



ADAPT-FELT[®] 2011

For Friction, Elongation and Long-Term Stress Loss Calculation of Prestressed Tendons

ADAPT-FELT is the industry standard program for the calculation of elongations, friction loss, and long-term stress loss in pre- and post-tensioned tendons. It covers both bonded and unbonded tendons with regular or irregular geometries in two or three dimensions. In addition to a detailed tabular report, the program displays the geometry of tendon and the distribution of stress along the tendon. The immediate loss computation includes the friction and seating of tendon (wedge draw-in). The long-term losses include creep, shrinkage and relaxation in steel. The computations are based on the recommendations of ACI Committee 423. It is applicable to commercial and residential buildings, ground supported slabs, bridge structures, foundations and piles. FELT 2011 is compatible with 64-bit and Windows 7 operating systems.

Applications:

Essential tool needed to create erection or shop drawings for

- Bridges
- Buildings
- Parking structures
- Foundations
- Special structures
(tanks, containment vessels, piles, etc.)

Key Features:

- Two and three dimensional tendon layout
- Use the program's library of tendon shapes or define your own tendon profile
- One- and two-end tendon stressing
- Anchorage seating loss (draw-in)
- Elongation calculation for first and second pull
- Code check for maximum stress
- Long-term stress losses for unbounded and bonded tendons



Graphical and Tabular Reports:

- Graphical summary report displays tendon profile, stress along its length, and all other critical tendon information on one sheet
- Detailed tabular report summarizes
 - Long-term losses due to shrinkage, creep and relaxation
 - Friction and elongation values
 - Maximum stress ratio
 - Stress at both anchorages
 - Stress along tendon
 - Tendon height along its length
- Reports maximum stress ratio along tendon as well as the stress ratio at both anchorages

Documentation:

- Detailed documentation with a chapter on theory and verification
- Multiple examples with long-hand calculations

Span	L	Shape	Selection	S1	S2	S3	S4	X1/L	X2/L	X3/L	A/L	Angle
Typical	9.00	1	Standard	200	20		200	0.050	0.500	0.050		
1	9.00	1	Standard	100	20		200	0.050	0.500	0.050		
2	9.00	1	User defined	200	20		200	0.050	0.500	0.050		
3	9.00	1	User defined	200	20		200	0.050	0.500	0.050		
4	9.00	1	User defined	200	20		200	0.050	0.500	0.050		
5	9.00	1	User defined	200	20		100	0.050	0.500	0.050		
Cantilever			User defined									