



## 1 Performance

### 1.1 General

LoadMate electric chain hoists are designed for lifting and transporting of materials only. Under no conditions or circumstances, either during initial installation or in regular use, are hoists to be used for lifting or transporting of personnel. Do not lift or transport any load over personnel.

### 1.2 Ambient Conditions

LoadMate electric chain hoists are designed for indoor use where the ambient temperature is between 14°F [-10°C] and 104°F [40°C], elevation less than 3300 ft [1000 m] and the relative humidity less than 90%. When specially equipped, the hoists may be used for outdoor use or at higher elevations.

The sound intensity level of the hoist in the assumed operating location does not exceed 70 dB during normal hoisting and 75 dB while braking.

## 2 Hoist Duty Service Classification

### 2.1 FEM Standards

#### 2.1.1 FEM Hoist Duty Service Classification

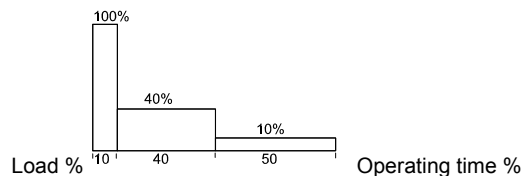
Service conditions have important influence on the performance of wearing parts of a hoist such as gears, bearings, chains, sprockets, electrical equipment, brake linings, load and lift limit devices, wheels, etc. Careful consideration of the duty service classifications will enable the user to evaluate the application, and to obtain a hoist designed for optimum performance and minimum maintenance. According to FEM9.511 standard, the duty service classification can be determined from its 1) load spectrum and 2) average daily operating time.

#### 2.1.2 FEM Load Spectrum

The load spectrum can be determined from the table below.

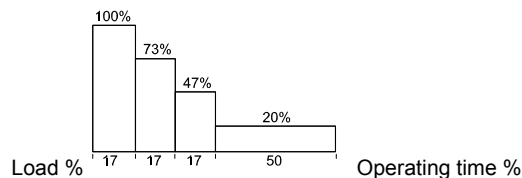
##### LIGHT

Occasional full load.  
 Usually light load.  
 Small fixed load.



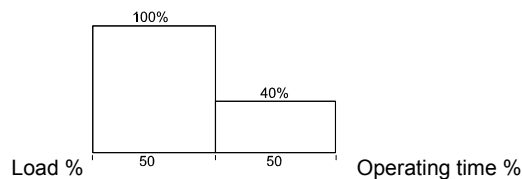
##### MEDIUM

Occasional full loads.  
 Usually light load.  
 Average fixed load.



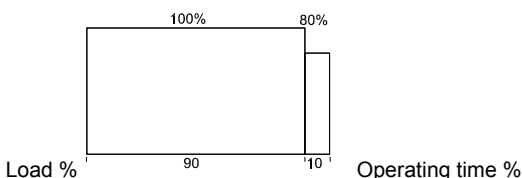
##### HEAVY

Repetitive full load.  
 Usually average load.  
 Heavy fixed load.



##### VERY HEAVY

Usually almost full load.  
 Very heavy fixed load.





### 2.1.3 FEM Average Daily Operating Time

The average daily operating time of the hoist can be calculated from the running time of the hoisting machinery [hours/day].

$$t = \frac{2 * H * N * T}{V * 60}$$

- ◆ H = average hoisting height m [ft]
- ◆ N = number of work cycles per hour [cycles/h]
- ◆ T = daily working time [h]
- ◆ V = hoisting speed m/min [fpm]

### 2.1.4 FEM Determining the hoist duty service classification

When the load spectrum and the average daily operating time of the hoist are identified, the duty service classification is obtained from the table below.

Load spectrum	Average daily operating time ISO/FEM (hours per day)					
	≤ 0.5	≤ 1	≤ 2	≤ 4	≤ 8	≤ 16
LIGHT			M3 1Bm	M4 1Am	M5 2m	M6 3m
MEDIUM		M3 1Bm	M4 1Am	M5 2m	M6 3m	M7 4m
HEAVY	M3 1Bm	M4 1Am	M5 2m	M6 3m	M7 4m	
VERY HEAVY	M4 1Am	M5 2m	M6 3m	M7 4m		

## 2.2 ASME Standards

For information about ASME Hoist Duty Service Classification, reference ASME publication catalog ASME HST-1 (latest edition) for electric chain hoists.