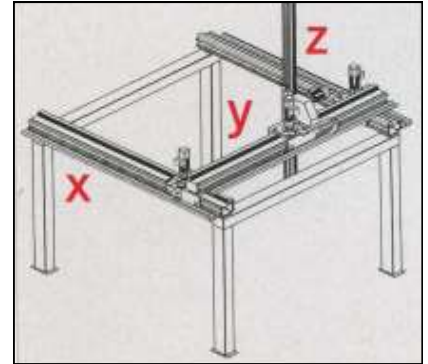
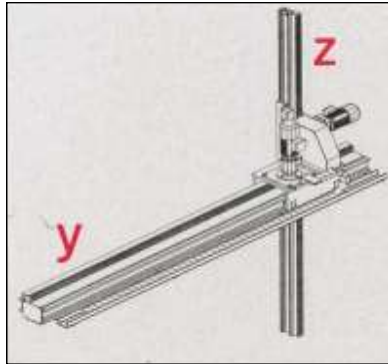


Design Criteria for Multi-Axis Systems

The schematics below represent various axis for movement. When describing the system needs, some basic concepts will identify parameters. For the drive mechanism, the X-axis is typically the long run length. The Y-axis is the width and Z-axis is the vertical stroke. Other helpful criteria is the length (in or mm) of movement or stroke for each axis, speed (in/sec or mm/sec) of the stroke desired, and acceleration (in/sec² or mm/sec²) if any. Also identify the frequency of stroke in times per hour or per day.



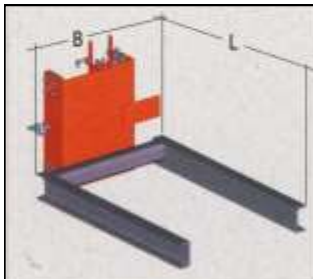
Type of Application: _____

Stroke:	X _____ in or mm	Y _____ in or mm	Z _____ in or mm
Speed:	X _____ in/sec or mm/sec	Y _____ in/sec or mm/sec	Z _____ in/sec or mm/sec
Acceleration:	X _____ in/sec ² or mm/sec ²	Y _____ in/sec ² or mm/sec ²	Z _____ in/sec ² or mm/sec ²
Position Accuracy:	X +/- _____ in or mm	Y +/- _____ in or mm	Z +/- _____ in or mm

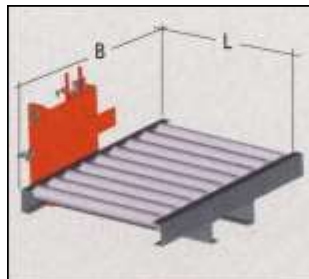
Motor: AC Motor Frequency Controlled Servo Load _____ Lbs or N Cycle Rate _____ cycles/hour

Other: (Ambient Conditions, etc., that may impact function) _____

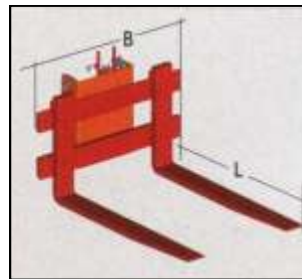
Criteria for Lift Systems



1. Load Frame



2. Conveyor



3. Frame with Forks

Type 1, 2 or 3 or other (Describe) _____

B = _____ in or mm L = _____ in or mm

Load: _____ Load Center: _____ Stroke: S = _____ in or mm

Max Height of Load Frame: H = _____ in or mm

Motor - AC Frequency Controlled or Servo _____ Top mount or Floor level _____

Lifting Speed: _____ ft/sec or m/sec Cycle Rate: _____ Cycles Per Hour

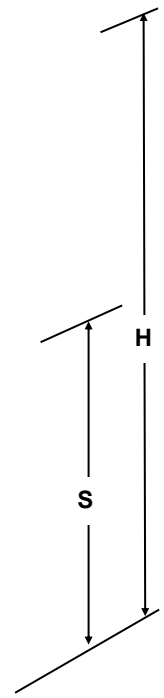
Fail Safe Brake: (y/n) _____ Lifting Sensors or Proximity Switches: _____

Mechanical Locking System: _____ Standby By Drive _____

Lift Mechanism Type: Chain Belt Rack & Pinion Hydraulic Other

Describe Operating Conditions (Surrounding Environment, Temps, Moistures, Contaminants, etc.,

Drawing/Sketch available?) _____



Please include a drawing/sketch if possible. Additional System concepts are available at www.winkel.de. Contact PTI for additional information. Phone: 704-588-1091 | Fax 704-588-5738 | www.ptintl.com