**Product Data** 



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JVL ...when motors must be controlled

## SizeWare Motor Configuration Software



SizeWare is a Windows-based program that makes it very easy to determine the required motor size for a specific task in applications such as machine design, education and research.

SizeWare enables you to key-in all commonly required parameter values that influence the motor torque or power required in order to achieve the desired motion.

SizeWare can be used for calculation of the correct motor size for AC-Servo, DC-Servo, and Step motors.

SizeWare runs on any PC under Windows 3.xx or Windows 98/

XP and is very easy to use. A single screen picture is used for displaying all parameters. Once the known values have been keyed in, simple select CALCU-LATE to display the results of the configuration. Results can printed out as hard copy or saved on disk for later use.

- Windows-based: runs under either Windows 3.xx or 98/XP
- Easy to use
- Single screen for all calcula tions
- Can be used for dimensioning Step, AC-, and DC Servo Motors

- Following parameters can be keyed-in: Velocity Acceleration Time
- Load
- Motor Inertia
- Gear Inertia
- Vertical/Horizontal movement Safety factor
- Can calculate with or without gearing on various drives: Spindle Drive belt Disk
- Hard-copy printouts of results
- Storage of results on disk
- Supplied on 31/2" diskette
- Also ideal for educational purposes

LD0019-02GB



## SizeWare Configuration Example



In the above simple example using a motor-driven spindle, a mass is to be moved a certain distance in a certain time.

- Typical values are as follows:
- Mass: 70kg

Length: 1000mm

Time of travel: 4s.

These values are keyed-in to SizeWare. Acceleration (and Deceleration) time is set to 0.1 s and the start velocity to 500 Hz.

The spindle data are keyed in. Friction is estimated to be 10 N.

The CALCULATE button is then pressed and a suitable motor that can provide the required torque at the calculated step frequency is found. The motor data is then keyed in. In this example an MAE step motor HY 200-2240 is selected CALCULATE is then selected again and a check is made to ensure that the calculation still provides results within the required range.



In this example the motor must be able to provide 0.4 Nm at 3064.1 Hz, which the selected motor can. A smaller motor may also be suitable for the task. During the calculation sequence it may be necessary to adjust the selected time, acceleration and start frequency. SizeWare immediately shows the effect of such changes on the required torque and frequency, thus greatly helping to optimise system design and configuration..

### **Configuration Example**



In this simple example, the motor torque is transmitted via a gear to a belt-driven sled.

Typical values are as follows: Gearing: 1:10.5 Mass of sled 70 kg Time of travel 1.5 s. Length: 300 mm These values are keyed-in to SizeWare together with data for the cogs, etc. The gear can be selected directly from Technoingranaggi's product range.

After pressing CALCULATE, a motor is
selected that can provide the calculated
torque at the given operating fre-
quency. The software includes data for
a wide range of standard motors of
various manufacture. In this example a
Yaskawa motor SGM-04 is selected.

#### System Requirements

PC with Windows 3.1 or later, or Windows 98/XP. Harddisk with 1 Mbyte available disk space.

Mechanical		Moneral			
Mass	* 76. kg 6. 6. Degree	Terpsr from mechanics Terpsr from belt and inertia	1.297		
Friction	. N	Torque from motor and gear	1.0/1 No.		
Toothed wheel mats. Steel	- 7950. kg/m*1		1.217 844		
Toothed wheel diameter	101. mm	Saleta factor	15		
Toothed wheel thickness	25	Torque Incl. safety factor	2.824		
Number of toothed wheel	2 10				
Many of loothed belt	45 44				
Tauthed belt efficiency IBB. N		Motor mov	Motor movement		
Other rotating inertia	R. Apart	Frequence	22314.2 He		
		Motor acceleration	227942.3 Hats		
Moreneut		Acceleration patters	THI Paters		
Telecity of table	111.381	Acceleration length	16.6683		
Total time for movement		Total gracing	48.445355 Pulsesie +		
Longh	200	Rotational speed of motor	668.4 spm		
Acceleration time	0.1 5	The board of the board	4		
Start speed	281 Ha	Power (not in	cluding safety factor)		
		At constant speed	1.193		
Motor an	d gear	Acceleration power	34.428		
Publics per cere. 2040	- 2948. Pulate		-78.867		
Inertia of motor CEAL 84	. 0.01 harm"	Inertia referred to motorchaft			
Inertia of gear \$105.0017-800.2					
Genting ratio	8.5	S			
Gear efficience	90.				
			Velocite	1	
Base			Torque		
		1.36			
Company		-			
Address		- 1 /			
Postal Code Toes		4.00	1		
Country		_	1		
Tel.mo.	Date				
Subject			50 1.00		
		Total tie	ne [ies]		



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