

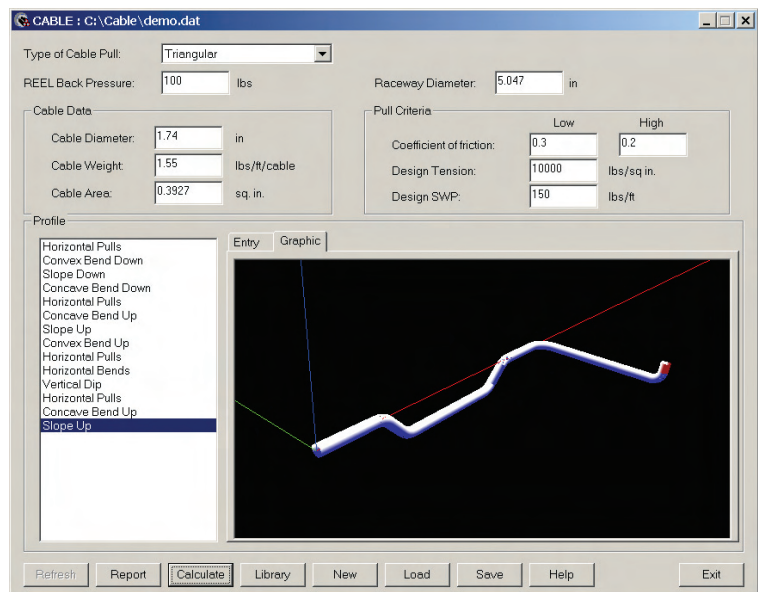
# PTW CABLE 3D

## Cable Pulling Analysis

CABLE quickly solves complex three-dimensional cable pulling tension and sidewall pressure calculations, allowing you to make rapid and accurate design decisions. Don't leave installation to chance.

### Benefits

- Eliminate costly cable damage.
- Save time with graphical entry and display.
- Communicate designs more easily with professional reports and graphs.
- Evaluate alternatives quickly and easily to establish an optimal design.
- CABLE is an important tool every power system engineer, designer and contractor needs.



Section Length	FORWARD PULL				REVERSE PULL			
	Total Pounds	Total lbs/ft	SWP Limits	PULL Length	Total Pounds	Total lbs/ft	SWP Limits	PULL Length
1	50.0	182.0		PASS	452.1	2252.4		PASS
2	65.7	237.1	7.0	PASS	402.1	2170.4	63.8	PASS
3	85.7	194.5		PASS	386.4	1600.2		PASS
4	101.4	197.3	5.8	PASS	366.4	1511.2	44.4	PASS
5	201.4	361.3		PASS	350.7	1143.2		PASS
6	217.1	479.8	14.1	PASS	250.7	979.1	28.8	PASS
7	237.1	568.7		PASS	235.0	787.1		PASS
8	252.8	809.6	23.8	PASS	215.0	829.7	24.4	PASS
9	302.8	891.6		PASS	199.3	631.2		PASS
10	334.2	1554.7	45.7	PASS	149.3	549.2	16.1	PASS
11	434.2	2062.1	9.7	PASS	117.9	311.0	1.5	PASS
12	444.2	2078.5		PASS	17.9	147.0		PASS
13	452.1	3027.1	427.4	FAIL	7.9	130.6	15.4	PASS

## Analysis Options

- Calculates cumulative pulling tension through each pull profile
- Calculates side wall pressure for each segment of the pull profile
- Calculates jam ratios, clearances and percent fills
- Automatically calculates forward and reverse pulls through each pull profile
- Simulates single, triangular, cradled and diamond cable configurations
- Suitable for any type of cable and pulling profile

## Interface Options

- Unlimited pulling profiles
- Unlimited segments in each pulling profile
- Cable, raceway and lubricant library
- 3-D graphical display
- Extensive on-line help
- Simple single-screen interface

The screenshot shows the 'CABLE' software interface with the following data and settings:

- Title Bar:** CABLE : C:\Cable\demo.dat
- Type of Cable Pull:** Triangular
- REEL Back Pressure:** 100 lbs
- Raceway Diameter:** 5.047 in
- Cable Data:**
  - Cable Diameter: 1.74 in
  - Cable Weight: 1.55 lbs/ft/cable
  - Cable Area: 0.3927 sq. in.
- Pull Criteria:**

	Low	High
Coefficient of friction:	0.3	0.2
Design Tension:	10000	lbs/sq in.
Design SWP:	150	lbs/ft
- Profile:**
  - Horizontal Pulls
  - Convex Bend Down**
  - Slope Down
  - Concave Bend Down
  - Horizontal Pulls
  - Concave Bend Up
  - Slope Up
  - Convex Bend Up
  - Horizontal Pulls
  - Horizontal Bends
  - Vertical Dip
  - Horizontal Pulls
  - Convex Bend Down
  - Slope Down
- Section Pull Type:** Convex Bend Down
- Length:** 15.708 ft
- Radius:** 20 ft
- Angle:** 45 deg
- Diagram:** A schematic showing a cable segment with tension  $T_1$  at the start, tension  $T_2$  at the end, a radius  $R$ , and an angle  $\theta$ .
- Forward Pull:**
  - Tension: 237.069 lbs **PASS**
  - SWP: 6.969 lbs/ft
- Reverse Pull:**
  - Tension: 1960.427 lbs **PASS**
  - SWP: 57.633 lbs/ft
- Buttons:** Refresh, Report, Calculate, Library, New, Load, Save, Help, Exit