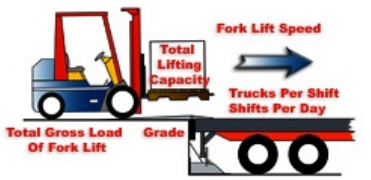
Leveler Capacity

Determining Capacity



Selecting the proper capacity for the leveler can be confusing due to the variables that must be addressed. Dock leveler manufacturers have different terminology to describe capacity such as rated load, dynamic capacity, rollover capacity, etc., which can add to the confusion. To ensure proper capacity selection, consider these factors:

1. What is the maximum lifting capacity of the fork lift in the facility?
   (no matter how infrequent)
2. What is the maximum fork lift weight (with battery) in the facility?
   (no matter how infrequent)
3. Does the fork lift have any attachments?
   If so add the weight of attachments to the weight of the fork lift.
4. Fork lift type, three wheel or four wheel?
   (specify the number, size and arrangement of the vehicle wheels)
5. What speed are the vehicles traveling - 4 mph or less, over 4 mph?
6. Fork lift direction onto the dock leveler - straight or angle approach?
7. What is the height difference between the vehicles and the dock?
8. Trailer traffic volume (trucks serviced per shift)? Light (1-3), Moderate (4-8) or Heavy (over 8)?
9. Number of shifts per day - one, two or three?

Calculating Capacity

A simple guideline exists to calculate the safest dock leveler capacity for light to normal usage. Add the gross weight of the vehicle and the gross weight of the load. Multiply that by 2.0 (ie. 8,000 lbs. forklift gross weight + 4,000 lbs gross load = 12,000 lbs x 2.0 = 24,000 lbs; rounded up to 25,000 lbs).

If the manufacturer does not offer that exact capacity, use the next higher capacity. For normal to heavy usage, a multiplier of 3 to 4 should be applied.

Specifying a capacity higher than the calculated requirements will further extend the life expectancy of the dock leveler. Select the dock leveler to offer a minimum of 10 years of service life.

Dock levelers are designed to withstand dynamic forces generated when the loading vehicle makes contact with the inclined leveler.

The impact force can be many times greater than the actual gross load due to the speed at which it is traveling. Three-wheeled loading vehicles or narrow wheels greatly increase pin-point loading and should be accounted for by further increasing the leveler capacity. When using equipment of this type, a dock leveler with a minimum capacity of 30,000 lbs. is recommended regardless of gross load.

This guideline will work in the majority of applications when the grade is less than 7%, the speed does not exceed 5 mph, and the frequency is not more than 8 trucks per door per day, 20 rollover cycles per vehicle. The rated capacity may be adversely affected by unique loading or operating conditions.

For applications of higher frequency, greater grade, and higher speeds, a multiplier of 4 to 5 times the total gross load should be used. Unusual conditions can lessen the effectiveness of this guideline. When in doubt, always specify a higher capacity.