

Delta PT® fasteners are engineered to provide maximum performance in a wide range of thermoplastics. The improved design results in a stronger fastener that creates optimal material flow during installation, providing higher performance, better clamp loads and increased joint life.



STANDARD DESIGN GUIDELINES

Sizes: Delta PT 14 – 70 (1.4mm – 7.0mm)
Other sizes under development

Styles: Can be used with any head design

Specials: Shoulder screws, sems, double end studs, collar studs; others as required

Drive Systems: TORX PLUS® Drive is recommended to facilitate the proper amount of torque transfer required for forming threads. Other styles also available.

For more information on how Delta PT® fasteners can benefit your assembly, please contact:



6125 Eighteen Mile Road
Sterling Heights, Michigan 48314

1-800-544-6117

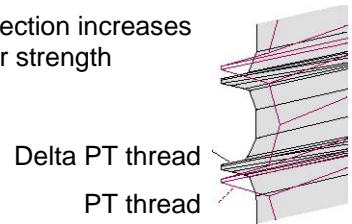
acument.com
camcarsolutions.com
ringscrew.com

MAXIMUM PERFORMANCE IN THERMOPLASTICS

Delta PT fasteners offer an improvement over the proven performance of PT fasteners.

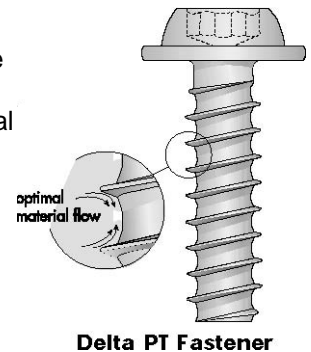
FEATURES

- Flank geometry engineered to provide better material flow during installation combined with high flank engagement
- Larger fastener cross-section increases shear area and fastener strength
- Optimized pitch allows high clamp load with smaller contact pressure



BENEFITS

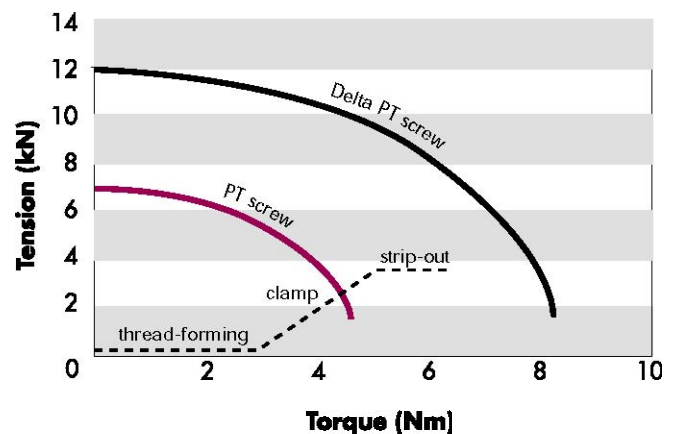
- Minimizes radial stress
- Offers increased fatigue life
- Optimizes material flow
- Provides increased torsional and tensile strength
- Can achieve higher clamp loads and seating torques
- May permit use of shorter fasteners and/or smaller diameters, if necessary



UP TO 50% INCREASE IN TENSILE & TORSIONAL STRENGTH

The enlarged shear area of the Delta PT fastener increases its tensile and torsional strength, improving fastener strength over the PT fastener.

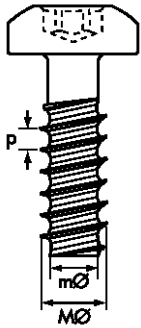
The torque/tension chart below demonstrates how the failure levels for Delta PT fasteners is comfortably above normal seating torque levels.



- Delta PT screw breakage
- PT screw breakage
- - Thread-forming and stripping torque

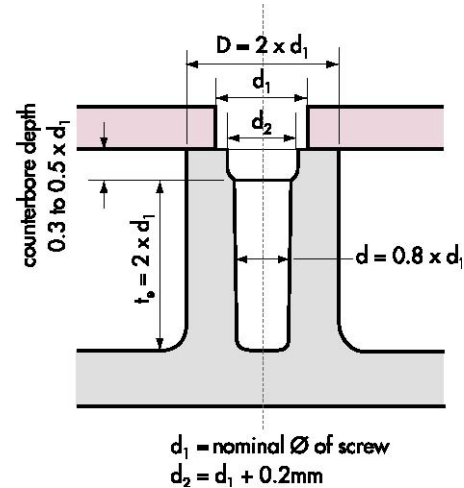
DESIGN RECOMMENDATIONS FOR DELTA PT® THREAD-FORMING FASTENERS

DIMENSIONAL DATA



Nom. Size	p Thread Pitch (mm)	MØ Major Dia. (mm)	mØ Minor Dia. (mm)
Delta PT 14	0.573	1.4	0.928
Delta PT 16	0.641	1.6	1.073
Delta PT 18	0.709	1.8	1.218
Delta PT 20	0.78	2.0	1.4
Delta PT 22	0.85	2.2	1.5
Delta PT 25	0.95	2.5	1.7
Delta PT 30	1.12	3.0	2.1
Delta PT 35	1.29	3.5	2.5
Delta PT 40	1.46	4.0	2.8
Delta PT 45	1.63	4.5	3.2
Delta PT 50	1.80	5.0	3.5
Delta PT 60	2.14	6.0	4.3
Delta PT 70	2.48	7.0	5.0

BOSS DESIGN RECOMMENDATIONS



The criteria for optimum hole diameter is the maximum clamp load during the thread-forming process. A good starting point in determining the proper hole diameter is

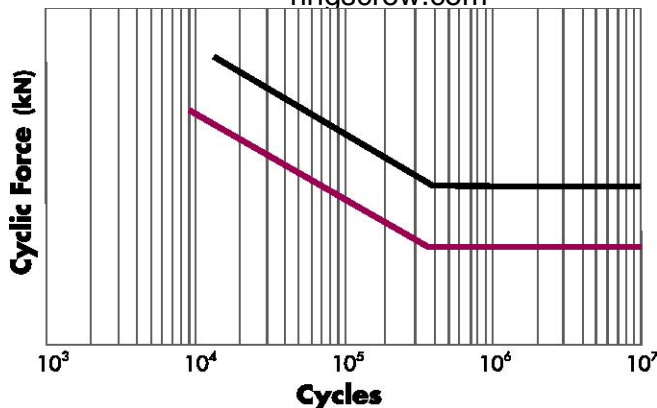
$$d = 0.8 \times d_1$$

Specific applications will require some modifications to allow for the flexural modulus of the material, molding conditions, mold tool design, feed distance from gate, weld lines, structural heterogeneity and amount of reground material.

In order to ensure optimal performance, we recommend testing on initial samples. Please contact an Acument™ Global Technologies applications specialist for assistance.

For more information on how Delta PT® fasteners can benefit your assembly, please contact:

PROVIDES HIGH STRENGTH AND IN-PLACE RELIABILITY



Delta PT fastener
PT fastener

R = 0.1
Cycle stress; breakage of the fastener cross section

With its extended core diameter and optimum thread design, the Delta PT fastener offers a longer fatigue life than the PT fastener. The Delta PT design provides better thread engagement and, therefore, better conditions against stress fractures of the thread flank.

The chart above demonstrates that the Delta PT fastener provides greater resistance against screw breakage than the PT fasteners under in-service loads.



6125 Eighteen Mile Road
Sterling Heights, Michigan 48314

1-800-544-6117

acument.com
camcarsolutions.com
ringscrew.com