

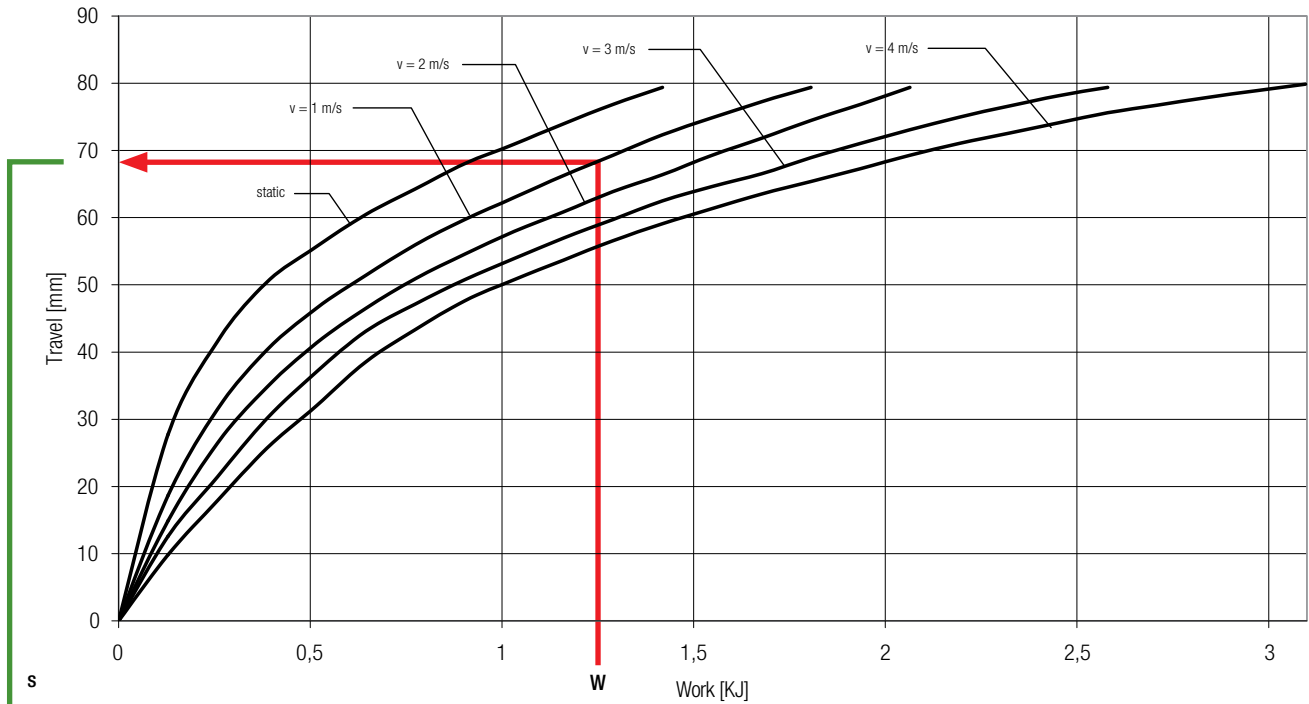
# Load Diagrams

## Program 0180 Cellular Bumpers

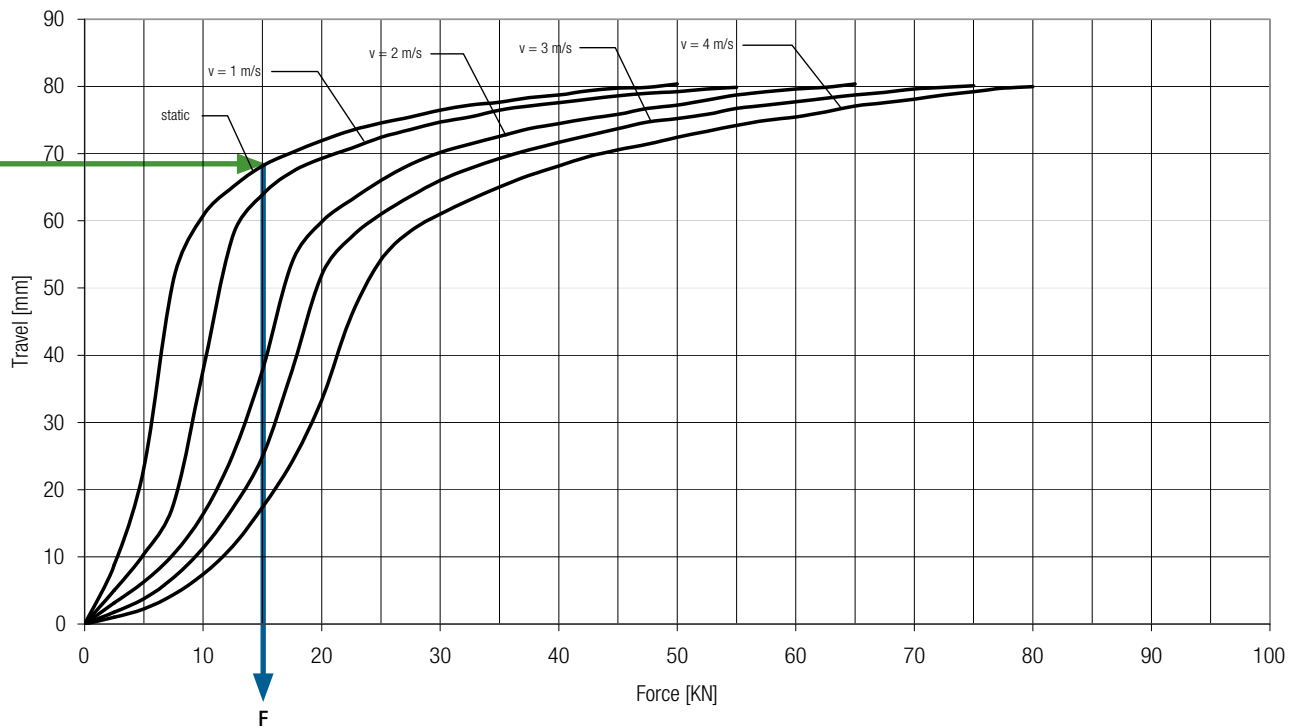


## Calculation Example

100 x 100 Energy absorption



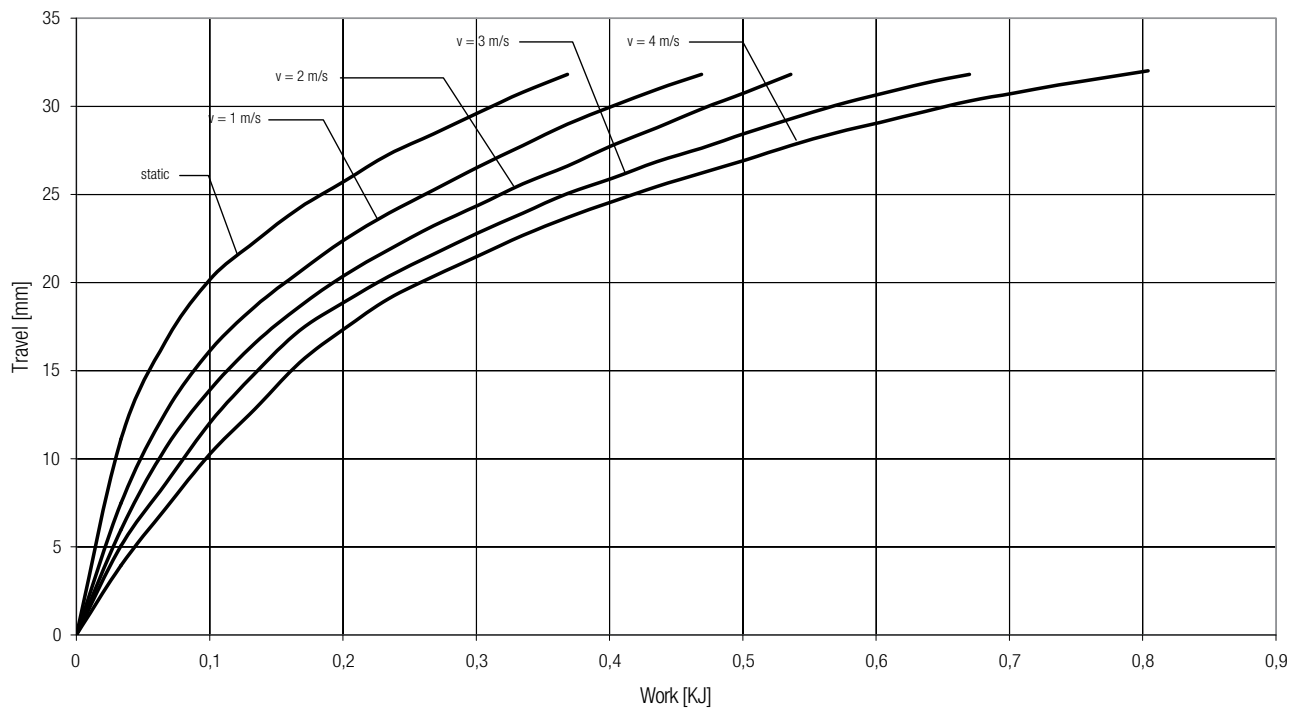
100 x 100 Final load



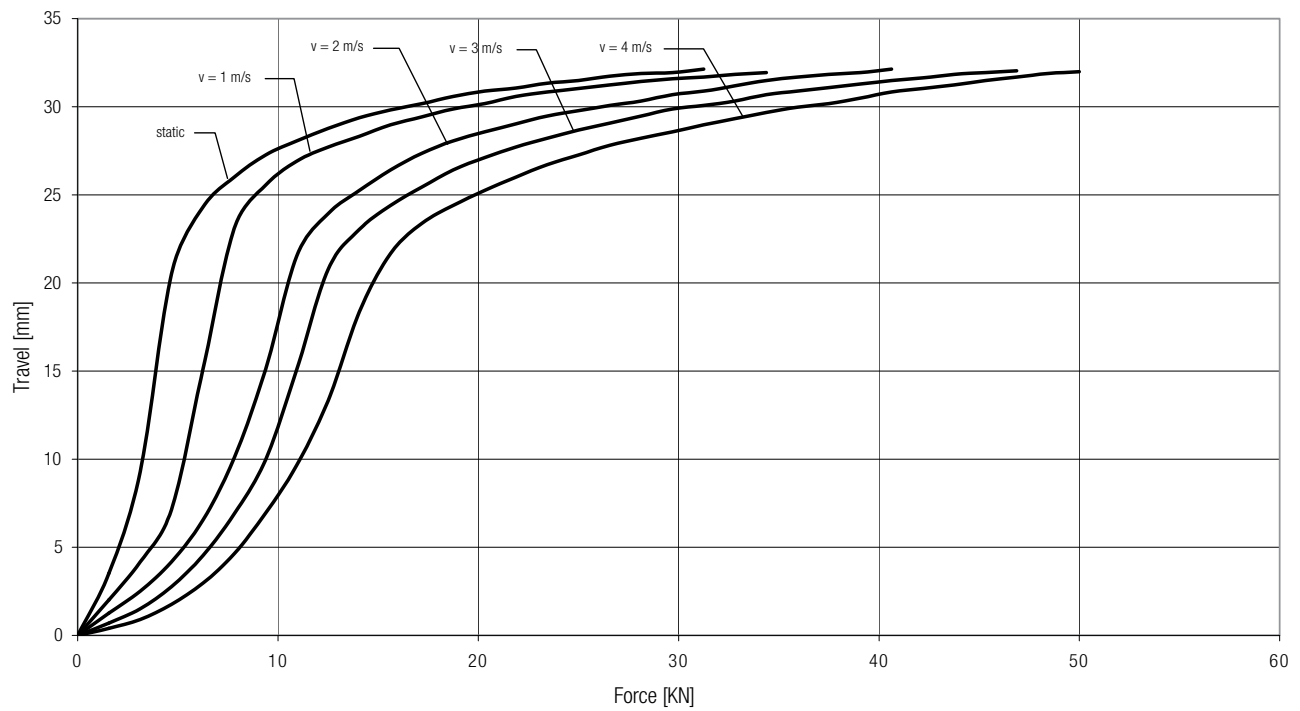
1. Calculation of energy per bumper:  $W = \frac{1}{2} m \times v^2$
2. Readout compression length from the diagram
3. Readout final load of the bumper from the table
4. Result and verification
  - $S < 0,8 \times h$
  - $F < F_{max}$  of the crane structure
  - $a = v^2/2s < a_{max}$

**W = Energy Absorption [J]**  
**s = Travel [mm]**  
**F = Force [kN]**  
**v = Velocity [m/s]**  
**m = Mass [kg]**  
**h = Bumper height**  
**a = deceleration**

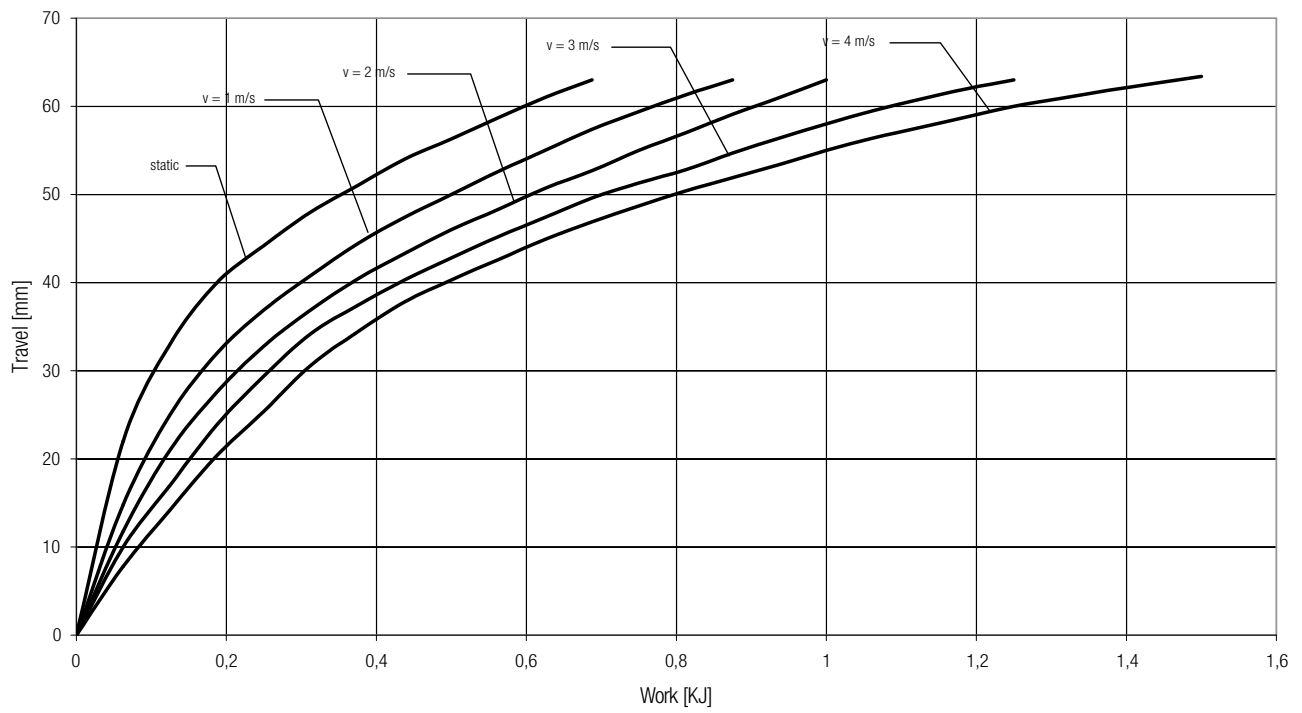
## 80 x 40 Energy Absorption



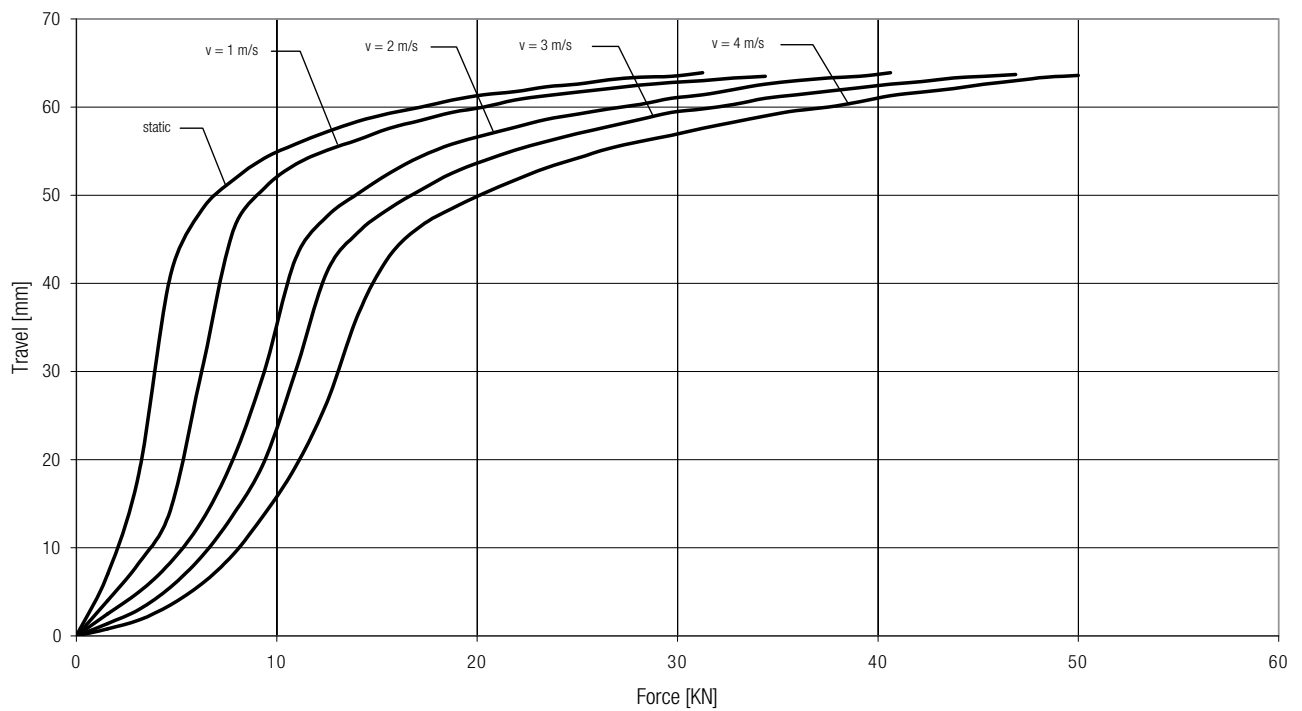
## 80 x 40 Final Load



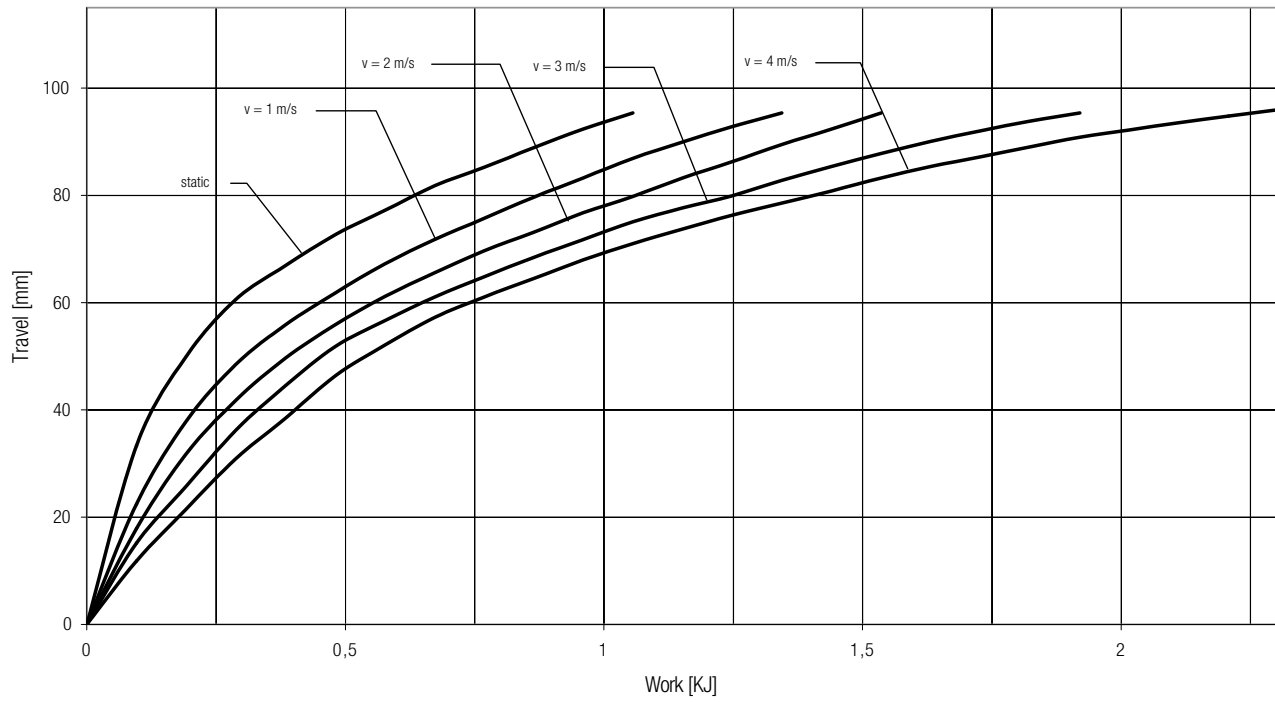
## 80 x 80 Energy Absorption



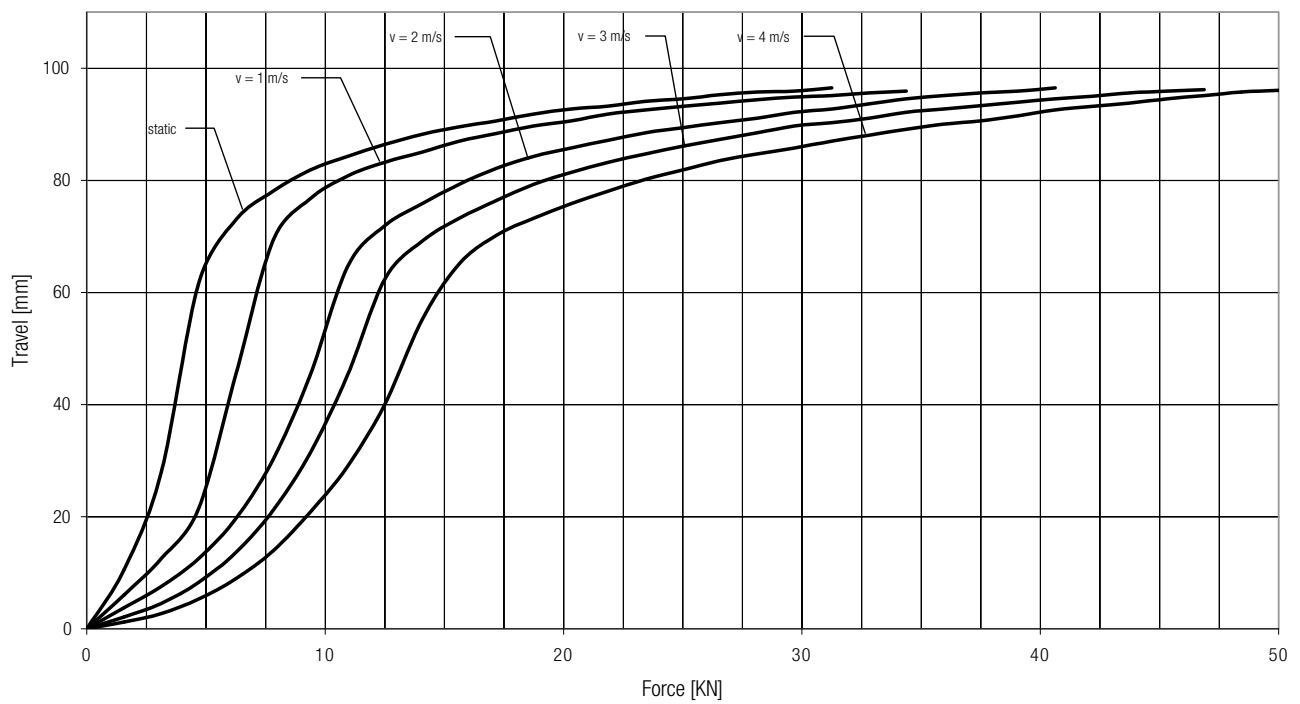
## 80 x 80 Final Load



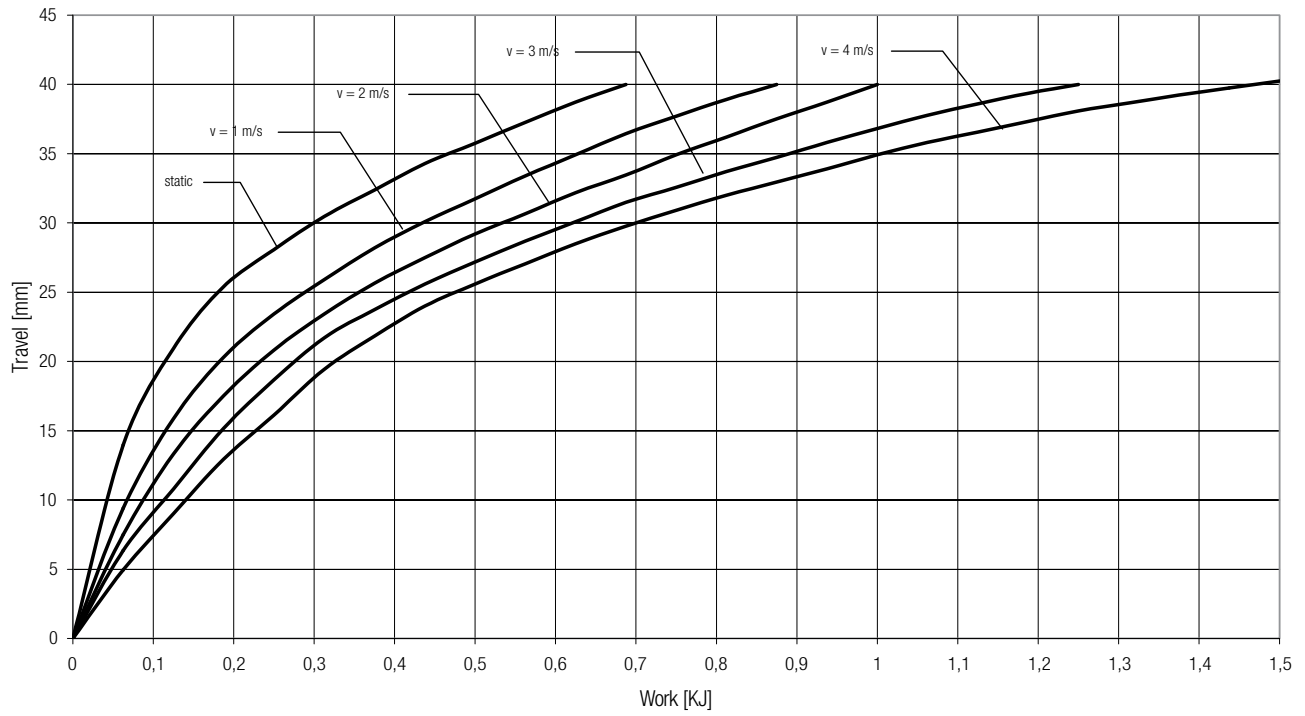
## 80 x 120 Energy Absorption



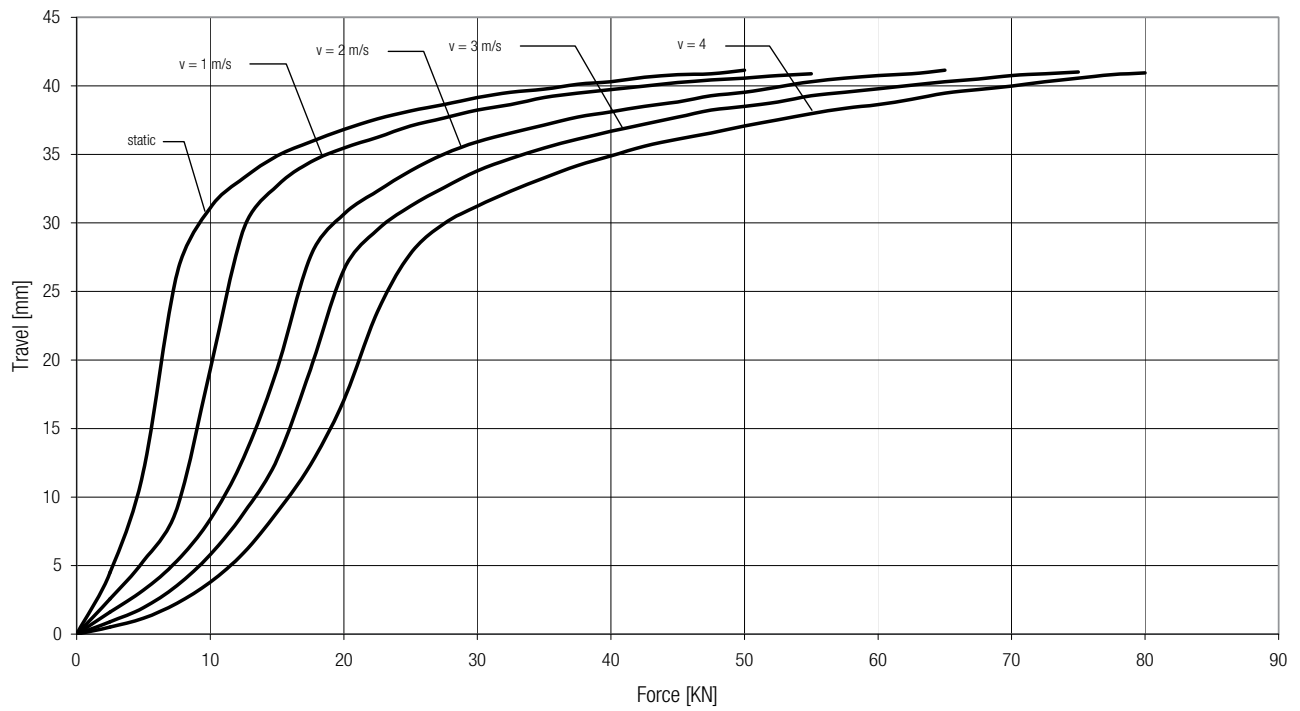
## 80 x 120 Final Load



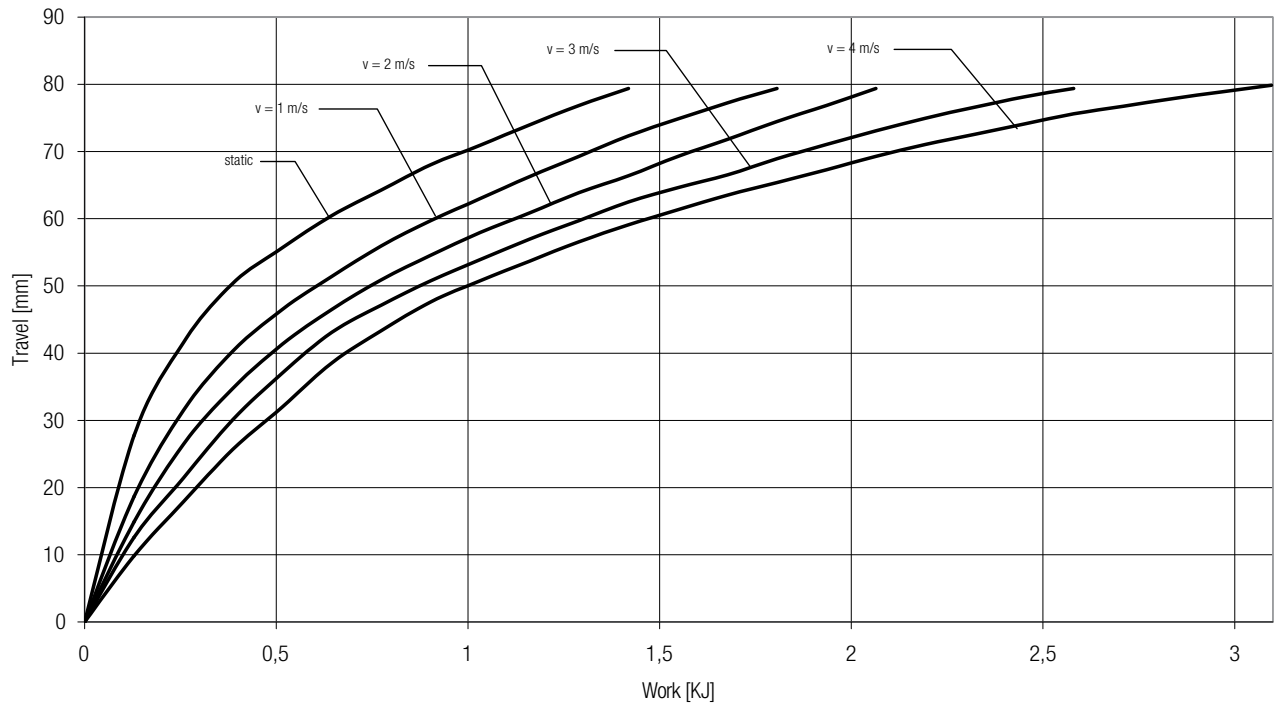
## 100 x 50 Energy Absorption



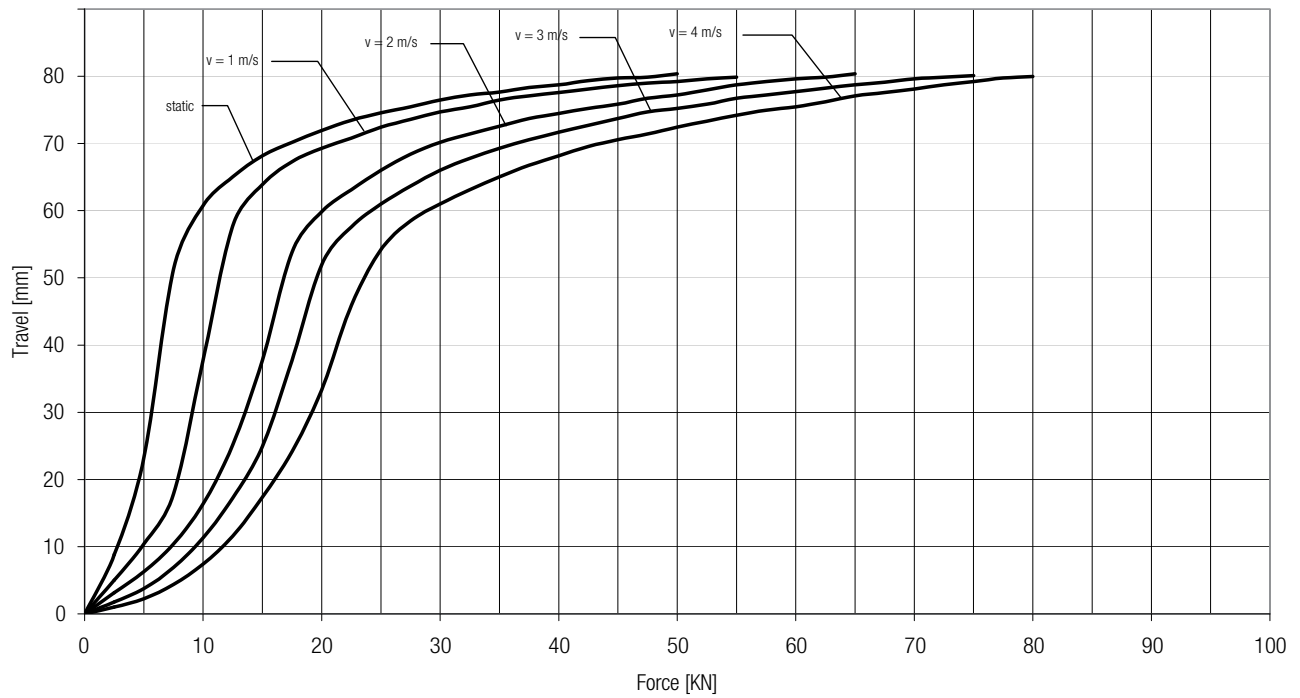
## 100 x 50 Final Load



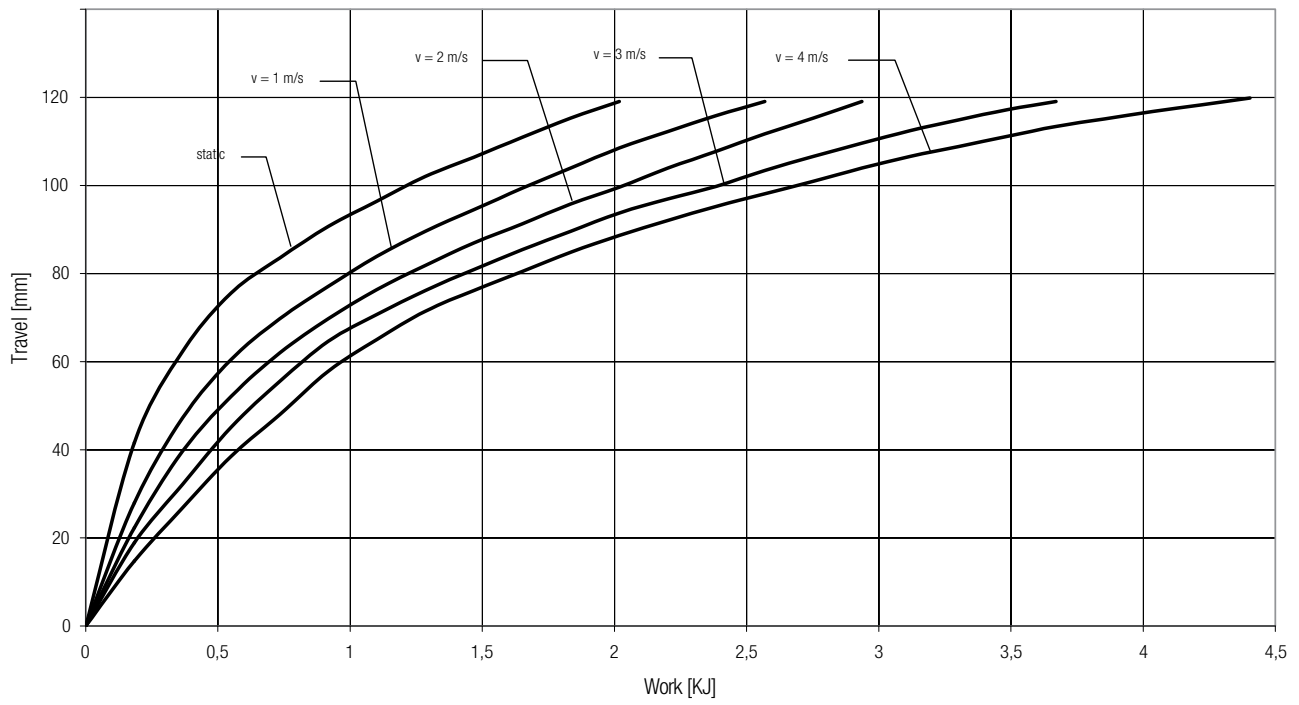
## 100 x 100 Energy Absorption



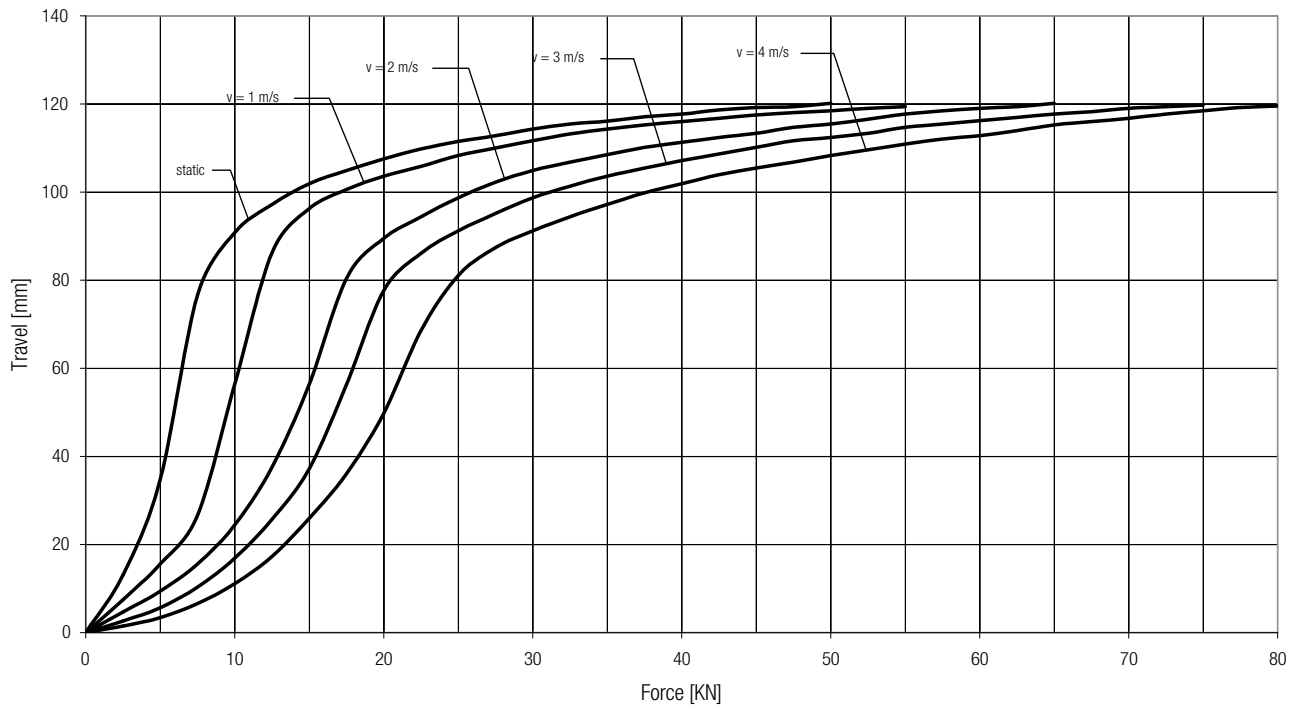
## 100 x 100 Final Load



## 100 x 150 Energy Absorption

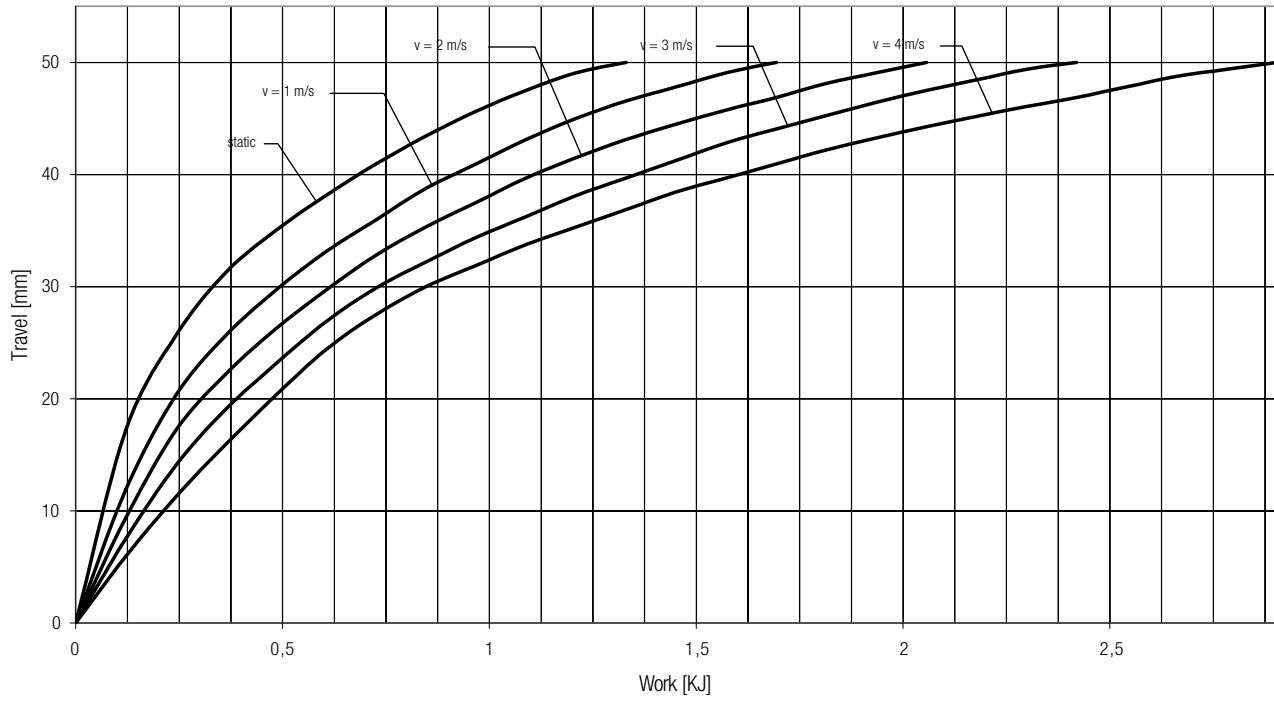


## 100 x 150 Final Load

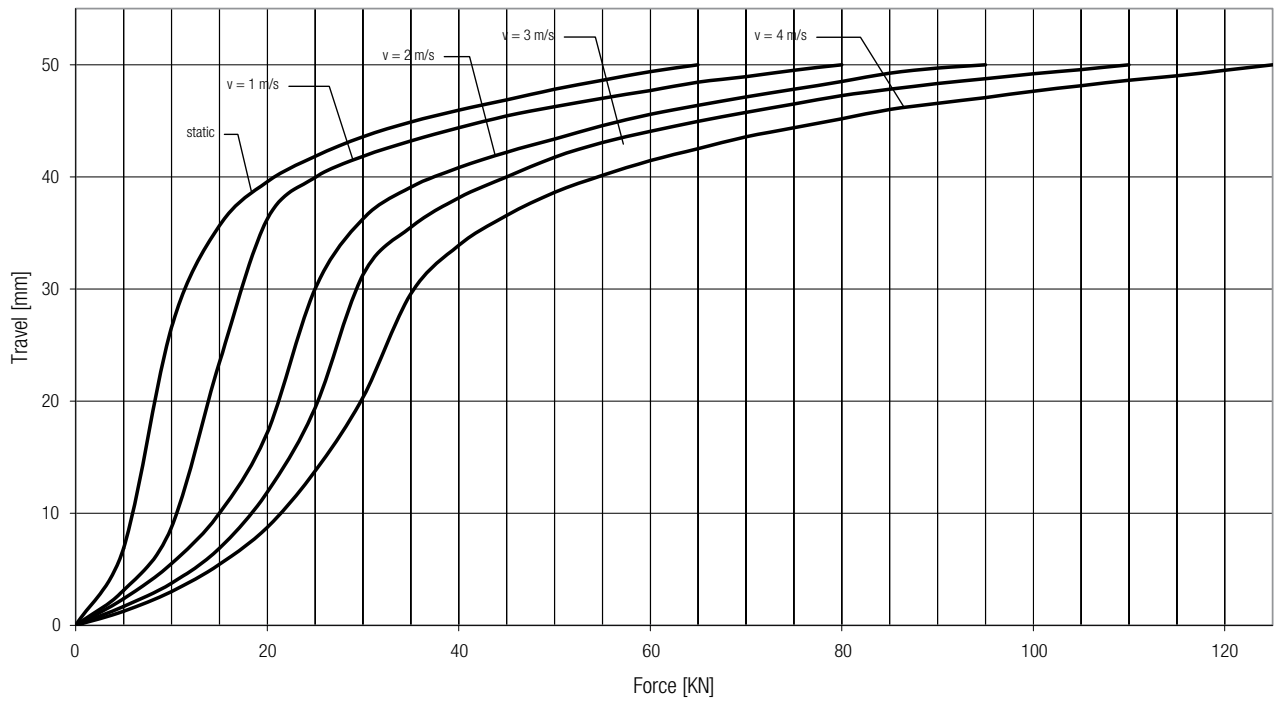




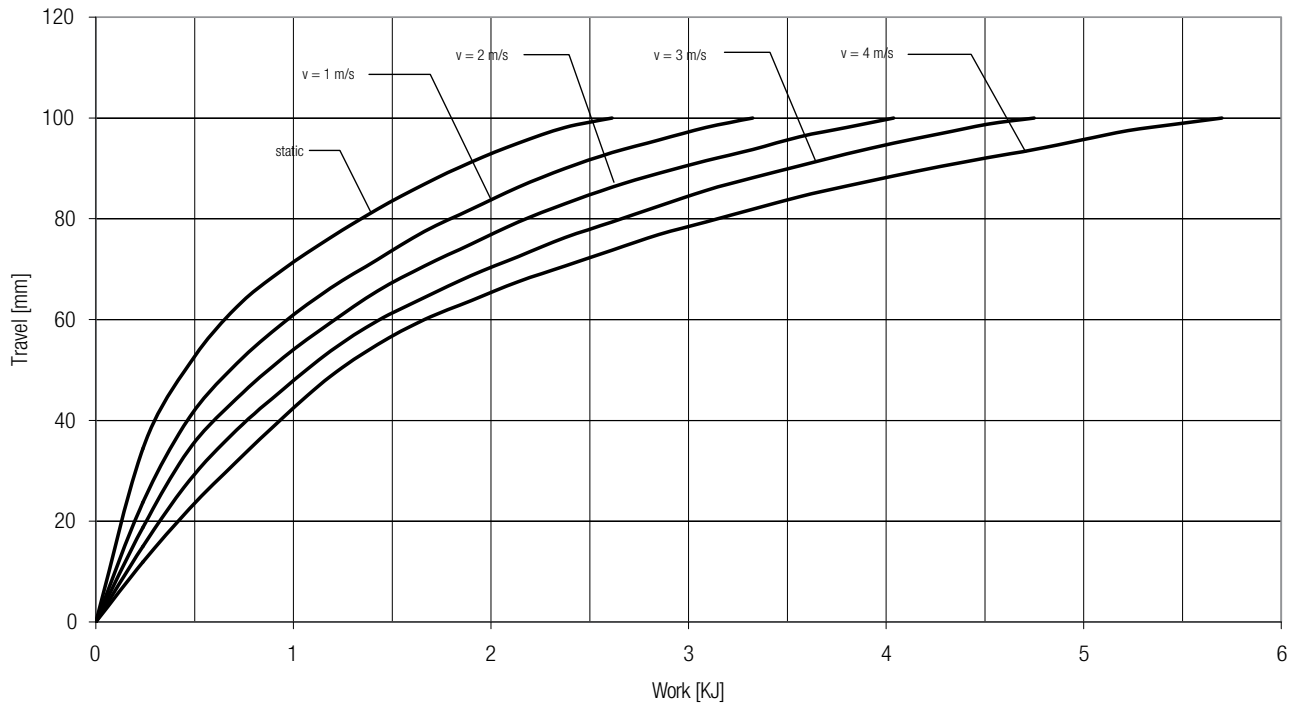
## 125 x 63 Energy Absorption



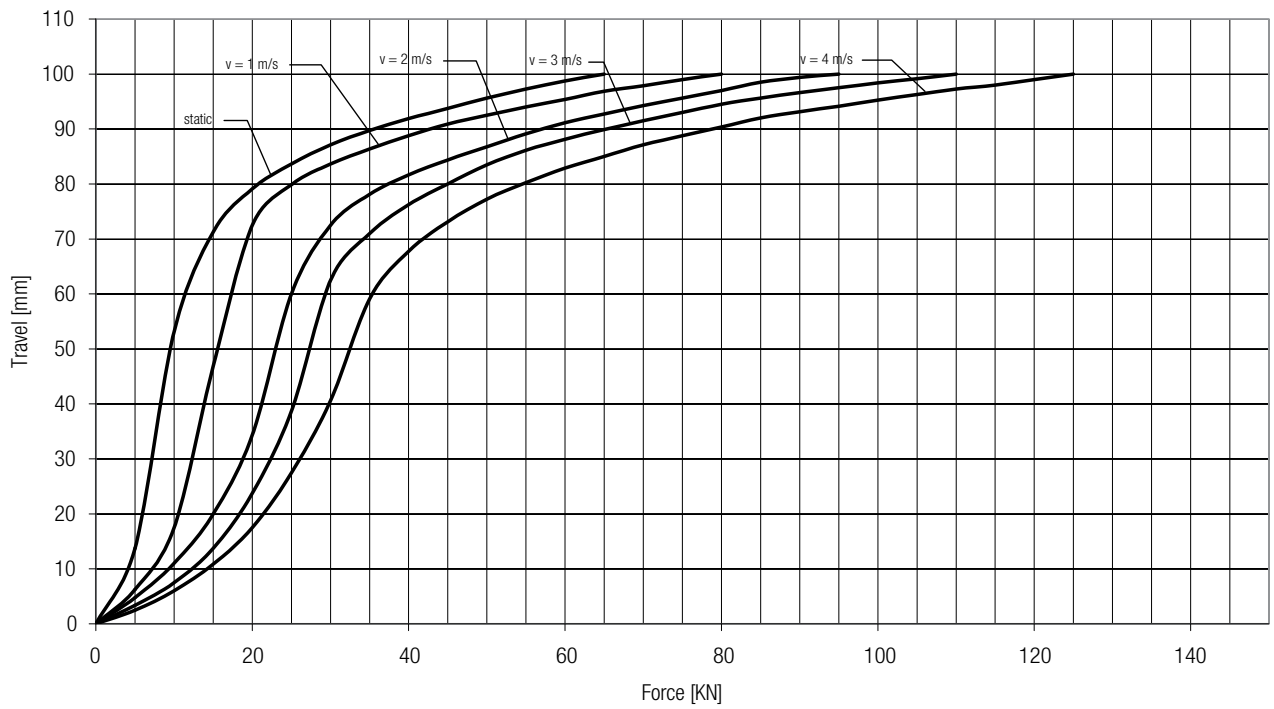
## 125 x 63 Final Load



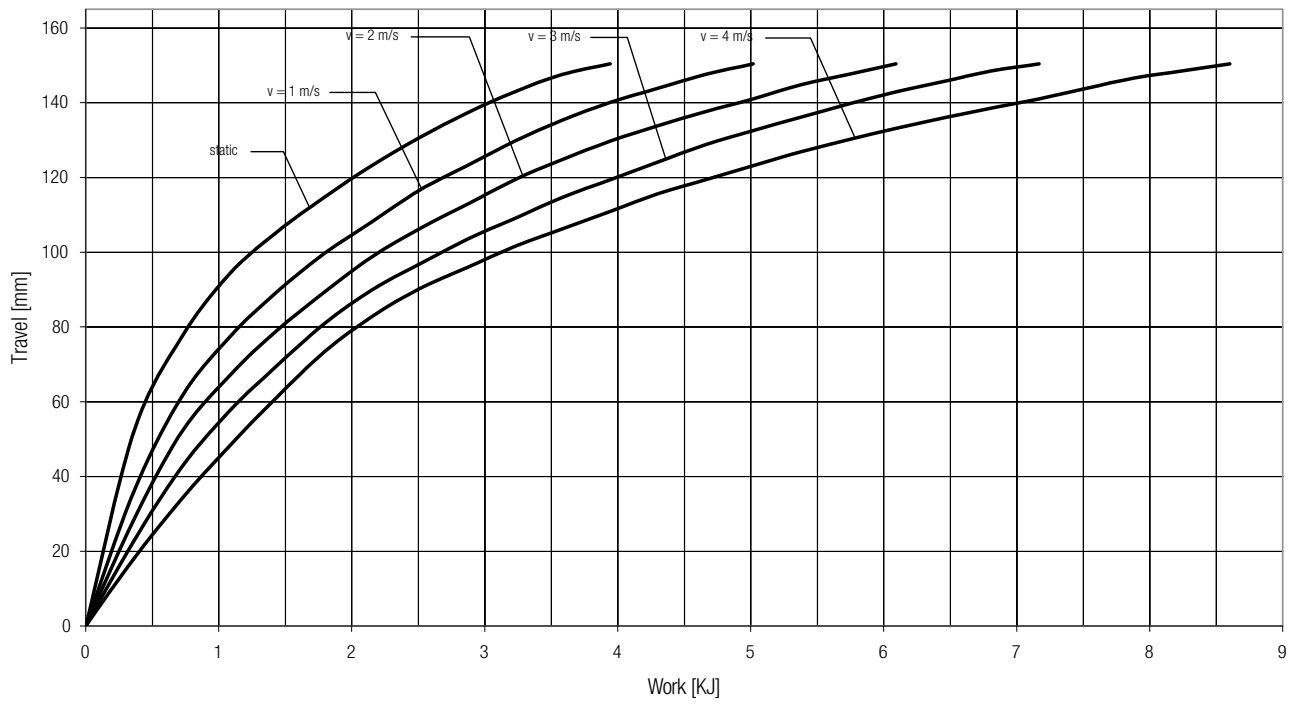
## 125 x 125 Energy Absorption



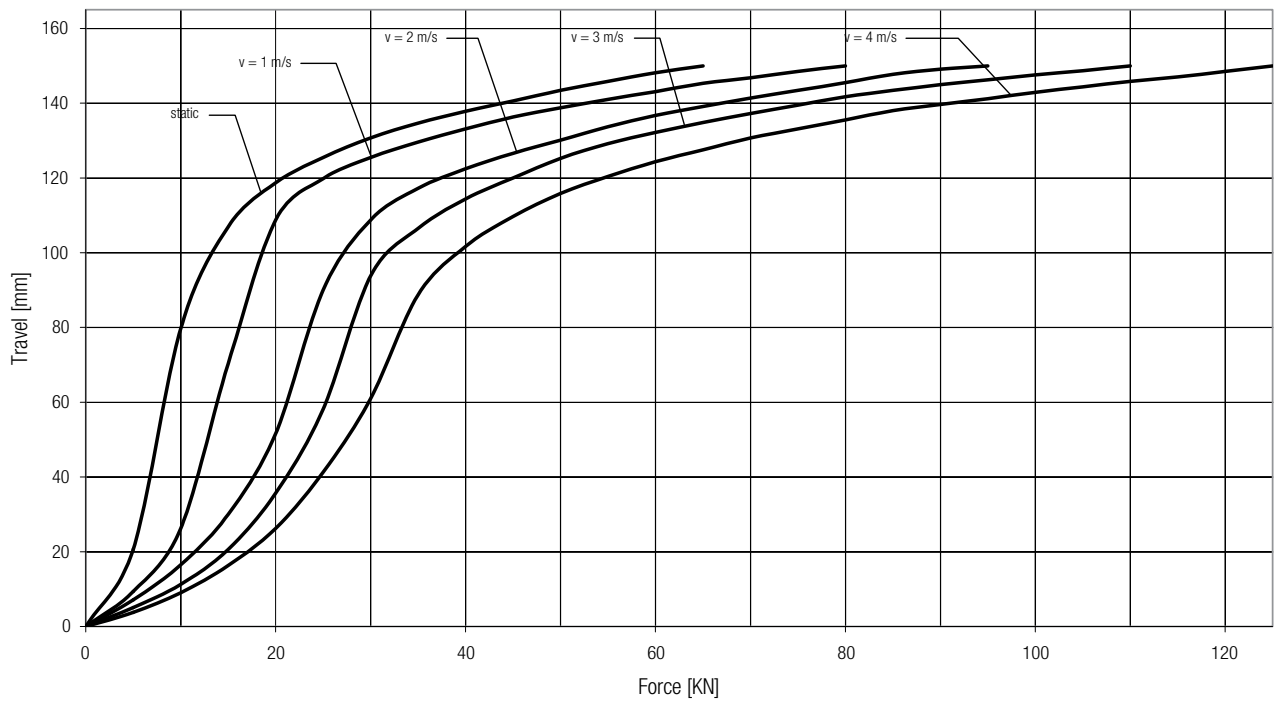
## 125 x 125 Final Load



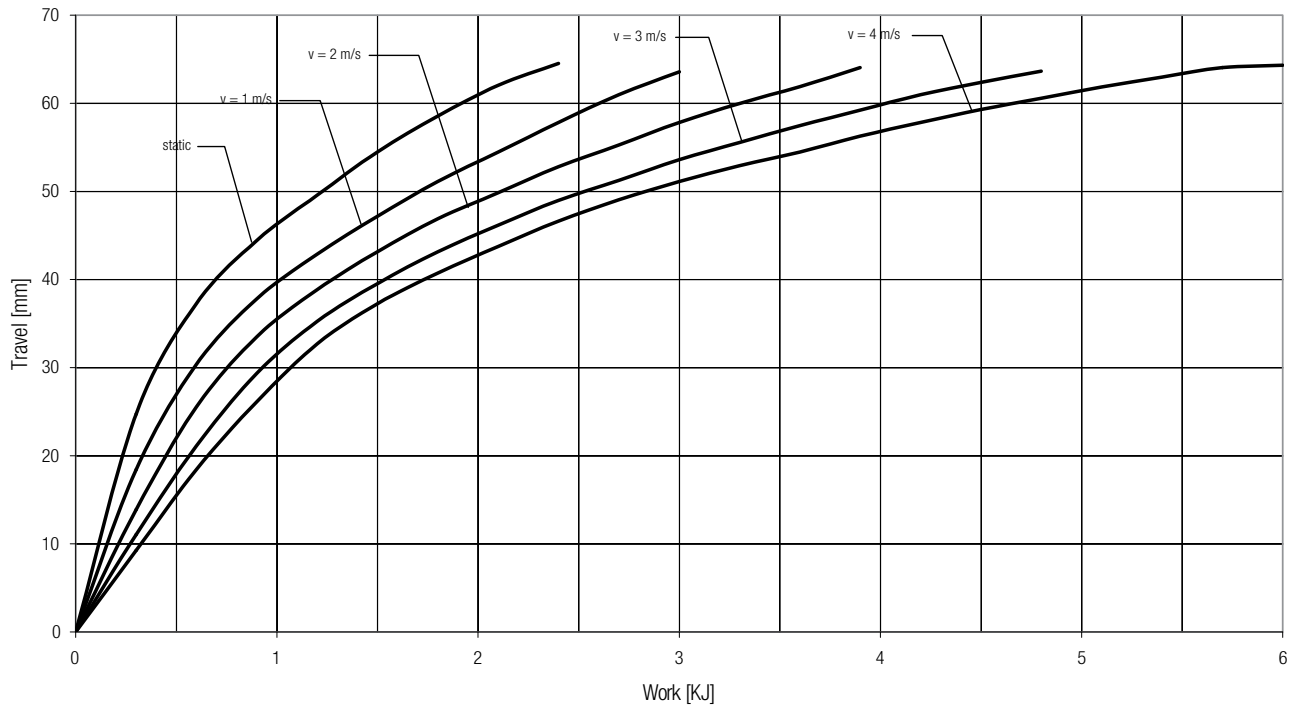
## 125 x 188 Energy Absorption



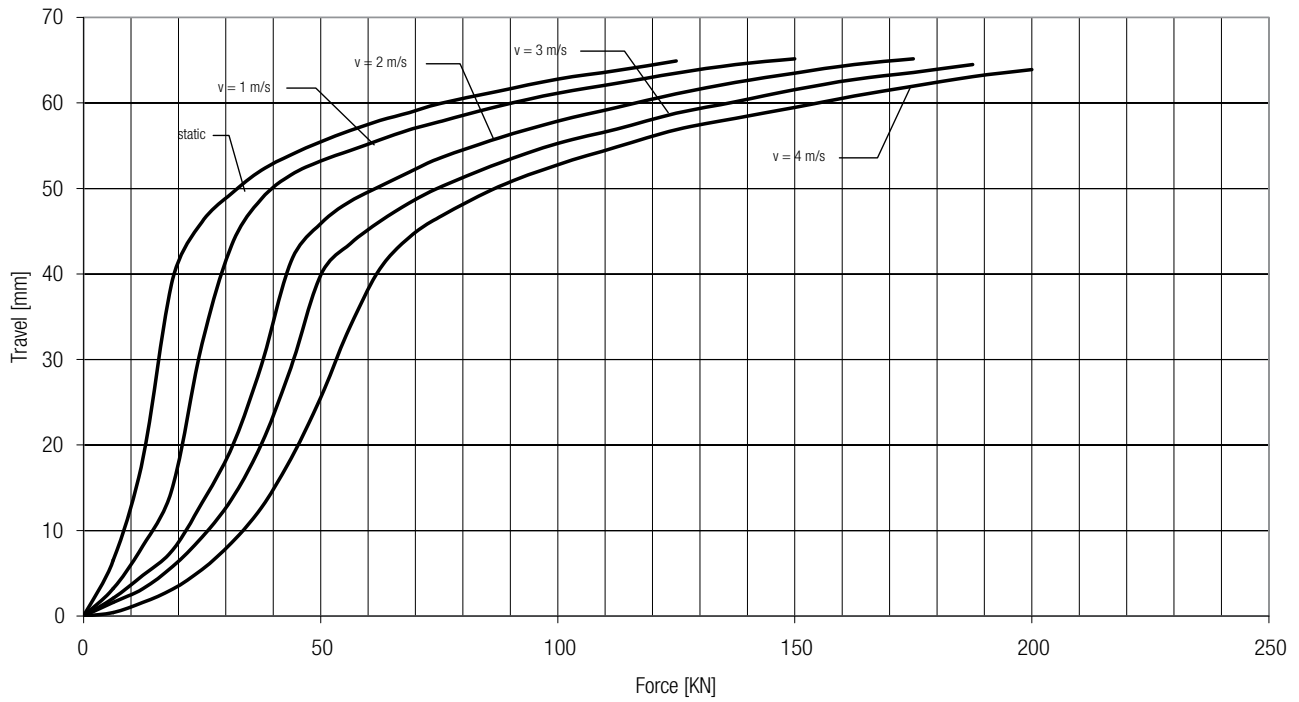
## 125 x 188 Final Load



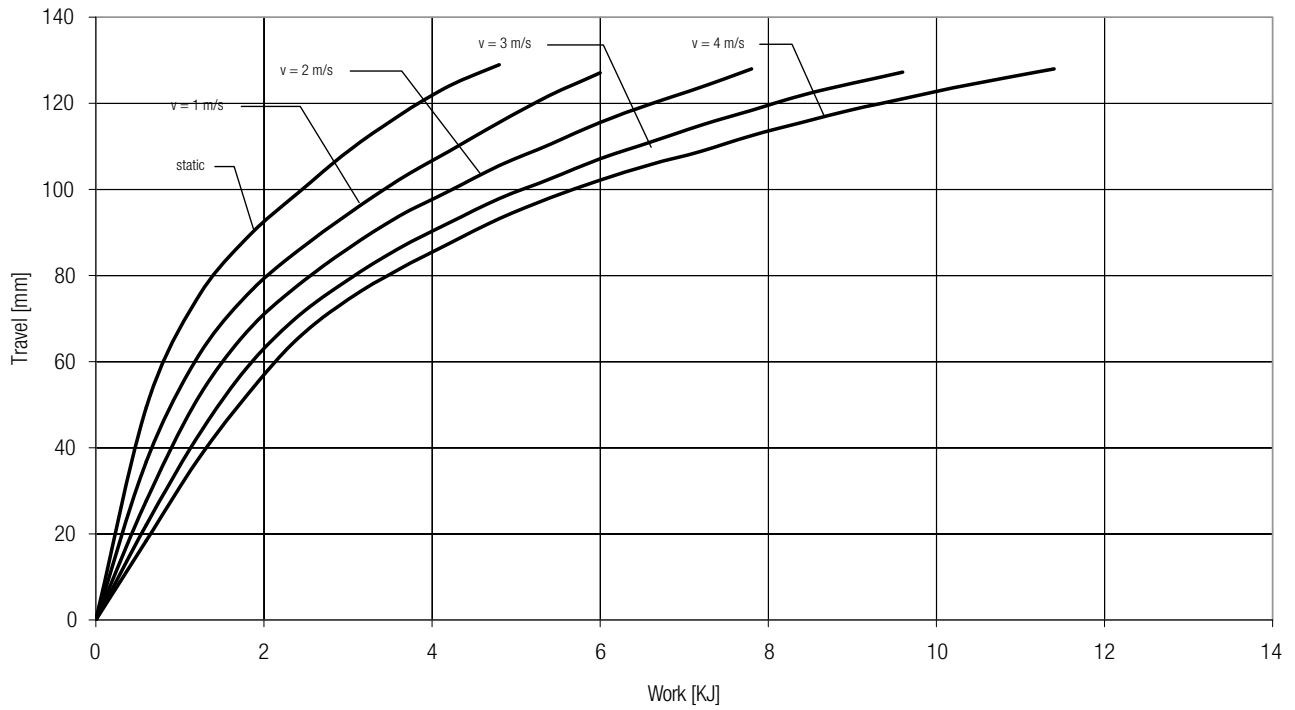
## 160 x 80 Energy Absorption



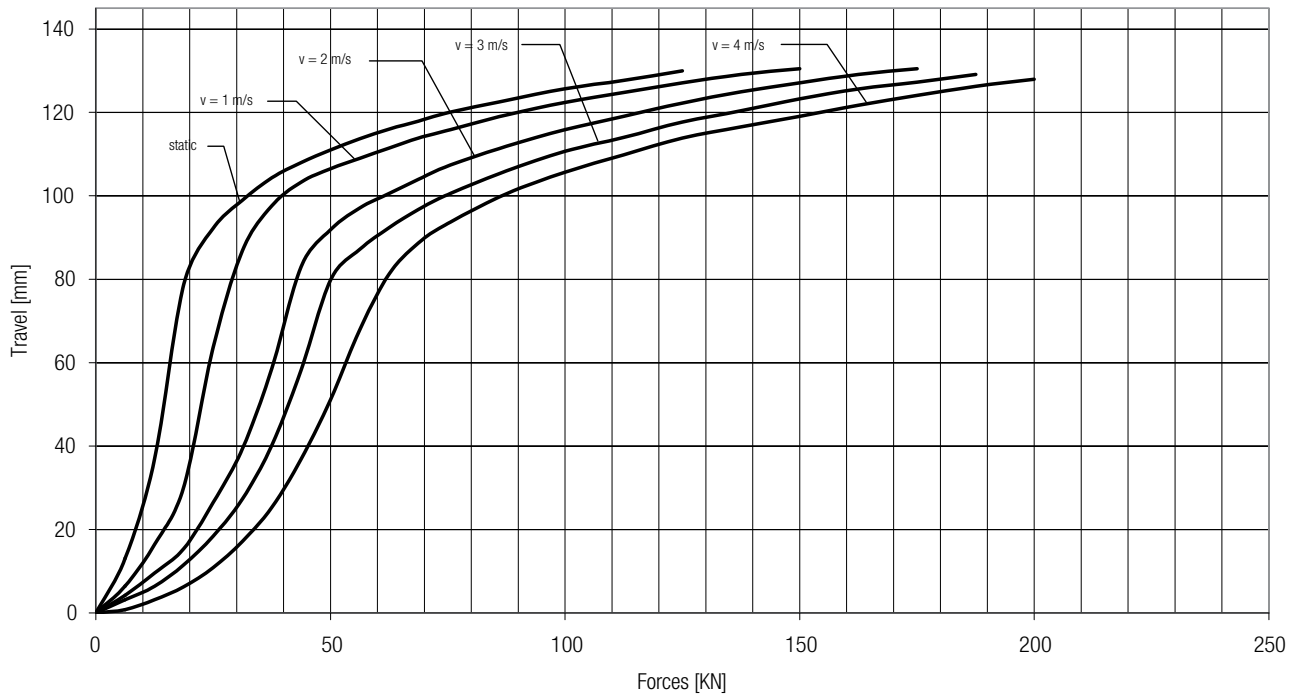
## 160 x 80 Final Load



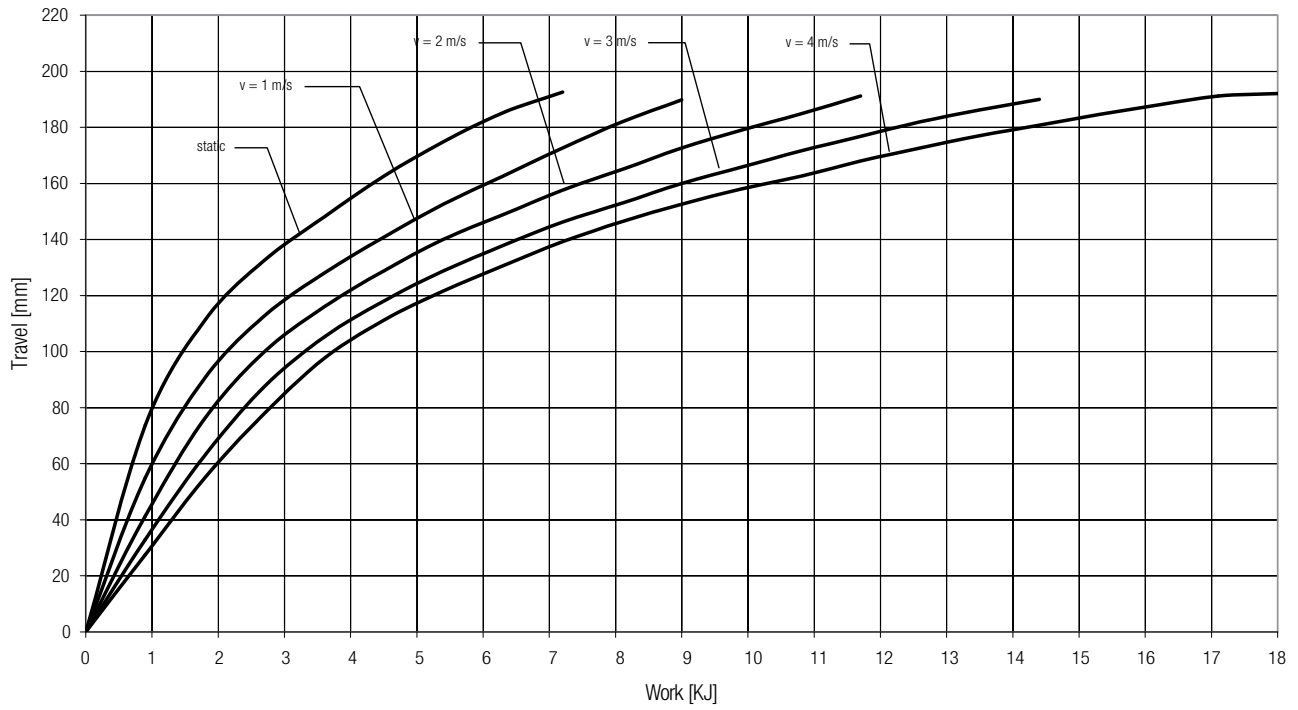
## 160 x 160 Energy Absorption



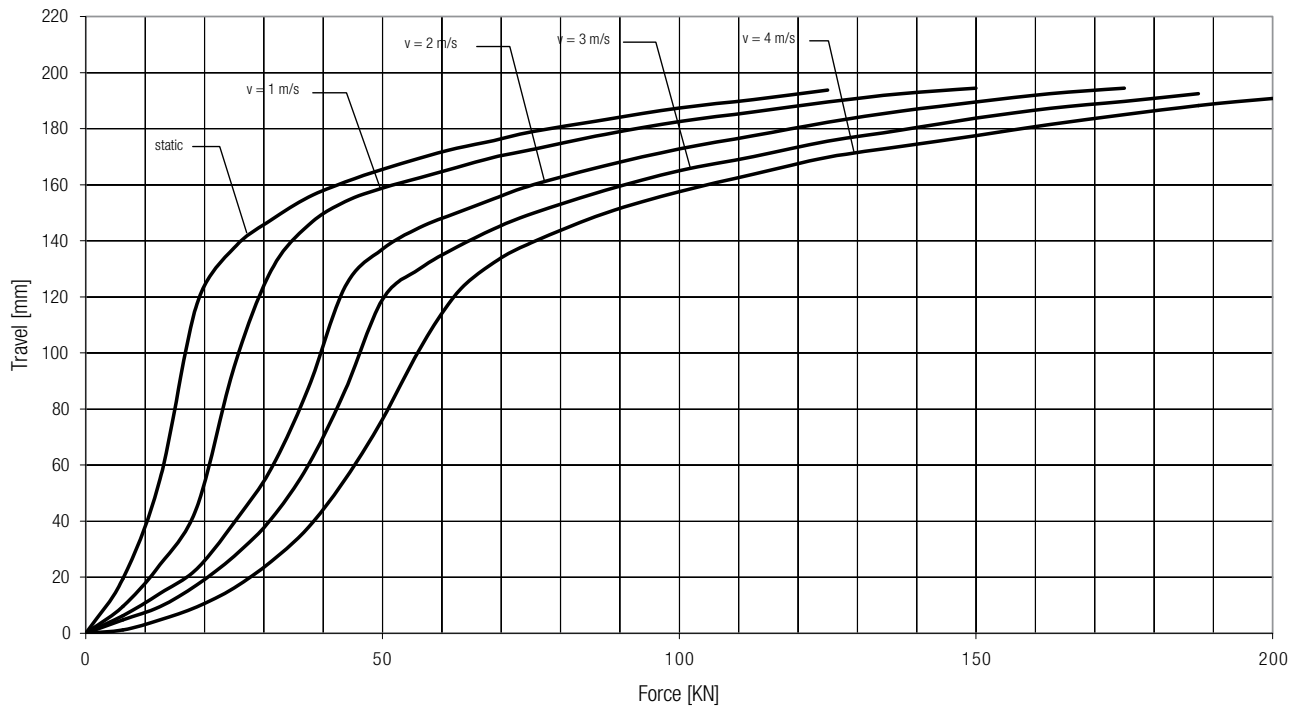
## 160 x 160 Final Load



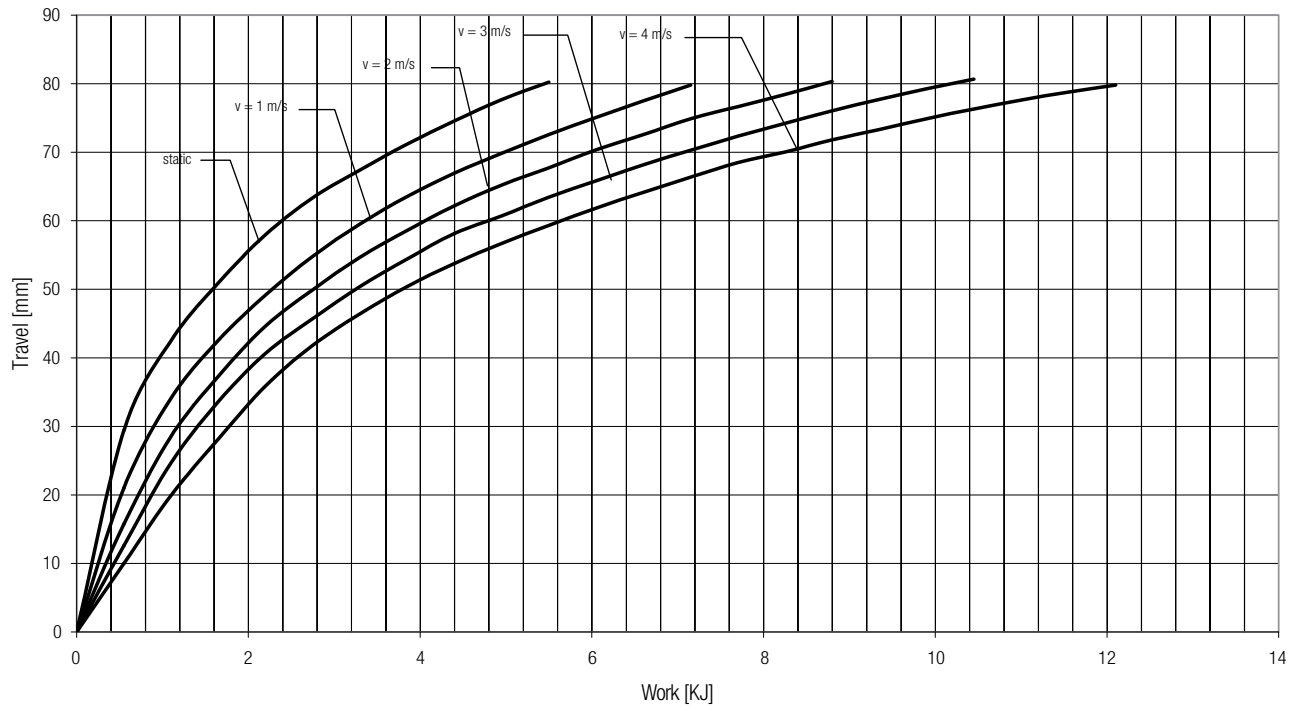
## 160 x 240 Energy Absorption



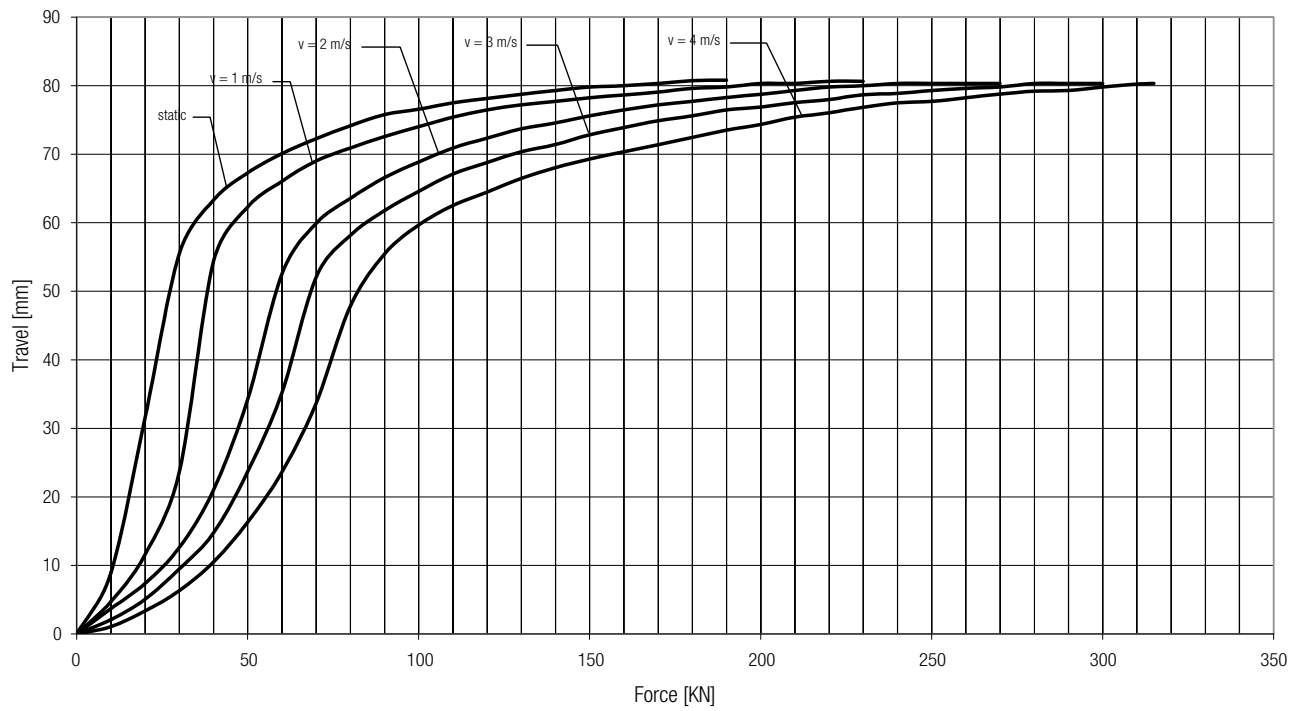
## 160 x 240 Final Load



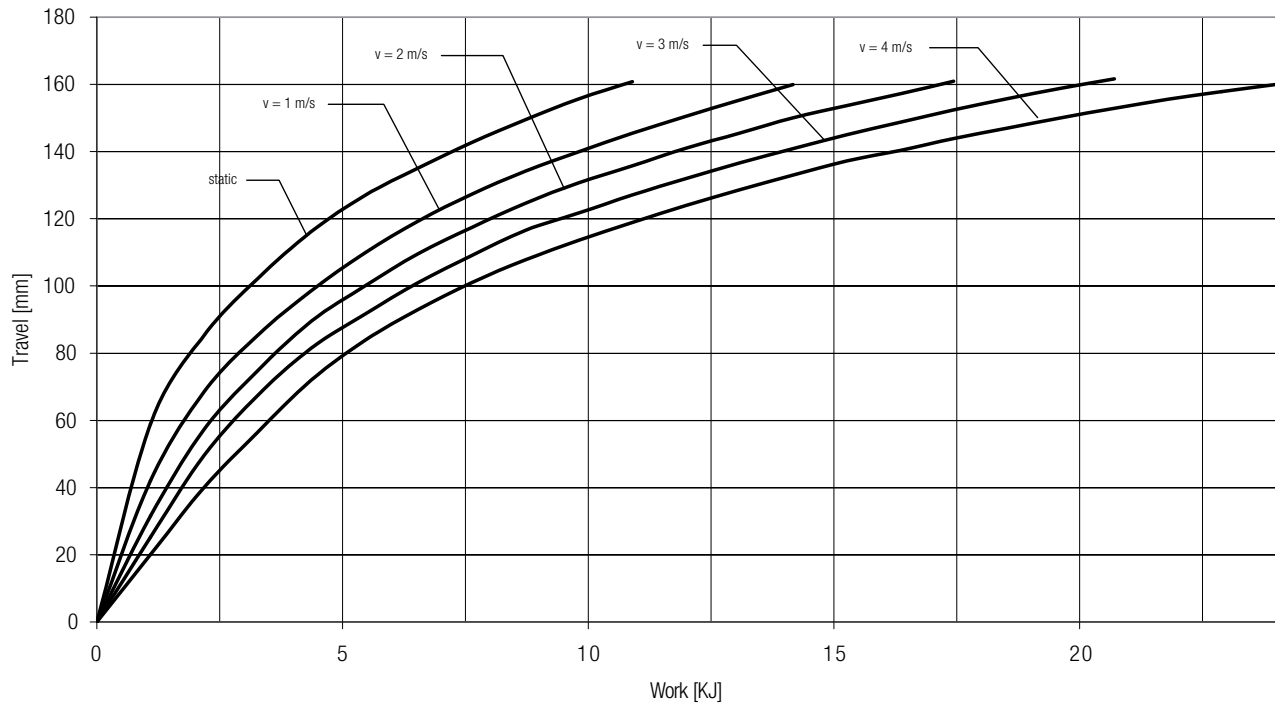
## 200 x 100 Energy Absorption



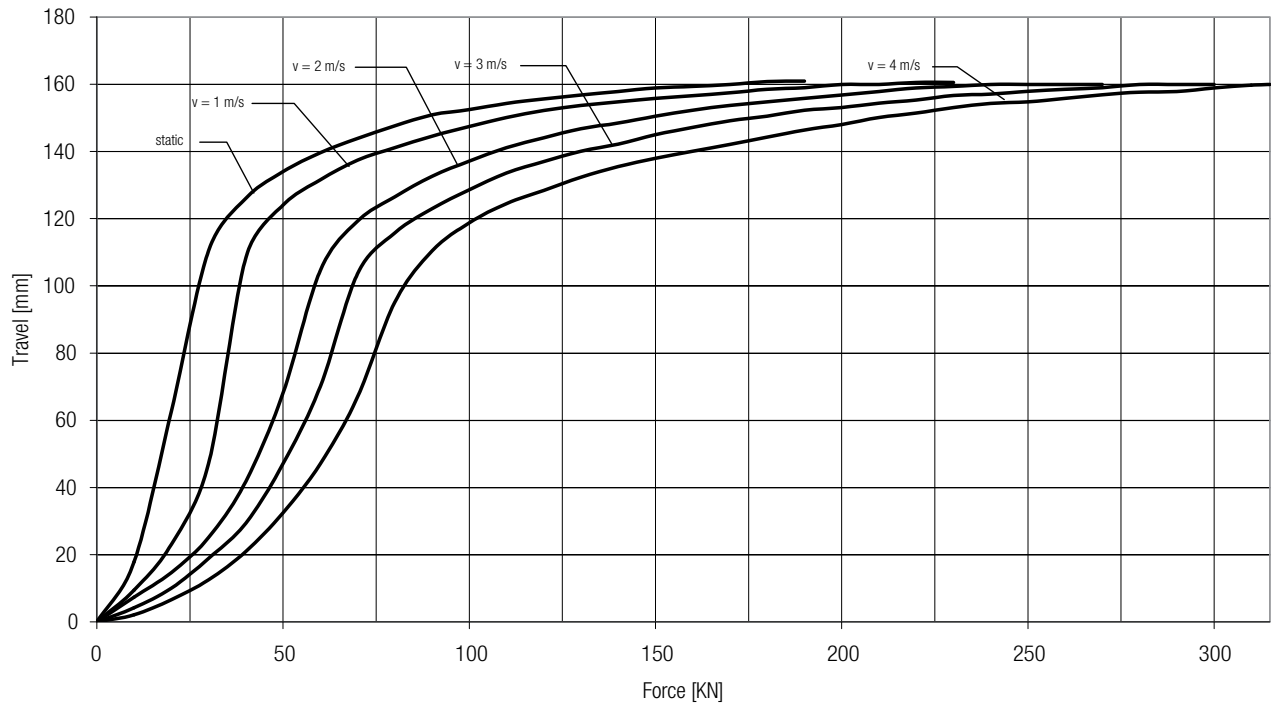
## 200 x 100 Final Load



## 200 x 200 Energy Absorption

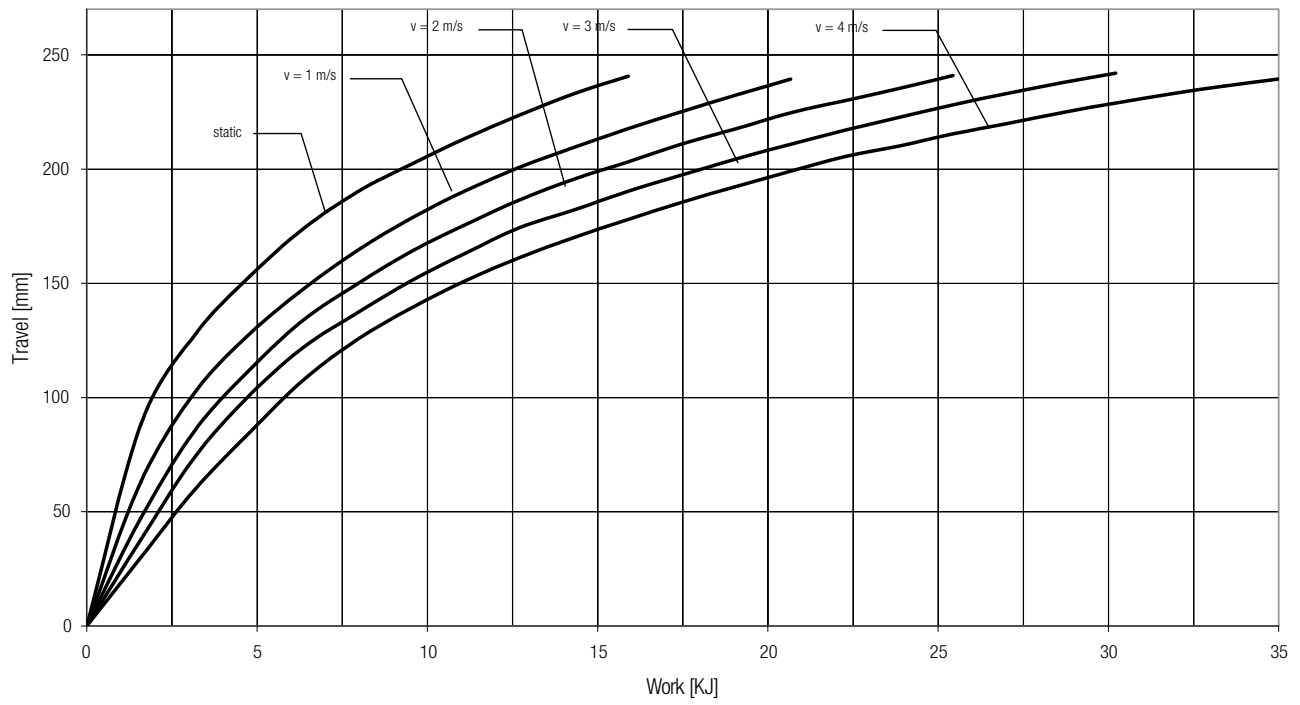


## 200 x 200 Final Load

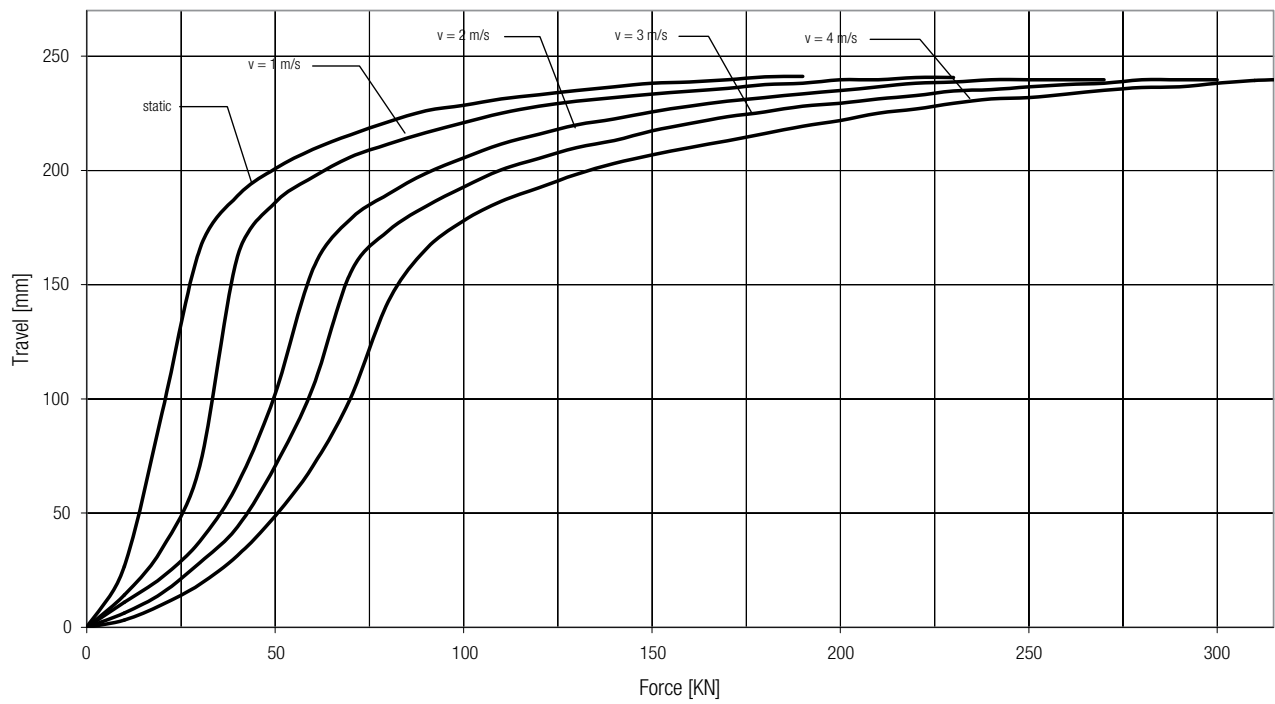




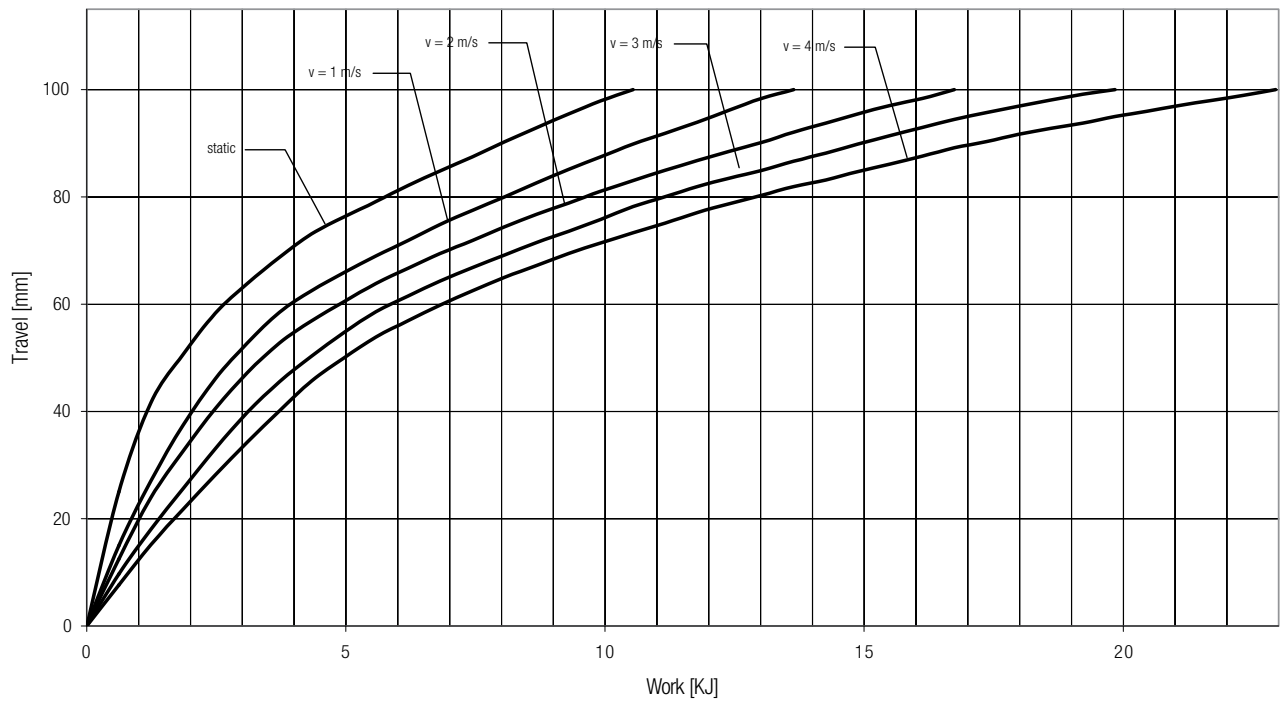
## 200 x 300 Energy Absorption



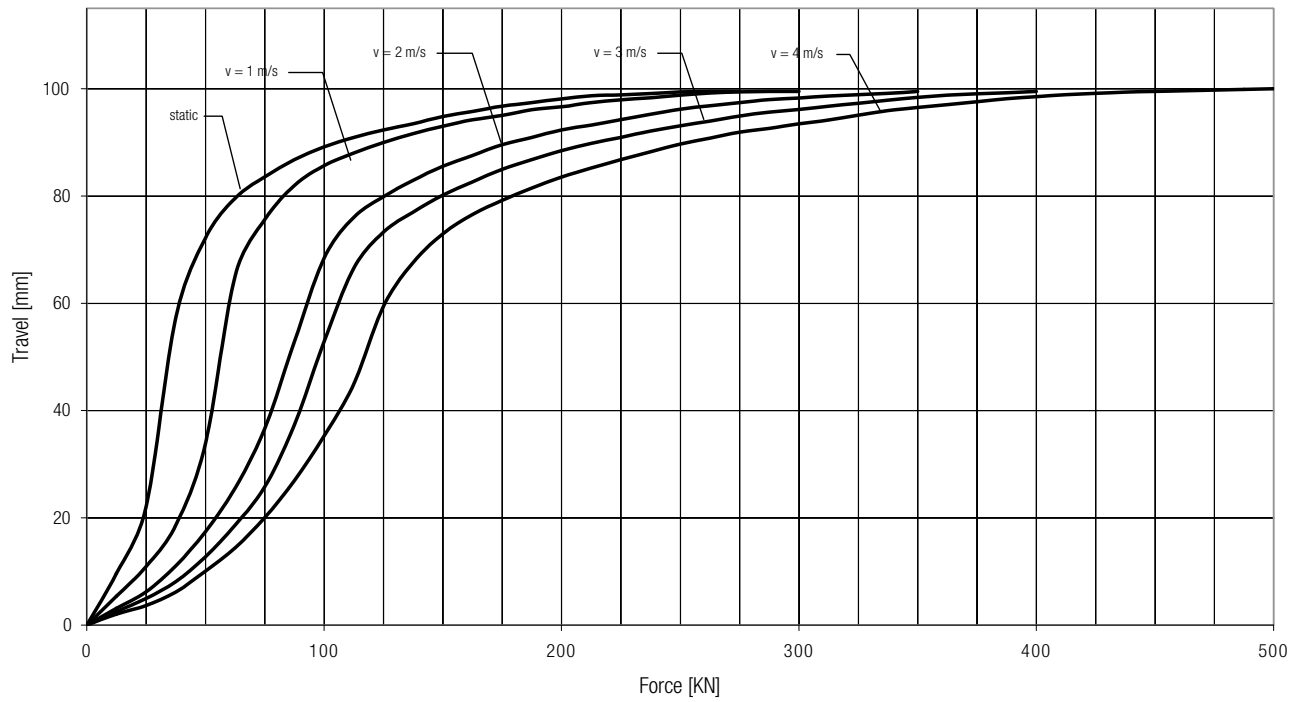
## 200 x 300 Final Load



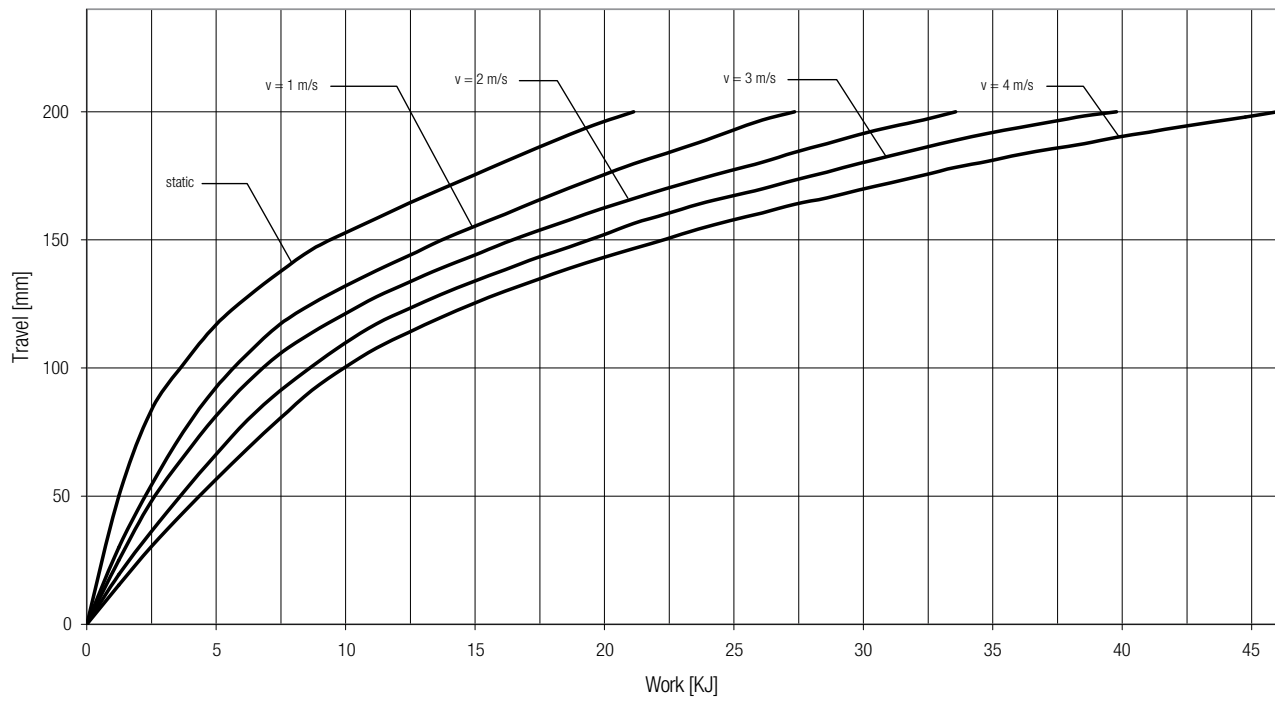
## 250 x 125 Energy Absorption



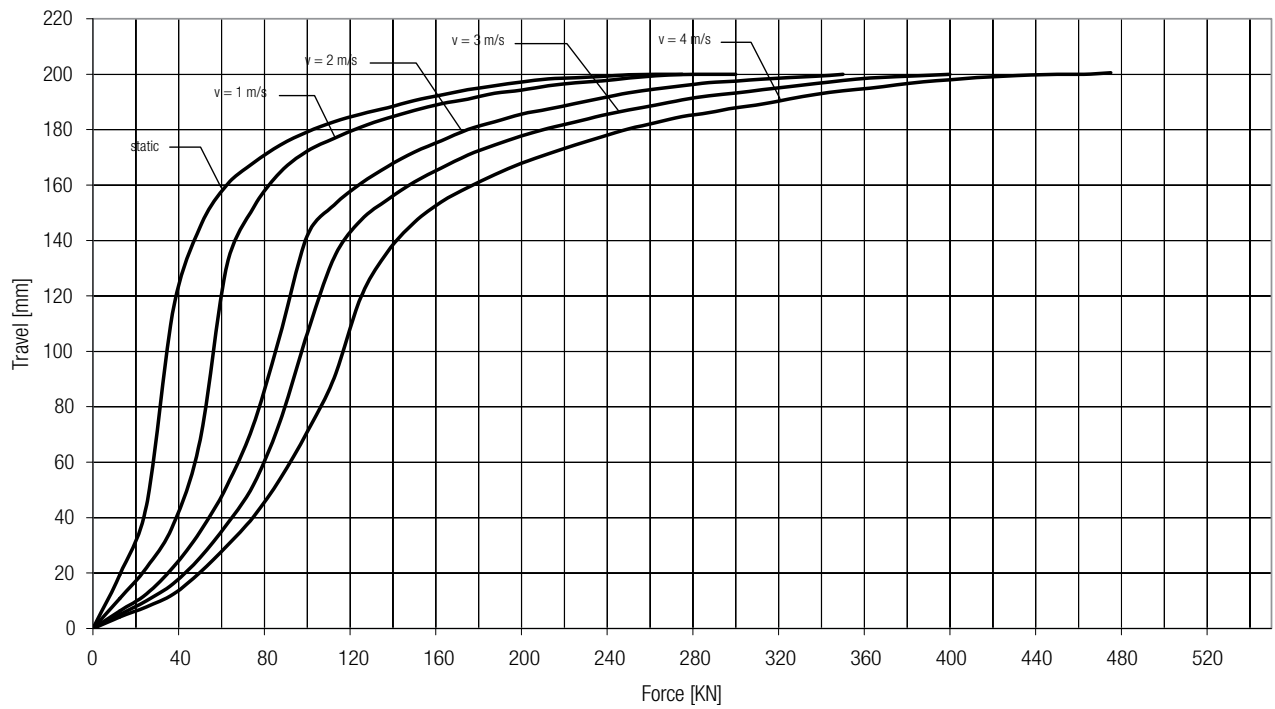
## 250 x 125 Final Load



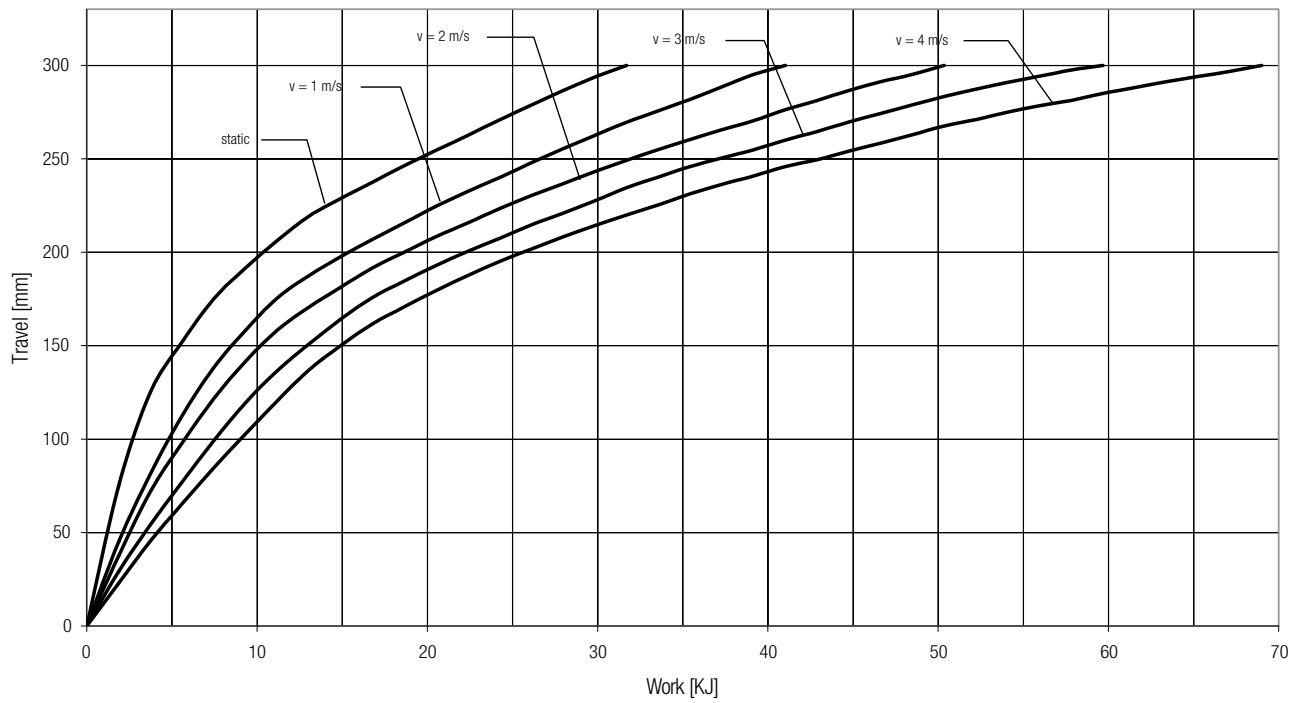
## 250 x 250 Energy Absorption



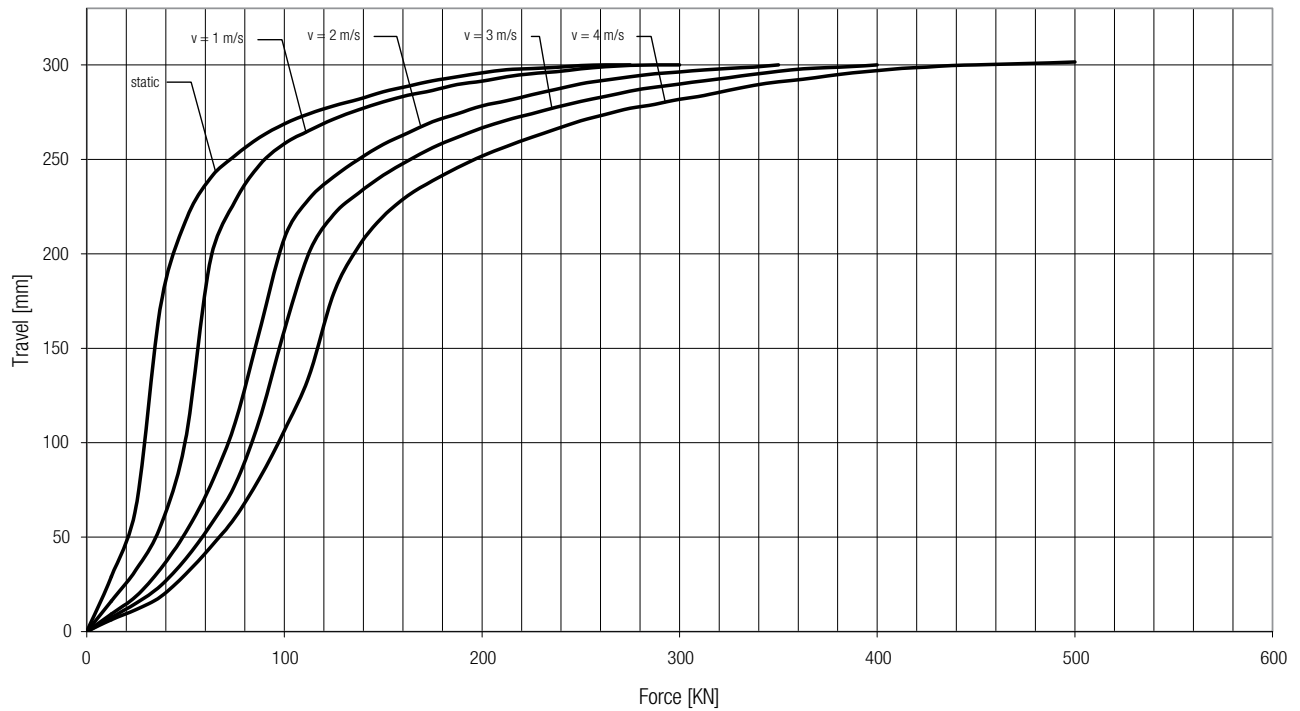
## 250 x 250 Final Load



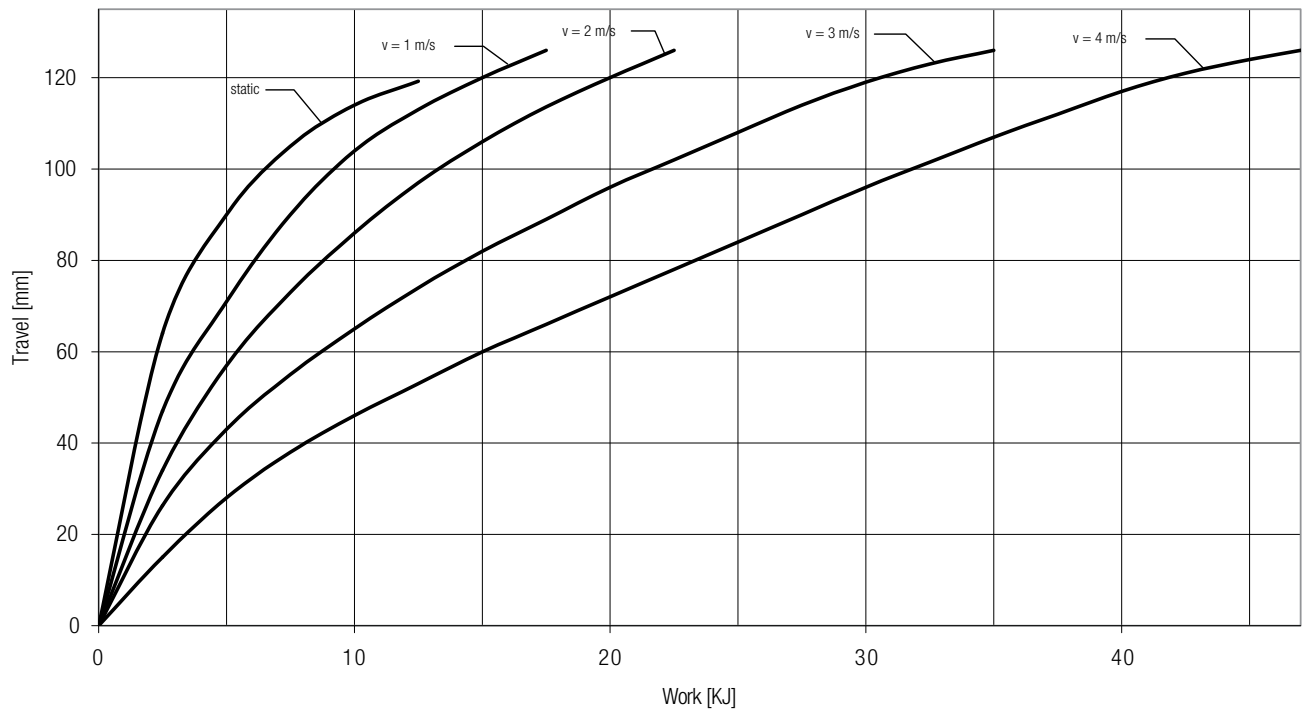
## 250 x 375 Energy Absorption



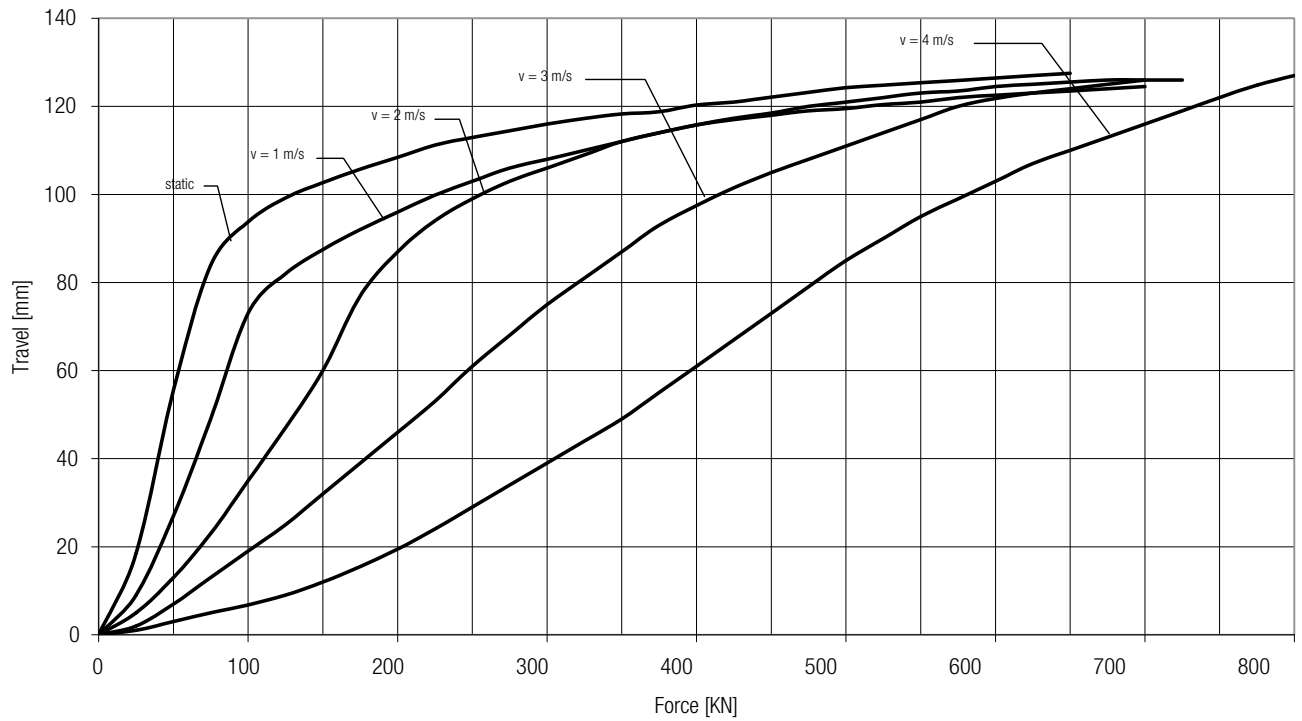
## 250 x 375 Final Load



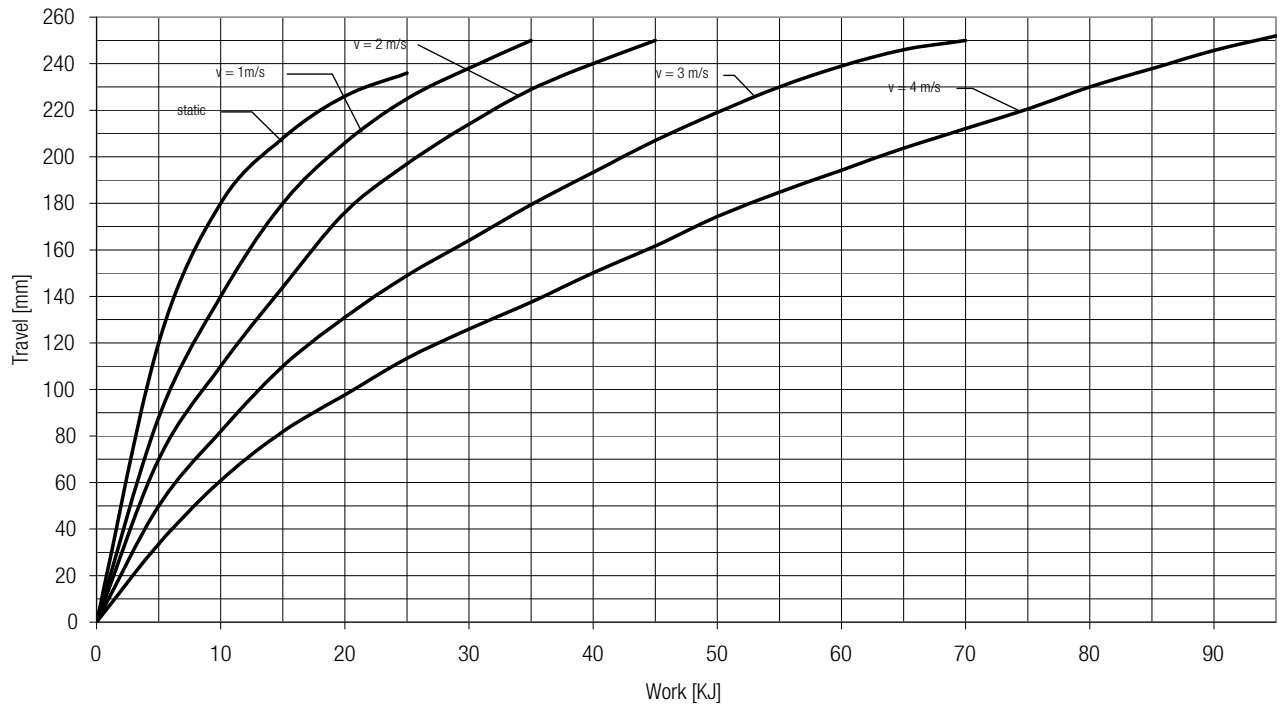
### 315 x 158 Energy Absorption



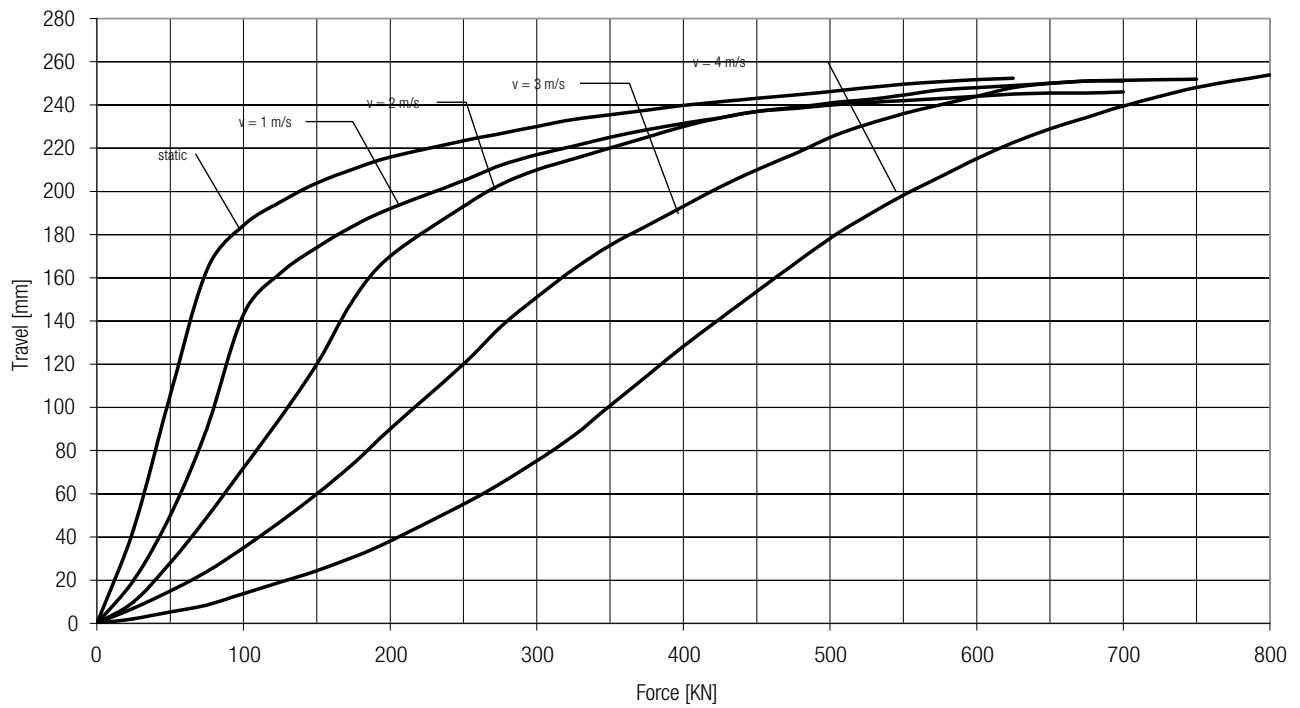
### 315 x 158 Final Load



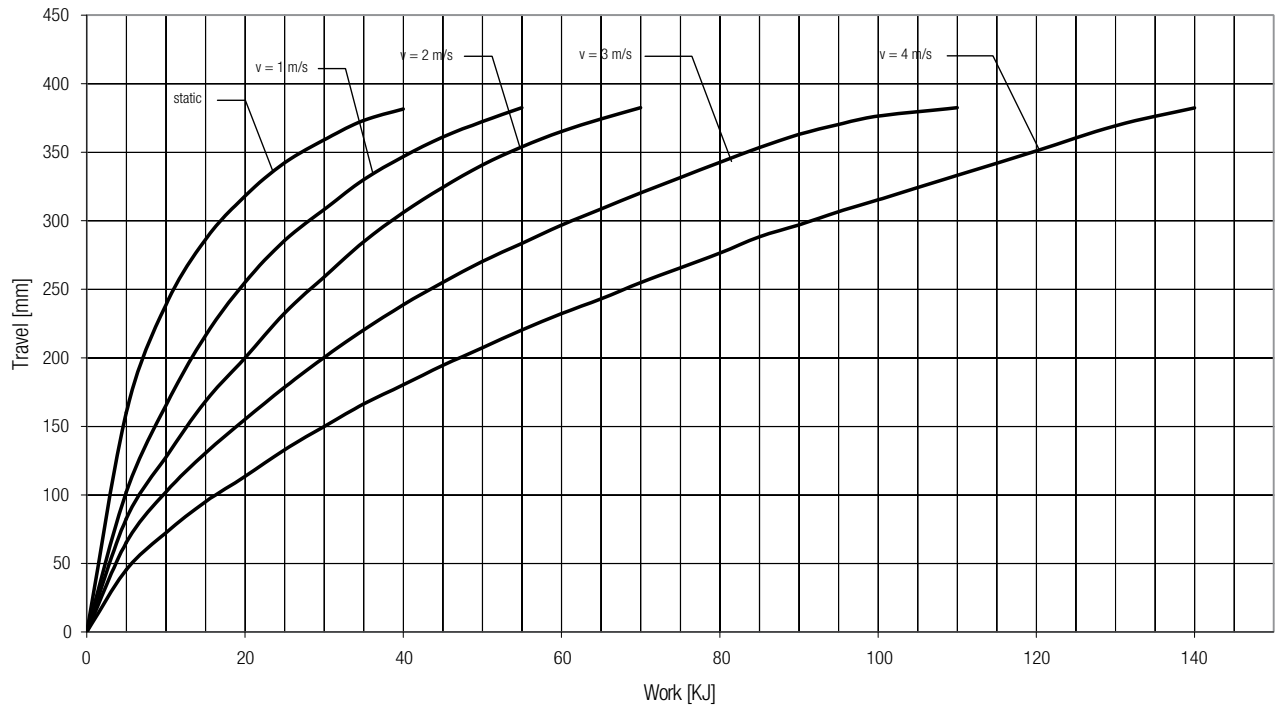
## 315 x 315 Energy Absorption



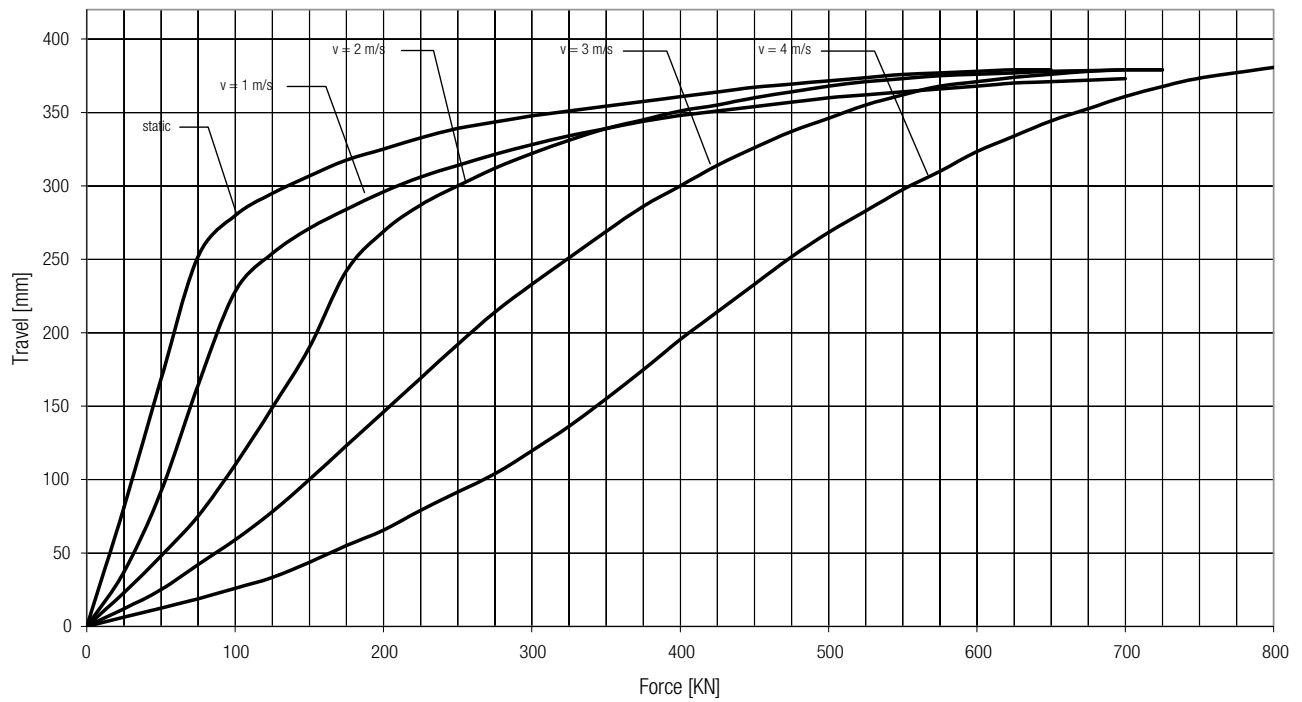
## 315 x 315 Final Load



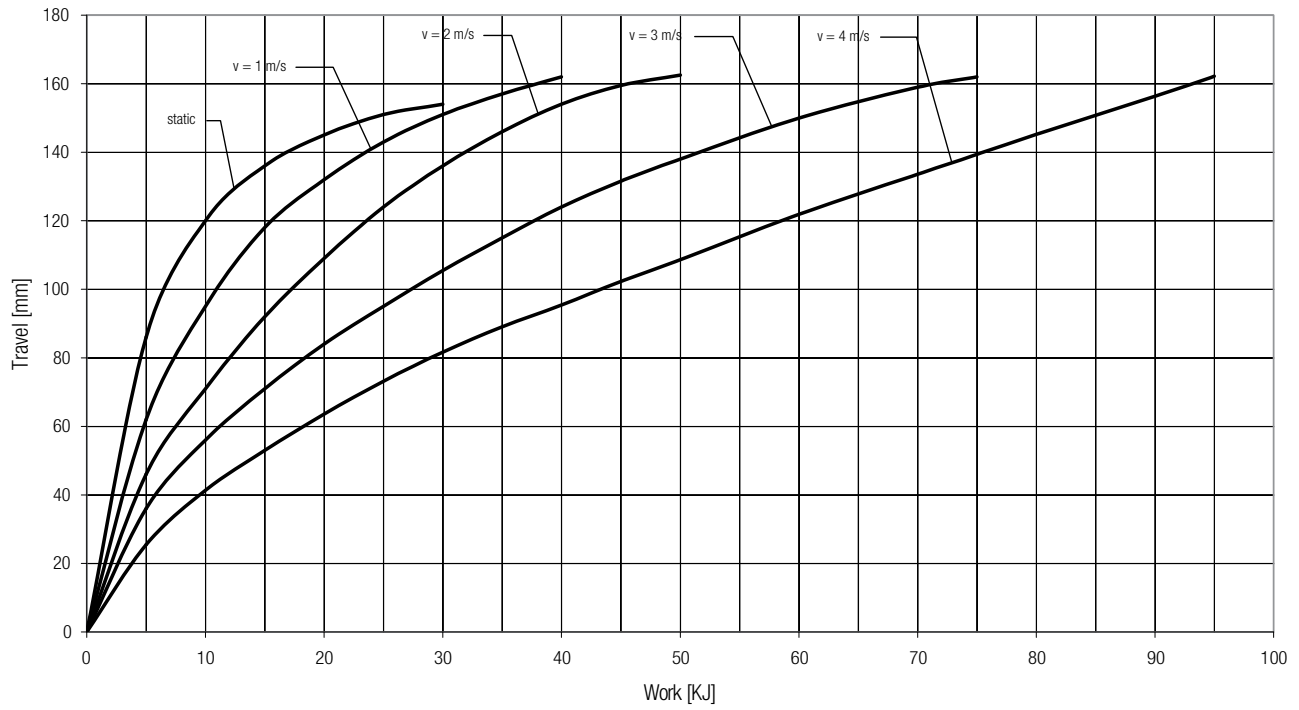
## 315 x 475 Energy Absorption



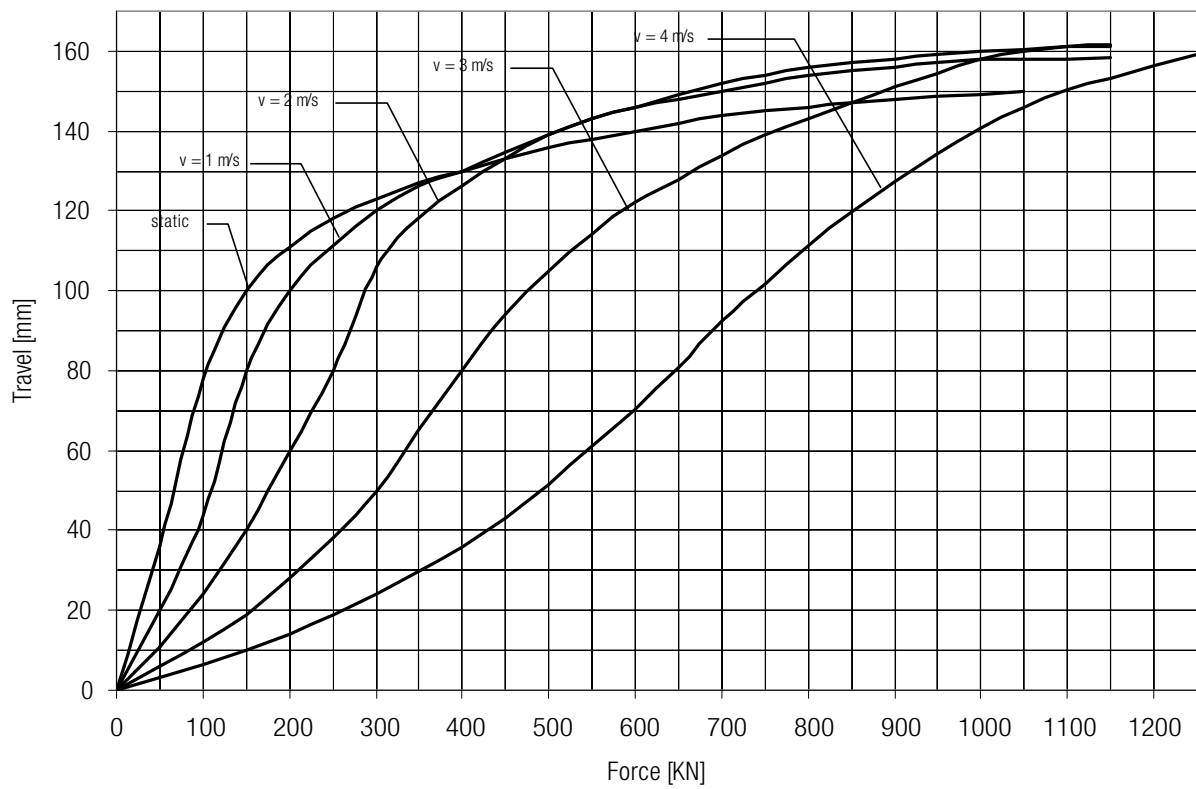
## 315 x 475 Final Load



## 400 x 200 Energy Absorption

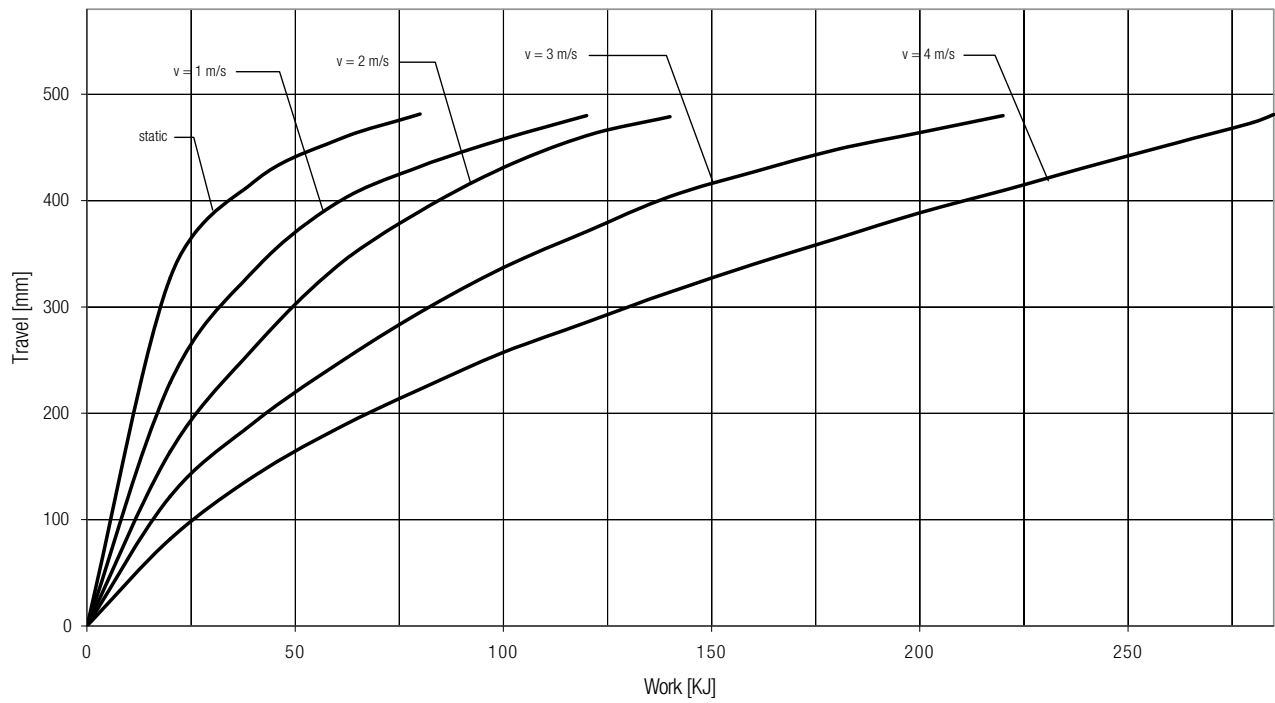


## 400 x 200 Final Load

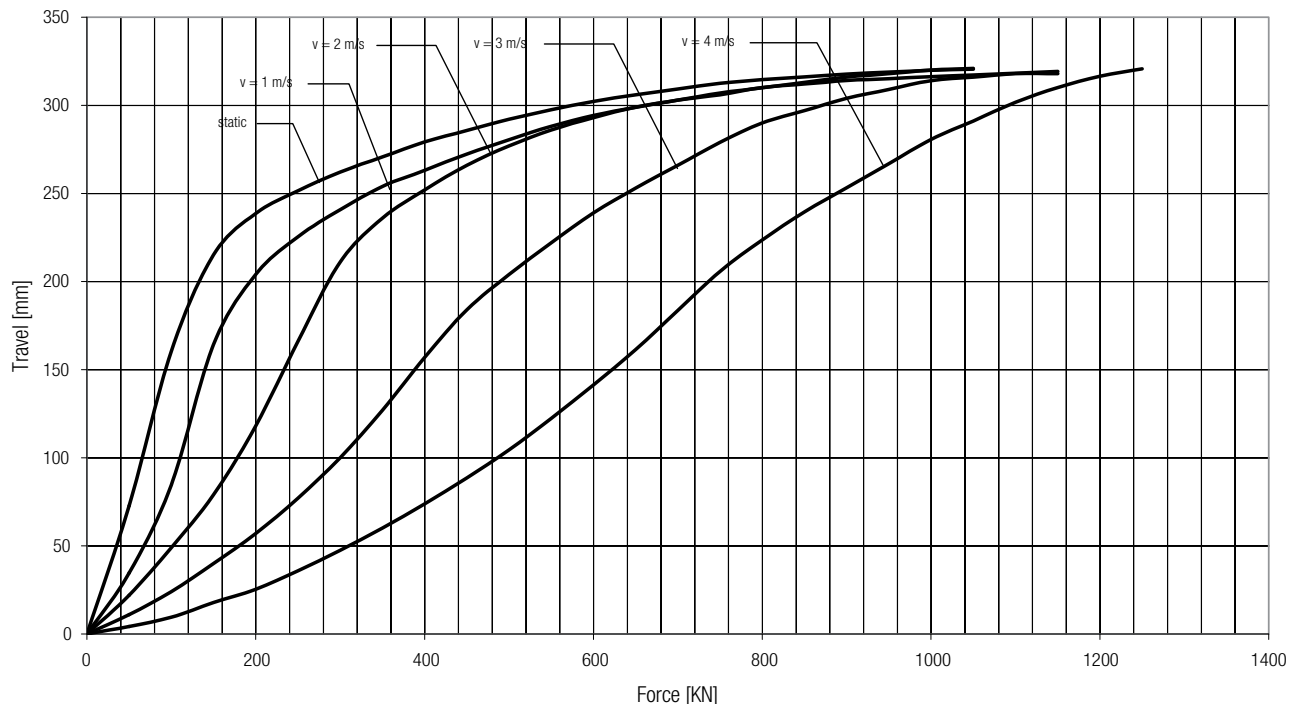




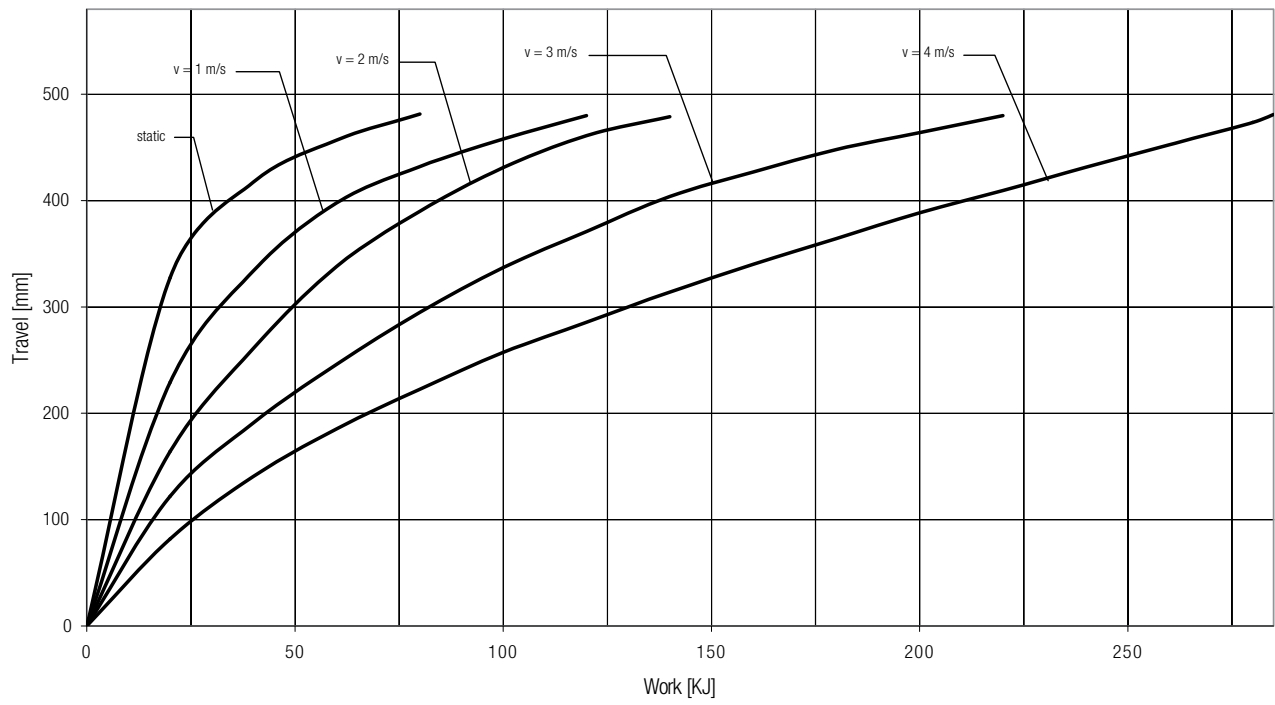
## 400 x 400 Energy Absorption



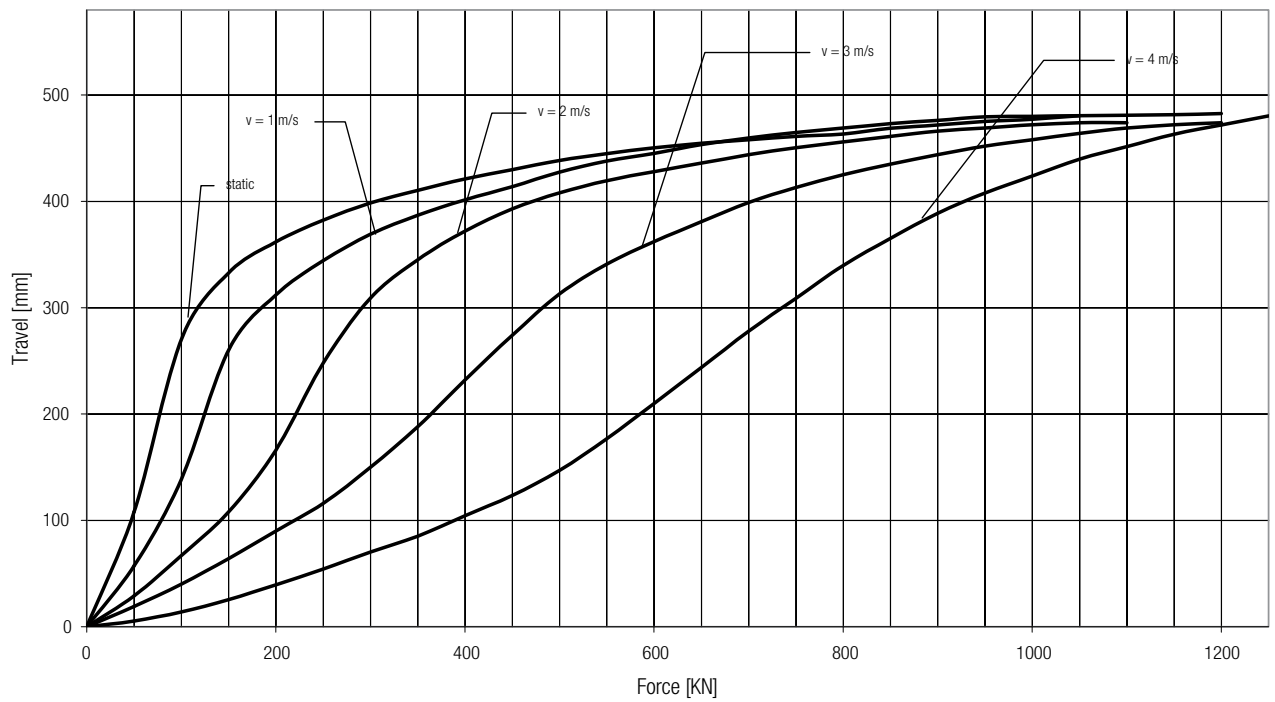
## 400 x 400 Final Load



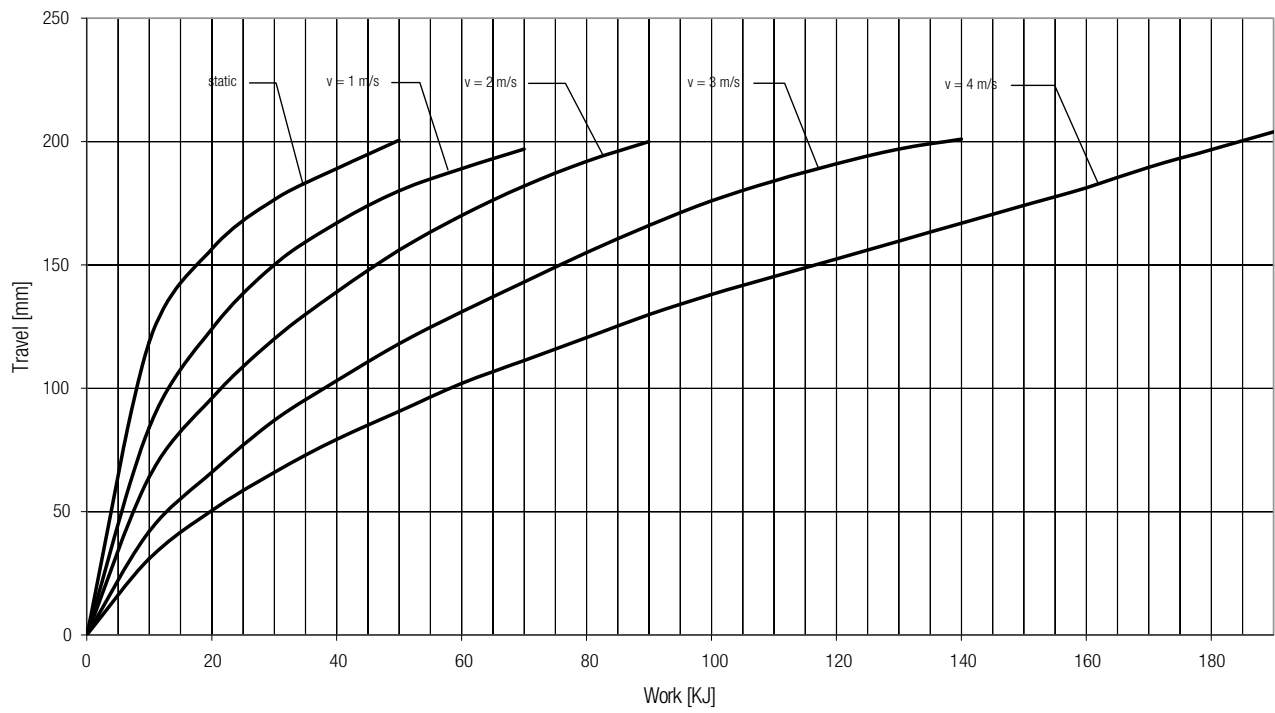
## 400 x 600 Energy Absorption



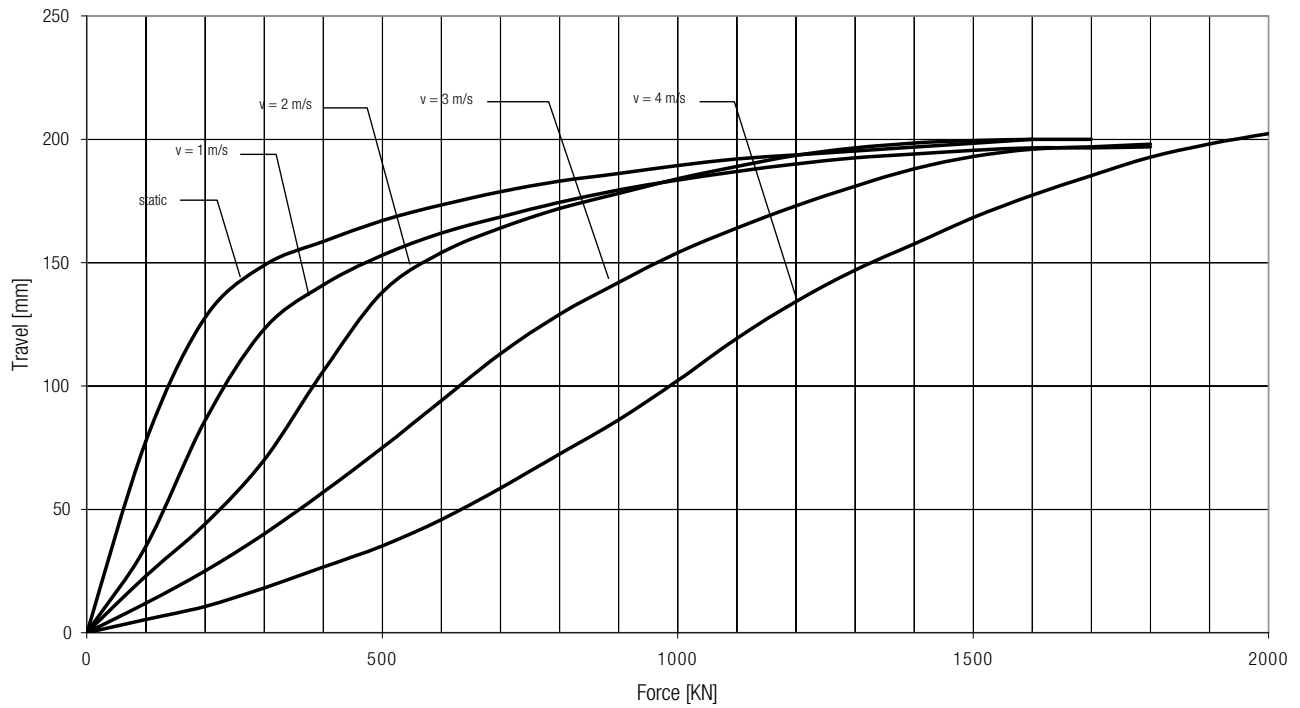
## 400 x 600 Final Load



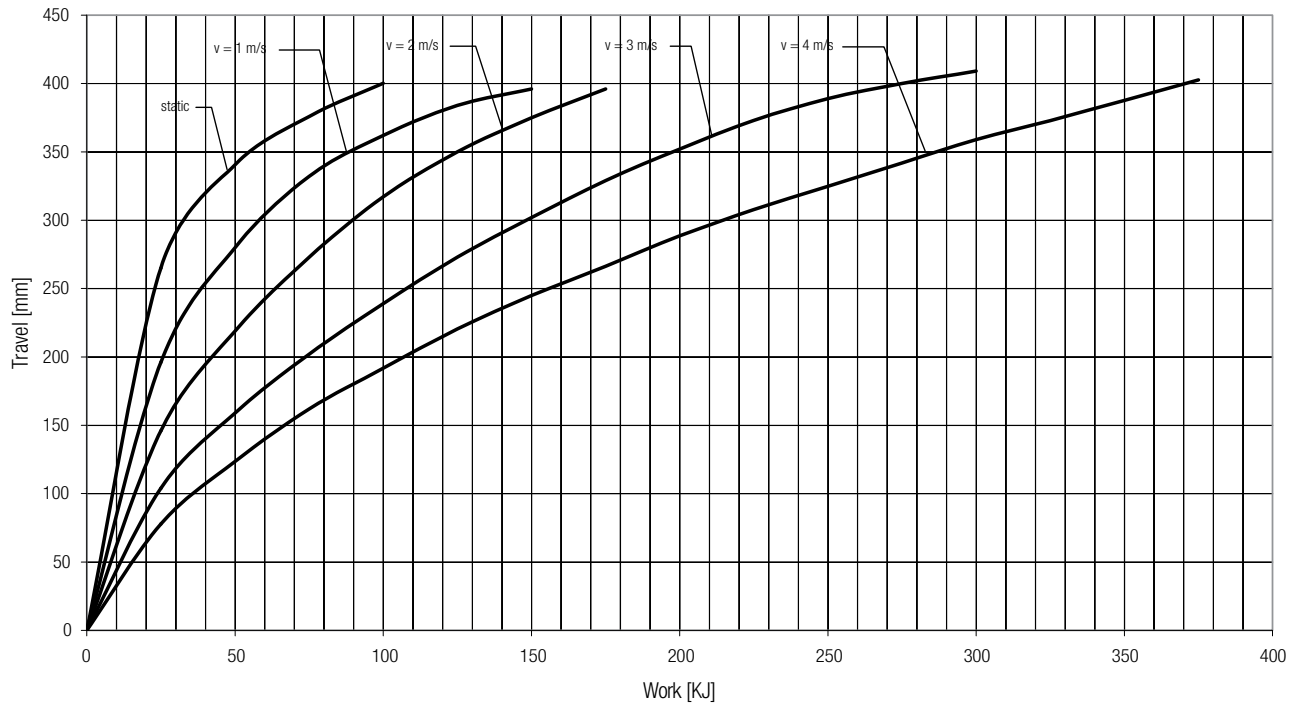
## 500 x 250 Energy Absorption



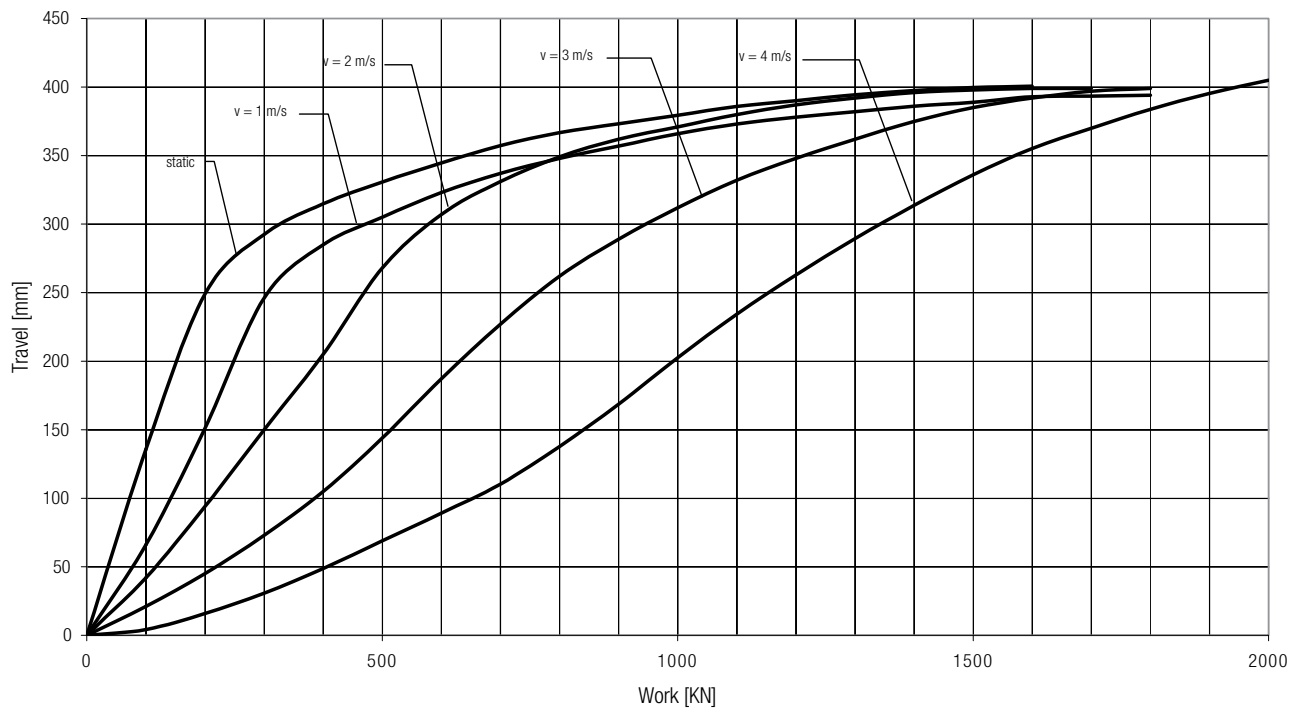
## 500 x 250 Final Load



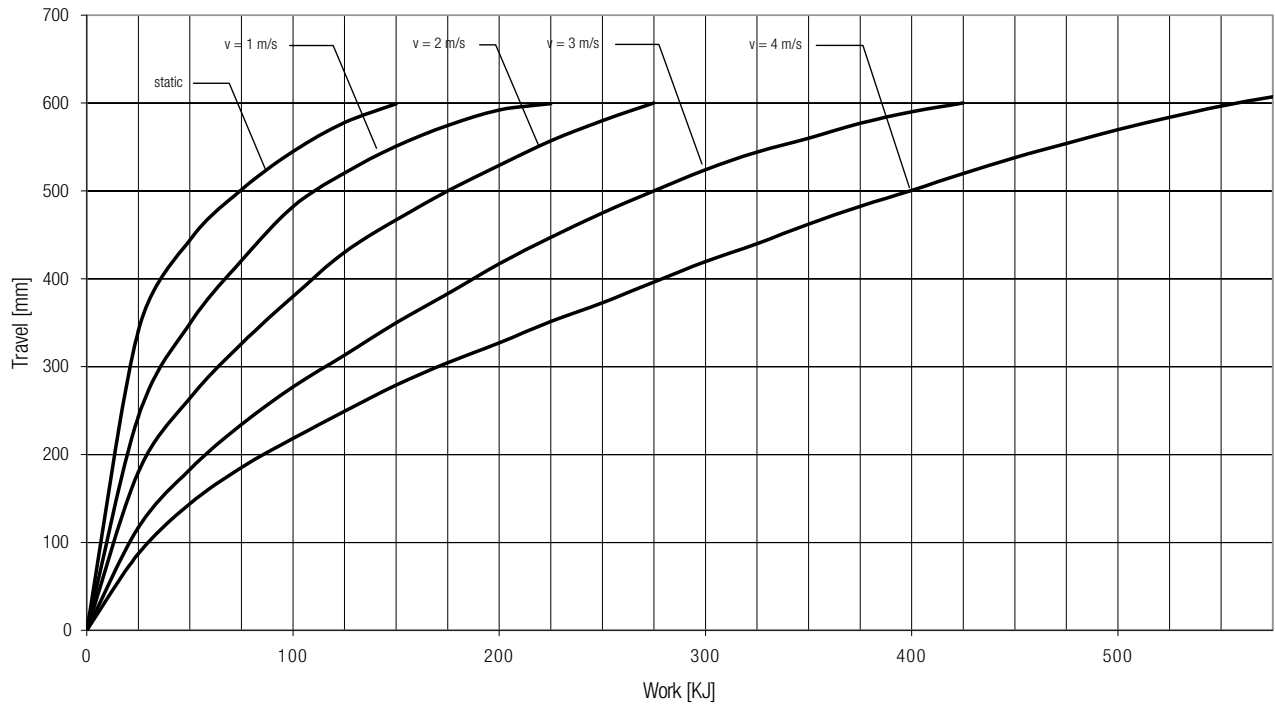
## 500 x 500 Energy Absorption



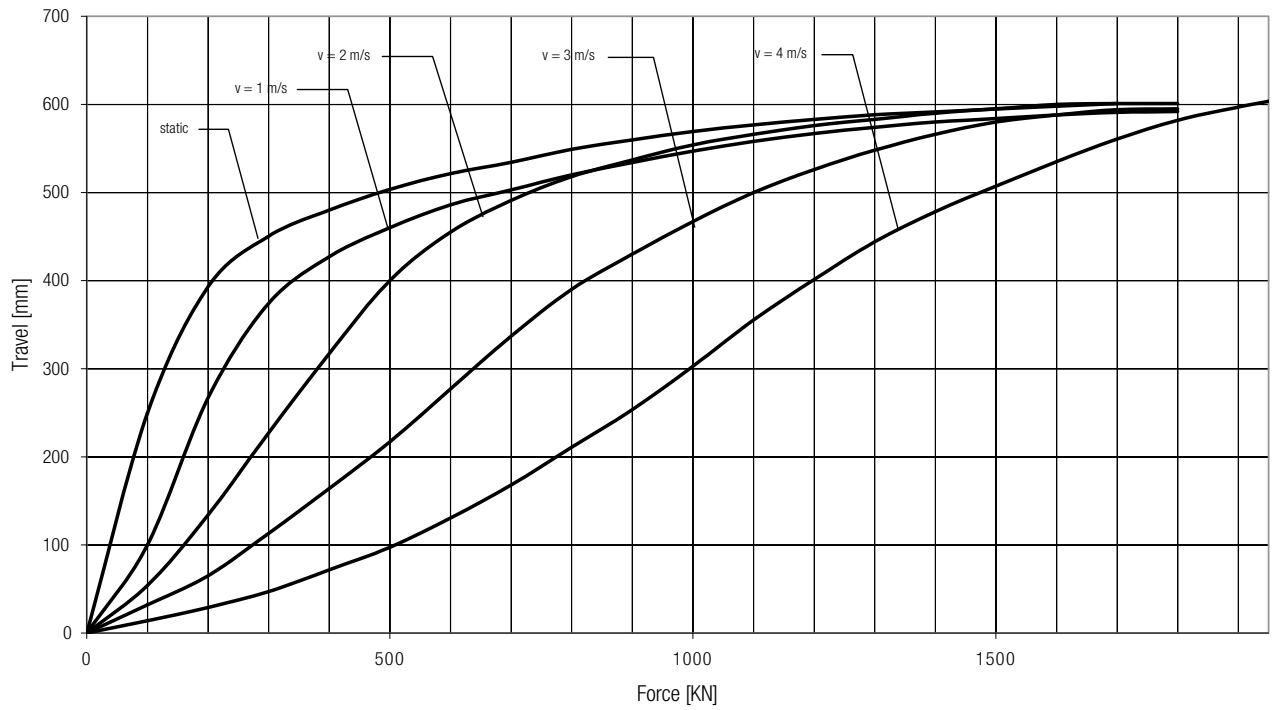
## 500 x 500 Final Load



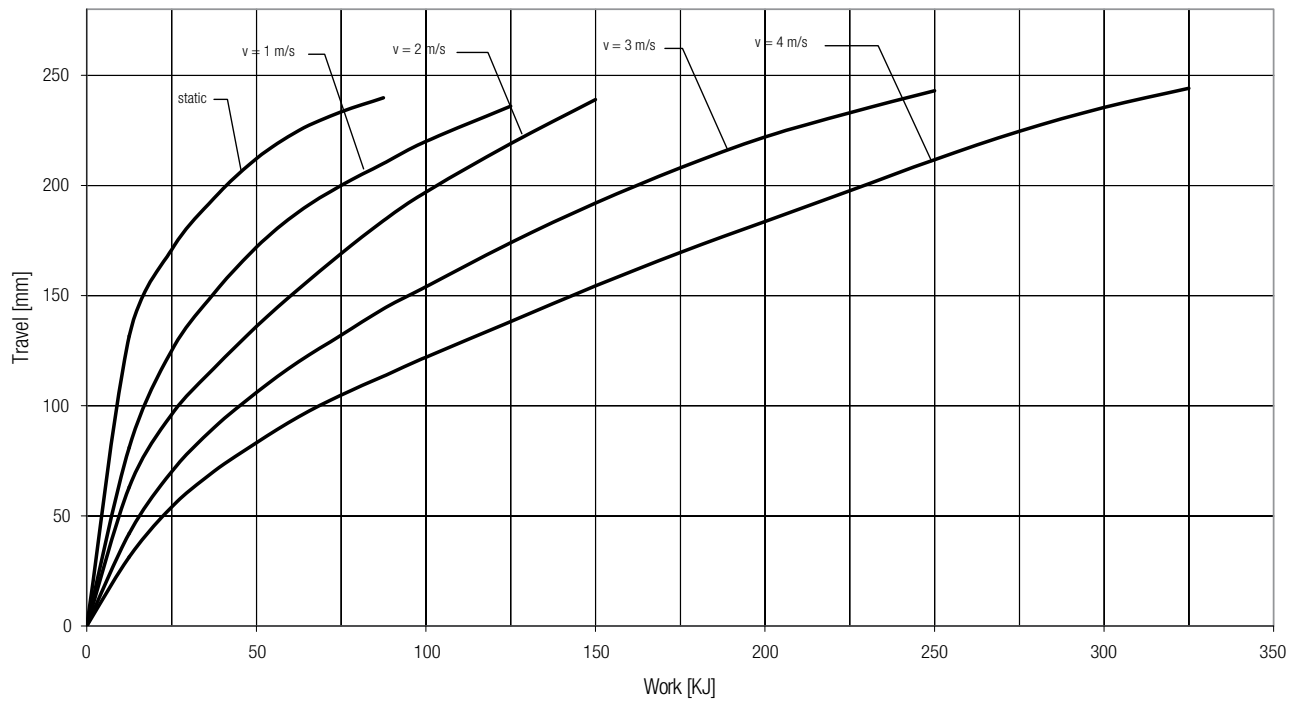
## 500 x 750 Energy Absorption



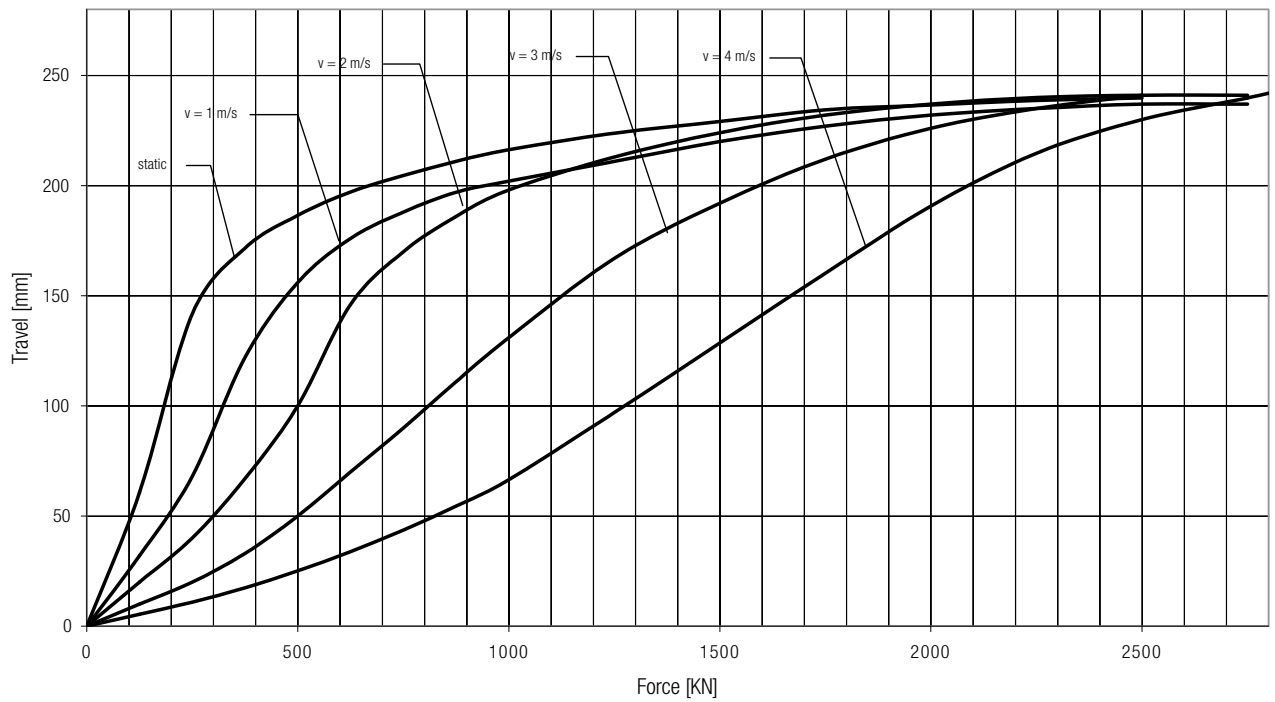
## 500 x 750 Final Load



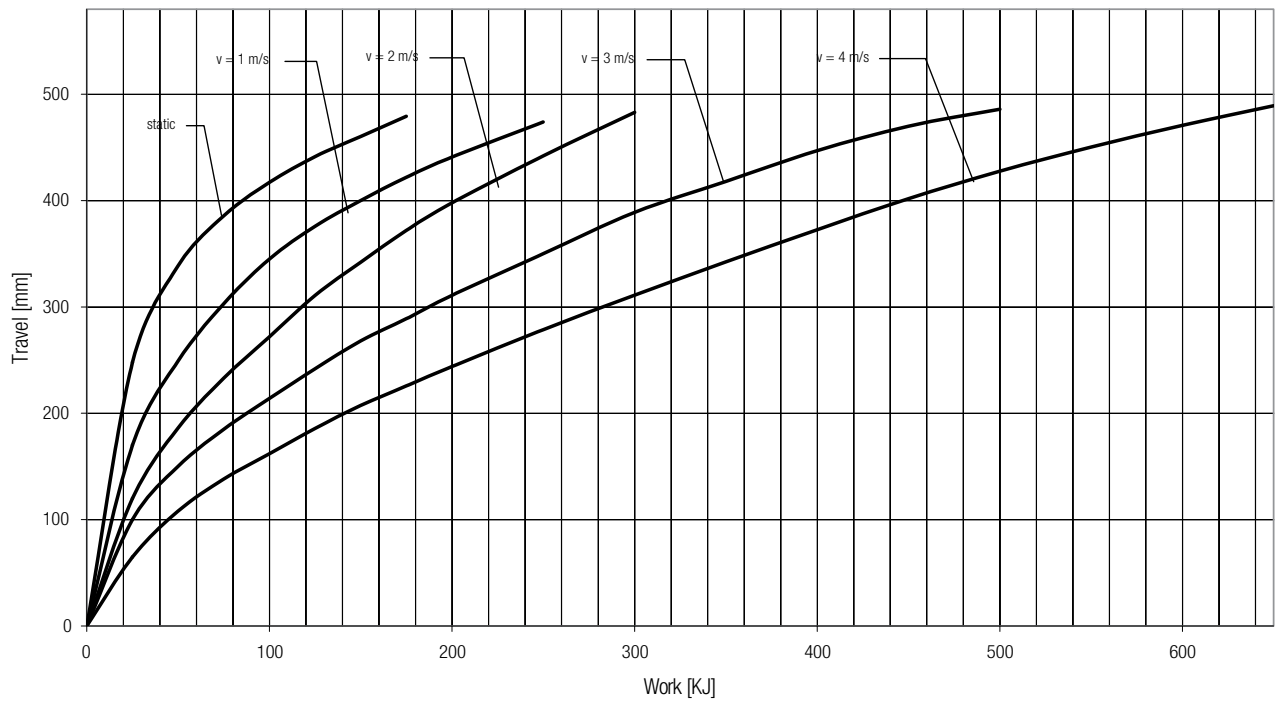
## 600 x 300 Energy Absorption



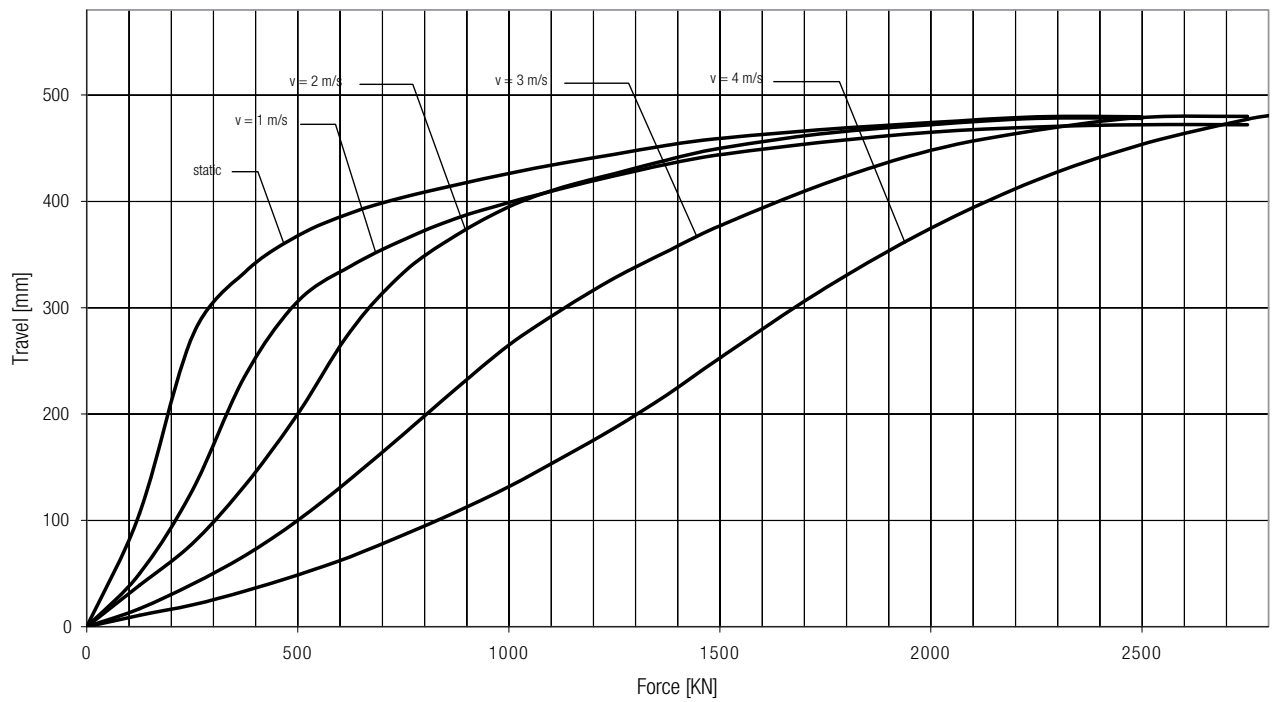
## 600 x 300 Final Load



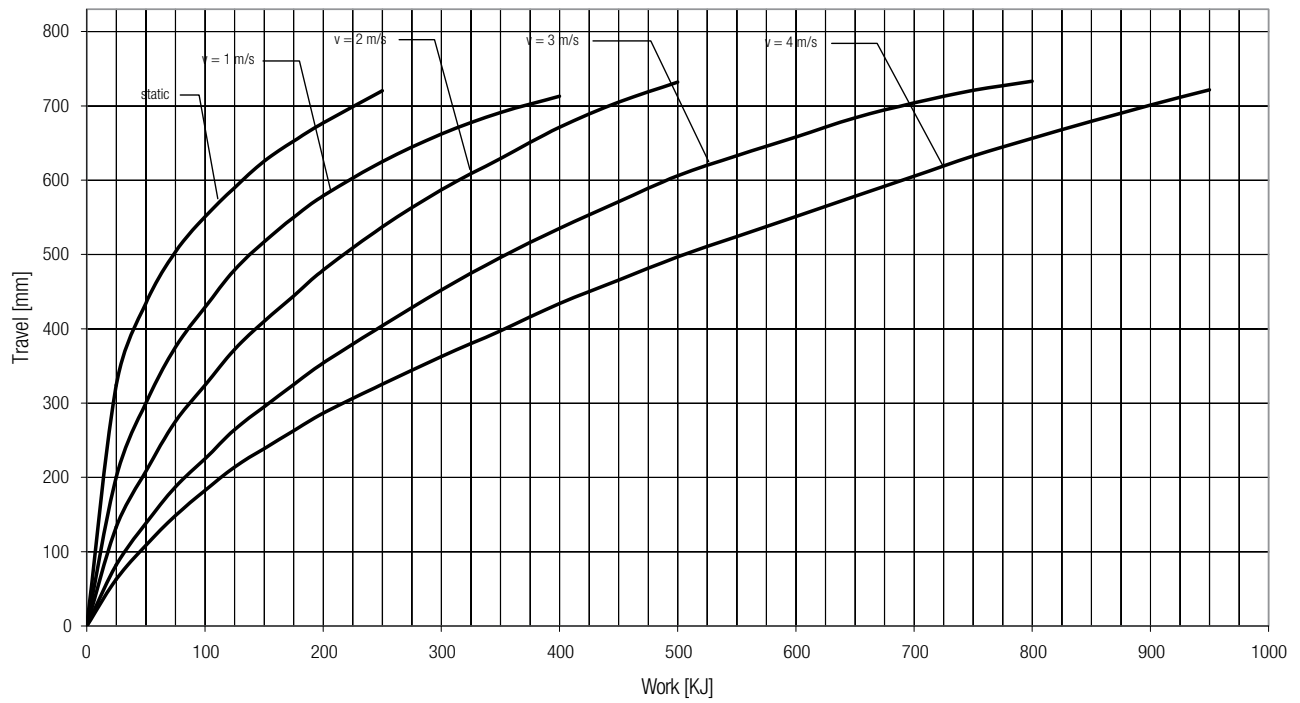
## 600 x 600 Energy Absorption



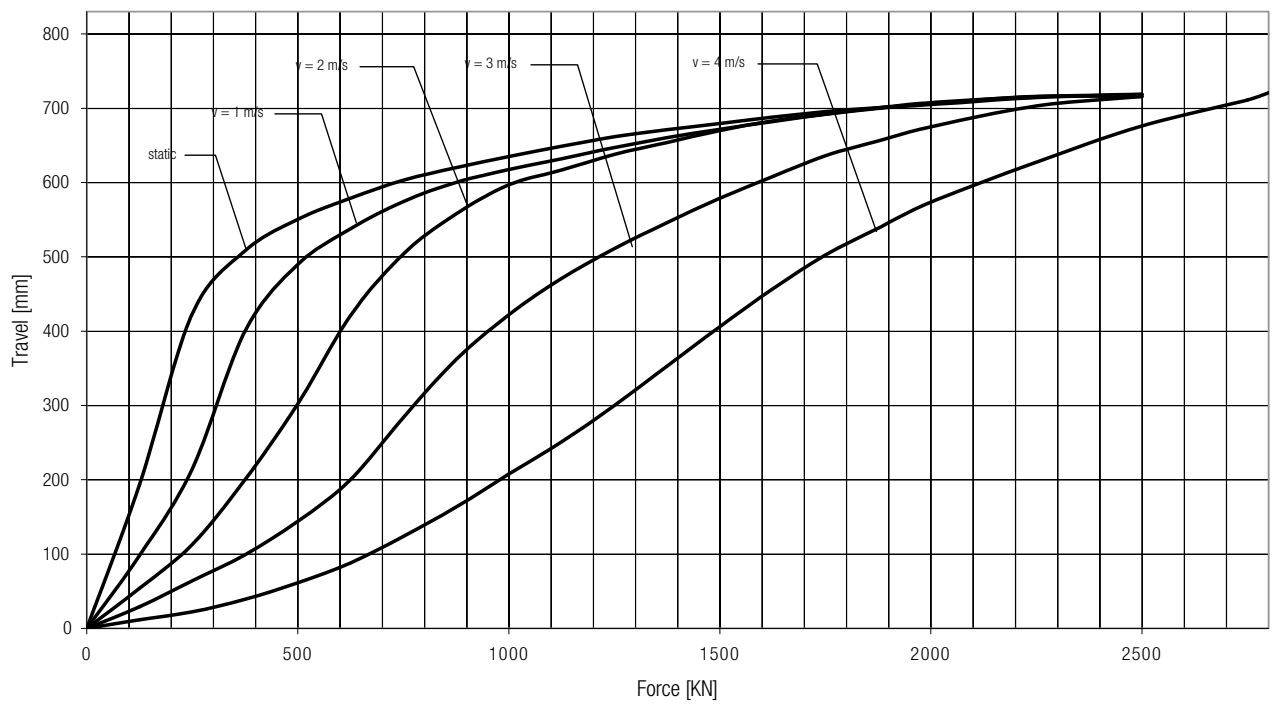
## 600 x 600 Final Load



## 600 x 900 Energy Absorption



## 600 x 900 Final Load







# www.conductix.us

## USA / LATIN AMERICA

10102 F Street  
Omaha, NE 68127

Customer Support

Phone +1-800-521-4888

Fax +1-800-780-8329

Phone +1-402-339-9300

Fax +1-402-339-9627

info.us@conductix.com

latinamerica@conductix.com

## CANADA

18450 Rue J.A. Bombardier  
Mirabel, QC J7J 0H5

Customer Support

Phone +1-800-667-2487

Phone +1-450-565-9900

Fax +1-450-951-8591

info.ca@conductix.com

## MÉXICO

Calle Treviño 983-C  
Zona Centro  
Apodaca, NL México 66600

Customer Support

Phone (+52 81) 1090 9519

(+52 81) 1090 9025

(+52 81) 1090 9013

Fax (+52 81) 1090 9014

info.mx@conductix.com

## BRAZIL

Rua Luiz Pionti, LT 05, QD.  
L - Vila Progresso  
Itu, São Paulo, Brasil  
CEP: 13.313-534

Customer Support

Phone (+55 11) 4813 7330

Fax (+55 11) 4813 7330

info.br@conductix.com

Contact us for our Global Sales Offices

