

# Importing Excel/path/SIDIM data into a SIZER project

SIZER - import load profiles

FAQ • August 2013



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## Question

How can traversing curve sections be transferred from Excel and path/SIDIM into the SIZER "Enter traversing curves" screenform in the mechanical system?

## Answer

To fully answer this question, follow the handling instructions and notes listed in this document.

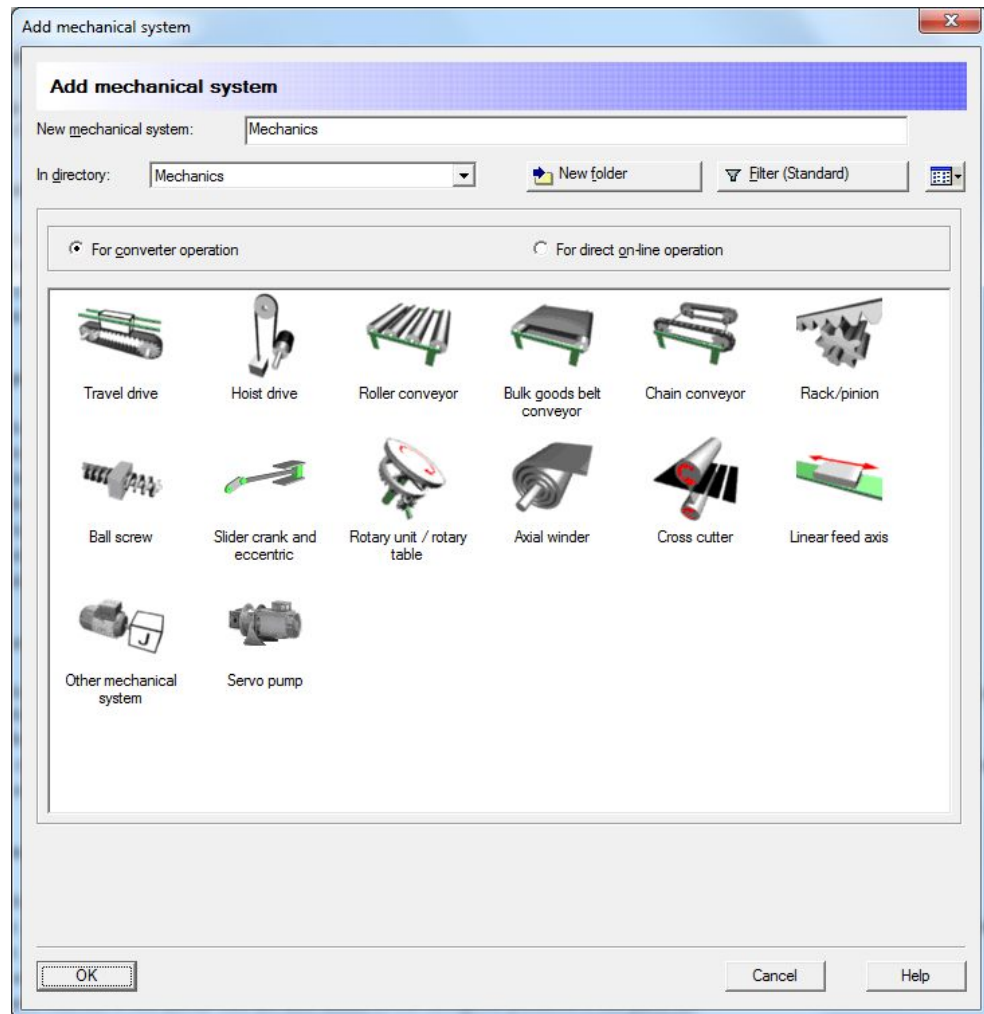
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# 1 Introduction

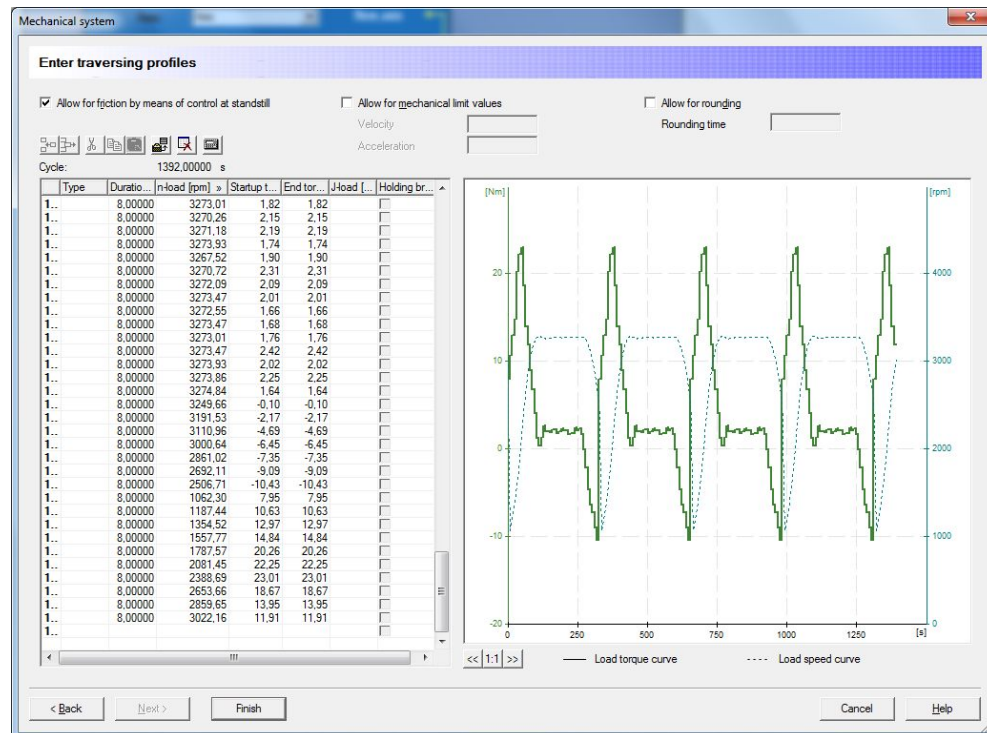
In SIZER, the complete drive line can be configured using a mechanical system, see Fig. 1-1.

Fig. 1-1: Mechanical systems under SIZER



The traversing curve for some mechanical models can be entered in tabular form (Fig. 1-2). The user has often created the traversing curve beforehand in a spreadsheet program (e.g. Excel). Transferring such data manually to the SIZER table is time-consuming and can cause transmission errors. In the current SIZER version 3.9 it is possible to import this Excel data and path/SIDIM data into SIZER.

Fig. 1-2: Traversing curves input under SIZER



### The data acceptance is available in the following mechanical systems:

- Other mechanical system
- Traversing gear
- Hoist drive
- Roller conveyor
- Bulk goods conveyor
- Chain conveyor
- Rack and pinion
- Ball screw
- Linear feed axis
- Slider crank and eccentric
- Rotary unit, rotary table
- Servo pump

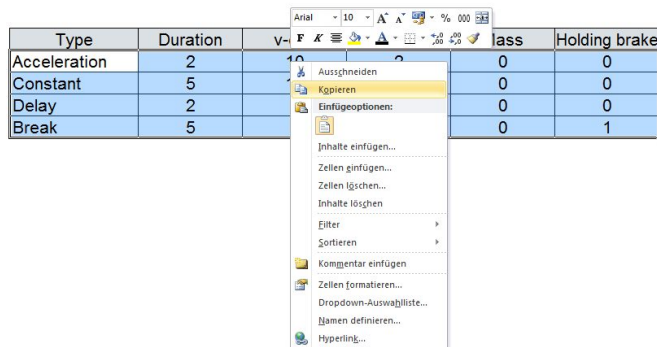
## 2 Data import

### 2.1 Excel data import

The "Traversing gear" example is used to show the import procedure. The data to be copied must have the same number of columns and units as the input table of the mechanical system, see Fig. 2-4.

The data acceptance is performed via the clipboard. Copy the desired data area from the Excel table, see Fig. 2-1.

Fig. 2-1: Copy data area



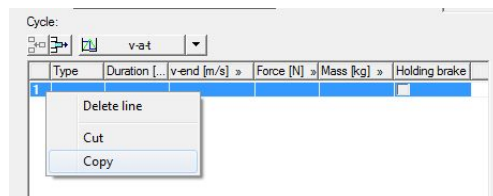
Type	Duration	v-end	Force [N]	Mass [kg]	Holding brake
Acceleration	2		0	0	0
Constant	5		0	0	0
Delay	2		0	0	0
Break	5		0	0	1

To insert the data in SIZER at the beginning (Fig. 2-2), the first row must be marked. To do so, click "1". The right mouse key with "Insert" can then be used to insert the data. The Insert button can also be used. Further rows can be inserted by marking the next free row and the right mouse key used to insert.

Any existing data is overwritten. The units set in SIZER remain unchanged during the import. Please verify that your imported data matches the SIZER units. The thousand-separator character cannot be used. Empty rows and columns are not filled.

The "Holding brake" column can have the values 1 (selected), 0 (deselected) and -1 (not available). The holding brake is used to hold the motor shaft at the motor standstill and can be selected at speed 0 rpm. The values for the holding brake are not transferred for incomplete load profiles. The load profiles must be complete and consistent so that the pause sections can be acquired.

Fig. 2-2: "Traversing curve" mechanical system



Type	Duration [v-end [m/s]]	Force [N]	Mass [kg]	Holding brake
1				

Fig. 2-3 shows a successful data import. The cycle characteristic is shown in the right-hand screen area.

Fig. 2-3: Insert task performed successfully

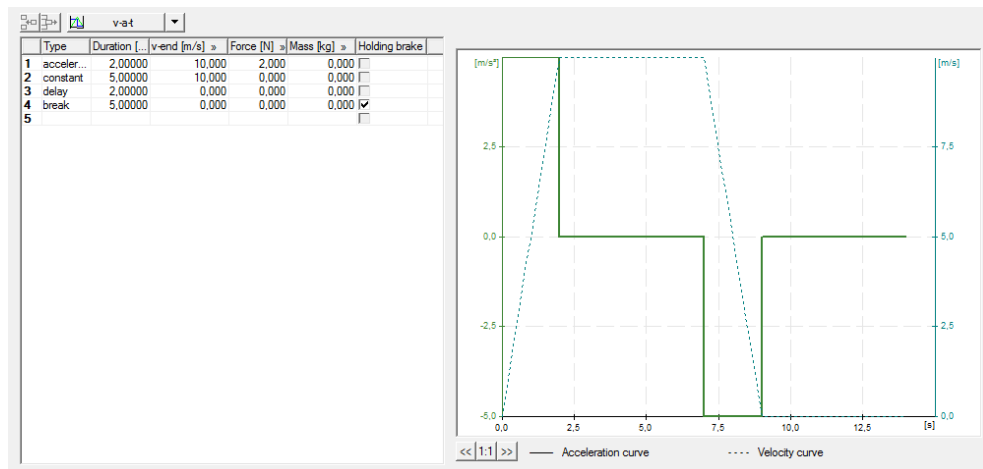


Fig. 2-4 shows the individual formats for each mechanical system.

Fig. 2-4: Formats of the various mechanical systems

	Type	Duration	v-end	Force	Mass	Holding brake				
Travel drive										
Hoist drive	Text	1,0000	0,000	0,000	0,000	0				
Roller conveyor										
Bulk goods belt conveyor										
Chain conveyor										
rack, pinion										
Ball screw										
Lineare Vorschubachse										
Slider crank and eccentric	Type	Duration	ω-load	Force	Mass	Holding brake				
	Text	1,00000	0,000	0,000	0,000	0				
Rotary unit/rotary table	Type	Duration	ω-load	M-load	J-load	Holding brake	β-additional	r-additional	m-additional	
	Text	1,00000	0,000	0,00	0,000000	0	0,00	0,000000	0,000	
Other mechanical system	Type	Duration	n-load	Startup torque	End-torque	J-load	Holding brake			
	Text	1,00000	0,00	0,00	0,00	0,000000	0			
Other mechanical system	Type	Duration	n-end	Startup torque	Holding brake					
Pfad/SIDIM	Text	1,00000	0,00	0,00	0					
Servo pump	Type	Duration	Q-end	End-pressure						
	Text	1,00000	0,00	0,00						
Axial winder, Cross cutter	no input possible									

1 = activ  
0 = inactiv  
-1 = not available

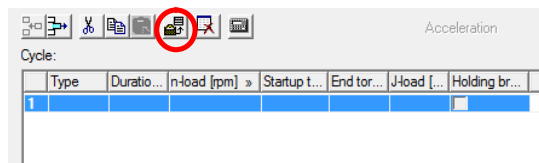
## 2.2 Import of path/SIDIM data

Path/SIDIM movement sequences can also be imported in an "other mechanical system" via the clipboard. Fig. 2-5 shows the button used to insert the data. The following format is required:

SIDIM import format:

Type	Duration	n-end	Initial torque	Brake
------	----------	-------	----------------	-------

Fig. 2-5: Other mechanical system



For the path/SIDIM data, the significance of the holding brake state with regard to SIZER is different:

- SIZER: The holding brake holds the load in the pause (corresponds to 1 for SIZER).
- Path/SIDIM: The motor does not need to hold the load in the pause; the holding brake is active (corresponds to 0 for path/SIDIM).

Table 2-1: Various details for the holding brake

Holding brake	Active	Inactive
SIZER	1	0
Path/SIDIM	0	1

Available values for path/SIDIM are 1 (deselected) and 0 (selected). Because only the starting torque is available for path/SIDIM, SIZER takes it as end torque.

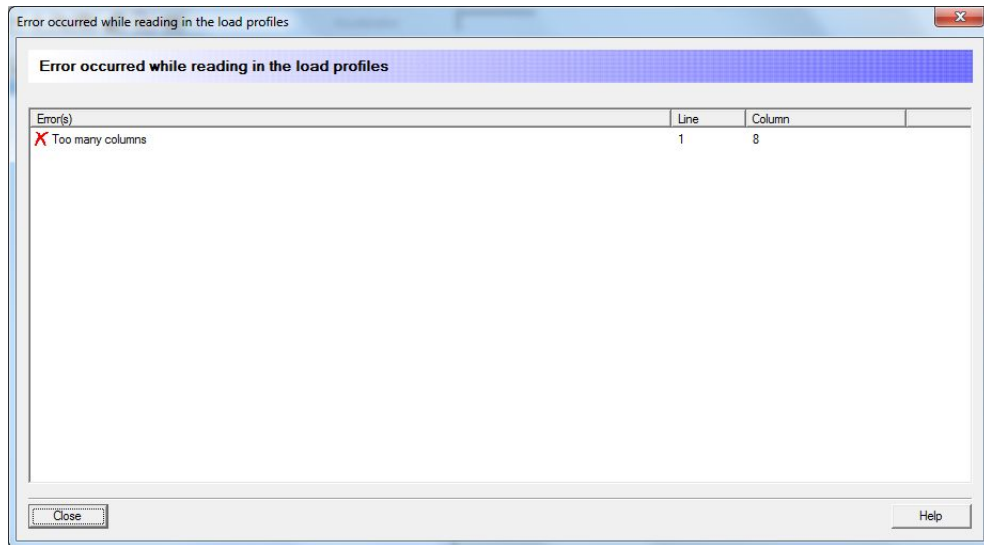


### 3 Possible error messages

If the import data does not match the format specifications, errors can result. They are displayed in an info window. Several input errors are listed below.

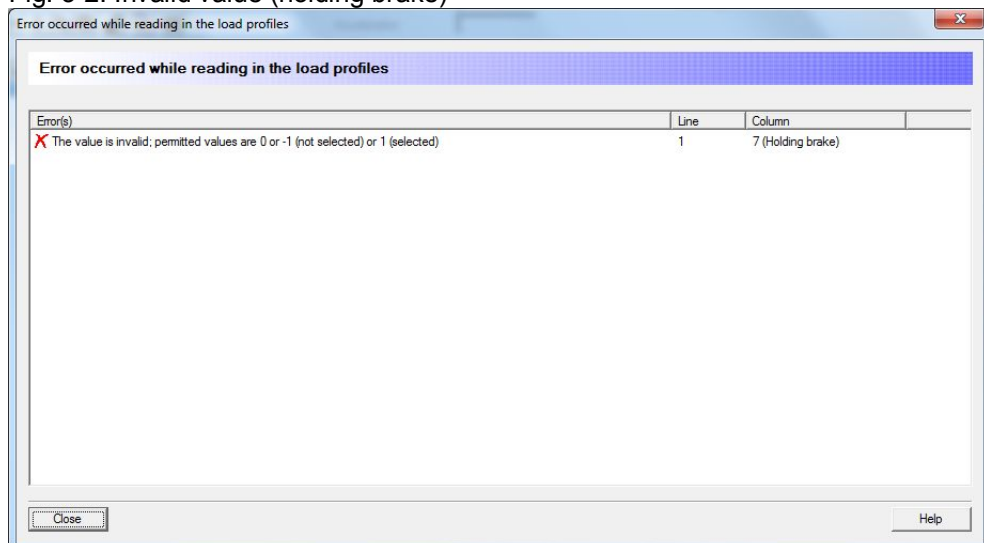
- Too many columns have been inserted during the copying.

Fig. 3-1: Number of columns



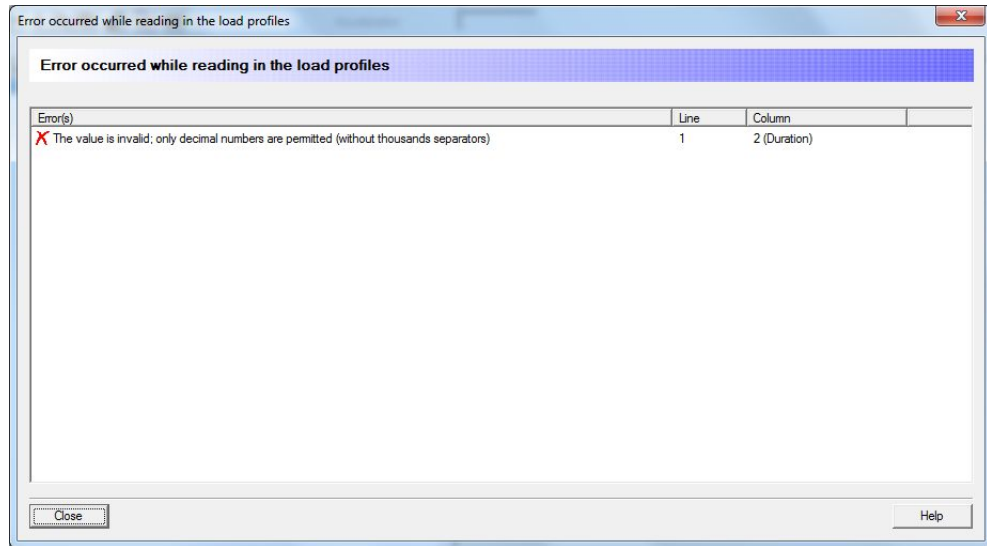
- If a value is specified for the holding brake, it must be -1, 0 or 1.

Fig. 3-2: Invalid value (holding brake)



- Text was inserted in the number field.

Fig. 3-3: Invalid format



- The imported value lies outside the value range. In this case, the speed value has too many digits.

Fig. 3-4: Limit value violation

