Helix delta-T Conveyor Design Program

Features and Capabilities of Different Versions of delta-T						
Function / Feature Description *	**Ver 3 Std**	**Ver 4 Prof**	**Ver 5 Lite**	**Ver 5 Std**	**Ver 5 Prof**	**Ver 5 Dyn**
Conveyor Capacity						
Maximum Capacity in Tonnes per hr	µ	µ	**200**	**1000**	µ	µ
(∝ indicates unlimited capacity)						
Equipment Databases						
Belts	**o**	**o**	**o**	**o**	**o**	**o**
Idlers	**o**	**o**	**o**	**o**	**o**	**o**
Motors	**o**	**o**	**o**	**o**	**o**	**o**
Fluid Couplings	**o**	**o**	**o**	**o**	**o**	**o**
Gearboxes	**o**	**o**	**o**	**o**	**o**	**o**
Materials	**o**	**o**	**o**	**o**	**o**	**o**
Brakes		**o**	**o**	**o**	**o**	**o**
Data in Table Format		**o**	**o**	**o**	**o**	**o**
Cut & Paste from Excel for quick adding of data			**o**	**o**	**o**	**o**
Export to CSV files			**o**	**o**	**o**	**o**
Draw Conveyor Profile		**o**	**o**	**o**	**o**	**o**
Add any number of Pulleys		**o**	**o**	**o**	**o**	**o**
Draw any Pulley Wrap Angle		**o**	**o**	**o**	**o**	**o**
Draw any Conveyor Configuration		**o**	**o**	**o**	**o**	**o**
Draw Vertical Curve Statically	**o**	**o**	**o**	**o**	**o**	**o**
Draw Vertical Curve Dynamically			**o**	**o**	**o**	**o**
Draw Horizontal Curve Dynamically			**o**	**o**	**o**	**o**
Draw 3D Model of Conveyor			**o**	**o**	**o**	**o**
Draw Conveyor Longsection	**o**	**o**	**o**	**o**	**o**	**o**
Draw Conveyor Plan with Horizontal Curves			**o**	**o**	**o**	**o**
Conveyor Sections						
Unlimited number of Flights	**o**	**o**	**o**	**o**	**o**	**o**
Unlimited Length of Conveyor	**o**	**o**	**o**	**o**	**o**	**o**
Vary Idler Spacing by Section		**o**	**o**	**o**	**o**	**o**
Vary Skirt Length		**o**	**o**	**o**	**o**	**o**
Input Scrapers & Ploughs		**o**	**o**	**o**	**o**	**o**
Manually Override Friction Factor f		**o**	**o**	**o**	**o**	**o**
Friction factor adjustment factor f						**o**

* Std = Standard, Prof = Professional, Dyn = Dynamic Analysis versions

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Takeup Calculations						
Allow user Takeup Mass Input		o	o	o	o	o
Automatic Takeup Mass Calculation	o	o	o	o	o	o
Check sag over all sections			o	o	o	o
Horizontal Takeup		o	o	o	o	o
Traction Check for Running	o	o	o	o	o	o
Traction Check for Starting		o	o	o	o	o
Traction Check for Braking		o	o	o	o	o
Calculate Takeup mass deficiency		o	o	o	o	o
Conveyor Drives						
Maximum Number of Drive Pulleys	2	µ	1	1	µ	µ
Head Drive	o	o	o	o	o	o
Tail Drive	o	o	o	o	o	o
Return Drive	o	o	o	o	o	o
Tripper Drive		o			o	o
Dual Drive Pulleys	o	o			o	o
Multiple / Unlimited Drive Pulleys		o			o	o
Multiple Motors on one Drive		o	o	o	o	o
Starting Torque Factor input		o	o	o	o	o
Starting Empty Torque Factor			o	o	o	o
Backstop Torque Calculation		o	o	o	o	o
High Speed Brake Torque Calc			o	o	o	o
Add Inertia Flywheels					o	o
Input Speed vs Torque Curves						o
Input Time vs Speed Velocity Ramp						o
Drive Start Delay Times						o
Torque / Speed Control Starting						o
Model DOL, VVVF, Wound Rotor Motor, Fluid Coupling Starting						o
Brakes						
Input Braking Torque on Drive Pulley		o	o	o	o	o
Input Braking Torque on any Pulley		o	o	o	o	o
High or Low Speed Brake location			o	o	o	o
Brake Caliper Selection			o	o	o	o
Brake Disc Sizing & Inertia Calc			o	o	o	o
Brake Disc Temperature Rise			o	o	o	o
Add Inertia Flywheels					o	o
Calculate Braking / Coasting Distance					o	o
Discharge Volume Braking / Coasting					o	o

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Function / Feature Description	**Ver 3 Std**	**Ver 4 Prof**	**Ver 5 Lite**	**Ver 5 Std**	**Ver 5 Prof**	**Ver 5 Dyn**
Belt Tension & Friction Calculations						
ISO 5048	**o**	**o**	**o**	**o**	**o**	**o**
CEMA	**o**	**o**	**o**	**o**	**o**	**o**
Temperature Correction Kt		**o**	**o**	**o**	**o**	**o**
Fixed Friction Factor Calculation	**o**	**o**	**o**	**o**	**o**	**o**
User Controlled Friction Factor		**o**	**o**	**o**	**o**	**o**
Automatic Friction Factor Calculation	**o**		**o**	**o**	**o**	**o**
Reduced Friction on Declines >2.5%		**o**	**o**	**o**	**o**	**o**
Suitable for Overland Conveyors		**o**	**o**	**o**	**o**	**o**
Suitable for Wide Idler Spacing Friction & Power Calculations			**o**	**o**	**o**	**o**
Flexible Body Dynamic Analysis Tension calculations						**o**
Variable Friction Factor during Starting and Stopping Calculations						**o**
Tension Summary Report						
Running Full	**o**	**o**	**o**	**o**	**o**	**o**
Running Empty	**o**	**o**	**o**	**o**	**o**	**o**
Running Levels & Inclines Loaded		**o**	**o**	**o**	**o**	**o**
Running Levels & Declines Loaded		**o**	**o**	**o**	**o**	**o**
Starting Fully Loaded		**o**	**o**	**o**	**o**	**o**
Starting Empty		**o**	**o**	**o**	**o**	**o**
Braking Fully Loaded		**o**	**o**	**o**	**o**	**o**
Braking Empty		**o**	**o**	**o**	**o**	**o**
Coasting Fully Loaded, Empty		**o**	**o**	**o**	**o**	**o**
Sag Check		**o**	**o**	**o**	**o**	**o**
Takeup Mass Deficiency Calculation			**o**	**o**	**o**	**o**
Dynamic Tensions Starting / Stopping						**o**
2D and 3D surface plot of Dynamic Tensions and Belt Velocities						**o**
Vertical Curves						
Belt Lift off Calculation	**o**	**o**	**o**	**o**	**o**	**o**
Worn Belt Allowance for Lift off		**o**	**o**	**o**	**o**	**o**
Edge Tension Rise		**o**	**o**	**o**	**o**	**o**
Limit Centre Tension		**o**	**o**	**o**	**o**	**o**
Maximum Buckling Radius		**o**	**o**	**o**	**o**	**o**
Dynamic Drawing of Vertical Curves on Screen for Geometric Design			**o**	**o**	**o**	**o**

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Horizontal Curves						
Input Radius			o	o	o	o
Draw Curve Dynamically on Plan			o	o	o	o
Belt Drift Allowance					o	o
Banking Angle Calculation under Running, Starting Braking etc.					o	o
					o	o
Pulley & Shaft Calculations						
Shaft Deflection at Hub	o	o	o	o	o	o
Shaft Torsion / Strength	o	o	o	o	o	o
Running Tensions		o	o	o	o	o
Starting Tensions		o	o	o	o	o
Multiple Shaft & Bearing Combinations		o	o	o	o	o
Pulley Inertia's Calculated		o	o	o	o	o
Pulley & Shaft Rationalisation by changing database selection setting		o	o	o	o	o
Conveyor Dynamics						
System Equivalent Masses	o	o	o	o	o	o
Drive & Pulley Inertia Calcs		o	o	o	o	o
Belt Tension Rise % - Static	o	o	o	o	o	o
Starting Time Loaded, Empty	o	o	o	o	o	o
Stopping Braking Loaded, Empty		o	o	o	o	o
Stopping Coasting Loaded, Empty		o	o	o	o	o
Stopping Distance Full & Empty		o	o	o	o	o
Discharge Volume Braking & Coasting		o	o	o	o	o
Individual Drive Starting Torque factor		o	o	o	o	o
Flywheel / Inertia addition at any point		o	o	o	o	o
Flexible Belt Dynamic Tension Graphs						o
Belt Velocity at any point during Starting / Stopping						o
						o
Takeup Movement Plotted vs Time						
Quick Calculations						
Discharge Trajectory - Belt line	o	o	o	o	o	o
Discharge Trajectory - Lump			o	o	o	o
Hopper Pull-out Force - Basic	o	o	o	o	o	o
Feeder / Hopper Calc - Bruff's			o	o	o	o
Concave Curves	o	o	o	o	o	o
Convex Curves	o	o	o	o	o	o
Bearing Life	o	o	o	o	o	o

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Equipment Schedules from Multiple Design Files						
Design Summary		o	o	o	o	o
Pulley & Shafts	o	o	o	o	o	o
Idlers	o	o	o	o	o	o
Motors	o	o	o	o	o	o
Gearboxes	o	o	o	o	o	o
Fluid Couplings	o	o	o	o	o	o
Printing and Exporting Reports						
Number of Reports	**30**	**45**	**60+**	**60+**	**60+**	**90+**
Print Multiple Reports		o	o	o	o	o
Export Reports	o	o	o	o	o	o
PDF Files			o	o	o	o
MS Word RTF files			o	o	o	o
Draw Conveyor			o	o	o	o
3D Model	o	o	o	o	o	o
Tension Graphs - Bar Graphs T1/T2			o	o	o	o
Tension Graphs - Line Graphs			o	o	o	o
Dynamic Graphs 2D and 3D						o
Conveyor Equipment Costing						
Basic Equipment only	o	o	o	o	o	o
Comprehensive			o	o	o	o
Civil, Electrical, Erection			o	o	o	o
Selling Prices & Gross Margin Calcs			o	o	o	o
Help Files						
Basic	o					
Intermediate		o				
Comprehensive			o	o	o	o
Context Sensitive	o	o	o	o	o	o
New Windows Format with Index, Find			o	o	o	o
Instruction Manual						
Basic	o					
Intermediate		o				
Comprehensive			o	o	o	o
Operating Systems (Optimal)						
Windows® 3.1	o	o				
Windows® 95, 98, ME	o	o	o	o	o	o
Windows® NT4	o	o	o	o	o	o
Windows® 2000		o	o	o	o	o
Windows® XP			o	o	o	o