



Plasti-Kwick Plus™

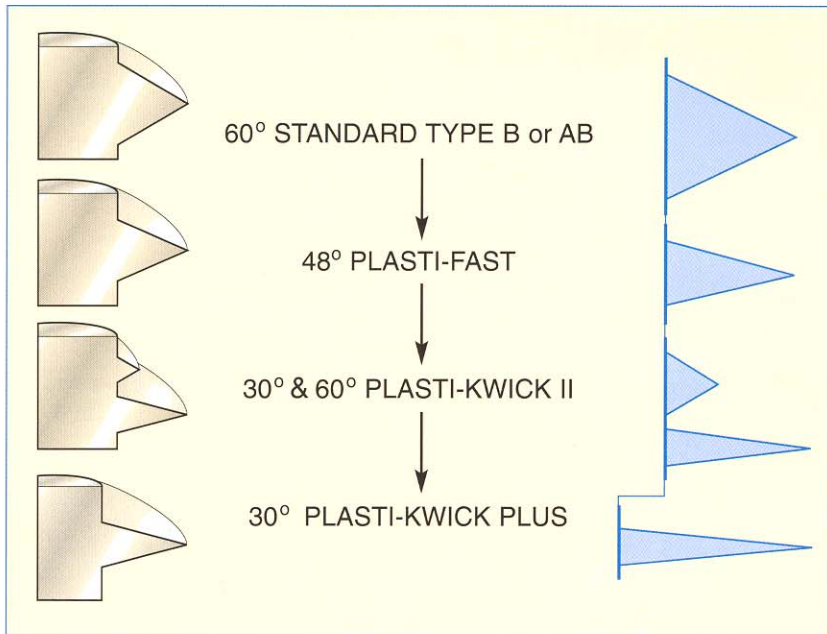
The Ultimate Screw For Plastics



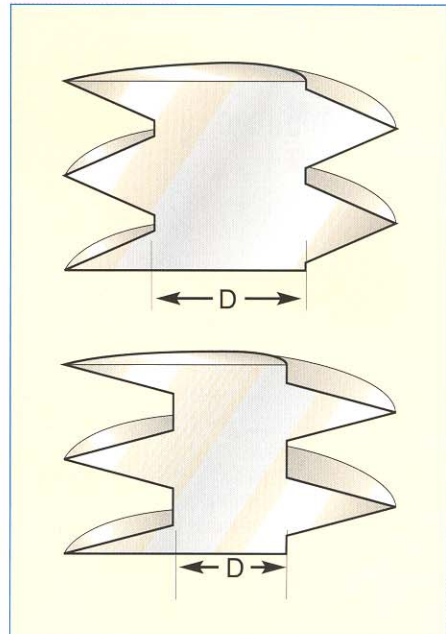
Albany Steel & Brass Corporation
SUCCESSORS TO LEBOVITZ BROTHERS
DISTRIBUTORS OF FASTENERS, INDUSTRIAL & MILL SUPPLIES
SINCE 1918
 1900 W. GRAND AVE. CHICAGO, IL 60622
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 ISO 9001-2008 www.albanysteel.com

The Design: The Plasti-Kwick Plus design combines a 30° thread form, reduced root diameter and coarse thread pitch to provide the ultimate screw for plastic applications. These design features, which are illustrated below, significantly reduce the stresses resulting in the plastic.

Extremely Narrow 30° Thread Form

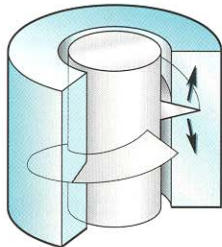


Reduced Root Diameter



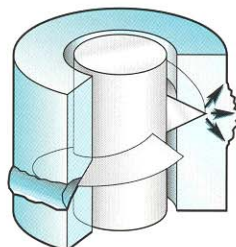
Reduced Hoop Stress and Plastic Boss Failure

Plasti-Kwick Plus Thread Profile



The force of thread entry results in stress directed parallel to plastic surface resulting in less failure of thin wall plastics.

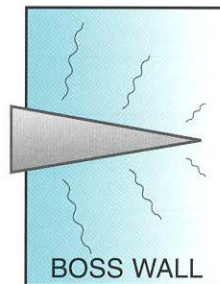
Standard 60° Thread Profile



The force of thread entry results in stress directed toward the outside wall of the plastic resulting in more failure of thin wall plastics.

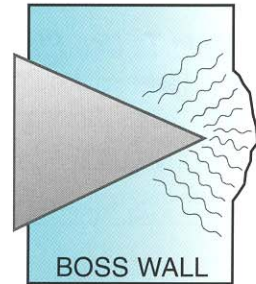
Reduced Plastic Failure

Plasti-Kwick Plus Thread Profile



During thread engagement less plastic movement and deformation results in less internal stress cracking.

Standard 60° Thread Profile



During thread engagement more plastic movement and deformation results in more internal stress cracking.

*Arrows represent movement of plastic to make room for entering thread.

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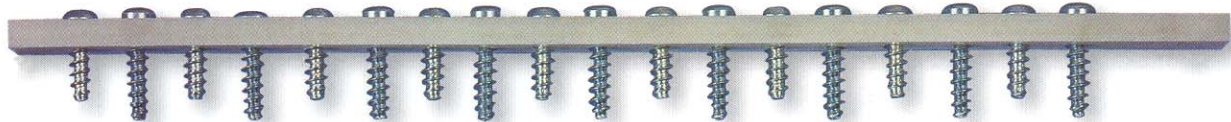
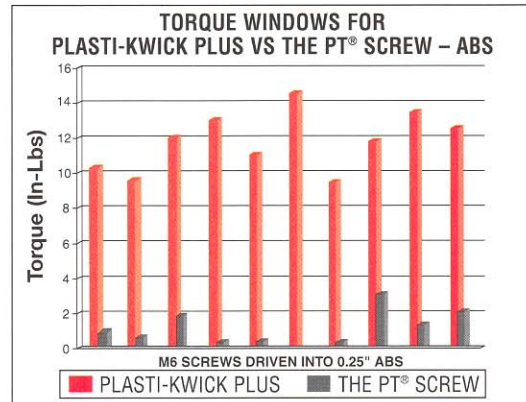
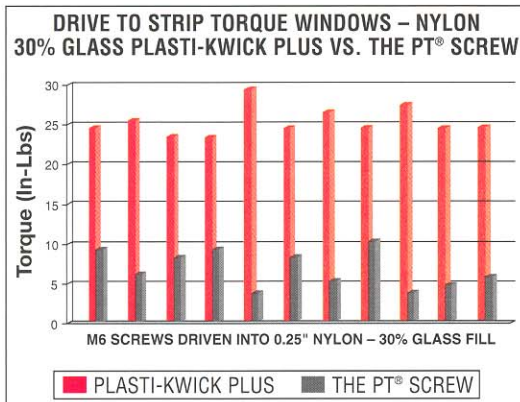
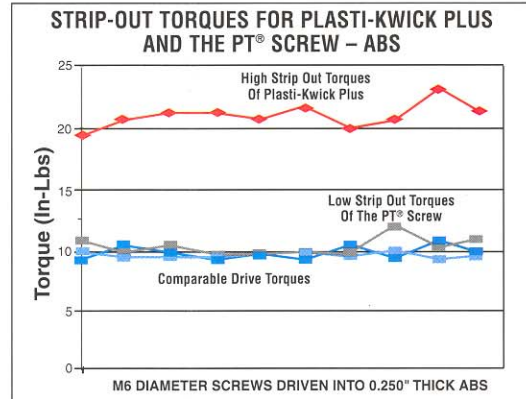
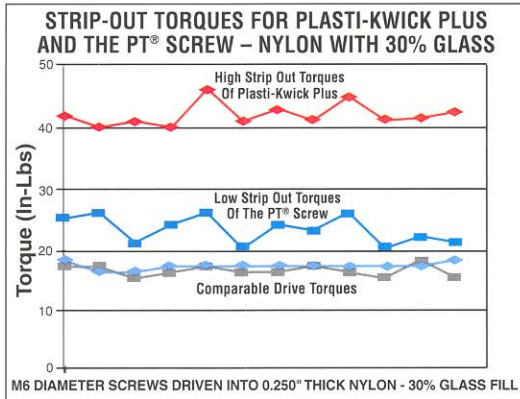
Plasti-Kwick Plus™

Comparison Testing

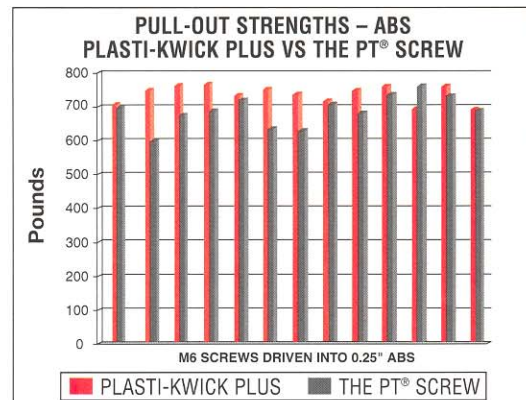
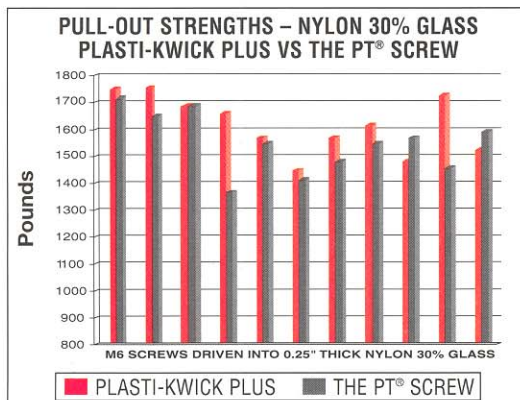


The Plasti-Kwick Plus Has Been Tested Directly Against The PT® Screw . . . And Won!

Drive To Strip Torques



Superior Pull-Out Resistance

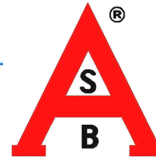


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Plasti-Kwick Plus™

Application Information



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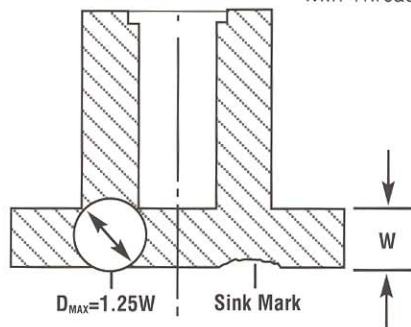
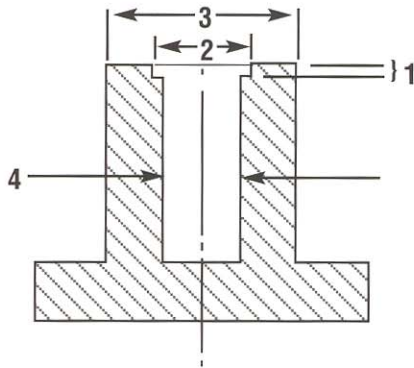
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The Plasti-Kwick Plus significantly reduces the stresses placed upon a plastic boss during the fastening process. As a result, thinner plastic boss walls can be considered. To determine the optimum boss dimensions, testing in the specific application should be conducted. If direct testing of the Plasti-Kwick Plus is not feasible, the general guidelines given here for determining boss dimensions can be used. If you have questions concerning unique plastic materials, fillers, or questions regarding your specific application, contact your Parker-Kalon sales representative.

Calculation of Boss Dimensions: The boss hole diameter, boss outside diameter and minimum thread engagement are calculated using the nominal screw diameter and the application data chart provided. Below are two examples for an M6 and M3 screw fastened into a Polyethylene boss.

M6 screw
Boss Hole Dia = (0.7) x (6mm) = 4.2mm
Boss Outside Dia = (2.0) x (6mm) = 12mm
Min Thread Engmnt = (1.9) x (6mm) = 11.4mm

M3 screw
Boss Hole Dia = (0.7) x (3mm) = 2.1mm
Boss Outside Dia = (2.0) x (3mm) = 6mm
Min Thread Engmnt = (1.9) x (3mm) = 5.7mm



To eliminate sink caused by plastic shrinkage during cooling, the diameter of a circle within the thickest section of the boss should not exceed 1.25 times the wall thickness (W). Additional options to avoid sink are available upon request.

1. The hole's clearance recess should have a depth of 1/2 the nominal screw diameter.
2. The hole's clearance recess should have a diameter of 0.4 mm above the nominal screw diameter.
3. The recommended boss outside diameter is calculated using the formula given below by plastic type.
4. The recommended boss hole diameter is calculated using the formula given below by plastic type.



APPLICATION DATA

Common Plastics	Boss Hole Diameter (4)	Boss Outside Diameter (3)	Min Thread Engagement
ABS (Acrylonitrile/Butadiene/Styrene)	0.80 x D	2.00 x D	2.00 x D
Nylon 6/60	0.75 x D	1.85 x D	1.70 x D
Nylon 6/6 w/40% Glass Fibers	0.82 x D	2.00 x D	2.10 x D
PBT (Polybutylene Terephthalate)	0.75 x D	1.85 x D	1.70 x D
PC (Polycarbonate)	0.85 x D	2.50 x D	2.20 x D
PE (Polyethylene)	0.70 x D	2.00 x D	1.90 x D
PET (Polyethylene Terephthalate)	0.75 x D	1.85 x D	1.70 x D
PP (Polypropylene)	0.70 x D	2.00 x D	2.00 x D
PS (Polystyrene)	0.80 x D	2.00 x D	2.00 x D
DPVC (Polyvinylchloride)	0.80 x D	2.00 x D	2.00 x D

D = Diameter of selected screw (For M6 D=6, For M3 D=3)

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