

PALLETFLO®

Live Storage Systems

Groceries
Australia



Coffee So. Africa



Textiles
USA



Truck Staging
England



Engines
USA



**The Gravity System That
Works With Commercial Pallets
Controls Continuously
Handles Mixed Loads
Needs No Brakes**



**Innovative Material Handling Solutions
Throughout the World**





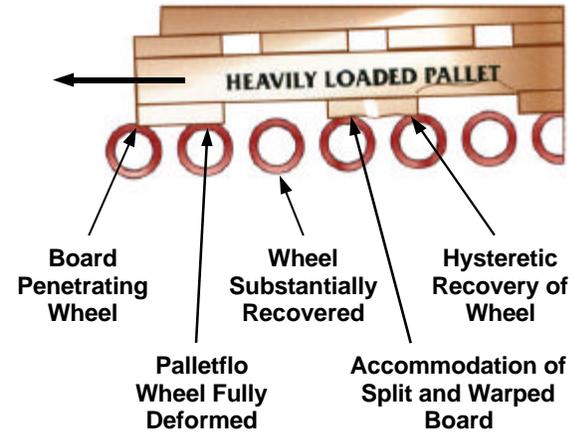
PALLETFLO®

Live Storage Systems

Inventory is stored on wheels in a rack, which can be as long, wide and high as needed. Loading is from the rear and unloading is from the front. As a load is removed, the row of loads behind it automatically moves forward. Methods for loading and unloading include manual, fork truck, and automatic or man-ride stackers, with computer control of inventory records and systems operation.

Palletflo® was the pioneer in pallet live storage. Thousands of installations serve industry throughout the world. Its success is based on the ability to handle almost any pallet and the smooth speed control resulting from the Hysteresis control built into every wheel. Palletflo® adds economy because there is no need for power, braking devices, special pallets, or rehandling of loads and pallets when transferring from receiving pallets to special pallets to shipping pallet. Its simplicity and versatility make it easy to apply whether the need is for a single lane to accumulate the output of a palletizer or a complete high rise warehouse. In the years since it gave industry its original break-thru into pallet live storage, Palletflo® has proven its versatility handling loads of pallets and skids of almost all types in as-is working condition, loads ranging from an empty pallet to 14,000 lbs. of air cargo, in runs

over 100 feet, at temperatures ranging from 28°F to 90°F. Special conditions can be accommodated if required.



The OD of the Palletflo® wheel is resilient to conform to irregularities such as warped, split, or loose boards in the pallet bottom surface. The wheel tread is made of an elastomer with high hysteresis properties. As a load rolls down the rail slope, each wheel in the rail absorbs kinetic energy from the pallet moving at a safe controlled speed.



Colemans Food



John Lewis

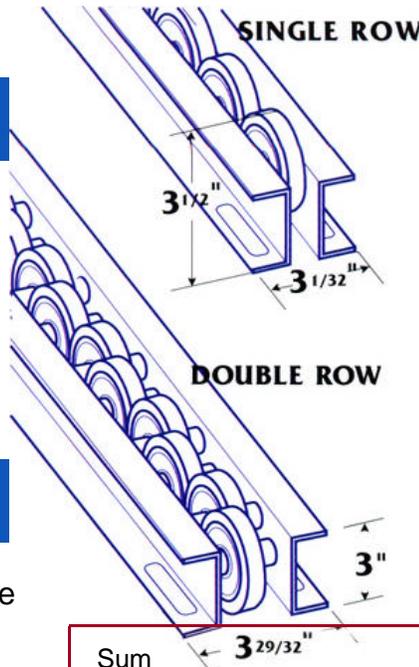


Tudor Webasto

Rail Weights

Standard For total load of up to 4100 lbs. on two rails with a 5" span

Heavy For loads up to 6200 lbs.



Wheels

General Warehousing Temperature range of 60° to 90° F.

Cold Room Temperature range of 28° to 50° F.

Pushline A low hysteresis wheel. Not subject to temperature variations

Two single row rails usually suffice for most common wood pallets. Double row rails are used for pallets whose cross-wise bottom boards are not wide enough (less than 4 1/2"). The 1 1/2" spacing is sometimes needed to keep wheel loading within the design recommendations of 80lbs. / wheel. This is often the case when the pallet boards are few and narrow. A simplified formula for determining maximum wheel spacing

Sum Bottom Board Widths	Wheel Spacing					
	Maximum Allowable Load Per Pallet on 2 Rails Based on 80lb. Limit Per Wheel					
	1-1/2"	2-1/2"	3"	3-3/4"	4-1/2"	5"
10"	960lb	640lb	480lb			
15"	1600lb	960lb	800lb	640lb		
20"	2080lb	1280lb	1040lb	800lb	640lb	
25"	2560lb	1600lb	1280lb	1040lb	880lb	800lb
30"	3200lb	1920lb	1600lb	12080lb	1040lb	960lb
35"	3680lb	2240lb	1840lb	1440lb	1200lb	1120lb
40"	4160lb	2560lb	2080lb	1680lb	1360lb	1280lb
45"	4800lb	2880lb	2400lb	1920lb	1600lb	1440lb
48"	5120lb	3040lb	2560lb	2000lb	1680lb	1520lb

in a two rail system is:

$$\text{Total board width} \times 160 \text{ Spacing (inches)} = \text{Load (lbs.)}$$

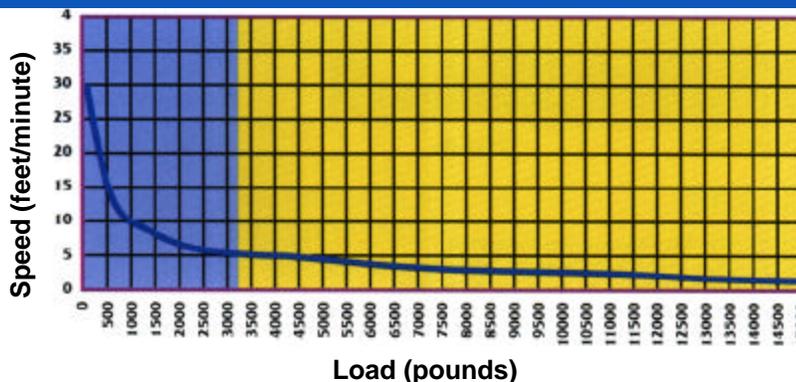
Spacing should not exceed *3" without testing. Three rail

Systems which are sometimes used for sagging pallets or to reduce wheel loading require special consideration and it is best to consult the factory. For total assurance, Kornylak offers to test your pallet and load at its facility without charge.

Typical Speed Test Of Standard Wood Pallets With Loads To 3,000 lbs.
 This portion charts tests run to determine effect of load on pallet speed using a 48" x 40" reversible slatted wooden pallet with 32" of bottom board in direction of flow; bottom boards crosswise on conveyor; running in 40" direction; on two standard RPB-3046-1-1/2 Load Rails with 7/16" slope per foot.

Typical Speed Test Of Air Cargo Pallet With Loads To 14,000 lbs.
 This portion charts tests run to determine effect of load on pallet speed using an 88" x 125" Brooks and Perkins air cargo pallet with solid bottom; running in 125" direction; on four standard RPB-3050-2-1/2 Load rails with 7/16" slope per foot.

Tests Demonstrate Safe, Controlled Speed, Gentle Stop, With Any Load



Both test run at 65° F.

*Cannot exceed 3" w/c on bottom boards that are 1 x 4 - ie. 1/2" x 3-1/2"

When planning large or unusual systems many have found it helpful and reassuring to first see their pallet and load tested. These tests duplicate the special conditions involved and provide data for the system designers.

Tests have proven Palletflo's capability at extreme temperatures, with very heavy loads, with unusual pallets, with loose and unstable loads, with mixes of various loads and with "hand with care" items such as computers, pianos and glass tubing.

You are invited to request such tests, free of charge and scheduled for your convenience at Kornylak. If unable to witness the test a report will be furnished. If required, a video tape can be provided.

Planning, Specifying And Ordering Your Palletflo® System

From the very earliest stage of planning your live storage system, Kornylak offers help in a variety of forms ~ advice, comparisons of storage forms, case histories, system layouts and actual tests. Tests run at Kornylak's facility are useful not only to demonstrate performance of special pallets or loads in a specific environment but also to determine the lowest cost rail capable of meeting all conditions.

Helpful data to speed up the advice process includes:

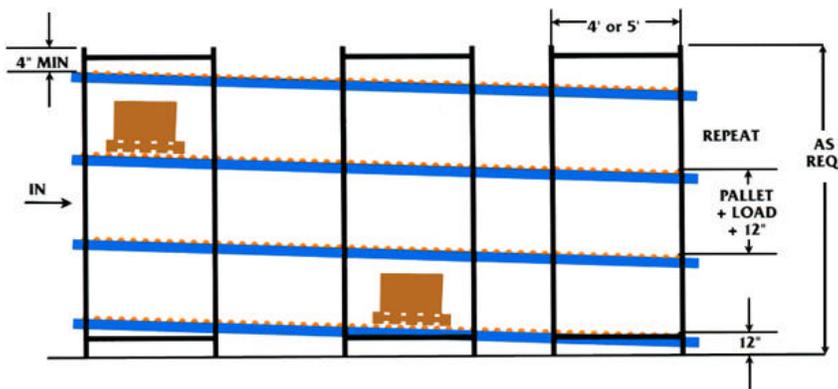
Pallet description ~ bottom board size, orientation and spacing.

Load description ~ weight, stability, height, overhang.

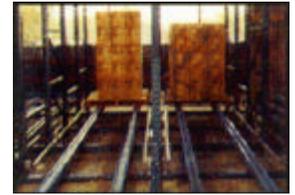
Environment ~ temperature range, moisture, dust.

Space ~ area, height, obstructions such as columns, ducts, pipes, exits.

Storage capacity desired ~ number of loads, bays wide, tiers high and length of lane and proposed method of replenishing and load removal.



PALLETFLO® Test Demonstration



A test demonstration illustrates the effectiveness of Palletflo® hysteresis wheels.



The Palletflo® rails are set at the same degree of slope and equipped with the same diameter wheels with the same durometer on same spacing. The rails on the right have Palletflo® urethane wheels, those on the left do not.



The uncontrolled load on the left accelerates continuously and falls off the pallet at the moment of impact. The controlled load on Palletflo® wheels on the right flows smoothly and comes to a safe, gentle stop.

Gravity Controlled
PALLETFLO®



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