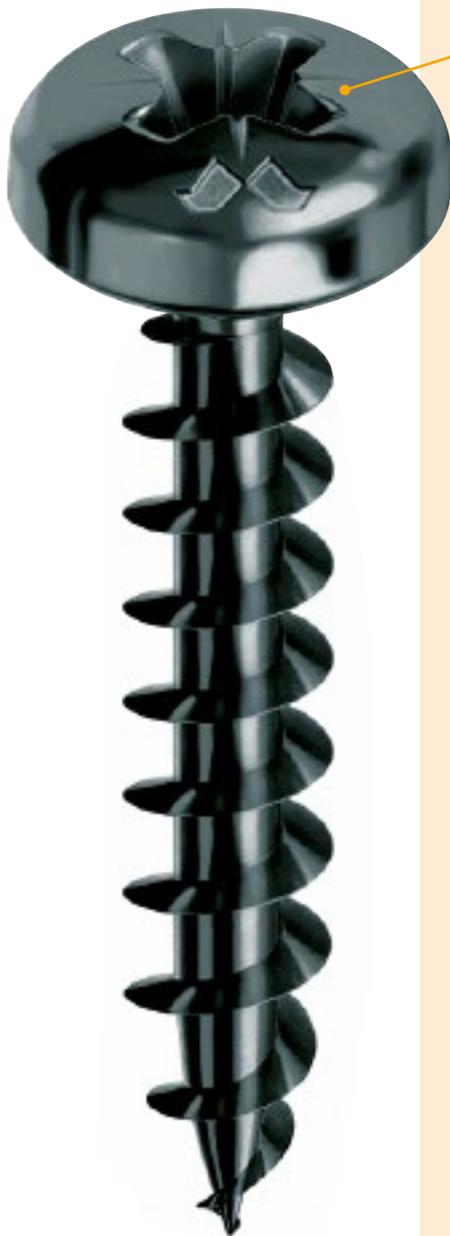
Diameters [mm]	<b>3</b>	<b>3,5</b>	<b>4</b>	<b>4,5</b>	<b>5</b>	<b>6</b>
TX Recess	T10	T20	T20	T20	T20	T30
Length/Thread [mm]						
<b>16</b>	•	•	•			
<b>20</b>	•	•	•			
<b>25</b>	•	•	•			
<b>30/18</b>	•	•	•	•	•	
<b>35/20</b>	•	•	•	•	•	
<b>40/25</b>	•	•	•	•	•	•
<b>45/28</b>		•	•	•	•	
<b>50/30</b>		•	•	•	•	•
<b>60/34</b>			•	•	•	•
<b>70/43</b>			•	•	•	•
<b>80/47</b>				•	•	•
<b>90/63</b>					•	•
<b>100/63</b>					•	•
<b>120/70</b>					•	•
<b>130/70</b>						•
<b>140/70</b>						•
<b>150/70</b>						•
<b>160/70</b>						•
<b>180/70</b>						•
<b>200/70</b>						•
Boxes	500 pieces		200 pieces		100 pieces	



Items code: PFACXP Diameter x Length C8C

**TC**  
Pan Head

**Panelvit**<sup>®</sup>  
UNIVERSAL SCREW



The **head geometry** develops a **high clamping pressure** making these screws perfect for fastening door and window fixture hardware like shutter hinges and furniture hardware.



#### CASE HARDENING TREATMENT

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

#### PROTECTIVE TREATMENT

To **protect the screw from rust and corrosion**, guaranteeing reliability over time and providing **appearance suited to all uses**.

#### LUBRICATION **LUBEX**<sup>®</sup>

MUSTAD antifriction treatment for **reducing fastening force by up to 50%**.



- △ *Technical specifications and sizes, page 71.*
- △ *Thermal, protective and lubrication treatment specifications, page 77-78.*





Pan Head  
**TC**

Recess  
**PZ**



## NEROPLUS® LUBRICATED

(description of NeroPlus® treatment: page 78)

Diameters [mm]	3,5	4	4,5	5
PZ Recess	Z 2	Z 2	Z 2	Z 2
Length [mm]				
<b>16</b>	•			
<b>20</b>	•	•		•
<b>25</b>	•	•		•
<b>30</b>	•	•	•	•
<b>35</b>			•	•
<b>40</b>			•	•
<b>50</b>				•
Boxes	500 pieces			200 pieces



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Items code: PVACZC Diameter x Length KNC



Pan Head  
**TC**

Recess  
**PZ**



## CHROMITING® LUBRICATED LUBEX®

(description of the Chromiting® treatment: page 78)

Diameters [mm]	3	3,5	4	5
PZ Recess	Z 1	Z 2	Z 2	Z 2
Length [mm]				
<b>12</b>	•	•	•	
<b>16</b>	•	•	•	
<b>20</b>		•	•	•
<b>25</b>		•	•	•
<b>30</b>			•	•
<b>35</b>			•	•
<b>40</b>			•	•
<b>50</b>				•
Boxes	500 pieces			200 pieces



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Items code: PVACZC Diameter x Length C8C

**FFL**  
Flanged Head

**Panelvit® FFL**  
FLANGED HEAD



With a wide head geometry, these screws can develop a **high clamping pressure** making them ideal for fixing pipe collars, brackets and supports.



#### CASE HARDENING TREATMENT

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

#### PROTECTIVE TREATMENT

To **protect the screw from rust and corrosion**, guaranteeing reliability over time and providing **appearance suited to all uses**.

#### LUBRICATION **LUBEX®**

MUSTAD antifriction treatment for **reducing fastening force by up to 50%**.



- △ *Technical specifications and sizes, page 71.*
- △ *Thermal, protective and lubrication treatment specifications, page 77-78.*



# Panelvit® FFL

FLANGED HEAD

Flanged Head  
**FFL**

Recess  
**PZ**



## WHITE ZINC PLATED 100 H LUBRICATED LUBEX®

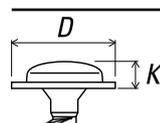
(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diameters [mm]	4,5	5	
PZ Recess	Z 2	Z 2	
Mustad Type	050A	113A	
Length [mm]			<b>Boxes</b>
<b>40</b>	•		500 pieces
<b>50</b>		•	200 pieces

Items code: PV (Mustad Type) Diameter x Length B8C

### HEAD DIMENSIONS

dimensions in mm



	4,5	5
Screw Diameter	4,5	5
Head Diameter D max	10	12
Head height K max	3,0	3,5



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# Mustad Box

ASSORTED METAL CASE



## Features:

- **Robust, professional case** with safety lock to prevent accidental opening.
- Assortment of **15 sizes of Panelvit® lubricated LUBEX®, white galvanised screws** chosen from the most common.
- Ideal to have an assortment of universal screws always at hand.
- Clear indication of the content of each compartment.
- Indication of the tool to be used for fastening.
- Gauge for measuring screw diameter and length.



Dimensions	Quantity (pieces)
<b>3 x 16</b>	<b>300</b>
<b>3 x 20</b>	<b>250</b>
<b>3,5 x 20</b>	<b>180</b>
<b>3,5 x 25</b>	<b>150</b>
<b>3,5 x 30</b>	<b>100</b>
<b>4 x 20</b>	<b>160</b>
<b>4 x 25</b>	<b>120</b>
<b>4 x 30</b>	<b>170</b>
<b>4 x 35</b>	<b>140</b>
<b>4 x 40</b>	<b>110</b>
<b>4 x 50</b>	<b>90</b>
<b>4,5 x 50</b>	<b>60</b>
<b>5 x 40</b>	<b>90</b>
<b>5 x 50</b>	<b>70</b>
<b>5 x 60</b>	<b>60</b>
<b>TOTAL SCREWS</b>	<b>2050</b>

Item code: MBPV001502050B8

# Mustad Expo

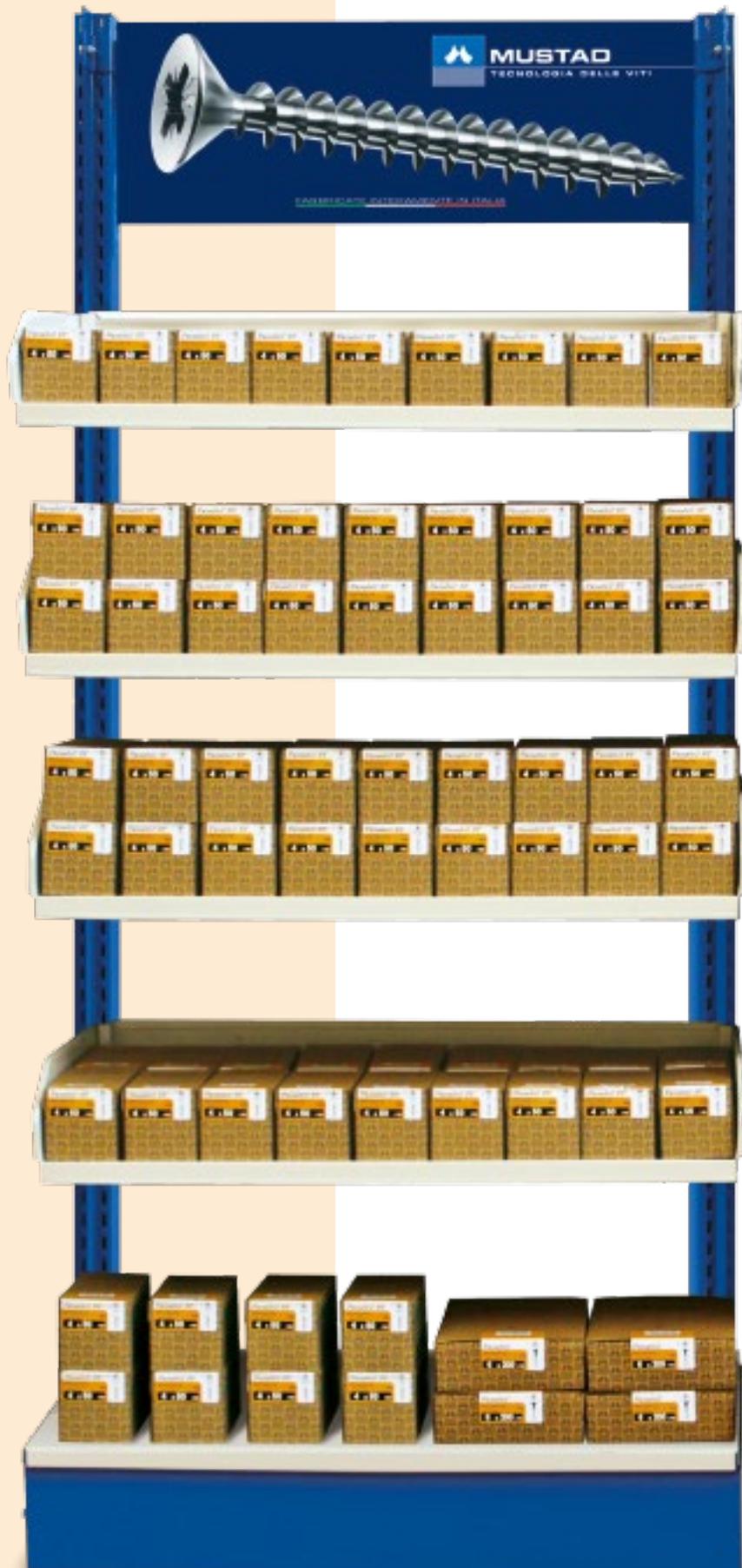
DISPLAY UNIT

Features:

- **Modular display unit.**  
Module base size (H x L x D)  
m 2 x 1 x 0.5.
- **Self-bearing structure,**  
no anchoring to wall needed.
- **Five shelves per module,**  
maximum capacity 50 kg each.
- **High display capacity:**  
each display unit can contain  
up to 45 references because  
**all Mustad boxes have the  
same width.**

Delivered disassembled on pallet.

Item code: ME05010002000CC



# TD CUT

Reduced Head  
Anti-Split CUT Tip

# Panelvit® TD CUT

FOR FIXING WINDOWS HARDWARE

Partially threaded screw with **reduced head and anti-split CUT tip recommended for fastening tilt and turn hardware systems made by the most common European manufacturers.**

**The head (Ø 7 mm) adapts perfectly to the countersinking present on the hardware elements to be fixed.**

**The smooth part of the shank does not interfere with the system movement even in case of inclined screwing.**



**The thread (Ø 4 mm) guarantees a pull-out strength much higher than that of common Ø 3.5 mm screws.**

**The anti-split CUT tip** is ideal for fastening near the frame edges (angular movements, scissor supports, hinges), where traditional screws could cause splitting and compromise the fastening and satisfactory operation of the system.

### CASE HARDENING TREATMENT

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

### CHROMITING® PROTECTIVE TREATMENT

This iridescent white treatment guarantees **a much better rust protection than normal galvanisation treatments.**

### LUBRICATION LUBEX®

MUSTAD antifriction treatment for **reducing fastening force by up to 50%.**



- △ *Technical specifications and sizes, page 71.*
- △ *Thermal, protective and lubrication treatment specifications, page 77-78.*

"CUT"  
TIP



# Panelvit® TD CUT

FOR FIXING WINDOWS HARDWARE



Reduced Countersunk Head

**TSP**

Recess

**PZ**



## CHROMITING® LUBRICATED LUBEX®

(description of Chromiting® treatment: page 78)

Diameters [mm]	<b>4</b>	
PZ Recess	Z 2	
Mustad Type	382A	
Length/Thread [mm]		<b>Boxes</b>
<b>30/20</b>	•	1.000 pieces
<b>35/20</b>	•	

Items code: P1382A Diameter x Length C8C

"CUT"  
TIP



Reduced Countersunk Head

**TSP**

Recess

**TX**



## CHROMITING® LUBRICATED LUBEX®

(description of Chromiting® treatment: page 78)

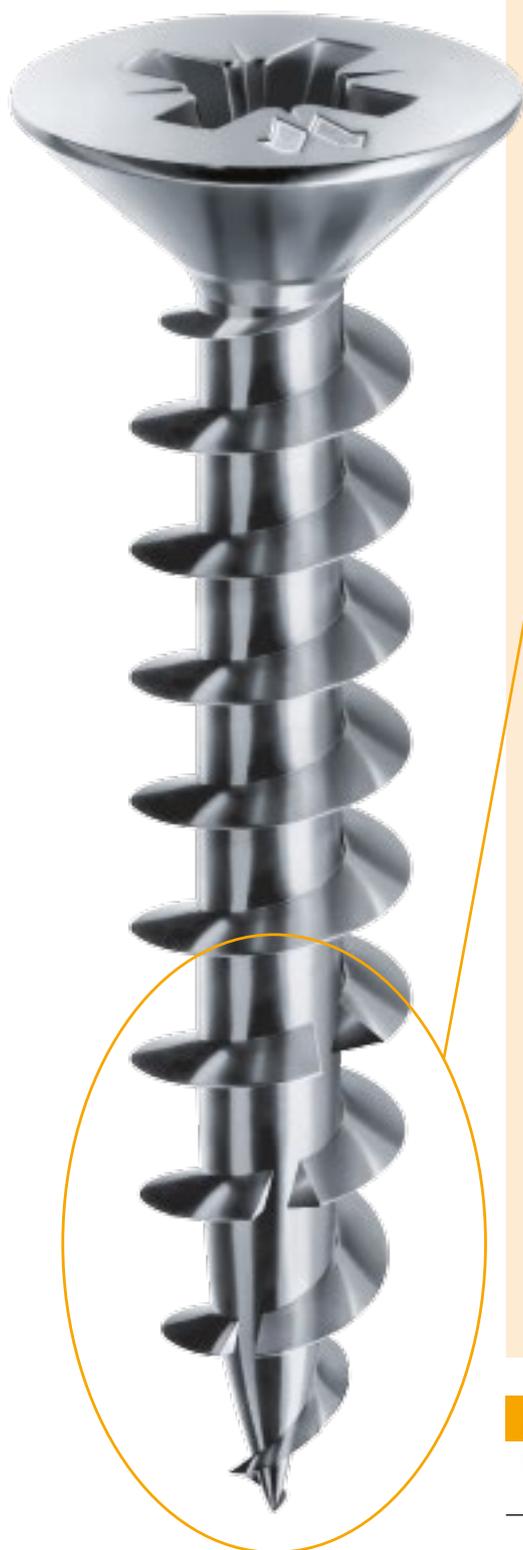
Diameters [mm]	<b>4</b>	
TX Recess	T 20	
Mustad Type	383A	
Length/Thread [mm]		<b>Boxes</b>
<b>30/20</b>	•	1.000 pieces

Items code: P1383A Diameter x Length C8C

"CUT"  
TIP

**CUT**  
Anti-Split CUT Tip

**Panelvit<sup>®</sup> CUT**  
FOR FIXING INVISIBLE HINGES



Screw with **anti-split CUT tip** specific for **fixing invisible interior door hinges**.

**The screw head** is housed in the hinge countersinking so as not to hinder cover plate insertion.

**The anti-split CUT tip** penetrates into the wood (natural, agglomerate, MDF) of the doors or the frame **without splitting the material or the surface laminate**.



**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

**PROTECTIVE TREATMENT**

**To protect the screw from rust and corrosion**, guaranteeing reliability over time and providing **appearance suited to all uses**.

**LUBRICATION LUBEX<sup>®</sup>**

MUSTAD antifriction treatment for **reducing fastening force by up to 50%**.



- △ *Technical specifications and sizes, page 71.*
- △ *Thermal, protective and lubrication treatment specifications, page 77-78.*

**WHITE ZINC PLATED 100 H LUBRICATED LUBEX<sup>®</sup>**

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diameters [mm]	<b>5</b>	
PZ Recess	Z 2	
Mustad Type	417A	
Length [mm]	<b>30</b>	<b>Boxes</b>
	•	500 pieces

Item code: PV417A Diameter x Length B8C

The **reduced head adapts to the countersinking** present on the door locks.



The **reduced head (Ø 6 mm)** allows to use a diameter screws (3,5) that **guarantees better tightness**, without that the head come out from the hardware.

### CASE HARDENING TREATMENT

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

### NICKEL-PLATED TREATMENT

for better pairing with the hardware to be fixed.

- △ *Technical specifications and sizes, page 71.*
- △ *Thermal, protective and lubrication treatment specifications, page 77-78.*



## NICKEL-PLATED

(description of nickel-plating: page 78)

Diameters [mm]	<b>3,5</b>	
PZ Recess	Z 2	
Mustad Type	120A	
Length [mm]		Boxes
<b>20</b>	•	500 pieces

Item code: PV120A Diameter x Length NIC

**PC**  
For Plastic Caps



**Panelvit® PC**  
FOR PLASTIC CAPS

**Screw with a special recess designed to accommodate a decorative plastic cap.** Various colours are available. It is particularly suited for windows, doors and furniture and in all cases in which it is desirable to cover the screw head for aesthetic purposes.

**Plastic caps provided with "ribbed" shank ensure high pull-out strength.** No glue needed for installation.



**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

**PROTECTIVE TREATMENT**

**To protect the screw from rust and corrosion**, guaranteeing reliability over time and providing **appearance suited to all uses.**

**LUBRICATION LUBEX®**

MUSTAD antifriction treatment for **reducing fastening force by up to 50%.**



- ⚠ *Technical specifications and sizes, page 71.*
- ⚠ *Thermal, protective and lubrication treatment specifications, page 77-78.*



# Panelvit® PC

FOR PLASTIC CAPS

Countersunk Head  
**TSP**



Recess  
**PZ**



**WHITE ZINC PLATED 100 H LUBRICATED LUBEX®**  
(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diameters [mm]	4,5	5
PZ Recess	Z 2	Z 2
Length/Thread [mm]		
<b>20</b>	•	
<b>25</b>	•	
<b>30</b>	•	
<b>35</b>	•	
<b>40</b>	•	
<b>45</b>	•	
<b>50</b>	•	•
<b>60</b>	•	•
<b>70</b>	•	
<b>80/63</b>		•
Boxes	500 pieces	200 pieces

Items code: PCACPP Diameter x Length B8C



**Blister available**  
(10 screws and 30 caps: 10 white, 10 light brown and 10 dark brown)

<b>5 x 60</b>	•
Minimum order: <b>10 blister</b>	
Item Code: PCACPP500600B8L	

## PLASTIC CAPS FOR PANELVIT® PC SCREWS

diameter 12 mm



WHITE  
RAL code  
9003



BLACK  
RAL code  
9005



BEIGE  
RAL code  
1001



LIGHT  
BROWN  
RAL code  
8003



DARK  
BROWN  
RAL code  
8017

500 piece boxes

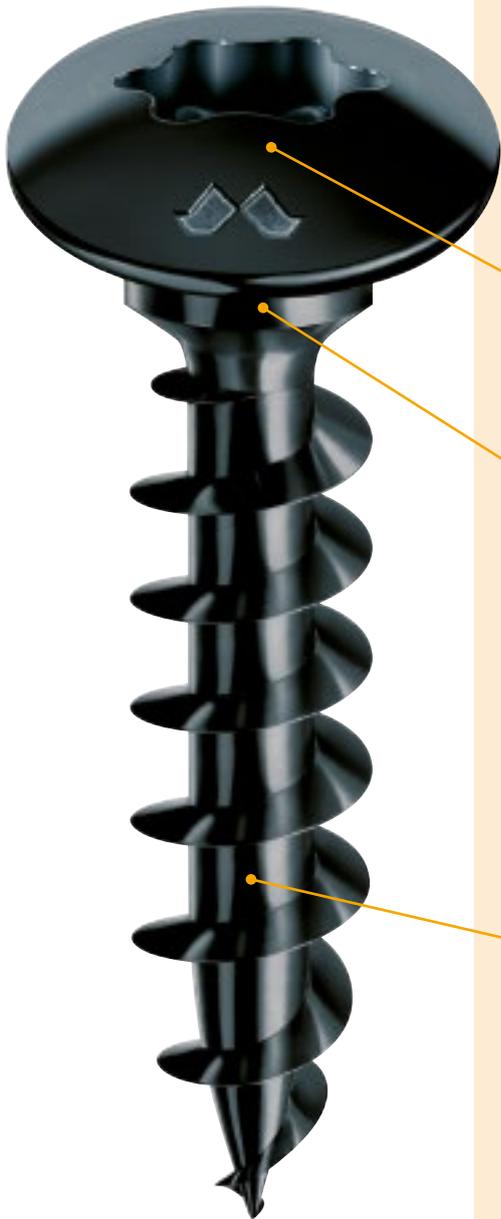
Item code: CPPC RAL Code 01200CC

**⚠ Important: The plastic caps must be used in combination with Panelvit® PC screws.**

**⚠ Minimum order: 5 boxes (one colour or assorted colours).**

**FC**  
Large Head with Collar

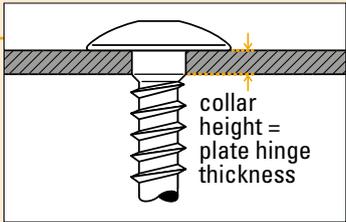
**Panelvit® FC**  
LARGE HEAD WITH COLLAR



Particularly suited for **fixing hinges and shutter plate hinges for window fixtures and window shutters made of wood, aluminium and PVC.**

**The large head** provides a **strong clamping pressure** and better hole coverage than common pan head screws.

**The collar**, of height as thick as the plate hinge, **centres** the hole and provides axial hold to prevent the window shutter from inclining.



**CASE HARDENING TREATMENT**

This confers two properties to the screw:  
 - **very hard surface** for biting into the fibres of the hardest wood;  
 - **tough, elastic core**, needed to avoid breakage of screws.

**NEROPLUS® RUSTPROOF TREATMENT**

This treatment confers a **rust corrosion resistance which is 15 times higher** than traditional black galvanisation in the salt spray test.  
 The **scratchproof sealing** provides excellent **resistance and improves appearance even further.**

**LUBRICATION LUBEX®**

MUSTAD antifriction treatment for **reducing fastening force by up to 50%.**



- △ *Technical specifications and sizes, page 71.*
- △ *Thermal, protective and lubrication treatment specifications, page 77-78.*



# Panelvit® FC

LARGE HEAD WITH COLLAR



Recess  
**TX**



## NEROPLUS® LUBRICATED

(description of Neroplus® treatment: page 78)

Diameters [mm]	5,5	6	7	Boxes
TX Recess	TX 30	TX 30	TX 30	
Mustad Type	208A	029A / 312A	057A	
Length/Thread [mm]				
<b>20</b>		•		500 pieces
<b>25</b>		•		
<b>30</b>	•	•	•	
<b>35</b>	•	•		200 pieces
<b>40</b>		•	•	
<b>45</b>		•		
<b>50</b>		•	•	
<b>60</b>		•	•	
<b>70/60</b>		•	•	100 pieces
<b>80/60</b>		•		



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Items code: Diameter 6: PV029A Diameter x Length KNC (up to 50 mm Length) - PV312A Diameter x Length KNC (starting at 60 mm Length)  
Further Diameters: PV312A (Mustad Type) Diameter x Length KNC



Recess  
**PZ**



## NEROPLUS® LUBRICATED

(description of Neroplus® treatment: page 78)

Diameters [mm]	5	Boxes
PZ Recess	Z 2	
Mustad Type	947B	
Length [mm]		
<b>20</b>	•	500 pieces
<b>25</b>	•	
<b>30</b>	•	
<b>35</b>	•	
<b>40</b>	•	

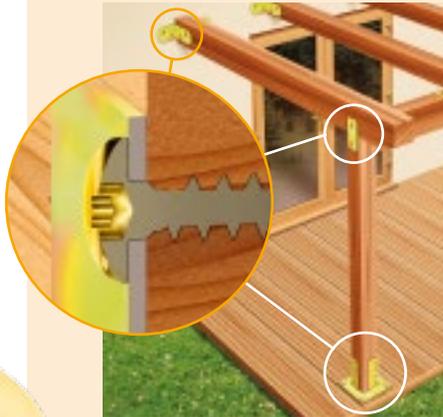
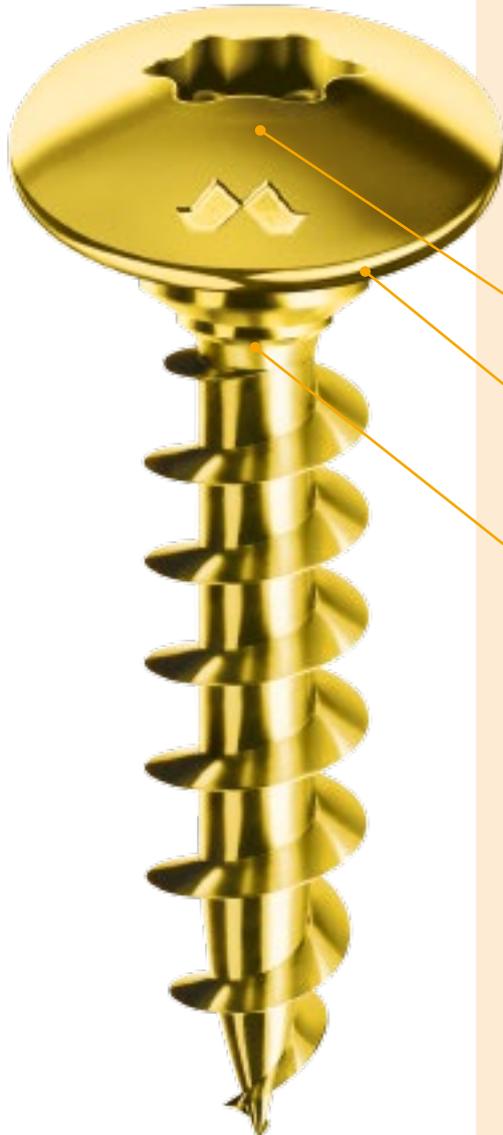


EN 14592 : 2009

Items code: PV947B Diameter x Length KNC

**FC**  
Large Head with Collar

**Panelvit<sup>®</sup> FC**  
LARGE HEAD WITH COLLAR



Fixing hardware for wood assembly.



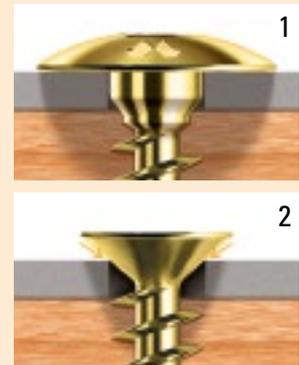
Pose of carpentry with angle bracket.

Special screw for **fixing hardware for timber constructions and frames installation.**

**The TX 30 recess** allows easy, fast screwing **without slipping.**

**The large head** provides a strong **clamping pressure** and better hole coverage (fig.1) than common countersunk head screws (fig.2).

**The collar centres the hole** and provides axial holding functions.



**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

**PROTECTIVE TREATMENT**

**To protect the screw from rust and corrosion**, guaranteeing reliability over time and providing **appearance suited to all uses.**

**LUBRICATION LUBEX<sup>®</sup>**

MUSTAD antifiction treatment for **reducing fastening force by up to 50%.**



- △ *Technical specifications and sizes, page 71.*
- △ *Thermal, protective and lubrication treatment specifications, page 77-78.*



# Panelvit® FC

LARGE HEAD WITH COLLAR



Recess  
**TX**



## YELLOW ZINC PLATED LUBRICATED LUBEX®

(description of yellow zinc plating: page 78)

Diameters [mm]	6	7	
TX Recess	T 30	TX 30	
Mustad Type	029A / 312A	057A	
Length/Thread [mm]			<b>Boxes</b>
<b>25</b>	•		500 pieces
<b>30</b>	•	•	
<b>35</b>	•		200 pieces
<b>40</b>	•	•	
<b>50</b>	•	•	
<b>60</b>	•	•	
<b>70/60</b>	•	•	
<b>80/60</b>	•	•	100 pieces
<b>100/60</b>	•	•	
<b>120/60</b>		•	



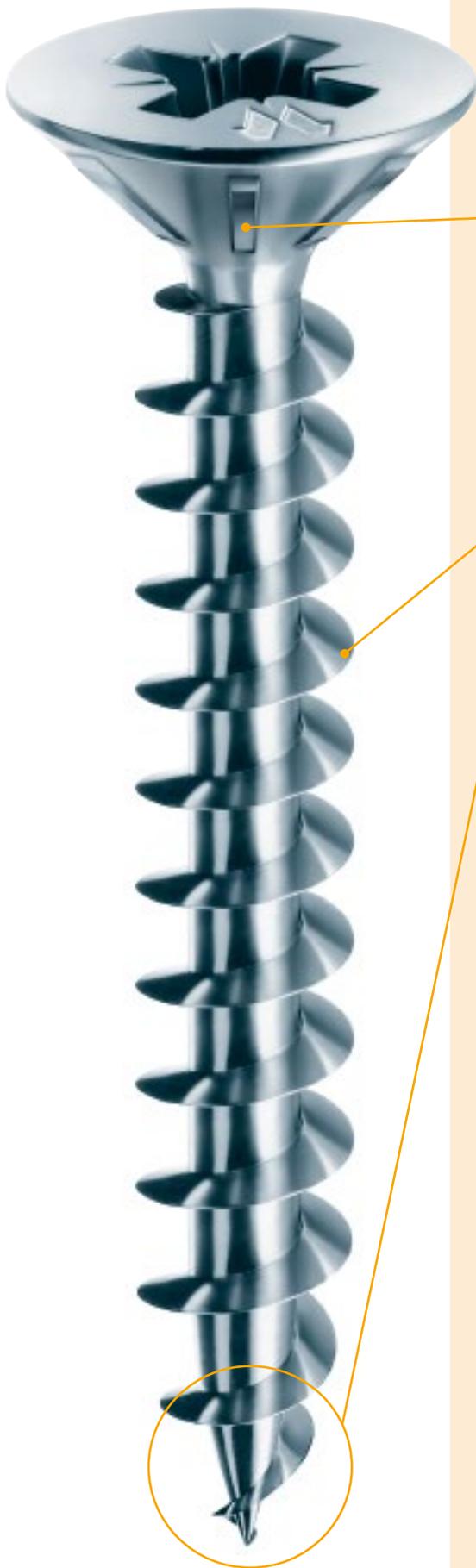
EN 14592 : 2009

Items code: PV029A Diameter x Length G8C (up to 50 mm Length)

PV312A Diameter x Length G8C (starting at 60 mm Length)

**FR**  
Bracking effect

**Panelvit® FR**  
BRACKING EFFECT



Specific screw for **fastening furniture hardware on low-density materials**, such as chipboard, MDF and soft wood, **avoiding stripping when tightening.**



**Sharp angle bracking ribs under the head** cause:  
- **stopping by friction when tightening to avoid stripping the material.**  
- **better twist-off and pull-out resistance** even in applications subject to major mechanical stress.



**The sharp thread and narrow pitch** ensure **strong pull-out strength to the screw** also when screwed into typically thin furniture panels.

**The ogive-shaped tip, threaded to the end**, gradually penetrates into the material deforming it **without causing splitting** and avoiding damage to the laminated finishing surface.

**CASE HARDENING TREATMENT**

This confers two properties to the screw:  
- **very hard surface** for biting into the fibres of the hardest wood;  
- **tough, elastic core**, needed to avoid breakage of screws.

**PROTECTIVE TREATMENT**

**To protect the screw from rust and corrosion**, guaranteeing reliability over time and providing **appearance suited to all uses.**

**LUBRICATION LUBEX®**

MUSTAD antifriction treatment for **reducing fastening force by up to 50%.**



- ⚠ *Technical specifications and sizes, page 71.*
- ⚠ *Thermal, protective and lubrication treatment specifications, page 77-78.*



Countersunk Head  
**TSP**



Recess  
**PZ**



## WHITE ZINC PLATED 100 H LUBRICATED LUBEX®

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diameters [mm]	<b>3,5</b>	
PZ Recess	Z 2	
Mustad Type	257A	
Length [mm]		Boxes
<b>16</b>	•	
<b>18</b>	•	1.000 pieces
<b>20</b>	•	
<b>30</b>	•	500 pieces

Diameters [mm]	<b>4</b>	
PZ Recess	Z 2	
Mustad Type	258A	
Length [mm]		Boxes
<b>20</b>	•	1.000 pieces
<b>30</b>	•	500 pieces

Items code: FR (Mustad Type) Diameter x Length B8C

Countersunk Raised Head  
**TSC**



Recess  
**PZ**



## NICKEL-PLATED

(description of nickel-plating treatment: page 78)

Diameters [mm]	<b>3,5</b>	
PZ Recess	Z 2	
Mustad Type	259A	
Length [mm]		Boxes
<b>16</b>	•	
<b>18</b>	•	500 pieces

Diameters [mm]	<b>4</b>	
PZ Recess	Z 2	
Mustad Type	264A	
Length [mm]		Boxes
<b>18</b>	•	500 pieces

Items code: FR (Mustad Type) Diameter x Length NIC

**AF**  
Anti-Splitting tip

**Panelvit® AF**  
ANTI-SPLITTING TIP



AF TIP

Specific screw for **use without pre-boring** on:

- MDF panels
- thin laminate panels and chipboards
- thin wood or plywood
- matchboards and angular elements
- edges and corners (also diagonal)

**without splitting or creating bulges in the material.**

**Reduced head with self-countersinking ribs.**

Penetrates easily into the material. The self-countersinking ribs and reduced countersinking angle **prevent an undesired "wedge effect"** while tightening.

**Partial threading.**

For optimal, fast tightening also for joining very thick panels.

**AF (Anti-Splitting) Self-Drilling Tip.**

Perforates wood like a **drill bit** by venting the wood chips. The hole accommodates the threading and the screw **penetrates without splitting.**

**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

**CHROMITING® PROTECTIVE TREATMENT**

This iridescent white treatment guarantees **a much better rust protection than normal galvanisation treatments.**

**LUBRICATION LUBEX®**

MUSTAD antifriction treatment for **reducing fastening force by up to 50%.**

*Example of screwing close to the edge:*



*Screwing of Panelvit® AF without pre-boring.*



*Screwing with traditional chipboard screw without pre-boring.*



- ⚠ *Technical specifications and sizes, page 71.*
- ⚠ *Thermal, protective and lubrication treatment specifications, page 77-78.*



# Panelvit® AF

ANTI-SPLITTING



Countersunk Head  
**TSP**

Recess  
**PZ**



## CHROMITING® LUBRICATED LUBEX®

(description of Chromiting® treatment: page 78)

Diameters [mm]	<b>4</b>	
PZ Recess	Z 2	
Mustad Type	140A	
Length/Thread [mm]		Boxes
<b>35/20</b>	•	500 pieces
<b>40/25</b>	•	
<b>45/30</b>	•	
<b>50/30</b>	•	200 pieces
<b>60/35</b>	•	

Items code: AF140A Diameter x Length C8C



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AF TIP



Countersunk Raised Head  
**TSC**

Recess  
**TX**



## CHROMITING® LUBRICATED LUBEX®

(description of Chromiting® treatment: page 78)

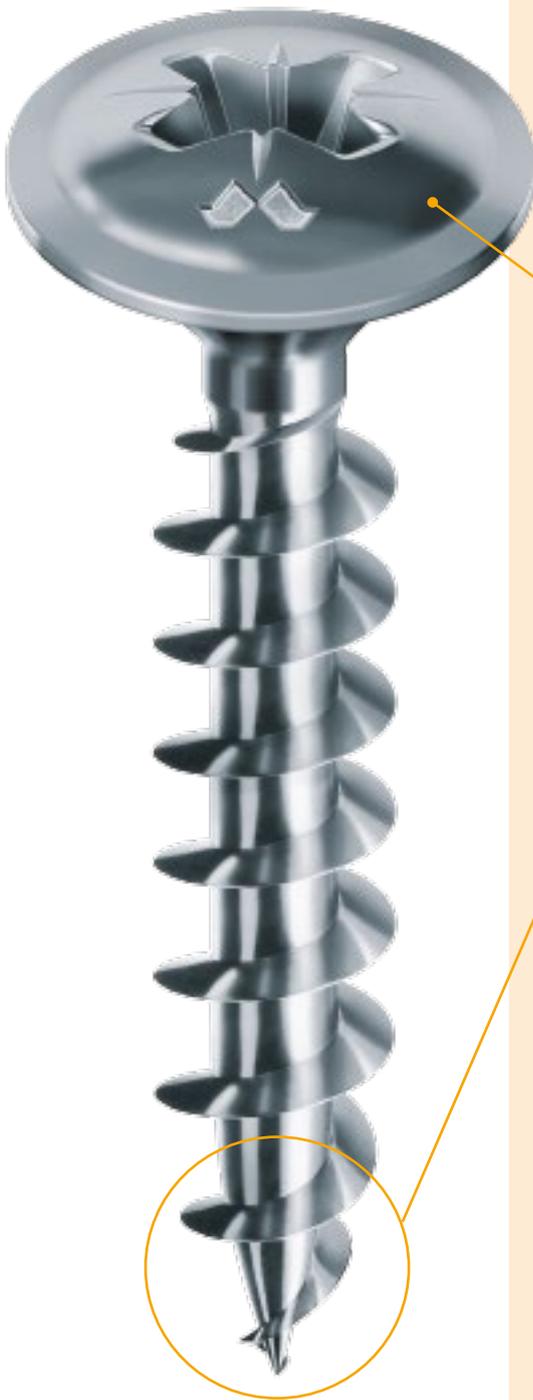
Diameters [mm]	<b>4</b>	
TX Recess	T 15	
Mustad Type	224A	
Length/Thread [mm]		Boxes
<b>35/20</b>	•	500 pieces

Items code: AF224A Diameter x Length C8C

AF TIP

**TPL**  
Large Flat Head

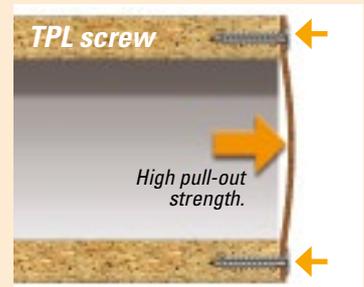
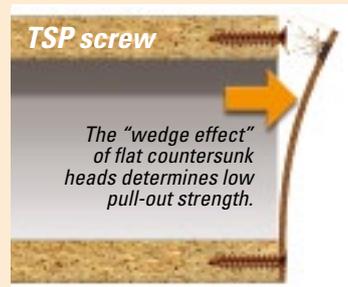
**Panelvit® TPL**  
LARGE FLAT HEAD FOR FURNITURE BACK PANELS



The head geometry develops a high clamping pressure making this screw particular **suitable for fastening furniture back panels** usually made of very soft material (thin plywood or cardboard).



**The flat surface under the head does not generate the undesired "wedge effect"** caused by flat countersunk head screws. The wide area under the head also provides **high back panel pull-out strength**.



**The ogive-shaped tip, threaded to the end**, gradually penetrates into the material deforming it **without causing splitting** and avoiding damage to the laminated finishing surface.

**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

**PROTECTIVE TREATMENT**

**To protect the screw from rust and corrosion**, guaranteeing reliability over time and providing **appearance suited to all uses**.

**LUBRICATION LUBEX®**

MUSTAD antifriction treatment for **reducing fastening force by up to 50%**.



- ⚠ *Technical specifications and sizes, page 71.*
- ⚠ *Thermal, protective and lubrication treatment specifications, page 77-78.*



# Panelvit® TPL

LARGE FLAT HEAD FOR FURNITURE BACK PANELS



Large Flat Head  
**TPL**

Recess  
**PZ**

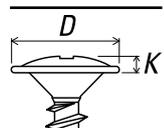


## WHITE ZINC PLATED 100 H LUBRICATED LUBEX®

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diameters [mm]	<b>3,5</b>	<b>4</b>	
PZ Recess	Z 2	Z 2	
Mustad Type	415A	416A	
Length [mm]			<b>Boxes</b>
<b>20</b>	•	•	500 pieces
<b>25</b>	•		

Items code: PV (Mustad Type) Diameter x Length B8C

	HEAD DIMENSIONS		dimensions in mm
	Screw Diameter	3,5	4
	Head Diameter D max	8,30	9,40
	Head height K max	1,60	1,90

**AF PT**  
Anti-Splitting for wood  
Massive Parquet

**Panelvit® AF PT**  
ANTI-SPLITTING FOR WOOD MASSIVE PARQUET

Specific screw for fixing of massive wood parquet.



**The reduced head with milling ribs and TX hexalobular recess** bites into the wood without causing splitting while tightening. **Head completely penetrates into the wood to allow the interlocking of the next strip.** The TX recess transmits all the screwing force and prevents slipping and wear in the recess.

**Partial threading.**

For an optimal tightening on the wood support.

**The AF Anti-splitting tip, allows to tighten diagonally,** without any pre-boring.

**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough, elastic core**, needed to avoid breakage of screws.

**PROTECTIVE TREATMENT**

**To protect the screw from rust and corrosion**, guaranteeing reliability over time and providing **appearance suited to all uses.**

**LUBRICATION LUBEX®**

MUSTAD antifriction treatment for **reducing fastening force by up to 50%.**



- ⚠ *Technical specifications and sizes, page 71.*
- ⚠ *Thermal, protective and lubrication treatment specifications, page 77-78.*

AF TIP



# Panelvit® AF PT

ANTI-SPLITTING FOR WOOD MASSIVE PARQUET

Countersunk Head  
**TSP**

Recess  
**TX**



## YELLOW ZINC PLATED LUBRICATED LUBEX®

(description of the yellow zinc plating: page 78)

Diameters [mm]	<b>3,5</b>	
TX Recess	T 10	
Mustad Type	427A	
Length/Thread [mm]		<b>Boxes</b>
<b>45/30</b>	•	<b>500 pieces</b>

Items code: AF427A Diameter x Length G8C

AFTIP



**TSP**  
Countersunk Head



**Panelvit® INOX**  
STAINLESS STEEL A2

Specific screw for **outdoor use in humid or marine environments or in presence of industrial and aggressive atmospheres.**

Panelvit® INOX is made of austenitic stainless steel A2 to guarantee **excellent corrosion and rust prevention.**

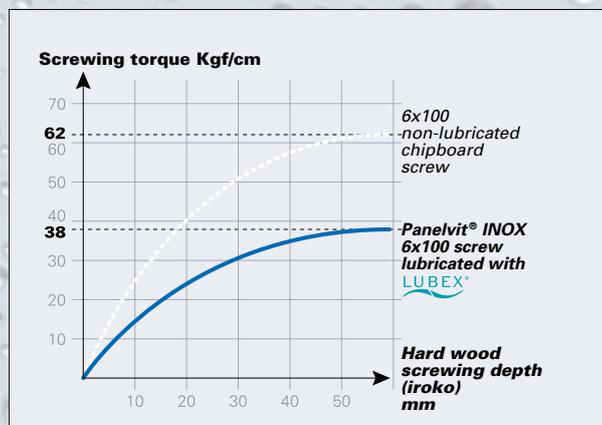
Although not being thermally treated, PANELVIT® INOX, can be inserted **without pre-boring** also in hard woods and allows safe, fast fastening.

These effects are achieved as a result of:

- work **hardened material** which avoid breakage of the screw and stripping of the recess;
- MUSTAD **LUBEX®** lubrication, which reduces the screwing force by 50% (see chart);
- **deep, smooth, sharp thread;**
- **multiple radius tip (ogive-shaped).**

The **passivation** treatment confers a brilliant, shiny and long-lasting finish.

Screwing force of a Panelvit® lubricated with **LUBEX®** with respect to a non-lubricated screw.



⚠ *Technical specifications and sizes, page 71.*



# Panelvit® INOX

STAINLESS STEEL A2



Countersunk Head  
**TSP**

Recess  
**PZ**



**PASSIVATED LUBRICATED LUBEX®**

Diameters [mm]	3	3,5	4	4,5	5	6
PZ Recess	Z 1	Z 2	Z 2	Z 2	Z 2	Z 3
Length/Thread [mm]						
<b>16</b>	•	•	•			
<b>20</b>	•	•	•			
<b>25</b>	•	•	•			
<b>30</b>	•	•	•	•	•	
<b>35</b>		•	•	•	•	
<b>40</b>		•	•	•	•	
<b>50</b>			•	•	•	•
<b>60/50</b>			•	•	•	•
<b>70/50</b>				•	•	•
<b>80/50</b>					•	•
<b>100/50</b>						•
Boxes:	200 pieces			100 pieces		

Items code: PVICZP Diameter x Length PSC



EN 14592 : 2009



Countersunk Head  
**TSP**

Recess  
**TX**



**PASSIVATED LUBRICATED LUBEX®**

Diameters [mm]	5	
TX Recess	T 20	
Mustad Type	340I	
Length/Thread [mm]		Boxes
<b>50/30</b>	•	
<b>60/34</b>	•	200 pieces
<b>70/43</b>	•	

Items code: PF340I Diameter x Length PSC



EN 14592 : 2008

# PF TX INOX

for Decking

# Panelvit® PF TX INOX

FOR DECKING



Specific screw for **outdoor applications** for making terraces, swimming pool decks and piers.

Made of austenitic stainless steel A2 to guarantee **excellent corrosion and rust prevention**.

**The reduced head with milling ribs and TX recess** bites into the wood without causing splitting while tightening. The very deep TX recess transmits screwing torque and avoids the risk of stripping.



**Partial threading** provides the pulling action needed to approach the deck to the support even if the elements are not straight.



*Choice of the screw depending on the thickness of the deck to be fixed:*  
Deck thickness  $\leq 20$  mm = screw 5 x 50  
Deck thickness  $> 20$  mm = screw 5 x 60 / 5 x 70

**PASSIVATION TREATMENT** confers a brilliant, shiny and long-lasting finish.

**LUBRICATION LUBEX®**  
MUSTAD antifriction treatment for **reducing fastening force by up to 50%**.

Pre-boring is recommended in case of very hard wood.

 *Technical specifications and sizes, page 71.*



# Panelvit® PF TX INOX

FOR DECKING



Countersunk Head  
**TSP**



Recess  
**TX**



**PASSIVATED LUBRICATED LUBEX®**

	<b>BOXES</b>		<b>BUCKETS</b>	
<i>Diameters [mm]</i>	<b>5</b>		<b>5</b>	 +  bit T 20 INOX A2
<i>TX Recess</i>	T 20		T 20	
<i>Mustad Type</i>	340I		340I	
<i>Length/Thread [mm]</i>				
<b>50/30</b>	•	200 pieces	•	400 pieces + bit T 20
<b>60/35</b>	•		•	300 pieces + bit T 20
<b>70/35</b>	•			
<i>Items code: PF340I Diameter x Length PSC</i>			 <b>Minimum order: 1 master = 8 buckets per size</b>	
			<i>Items code: PF340I Diameter x Length PSB</i>	



EN 14592 : 2008



Specific screw for **fixing door and window fixture elements on PVC profiles.**

**Reduced head (Ø 7 mm)** for fixing hardware and hinges.

**Very deep cross recess PH2** for optimal coupling with the screwing bit to noticeably reduce consumption.

**Thread with special profile for PVC** to guarantee high pull-out and stripping strength.  
**All-threaded to under the head** for better gripping on the outer wall of the profile.

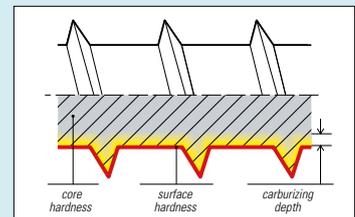
**All-threaded tip** for rapidly self-threading the material and cutting fibres without requiring high pressure.



#### CASE HARDENING TREATMENT

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of material;
- **tough, elastic core** for prevent breakage of the screws and guarantee **resistance to stress applied by automatic screwing machines.**



#### CHROMITING® PROTECTIVE TREATMENT

This iridescent white treatment guarantees a **much better rust protection than normal galvanisation treatments.**

#### AUTOMATIC SCREWING OPERATIONS

**Framex® PVC** screws are made **respecting tolerances which are stricter than those of standard fasteners.** They can be defined "**calibrated**", i.e. suitable for automatic screwing systems.



△ *Thermal and galvanic treatment specifications, page 77-78.*

# FRAMEX® PVC

FOR PVC DOORS AND WINDOWS



Countersunk Head  
**TSP**

Recess  
**PH**



## CHROMITING®

(description of the Chromiting® treatment: page 78)

Diameters [mm]	<b>4,3</b>	
PH Recess	H 2	
Mustad Type	436A	
Length [mm]		Boxes
<b>13</b>	•	1.000 pieces
<b>16</b>	•	
<b>20</b>	•	
<b>22</b>	•	
<b>25</b>	•	
<b>30</b>	•	
<b>35</b>	•	500 pieces
<b>40</b>	•	
<b>45</b>	•	
<b>55</b>	•	

Items code: SP436A Diameter x Length C8C



Countersunk Head  
**TSP**

Recess  
**PH**



## NEROPLUS®

(description of Neroplus® treatment: page 78)

Diameters [mm]	<b>4,3</b>	
PH Recess	H 2	
Mustad Type	436A	
Length [mm]		Boxes
<b>25</b>	•	1.000 pieces

Items code: SP436A Diameter x Length KNC



## CHROMITING® + LACQUERED HEAD

Lacquering of head only, according to RAL table is available on demand.

**TSP**  
Countersunk Head

**DRILLEX® PVC**  
SELF-DRILLING FOR PVC DOOR AND WINDOW



Specific screw for **fixing reinforcements and hinges on PVC door and window fixture profiles.**

**Reduced head (Ø 7 mm)** for fixing hardware and hinges.

**Very deep cross recess PH2** for optimal coupling with the screwing bit to noticeably reduce consumption.

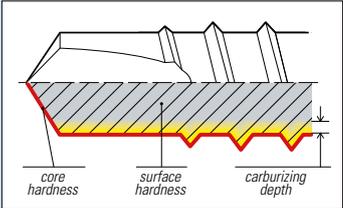
**Special narrow pitch tread** for screwing onto galvanised metal reinforcements. The **optimised threading to under the head** guarantees a good fastening of the screw and **excellent pull-out strength.**

Special **Drillex self-drilling tip** for drilling the galvanised metal reinforcement rapidly and with minimum effort.

**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **very hard surface to withstand high friction during drilling;**
- **tough, elastic core for prevent breakage of the screws and guarantee resistance to stress applied by automatic screwing machines.**



**CHROMITING® PROTECTIVE TREATMENT**

This iridescent white treatment guarantees a **much better rust protection than normal galvanisation treatments.**

**AUTOMATIC SCREWING OPERATIONS**

**Drillex® PVC** screws are made **respecting tolerances which are stricter than those of standard fasteners.** They can be defined "**calibrated**", i.e. suitable for automatic screwing systems.



△ *Thermal, protective and lubrication treatment specifications, page 77-78.*

# DRILLEX® PVC

SELF-DRILLING FOR PVC DOOR AND WINDOW



Countersunk Head  
**TSP**

Recess  
**PH**



## CHROMITING®

(description of Chromiting® treatment: page 78)

Diameters [mm]	<b>3,9</b>	
PH Recess	H 2	
Mustad Type	448 / 435	
Length [mm]		Boxes
<b>13</b>	•	
<b>14</b>	•	
<b>16</b>	•	1.000 pieces
<b>19</b>	•	
<b>25</b>	•	
<b>32</b>	•	
<b>38</b>	•	500 pieces

**⚠ Minimum order size: 1 box per size**

Lengths: 25, 32 and 38 mm with locking ribs

Items code: SP448 Diameter x Length C8C (up to 19 mm Length)  
SP435 Diameter x Length C8C (starting at 25 mm Length)



Countersunk Head  
**TSP**

Recess  
**PH**



## NEROPLUS®

(description of Neroplus® treatment: page 78)

Diameters [mm]	<b>3,9</b>	
PH Recess	H 2	
Mustad Type	435	
Length [mm]		Boxes
<b>25</b>	•	1.000 pieces
<b>32</b>	•	

**⚠ Minimum order size: 1 box per size**

Lengths: 25 and 32 mm with locking ribs

Items code: SP435 Diameter x Length KNC

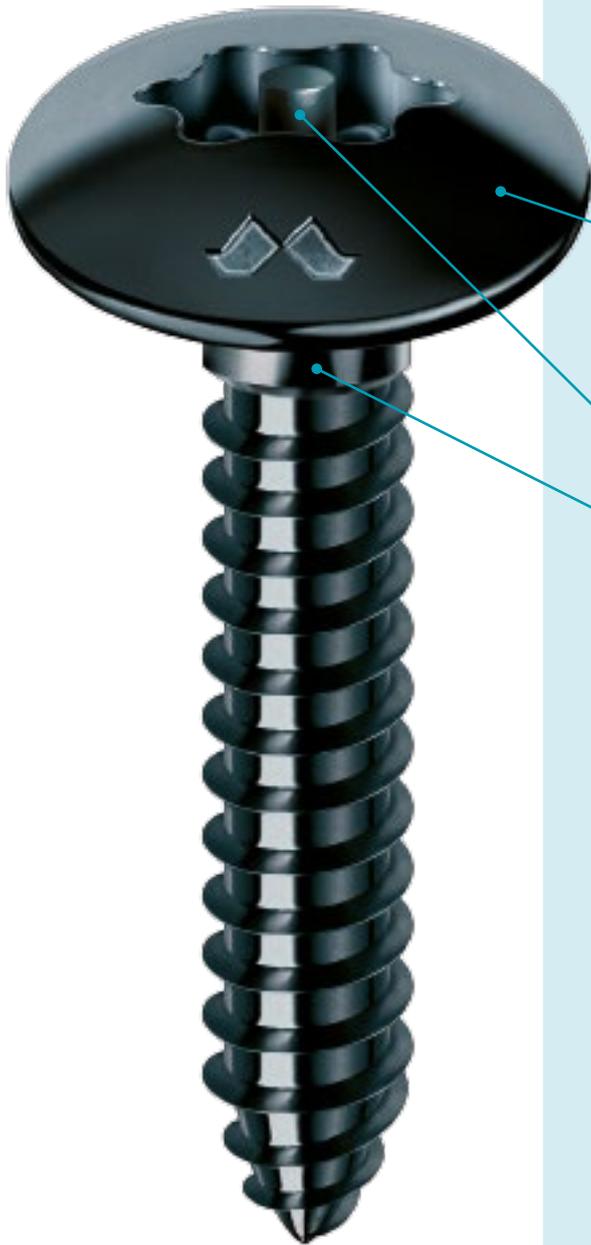


## CHROMITING® + LACQUERED HEAD

Lacquering of head only according to RAL table is available on demand.

**FC**  
Round with Collar

**SELF-TAPPING FC**  
ROUND WITH COLLAR

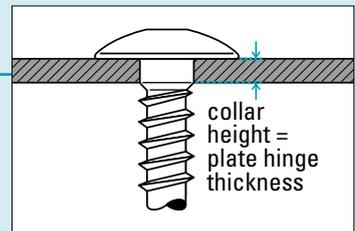
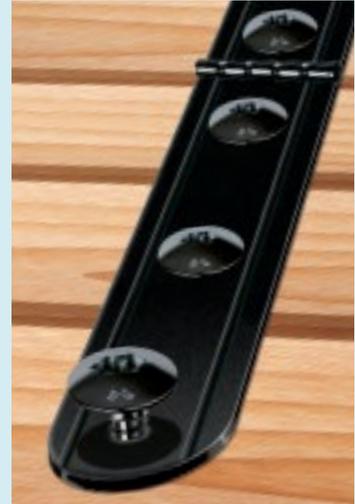


Particularly suited for **fixing hinges and shutter strap hinges for window fixtures and window shutters made of aluminium and PVC.**

**The large head** allows a **strong clamping pressure** and a better hole coverage than common pan head screws.

**TX hexalobular recess with tamperproof pin.**

**The collar**, of height equal to the thickness of the plate hinge, **centres the hole** and provides axial hold to prevent the window shutter from inclining.



**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **extra-hard surface** needed to thread the metal material of the reinforcements
- **tough, elastic core** to prevent breakage of the screw and guarantee axial resistance of the shutter.

**NEROPLUS® RUSTPROOF TREATMENT**

This treatment confers a **rust corrosion resistance which is 15 times higher** than traditional black galvanisation in the salt spray test.

The **scratchproof sealing** provides excellent **resistance and improves appearance even further.**



**NEROPLUS®**

(description of Neroplus® treatment: page 78)

Diameters [mm]	<b>5,5</b>	
TA Recess	T 30	
Mustad Type	354A	
Length [mm]	<b>32</b>	Boxes
	•	500 pieces

Item code: AU354A Diameter x Length KNC

**Self-drilling** screw with special head for **fastening belts for transporting doors and window fixtures.**

**The special shape of the head with convex underside** to hold it screwed at a given distance from the edge of the profile to couple to the handle for handling the fixture on site.



**Self-tapping** to anchor to the metal reinforcement of the fixture frame.

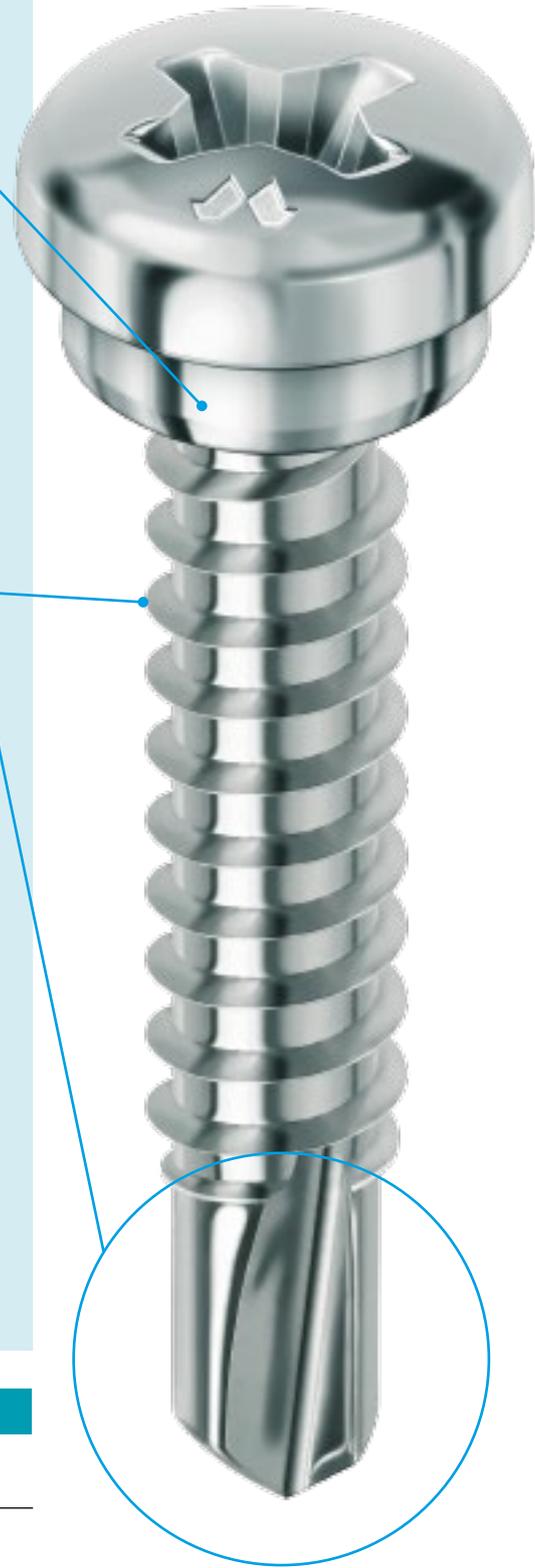
**DRILLEX® self-drilling TIP** to pierce the plastic wall and the metal reinforcement of the fixture.

**CASE HARDENING TREATMENT**

- This confers two properties to the screw:
- **extra-hard surface** capable of withstanding high friction and force when piercing and then threading;
  - **tough, elastic core** to avoid breakage of screws.

**CHROMITING® PROTECTIVE TREATMENT**

This iridescent white treatment guarantees a **much better rust protection than normal galvanisation treatments.**



**CHROMITING®**

(description of Chromiting® treatment: page 78)

Diameters [mm]	<b>5,5</b>	
PH Recess	H 2	
Mustad Type	323A	
Length [mm]		<i>Bulk box</i>
<b>22</b>	•	<i>2.500 pieces</i>

Item code: DX323A Diameter x Length C8S



Specific screw for **direct screwing** in: metal sheet, alloys, plastic materials **without threading or using nuts**.

## MUSTAD SELF-TAPPING BENEFITS

### DEEP RECESS

to ensure correct coupling with the screwdriver bit. **A deep recess with a perfect geometry** means that **one bit can be used for thousands of screwing operations**.

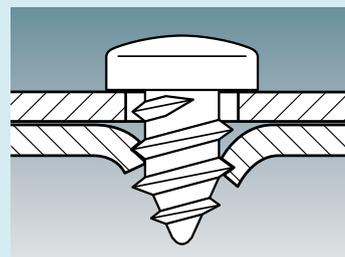


### THREAD

**to under the head**, to allow fastening even very thin metal sheets.

### ALL-THREADED POINT

to allow the screw to gradually deform the material creating a drawing-effect which increases hold in thin metal sheets.



### FLAT POINT VERSION

**(BZ type) with gradual lead-in** to facilitate fastening in blank holes and reducing the risk of injury during assembly, handling and maintenance of the assembled part.

**△ Thermal, protective and lubrication treatment specifications, page 77-78.**

**FLAT point version**

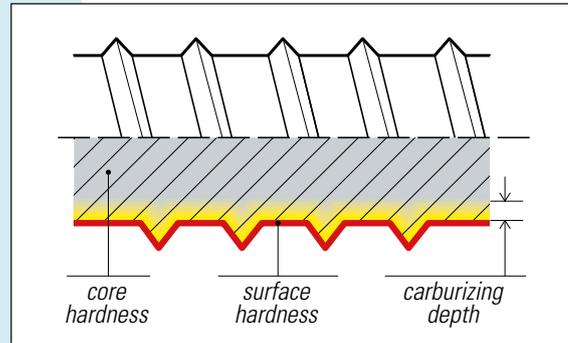


# MUSTAD SELF-TAPPING

## CASE HARDENING TREATMENT

This confers two properties to the screw:

- **extra-hard surface**, to thread the materials into which it is screwed.
- **tough, elastic core**, needed to avoid breakage of screws.

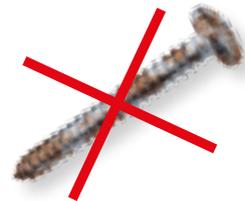


## PROTECTIVE TREATMENT

To protect the screw from rust and corrosion, guaranteeing reliability over time.

**MUSTAD self-tapping screws** are treated with products complying with the current RoHS laws.

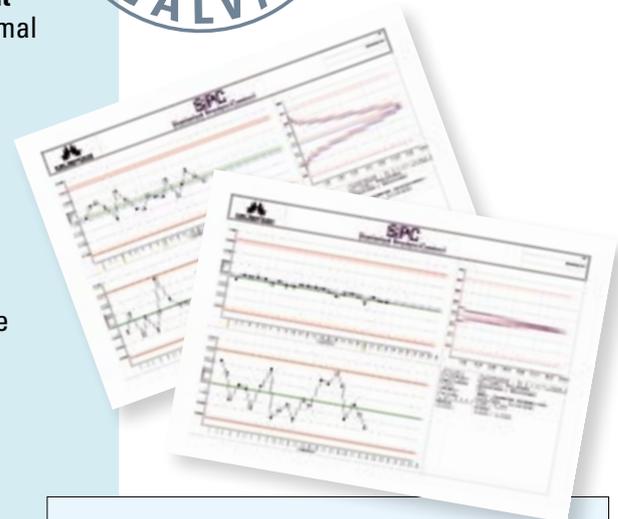
The **MUSTAD "100 HOURS" white galvanisation treatment** guarantees rustproof protection one third better than normal ISO 4042 compliant galvanisation.



## IN-PROCESS INSPECTIONS

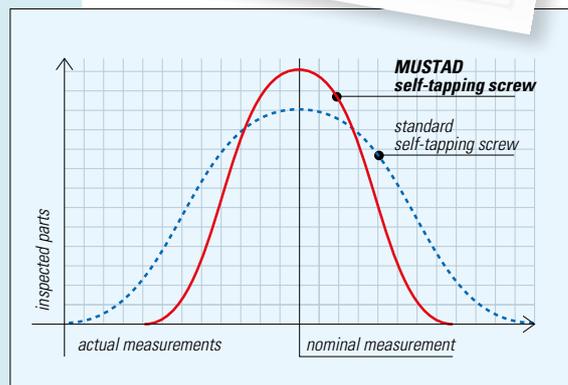
The entire production process is subjected to **SPC (Statistical Product Control) inspections**, to make sure the **high quality level is maintained constant over time**.

The lot number printed on the labels ensures **total traceability** of all production steps and of the respective inspection/test documents.



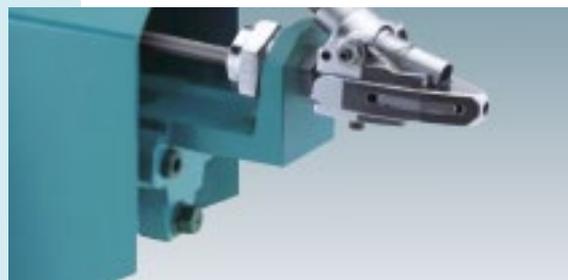
## CALIBRATED SCREWS

**MUSTAD self-tapping screws** are made respecting tolerances which are stricter than that of standard fasteners. They can therefore be called "**calibrated**" and slide with greater ease in guides and loading tubes of automatic screwdrivers.



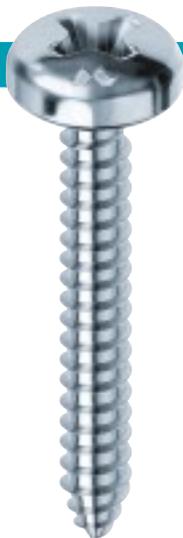
## AUTOMATIC SCREWING OPERATIONS

The properties illustrated above as a whole, in combination with entirely monitored production, make **MUSTAD self-tapping screws** suitable for **automated and critical screwing operations**.



# MUSTAD SELF-TAPPING

Pan Head  
**TC**



Recess  
**PH**



## WHITE ZINC PLATED 100 H

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diam. [mm] / N°ASA	2,2/2	2,9/4	3,5/6	3,9/7	4,2/8	4,8/10	5,5/12
PH Recess	H 1	H 1	H 2	H 2	H 2	H 2	H 3
Length [mm]							
<b>6,5</b>	•	•	•				
<b>9,5</b>	•	•	•	•	•	•	
<b>13</b>	•	•	•	•	•	•	•
<b>16</b>		•	•	•	•	•	•
<b>19</b>		•	•	•	•	•	•
<b>22</b>		•	•	•	•	•	
<b>25</b>		•	•	•	•	•	•
<b>32</b>			•	•	•	•	•
<b>38</b>			•	•	•	•	•
<b>45</b>			•		•	•	•
<b>50</b>			•		•	•	•
Boxes	1000 pieces	500 pieces	200 pieces				

Items code: AUACHC Diameter x Length B8C

Countersunk Head  
**TSP**



Recess  
**PH**



## WHITE ZINC PLATED 100 H

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diam. [mm] / N°ASA	2,2/2	2,9/4	3,5/6	3,9/7	4,2/8	4,8/10	5,5/12
PH Recess	H 1	H 1	H 2	H 2	H 2	H 2	H 3
Length [mm]							
<b>6,5</b>	•						
<b>9,5</b>	•	•	•	•			
<b>13</b>		•	•	•	•	•	
<b>16</b>		•	•	•	•	•	
<b>19</b>		•	•	•	•	•	
<b>22</b>			•	•	•		
<b>25</b>		•	•	•	•	•	•
<b>32</b>			•	•	•	•	•
<b>38</b>			•	•	•	•	•
<b>50</b>			•		•	•	•
Boxes	1000 pieces	500 pieces	200 pieces				

Items code: AUACHP Diameter x Length B8C

# MUSTAD SELF-TAPPING

Slot  
screw drive



## WHITE ZINC PLATED 100 H

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Screw recommended for fixing snap-fitted glazing beads for iron and aluminium fixtures.

Diam. [mm] / ASA N.	4,2/8	4,8/10	
Head Diameter [mm]	6,2	8,0	
Mustad Type	463/A	590/A	
Length [mm]			Boxes
<b>9,5</b>	•	•	500 pieces
<b>13</b>		•	

Items code: FV (Mustad Type) Diameter x Length B8C

## FLAT SELF-TAPPING

### Flat tip with gradual lead-in

Flat tip screws for industrial use with gradual lead-in to facilitate fastening in blank holes and reducing the risk of injury during assembly, handling and maintenance of the assembled part.

The **bulk box** weighing less than 10 kg is provided with a pre-cut side opening. No blades or cutters needed to open it.



Cylindric Head  
**TC**

Recess  
**PH**



## WHITE ZINC PLATED 100 H

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diam. [mm] / ASA N.	2,9/4	3,5/6	3,9/7	4,2/8	4,8/10
PH Recess	H 1	H 2	H 2	H 2	H 2
Length [mm]					
<b>6,5</b>	•	•	•	•	
<b>9,5</b>	•	•	•	•	•
<b>13</b>		•	•	•	•
<b>16</b>		•	•	•	

FLAT TIP

Items code: AUAFHC Diameter x Length B8S



**Drilling and self-tapping screw for direct screwing in metal sheets and rolled metal items with no need for pre-boring.**

**DEEP RECESS**

to ensure correct coupling with the screwdriver bit. **A deep recess with a perfect geometry** means that **one bit can be used for thousands of screwing operations.**

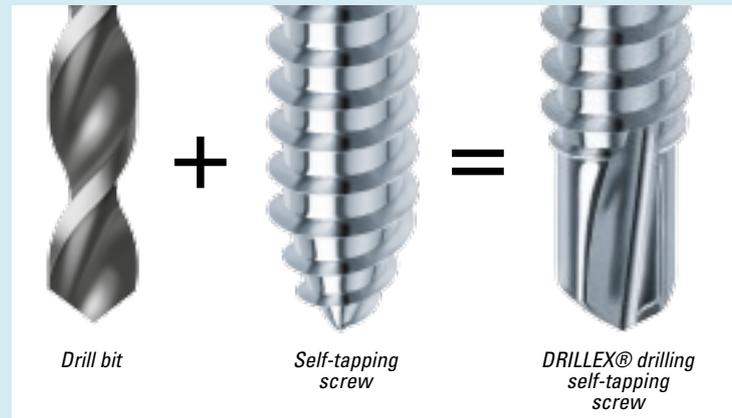


**THREAD**

**to under the head,** to allow fastening even very thin metal sheets.

**DRILLEX® DRILLING POINT**

allows to bore material up to 5 mm thick, threading it and then fastening it.



The optimal drilling diameter is obtained directly by the screw which threads and then fastens.

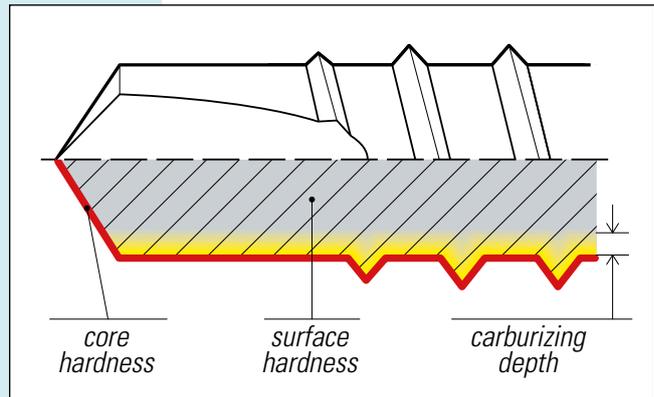
△ *Thermal, protective and lubrication treatment specifications, page 77-78.*



## CASE HARDENING TREATMENT

This confers two properties to the screw:

- **extra-hard surface;**
- **capable of withstanding high friction and force when piercing and then threading;**
- **tough, elastic core,** needed to avoid breakage of screws.



## PROTECTIVE TREATMENT

To protect the screw from rust and corrosion, guaranteeing reliability over time.

**MUSTAD self-tapping screws** are treated with products complying with the current RoHS laws.

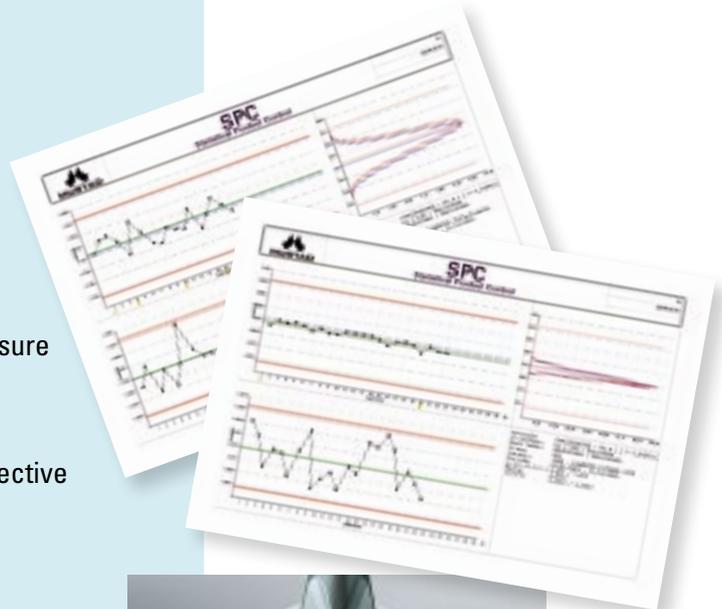
The **MUSTAD "100 HOURS" white galvanisation treatment** guarantees rustproof protection one third better than normal ISO 4042 compliant galvanisation.



## IN-PROCESS INSPECTIONS

The entire production process is subjected to **SPC (Statistical Product Control) inspections**, to make sure the **high quality level is maintained constant over time.**

The lot number printed on the labels ensures **total traceability** of all production steps and of the respective inspection/test documents.



## DRILLING CAPACITY INSPECTION

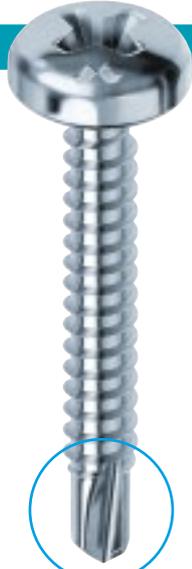
All lots are tested with specific tools to **determine the drilling speed** on various materials.





Pan Head  
**TC**

Recess  
**PH**



## WHITE ZINC PLATED 100 H

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diam. [mm] / N°ASA	3,5/6	3,9/7	4,2/8	4,8/10
PH Recess	H 2	H 2	H 2	H 2
Length/Thread [mm]				
<b>9,5</b>	•	•		
<b>13</b>	•	•	•	•
<b>16</b>	•	•	•	•
<b>19</b>	•	•	•	•
<b>25</b>	•	•	•	•
<b>32</b>	•	•	•	•
<b>38</b>	•	•	•	•
<b>45</b>				•
<b>50</b>				•
<b>60/50</b>				•
<b>70/50</b>				•
<b>80/50</b>				•
Boxes	500 pieces			200 pieces

DX TIP

Items code: DXADHC Diameter x Length B8C

Countersunk Head  
**TSP**

Recess  
**PH**



## WHITE ZINC PLATED 100 H

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diam. [mm] / N°ASA	3,5/6	3,9/7	4,2/8	4,8/10
PH Recess	H 2	H 2	H 2	H 2
Length/Thread [mm]				
<b>13</b>	•	•	•	
<b>16</b>	•	•	•	•
<b>19</b>	•	•	•	•
<b>25</b>	•	•	•	•
<b>32</b>	•	•	•	•
<b>38</b>	•	•	•	•
<b>45</b>		•	•	•
<b>50</b>		•	•	•
<b>60/50</b>				•
<b>70/50</b>				•
<b>80/50</b>				•
Boxes	500 pieces		200 pieces	

DX TIP

Items code: DXADHP Diameter x Length B8C



DRILLEX® FFL large flanged head screws are particularly recommended for fixing: electric cable ducts, omega bars, thin wood or plastic panels on metal structures, plasterboard wall lining frames, light carpentry, metal prefabricated structures.



The wide head avoids the need for washers.

Large Flanged Round Head  
**FFL**

Recess  
**PH**



## WHITE ZINC PLATED 100 H

(description of "100 HOURS" MUSTAD white zinc plating: page 78)



Diam. [mm] / N°ASA	4,2/8	4,8/10
PH Recess	H 2	H 2
Mustad Type	194A	232A
Length [mm]		
<b>13</b>	•	
<b>16</b>	•	
<b>19</b>	•	•
<b>25</b>	•	•
<b>32</b>	•	•
<b>38</b>		•
Boxes	500 pieces	200 pieces

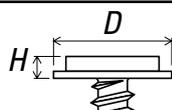
DX TIP

Items code: DX (Mustad Type) Diameter x Length B8C

### HEAD DIMENSIONS

dimensions in mm

	4,2	4,8
Screw diameter	4,2	4,8
Head diameter D max	11,20	12,70
Head height H max	2,45	2,90



Hexagonal Head with Washer  
**TECC**

Hexagonal Wrench



## WHITE ZINC PLATED 100 H

(description of "100 HOURS" MUSTAD white zinc plating: page 78)



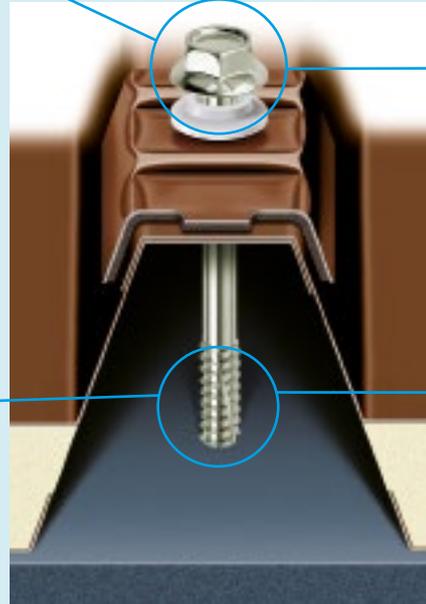
Diam. [mm] / N°ASA	4,2/8	4,8/10	5,5/12
Hexagonal Wrench	K 7	K 8	K 8
Length [mm]			
<b>13</b>	•		
<b>16</b>	•	•	
<b>19</b>	•	•	•
<b>25</b>	•	•	•
<b>32</b>		•	•
<b>38</b>		•	•
<b>45</b>			•
<b>50</b>			•
Boxes:	500 pieces	200 pieces	

DX TIP

Items code: DXADKR Diameter x Length B8C



**Specific screw for fixing roofing sheets and prefabricated metallic facades to iron structures.**



**SHARP EDGED  
HEX FLANGED HEAD**  
with collar, designed for optimal washer housing to prevent water infiltrations.

**SELF-THREADING  
BS THREAD**  
with self-threading grooves for use also in thick material without prior threading.

#### CASE HARDENING TREATMENT

This confers two properties to the screw:

- **extra-hard surface** capable of withstanding high friction and force when piercing and then threading;
- **tough, elastic core** to avoid breakage of screws.

#### CHROMITING® RUSTPROOF TREATMENT

Iridescent colour (lower visual impact on the panel) and **much better resistant against weather and pollution, than all normal galvanisation treatments.**

#### DX SELF-DRILLING TIP

can bore material **up to 7 mm thick**, threading and then fastening.

⚠ *Thermal, protective and lubrication treatment specifications, page 77-78.*

**DX  
SELF-DRILLING  
VERSION**





## SELF-DRILLING CHROMITING® DX

(description of Chromiting® treatment: page 78)

Diam. [mm]	<b>6,3</b>	
K	10	
Mustad Type	943B	
Length/Thread [mm]		Boxes
<b>20</b>	•	200 pieces
<b>25</b>	•	
<b>30</b>	•	
<b>35</b>	•	
<b>40</b>	•	
<b>50</b>	•	
<b>60</b>	•	100 pieces
<b>70/60</b>	•	
<b>80/60</b>	•	
<b>90/60</b>	•	
<b>100/60</b>	•	
<b>110/60</b>	•	
<b>120/60</b>	•	
<b>130/60</b>	•	
<b>140/60</b>	•	
<b>150/60</b>	•	
<b>160/60</b>	•	
<b>180/60</b>	•	
<b>200/60</b>	•	

DX TIP

Items code: KV943B Diameter x Length C8C



## SELF-TAPPING CHROMITING® BS

(description of Chromiting® treatment: page 78)

Diam. [mm]	<b>6,3</b>	
K	10	
Mustad Type	592B	
Length/Thread [mm]		Boxes
<b>20</b>	•	200 pieces
<b>25</b>	•	
<b>30</b>	•	
<b>35</b>	•	
<b>40</b>	•	
<b>50</b>	•	
<b>60</b>	•	100 pieces
<b>70/60</b>	•	
<b>80/60</b>	•	
<b>90/60</b>	•	
<b>100/60</b>	•	
<b>110/60</b>	•	
<b>120/60</b>	•	
<b>130/60</b>	•	
<b>150/60</b>	•	
<b>180/60</b>	•	

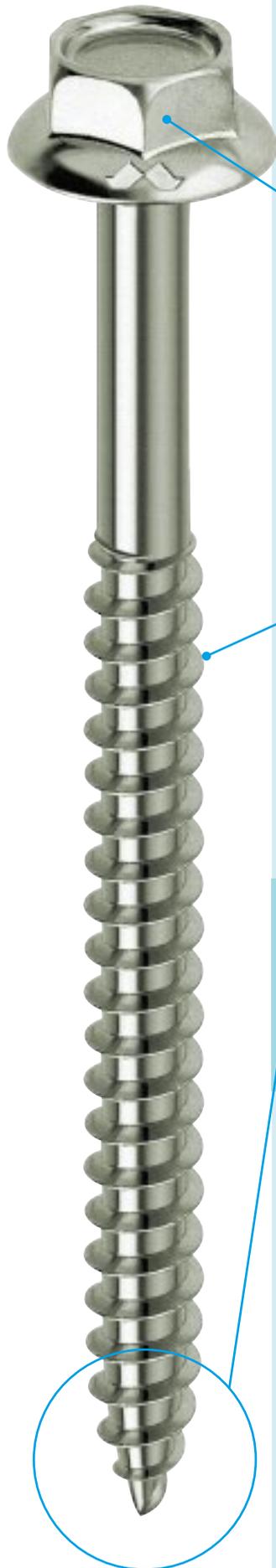
Items code: KV592B Diameter x Length C8C



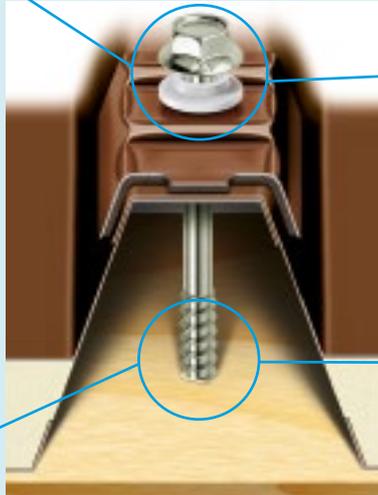
## WATERPROOF WASHER

200 piece box

Item code: REPC000000600CC



**Special screw for fastening wood, miscellaneous conglomerate materials, plywood, chipboards, wood-metal sheet sandwich structures, fibreglass and thin metal sheets with no need for pre-boring.**



**SHARP EDGE  
HEX FLANGED HEAD**

**with collar**, designed for optimal washer housing to prevent water infiltrations.

**LONG PITCH  
AA THREAD**

**for quick fastening.** Ideal for wood and light metal structures.

**30° ANGLE POINT**

suitable for easily penetrating in all low-density materials. Threaded point and hard steel pierce **roofing sheets directly** with no need for pre-boring. Fastening without pre-boring ensures a **30% better tearing strength than traditional screws.**

**CASE HARDENING TREATMENT**

This confers two properties to the screw:

- **extra-hard surface** capable of withstanding high friction and force when threading;
- **tough, elastic core** to avoid breakage of screws.

**Tearing strength is double that of a common hex lag screw even of larger diameter.**

**CHROMITING® RUSTPROOF TREATMENT**

Iridescent colour (lower visual impact on the panel) and **much better resistant against weather and pollution than all normal galvanisation treatments.**

⚠ *Thermal, protective and lubrication treatment specifications, page 77-78.*





## FOR WOOD AA CHROMITING® LUBRICATED LUBEX®

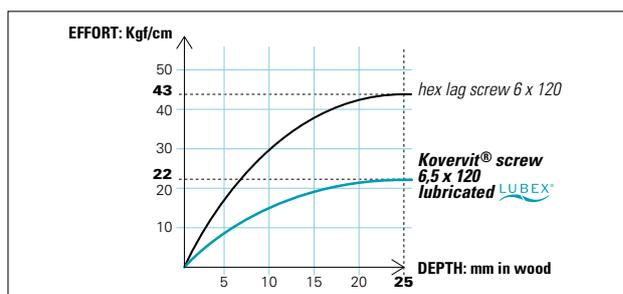
(description of Chromiting® treatment: page 78)

Diam. [mm]	6,5	
K	10	
Mustad Type	811B	
Length/Thread [mm]		Boxes
<b>40</b>	•	200 pieces
<b>50</b>	•	
<b>60</b>	•	
<b>70/60</b>	•	
<b>80/60</b>	•	
<b>90/60</b>	•	
<b>100/60</b>	•	100 pieces
<b>110/60</b>	•	
<b>120/60</b>	•	
<b>130/60</b>	•	
<b>140/60</b>	•	
<b>150/60</b>	•	
<b>160/60</b>	•	
<b>180/60</b>	•	
<b>200/60</b>	•	

Items code: KV811B Diameter x Length C8C

### LUBRICATION LUBEX®

The specific MUSTAD antifriction treatment reduces the screwing force by up to 50% with respect to a common hex lag screw even of smaller diameter.



### CE MARKING

For load-bearing timber assembly elements, EN 14592:2009 (awarded by CSTB Centre Scientifique du Bâtiment, Paris).

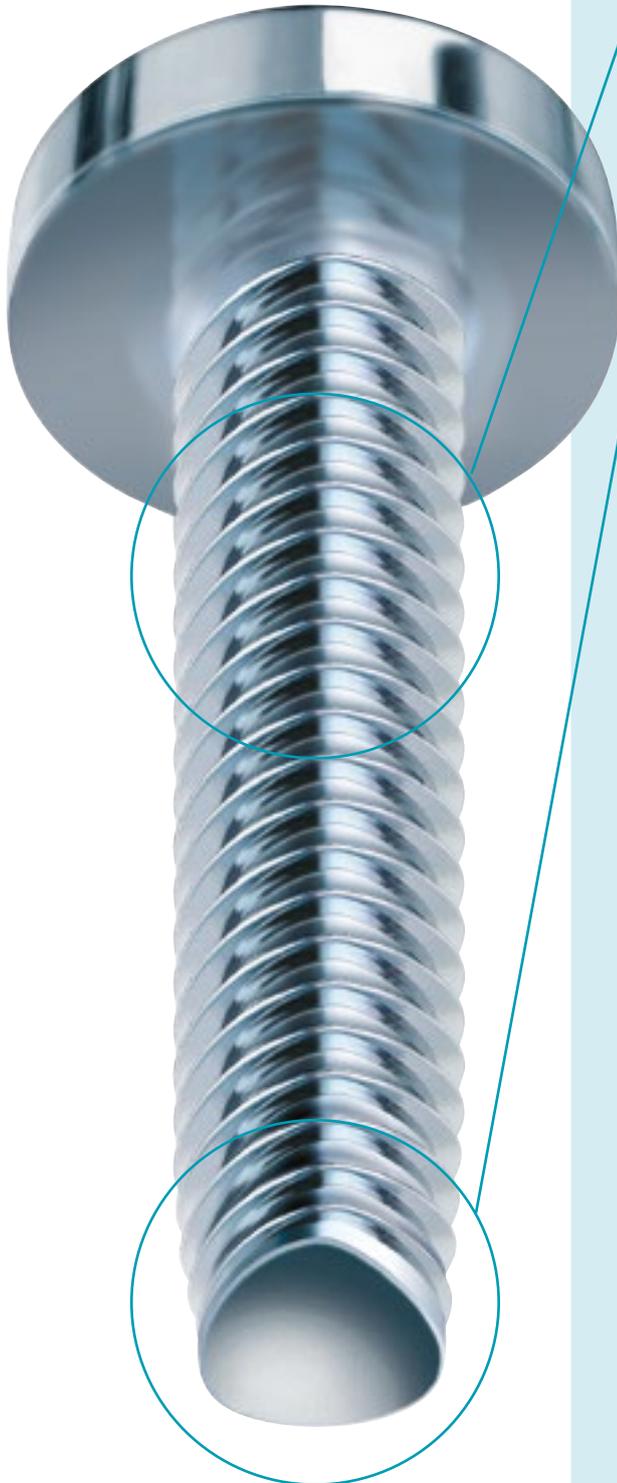
DoP (Declaration of Performance) issued, according to the European Construction Products Regulation 305/2011.



## WATERPROOF WASHER

200 piece box

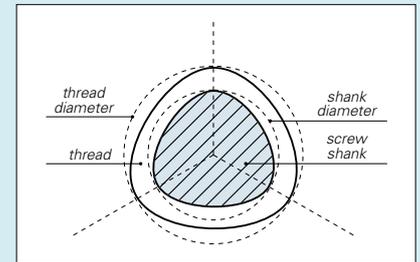
Item code: REPC000000600CC



**FORMEX®** is a **three-lobe shape section** screw with **metric thread** for **direct fastening in blank or through holes on metal sections and die-cast materials with no need for tapping or using nuts.**

### THREE LOBES

slightly protrude from the average thread circumference and gradually deform the material, thus creating the nut screw, **to thread (without creating shavings) and fasten at the same time.**



SCREW SHANK SECTION

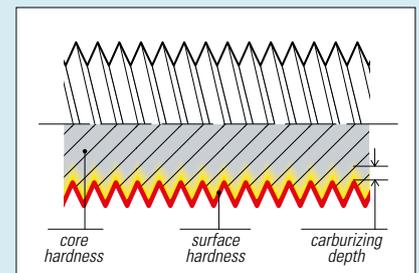
### TIP

with a gradually decreasing diameter and permanently sharp threads **favour optimal lead-in** and help to create the thread in the material.

### CASE HARDENING TREATMENT

This confers two properties to the screw:

- **extra-hard surface** capable of withstanding high friction and force when threading;
- **tough, elastic core** to avoid breakage of screws during piercing and tightening.



### PROTECTIVE TREATMENT

**To protect the screw against rust and corrosion** and guarantee reliability over time.

**MUSTAD Formex®** screws are treated with products complying with the current RoHS laws.

**The MUSTAD "100 HOURS" white galvanisation treatment guarantees rustproof protection one third better than normal ISO 4042 compliant galvanisation.**



### LUBRICATION TREATMENT **LUBEX®-M**

MUSTAD formula which **reduces screwing torque by up to 30%.**

⚠ *Thermal, protective and lubrication treatment specifications, page 77-78.*



### THE TECHNICAL AND COST BENEFITS OF FORMEX® SCREWS IN BRIEF:

- No tapping (no shaving because the thread is formed by deformation).
- Vibration resistance because of the continuous contact between screw and the surface of the hole (washers to prevent loosening are not needed).
- Increased assembly tightness, material fibres are deformed but not cut.
- Suitable for thick materials where self-tapping screws cannot be employed.
- Lower processing costs. No reworking needed.
- Fewer screws needed for assembly.



Pan Head  
**TC**



Recess  
**PH**



### WHITE ZINC PLATED 100 H LUBRICATED LUBEX®-M

(description of "100 HOURS" MUSTAD white zinc plating: page 78)

Diam. [mm]	3	3,5	4	5
PH Recess	H 1	H 2	H 2	H 2
Length/Thread [mm]				
<b>6</b>	•		•	
<b>8</b>	•		•	
<b>10</b>		•	•	•
<b>12</b>		•	•	•
<b>16</b>			•	•
<b>20</b>			•	•
<b>25</b>			•	

Other heads and sizes are made on request.

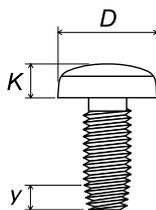
Items code: MXAFHC Diameter x Length B8S

### TECHNICAL AND DIMENSIONAL DATA

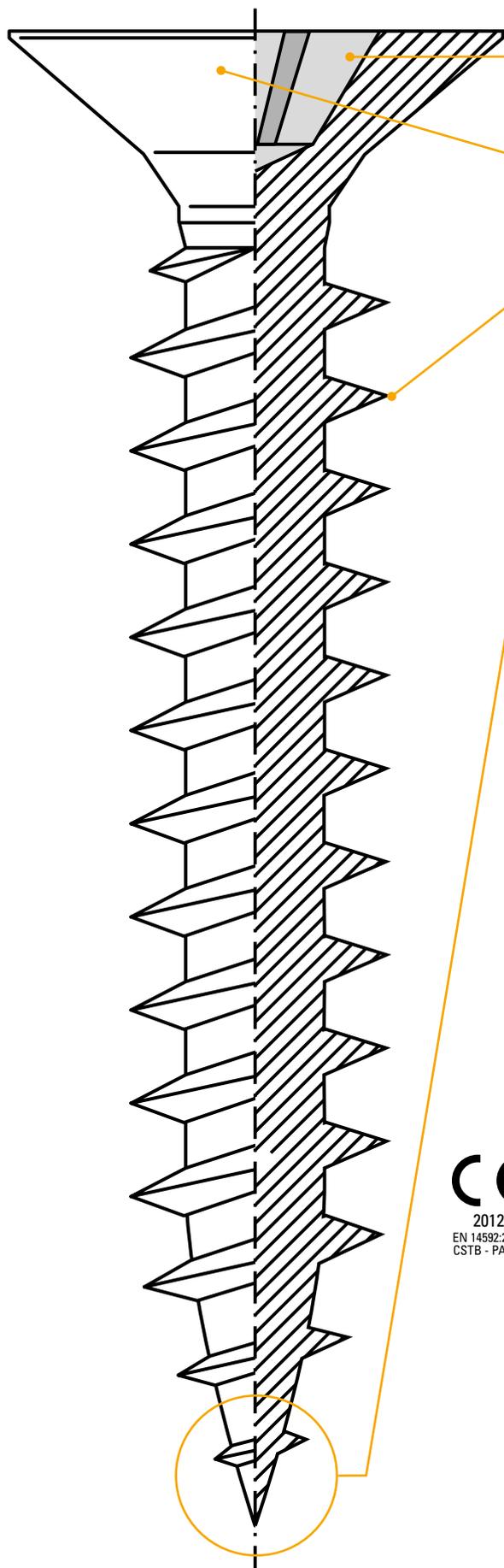
dimensions in mm



Screw Diameter	3	3,5	4	5	6
PH Recess N°	1	2	2	2	3



<b>PAN HEAD (Rif. UNI 8112)</b>		<b>(TC)</b>				
<b>D</b>	max	6	7	8	10	12
	min	5,82	6,78	7,78	9,78	11,73
<b>K</b>	max	2,52	2,82	3,25	3,95	4,75
<b>pitch</b>		0,5	0,6	0,7	0,8	1
<b>y</b>	max	1,80	2,10	2,40	2,80	3,50



### RECESS

**Very deep PZ or TX recess** to allow **excellent coupling** and avoid slipping.

### HEAD

Special geometry **reinforced under the head** to allow **high screwing torque transmission**.

### THREADING

The **smooth thread profile** guarantees fast advancement with **minimum force** and **reduces the risk of splitting of the wood**.

### OGIVE SHAPE TIP

The **multiple radius profile tip**, in combination with the **thread that runs up on the tip**, guarantees safe gripping without slipping and gradual, constant screw penetration. The results is **better penetration ease** and lower material cracking risk because there are no discontinuities.

### SPECIAL ALLOY STEEL

Purchased directly from steelworks.

### CASE HARDENING TREATMENT

This confers two properties to the screw:

- **very hard surface** for biting into the fibres of the hardest wood;
- **tough elastic core**, to avoid breakage of screws.

(for details see page 77)

### PROTECTIVE TREATMENT

To **protect the screw from rust and corrosion**, guaranteeing reliability over time and providing **appearance suited to all uses**.

(for details see page 78)

### LUBRICATION **LUBEX®**

Powerful MUSTAD antifriction treatment for **reducing fastening force by up to 50%**.

(for details see page 77)

### CE MARKING

For load-bearing timber assembly elements, according to EN 14592:2009 (awarded by CSTB Centre Scientifique du Bâtiment, Paris). Screws having threading length equal to at least six times their diameter are subject to marking.

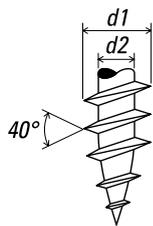
(see the table below)



2012  
EN 14592:2009  
CSTB - PARIS

dimensions in mm

Screw Diameter	CE marked screw lengths			
	Panelvit® TSP e TSC	Panelvit® PF - AF	Panelvit® TC	Panelvit® FC
2,5	≥ 18			
3	≥ 25			
3,5	≥ 30	≥ 50	≥ 30	
4	≥ 30	≥ 50	≥ 30	
4,5	≥ 35	≥ 50	≥ 35	
5	≥ 35	≥ 60	≥ 40	≥ 35
6	≥ 40	≥ 60		≥ 40
7				≥ 50



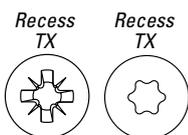
OGIVE SHAPED TIP

## THREADING

(quotes in mm)

Nominal Diameter	2,5	3	3,5	4	4,5	5	6	
<b>d1</b>	maximum	2,55	3,05	3,55	4,05	4,55	5,05	6,05
	minimum	2,36	2,86	3,32	3,82	4,32	4,82	5,82
<b>d2</b>	maximum	1,59	1,99	2,35	2,67	2,81	3,11	3,75
	minimum	1,40	1,80	2,12	2,44	2,58	2,88	3,52

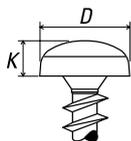
maximum threading length 70 mm



## RECESSES

(quotes in mm)

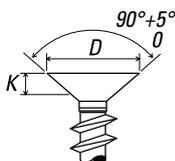
Nominal Diameter	2,5	3	3,5	4	4,5	5	6
N° PZ Recess	Z1	Z1	Z2	Z2	Z2	Z2	Z3
N° TX Recess	-	-	T20	T20	T20	T20	T30



## CYLINDRICAL HEAD

(TC)

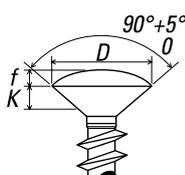
<b>D</b>	maximum	4,90	5,90	6,90	7,90	8,80	9,80	11,75
	minimum	4,60	5,60	6,54	7,54	8,44	9,44	11,32
<b>K</b>	maximum	2,00	2,25	2,60	2,80	3,00	3,50	4,10



## COUNTERSUNK HEAD

(TSP)

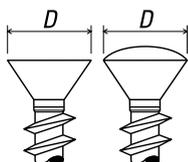
<b>D</b>	maximum	5,00	6,00	7,00	8,00	9,00	10,00	12,00
	minimum	4,70	5,70	6,64	7,64	8,64	9,64	11,57
<b>K</b>	maximum	1,40	1,80	2,00	2,35	2,55	2,85	3,35



## COUNTERSUNK RAISED HEAD

(TSC)

<b>D</b>	maximum	5,00	6,00	7,00	8,00	9,00	10,00	12,00
	minimum	4,70	5,70	6,64	7,64	8,64	9,64	11,57
<b>f</b>		0,71	0,66	0,89	1,02	1,17	1,17	1,57
<b>K</b>	maximum	1,40	1,80	2,00	2,35	2,55	2,85	3,35



## REDUCED HEAD

(TSP - TSC)

<b>D</b>	maximum			6,00	7,00		9,00	
	minimum			5,70	6,64		8,64	



## LARGE HEAD WITH COLLAR

(FC)

Ø thread: 5 mm	type 947B	Ø collar: 5,80 mm	Ø head: 11 mm	PZ Recess 2
Ø thread: 5,5 mm	type 208A	Ø collar: 5,90 mm	Ø head: 12,70 mm	TX Recess 30
Ø thread: 6 mm	type 029B/312A	Ø collar: 5,90 mm	Ø head: 15 mm	TX Recess 30
Ø thread: 7 mm	type 057A	Ø collar: 7 mm	Ø head: 17 mm	TX Recess 30

## SELF-TAPPING

**RECESS**  
Very deep  
PH Recess.

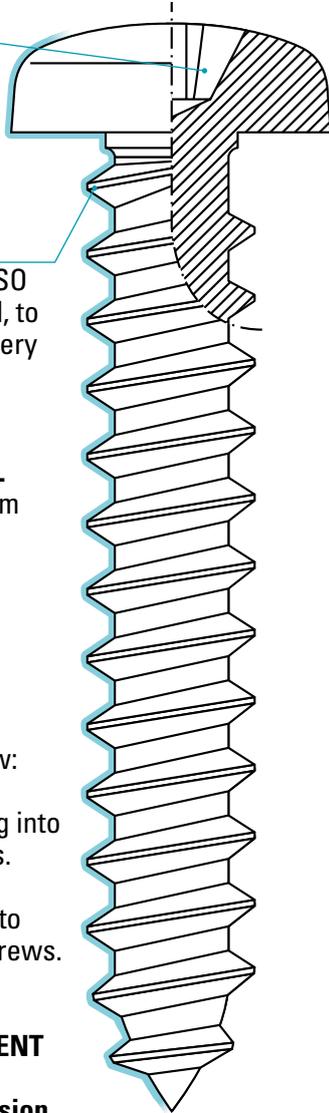
**THREADING**  
Accordingly UNI-EN-ISO  
1478 **to under the head**, to  
allow fastening even very  
thin metal sheets.

**SPECIAL ALLOY STEEL**  
Purchased directly from  
the steelworks.

**CASE HARDENING  
TREATMENT**  
Accordingly  
UNI-EN-ISO 2702  
to confere to the screw:  
- **Very hard surface**  
( $>450$  Hv 0,3) for biting into  
the metallic materials.  
- **Tough, elastic core**  
(270-390 HV) needed to  
avoid breakage of screws.

**PROTECTIVE TREATMENT**  
**To protect the screw  
against rust and corrosion**  
and guarantee reliability  
overtime.

**ALL THREADED TIP**



## DRILLEX® SELF-DRILLING

**RECESS**  
Very deep  
PH recess or sharp  
edged hex flanged  
head.

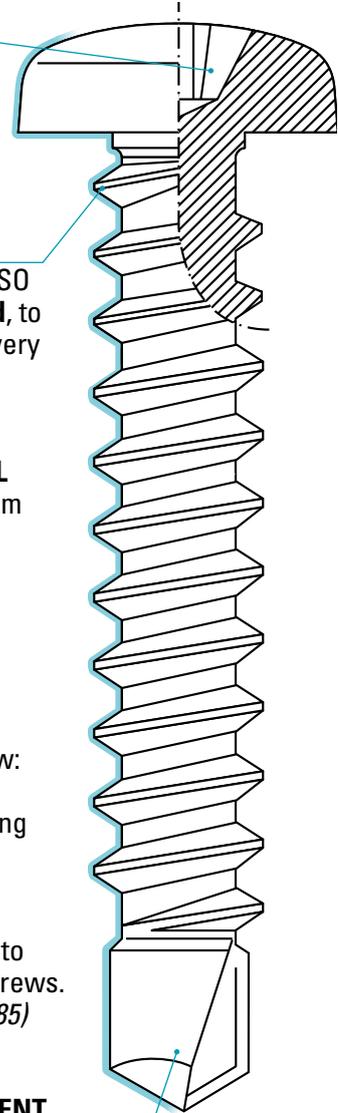
**THREADING**  
Accordingly UNI-EN-ISO  
1478 **to under the head**, to  
allow fastening even very  
thin metal sheets.

**SPECIAL ALLOY STEEL**  
Purchased directly from  
the steelworks.

**CASE HARDENING  
TREATMENT**  
Accordingly  
UNI-EN-ISO 10666  
to confere to the screw:  
- **Very hard surface**  
( $>450$  Hv 0,3) for drilling  
and threading the  
metallic materials.  
- **Tough, elastic core**  
(320-400 HV) needed to  
avoid breakage of screws.  
(for details see pag. 85)

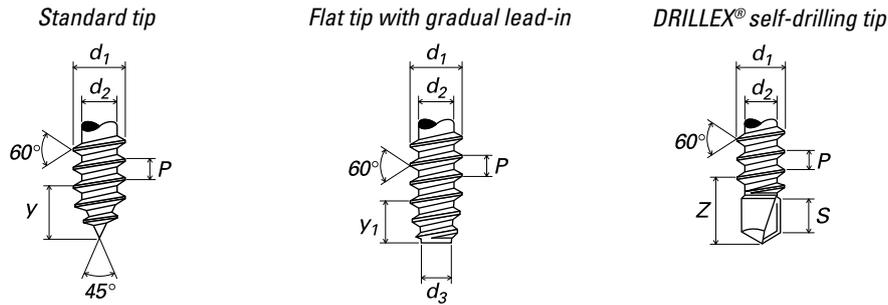
**PROTECTIVE TREATMENT**  
**To protect the screw  
against rust and corrosion**  
and guarantee reliability  
overtime.  
(for details see pag. 86)

**DRILLEX®  
SELF-DRILLING TIP**



# SELF-TAPPING and DRILLEX®

## TECHNICAL AND DIMENSIONAL DATA



### THREADING AND TIPS (Ref. UNI EN ISO 1478)

(quotes in mm)

diameters / N° ASA	2,2 / 2	2,9 / 4	3,5 / 6	3,9 / 7	4,2 / 8	4,8 / 10	5,5 / 12	6,3 / 14	
$d_1$	max	2,24	2,90	3,53	3,91	4,22	4,80	5,46	6,25
	min	2,10	2,76	3,35	3,73	4,04	4,62	5,28	6,03
$d_2$	max	1,63	2,18	2,64	2,92	3,10	3,58	4,17	4,88
	min	1,52	2,08	2,51	2,77	2,95	3,43	3,99	4,70
$d_3$	max	1,47	2,01	2,41	2,67	2,84	3,30	3,86	4,55
	min	1,37	1,88	2,26	2,51	2,69	3,12	3,68	4,34
$y$	max	2,00	2,60	3,20	3,50	3,70	4,30	5,00	6,00
$y_1$	max	1,60	2,10	2,50	2,70	2,80	3,20	3,60	3,60
$P$	Passo	0,80	1,10	1,30	1,30	1,40	1,60	1,80	1,80

### Ø hole diameters

Ref. to the MUSTAD technical documentation

### ONLY FOR DRILLEX® SELF-DRILLING SCREWS

$S$	maximum drilling depth		2	2,5	3	3,5	4	5	7
$Z$	max		4,10	4,80	5,30	5,90	7,30	8,30	10,80

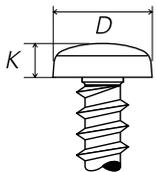
### PH Recess



### RECESS

(quote in mm)

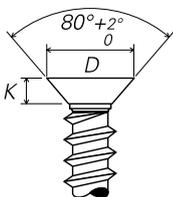
Screw diameter	2,2	2,9	3,5	3,9	4,2	4,8	5,5	6,3
PH recess N°	1	1	2	2	2	2	3	3



### CYLINDRICAL HEAD (Ref. DIN 7981 - UNI 6954)

(TC)

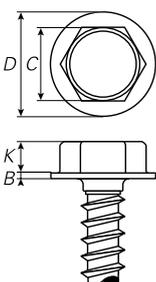
$D$	max	4,20	5,60	6,90	7,50	8,20	9,50	10,80	12,50
	min	3,90	5,30	6,54	7,14	7,84	9,14	10,37	12,07
$K$	max	1,80	2,20	2,60	2,80	3,05	3,55	3,95	4,55



### COUNTERSUNK HEAD (Ref. DIN 7982 - UNI 6955)

(TSP)

$D$	max	4,30	5,50	6,80	7,50	8,10	9,50	10,80	12,40
	min	4,00	5,20	6,44	7,14	7,74	9,14	10,37	11,97
$K$	max	1,30	1,70	2,10	2,30	2,50	3,00	3,40	3,80



### HEXAGONAL WITH WASHER HEAD (Ref. UNI 6950)

(TECC)

$C$	Hex wrench	5	5,5	7	7	8	8	10
	max	6,50	7,21	9,18	9,73	10,61	11,08	13,86
$D$	min	6,02	6,61	8,46	9,01	9,85	10,20	12,80
$K$	max	1,87	2,67	2,67	3,17	3,42	4,45	5,25
$B$	max	0,50	0,54	0,80	0,78	0,78	0,99	1,33

## KOVERVIT® BS SELF-TAPPING (type 592B)

### HEAD

Sharp edged hex flanged with convex underside.

### THREADING

Special BS threading to tighten in very depth metallic materials.

### SPECIAL ALLOY STEEL

Purchased directly from the steelworks.

### CASE HARDENING TREATMENT

Accordingly UNI-EN-ISO 2702 to confer to the screw:

- **Very hard surface** (>450 Hv 0,3) for biting into the metallic materials.
- **Tough, elastic core** (270-390 HV) needed to avoid breakage of screws.

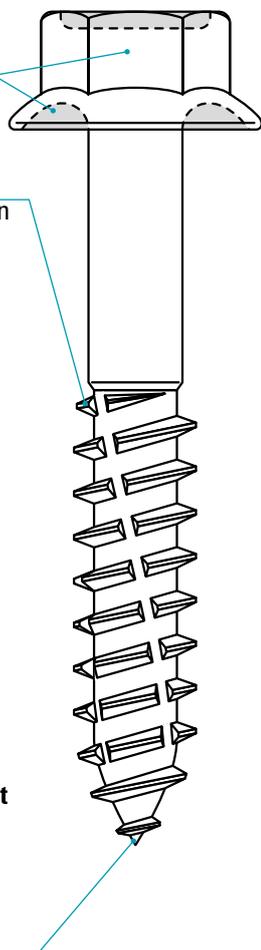
### CHROMITING®

#### RUSTPROOF TREATMENT

To protect the screw against rust and corrosion and guarantee reliability overtime.

(for details see page 78)

### ALL THREADED TIP



## KOVERVIT® DX SELF-DRILLING (type 943B)

### HEAD

Sharp edged hex flanged with convex underside.

### THREADING

Special BS threading to tighten in very depth metallic materials.

### SPECIAL ALLOY STEEL

Purchased directly from the steelworks.

### CASE HARDENING TREATMENT

Accordingly UNI-EN-ISO 10666 to confer to the screw:

- **Very hard surface** (>530 Hv 0,3) for biting into the metallic materials.
- **Tough, elastic core** (320-400 HV) needed to avoid breakage of screws.

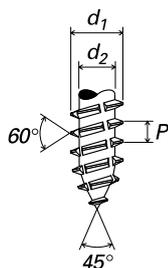
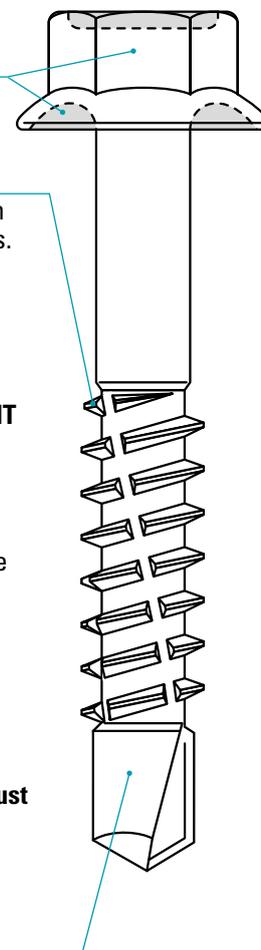
### CHROMITING®

#### RUSTPROOF TREATMENT

To protect the screw against rust and corrosion and guarantee reliability overtime.

(for details see page 78)

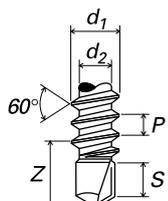
### DRILLEX® SELF-DRILLING TIP



### THREADING AND TIPS (type 592B)

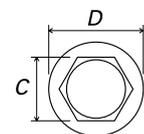
(quotes in mm)

screw diameter	6,3
$d_1$ max	6,25
$d_1$ min	6,03
$d_2$ max	4,88
$d_2$ min	4,70
$P$ pitch	1,80



### ONLY FOR KOVERVIT® DX (type 943B)

$S$ maximum drilling depth	7
$Z$ max	10,80



### HEXAGONAL HEAD WITH WASHER

$D$ max	14,82
$D$ min	14,39
$C$ Hex wrench	10

## KOVERVIT® AA FOR WOOD - LUBEX® LUBRICATED (type 811B)

### HEAD

Sharp edged hex flanged with convex underside.

### THREADING

Long pitch AA thread for quick fastening into the wood or light metal structures.

### SPECIAL ALLOY STEEL

Purchased directly from the steelworks.

### CASE HARDENING TREATMENT

Accordingly UNI EN ISO 2702

To confer to the screws:

- **Very hard surface** (>450 Hv 0,3),  
for biting into the different materials where is applied.
- **Tough, elastic core** (270-390 HV)  
needed to avoid breakage of screws.

### CHROMITING® RUSTPROOF TREATMENT

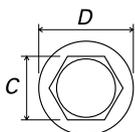
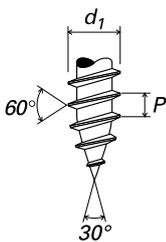
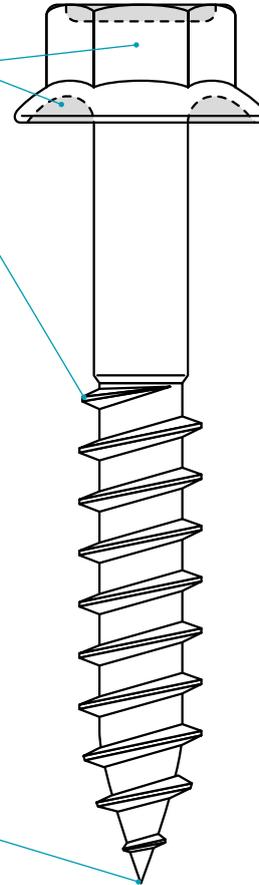
To protect the screw against rust and corrosion and guarantee reliability overtime.

(for details see page 78)

### SHARPED POINT, ALL THREADED

Suitable for pierce the roofing sheets directly without need for pre-boring.

**LUBRICATION** LUBEX®  
(for details see page 77)



### THREADING AND TIPS (type 811B)

(quotes in mm)

<b>screw diameter</b>	<b>6,5</b>
<b>d<sub>1</sub></b> max	6,50
<b>d<sub>1</sub></b> min	6,28
<b>P</b> Pitch	2,50

### HEXAGONAL HEAD WITH WASHER

<b>D</b> max	14,82
<b>D</b> min	14,39
<b>C</b> Hex wrench	10



### CE MARKING

For load-bearing timber assembly elements, EN 14592-2009 (awarded by CSTB Centre Scientifique du Bâtiment, Paris).  
DoP (Declaration of Performance) issued, according to the European Construction Products Regulation 305/2011.

# SURFACE TREATMENTS

## CASE HARDENING TREATMENT

Process for conferring the **hardness and toughness properties needed to drill or tighten different materials**. This thermal-chemical process is carried out in sophisticated case-hardening furnaces and consists of two steps:

### CASE HARDENING

The screw surface is carbide- and nitride-enriched by injecting chosen gases into the high-temperature controlled atmosphere.

### QUENCHING

The screw is rapidly cooled to increase metal toughness and resilience and obtain a very hard surface: properties needed to withstand high torsion torques and create threading in the harder materials.

## PROTECTIVE AND AESTHETIC TREATMENTS

(see page 78)

## LUBRICATION TREATMENT LUBEX®

The antifriction treatment reduces the friction between screw and material in which it is fastened. This **reduces the screwing force and the wear of tools and machines**, as a consequence. LUBEX® is applied to all Panelvit® screws, Kovervit® AA screws for wood, and in the version LUBEX®-M the FORMEX® three-lobe screw range.

The advantages of LUBEX®:

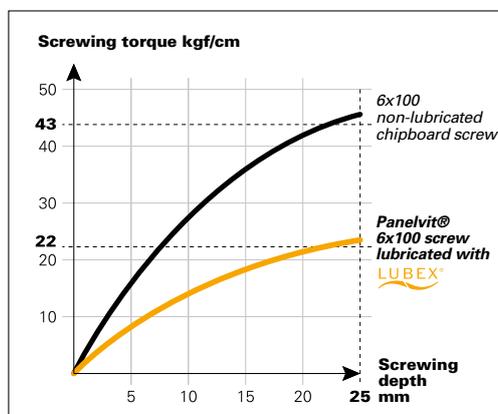
### 1) FOR SCREWING

**Screwing torque reduced by up to 50%** with respect to a common, non-lubricated screw (see chart 1 - SCREWING).

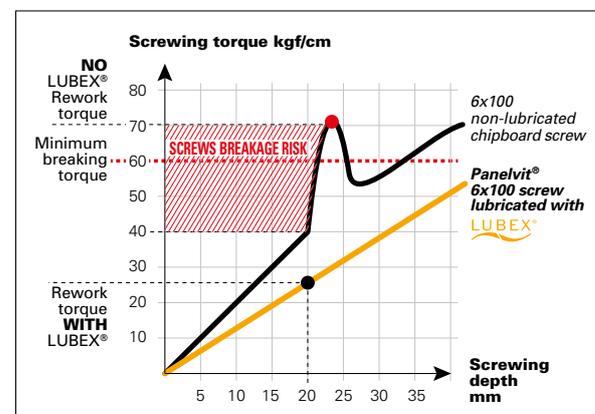
### 2) FOR REWORKING OR UNSCREWING

The screw is subject to high torsion when it is screwed in several steps (stopping and restarting or unscrewing) because the materials in which it is inserted applies friction onto it. The screw is thus subjected to force which may even exceed its breaking torque. **LUBEX® avoids these dangerous torque peaks and preserves the screw from the risk of breakage and tools from wear** (see chart 2 - REWORK OR UNSCREWING).

1 - SCREWING



2 - REWORKING OR UNSCREWING



# SURFACE TREATMENTS

These treatments have the two purpose of **protecting the screw from rust and corrosion**, guaranteeing reliability over time and **providing appearance suited to all uses**.  
The parameter which is used to express corrosion treatment resistance is the number of hours of permanence in salt spray chamber before rust appears (test carried out according to UNI ISO 9227).

TREATMENT	APPEARANCE	APPLICATION
<p><b>100 HOUR WHITE GALVANISATION</b> (8 micron thick) Salt spray corrosion resistance: &gt; 100 h. 30% better than standard galvanisation (appearance of red rust) conforming to grade 3 of EN 1670. RoHS compatible.</p>		<i>High corrosion resistance; suitable for outdoor use, where there can be occasional or frequent wetting from rain or dew.</i>
<p><b>YELLOW GALVANISATION</b> (spessore 8 micron) Salt spray corrosion resistance: &gt; 120 h. (appearance of red rust) conforming to grade 3 of EN 1670.</p>		<i>High corrosion resistance; suitable for outdoor use, where there can be occasional or frequent wetting from rain or dew.</i>
<p><b>CHROMITING®</b> White, iridescent. Salt spray corrosion resistance: &gt; 240 h. (appearance of red rust) conforming to grade 4 of EN 1670. RoHS compatible.</p>		<i>Very high corrosion resistance; suitable for outdoor use, in very severe conditions.</i>
<p><b>NEROPLUS®</b> Black coating, sealed with scratchproof, aesthetic treatment. Salt spray corrosion resistance: &gt; 1.000 h. (appearance of red rust) conforming to grade 5 of EN 1670. RoHS compatible.</p>		<i>Exceptionally high corrosion resistance; suitable for outdoor use, in exceptionally severe conditions where long-term protection of the product is required.</i>
<p><b>SILVERPLUS®</b> Grey coating, sealed with scratchproof treatment. Salt spray corrosion resistance: &gt; 1.000 h. (appearance of red rust) conforming to grade 5 of EN 1670. RoHS compatible.</p>		<i>Exceptionally high corrosion resistance; suitable for outdoor use, in exceptionally severe conditions where long-term protection of the product is required.</i>
<p><b>BRONZE-COATING</b> Electrolytic copper coating with bronzing chemical oxidation and protective oiling.</p>		<i>Dark wood. Furniture hardware.</i>
<p><b>BRASS-COATING</b> Electrolytic copper, nickel and brass coating with passivation and protective seal.</p>		<i>Brass-coated hardware.</i>
<p><b>NICKEL-COATING</b> PROTECTIVE nickel coating on copper.</p>		<i>Nickel-coated hardware (handles, hinges for furniture etc.).</i>



**MUSTAD**

SPA ITALY

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