# ENGINEERING CORPORATION



20 Yard PowerLynx with Roll Bar

## **PowerLynx**®

12 to 25 Yd High Compaction Chiseled Body Rear-Loader
Product Features Folder

Engineering and Product Technical Document
Improving Performance and Customer Acceptance

## **PowerLynx Overview**

The PowerLynx is the First Lightweight, High Compaction Rear-Loader in the Industry.

- High Compaction- Up to 1200 pounds/yard
- Exclusive Pivot Pack Tailgate Design
- · Lightweight Chiseled Body Design
- 3-Yard Hopper
- Fast Packing Cycle
- Complete Ejection Process From Inside The Cab



## **PowerLynx Body Specifications**

PowerLynx Standard									
PL12	PL16	PL18	PL20	PL25					
12 cu. yd.	16 cu. yd.	18 cu. yd.	20 cu. yd.	25 cu. yd.					
174"	198"	210"	228"	264"					
8,500 lbs.	8,800 lbs.	9,000 lbs.	9,300 lbs.	9,900 lbs.					
Minimum Cl	hassis Requirement	5							
84"	108"	120"	138"	159" *					
114"	138"	150"	168"	189"					
25,900 lbs.	30,000 lbs	33,000 lbs.	33,000 lbs	54,000 lbs.					
	PL12 12 cu. yd. 174" 8,500 lbs. Minimum Ch 84" 114"	PL12 PL16  12 cu. yd. 16 cu. yd.  174" 198"  8,500 lbs. 8,800 lbs.  Minimum Chassis Requirements  84" 108"  114" 138"	PL12         PL16         PL18           12 cu. yd.         16 cu. yd.         18 cu. yd.           174"         198"         210"           8,500 lbs.         8,800 lbs.         9,000 lbs.           Minimum Chassis Requirements         84"         108"         120"           114"         138"         150"	PL12         PL16         PL18         PL20           12 cu. yd.         16 cu. yd.         18 cu. yd.         20 cu. yd.           174"         198"         210"         228"           8,500 lbs.         8,800 lbs.         9,000 lbs.         9,300 lbs.           Minimum Chassis Requirements         84"         108"         120"         138"           114"         138"         150"         168"					

PowerLynx Heavy Duty								
BODY DIMENSIONS	PL12	PL16	PL18	PL20	PL25			
Advertised Body Size	12 cu. yd.	16 cu. yd.	18 cu. yd.	20 cu. yd.	25 cu. yd.			
Overall Length of Body	174"	198"	210"	228"	264"			
Approx. Body Weight	9,600 lbs.	9,900 lbs.	10,800 lbs.	11,300 lbs	11,900 lbs.			

#### Features

- \* Curved shell body design ultra-high strength-to-weight ratio
- \* High compaction- achieves full chassis GVW capacity
- \* Only 4 rotary bearings eliminates slide components
- \* 20-second hopper cycle time
- \* Shorter tailgate achieves outstanding weight distribution
- \* Lower maintenance no high-wear slide or slipper blocks
- \* Automatic latching tailgate for added safety
- \* Side access door

#### Body Construction (Standard Powerlynx Unit)

- \* Sides 11 gauge 50,000 psi
- \* Top 11 gauge 50,000 psi
- \* Floor 11 gauge 50,000 psi

#### Tailgate Construction (Standard PowerLynx Unit)

- \* Hopper sides 3/16" 100,000 psi
- \* Hopper bottom 3/16" T1 100,000 psi
- \* Packer and slide plates 3/16" 100,000 psi

#### Measurements

- \* Height Above Chassis Frame 86-1/2"
- \* Height Above Chassis Frame Tailgate Raised 146-1/2"
- \* Body Outside Width 96"
- \* Hopper Opening Width 74"
- \* Hopper Opening Height 83-1/2"
- \* Hopper Depth 20-1/2"
- \* Hopper Bottom Below Chassis Frame 21"
- \* Top of Step Below Chassis Frame Adjustable
- \* Loading Sill Below Chassis Frame 2" Below All PL Models
- \* Hopper Capacity "Volumetric" 3 yd.
- \* Dynamic Hopper Capacity (cu. yd./min) 7.5 cu. yd.

#### Hydraulic System

#### Cylinders

- \* (2) 4" double-acting packer panel cylinders
- \* (2) 4" double-acting sweep panel cylinders
- \* (1) 4" double-acting ejection cylinder, telescopic
- \* (2) 4" single-acting tailgate lift cylinders

#### Pump - Gear Type

- \* Capacity 25 gpm @ 1,500 rpm
- \* Maximum operating pressure 3,500 psi

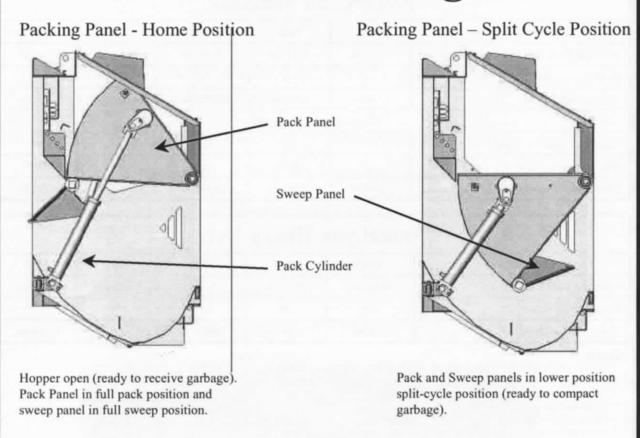
#### Hydraulic Tank

- \* Capacity 20 gallons
- \* Location Right-hand front on floor inside body
- \* Sight Gauge on tank
- \* Filter 10 micron return line filter with by-pass valve

#### Optional Equipment

- \* Strobe light
- \* Roll bar hydraulic container dumper
- \* TV camera
- \* Reeving winch container dumper
- \* Cart dumper
- \* Work lights
- \* Rotating beacon

## **Pivot Packing**



The exclusive rotational pivoting packing method with two double-acting, single-stage 4" bore hydraulic cylinders applies a force of 22 tons each (44,000 lbs.) to the refuse. This produces 88,000 pounds of hydraulic force that is transferred through the packing panel and directly into the garbage. This unique packing design efficiently transfers 98 % of the total force into the garbage and does not waste the force overcoming slide block friction, inherent in slide track designs.

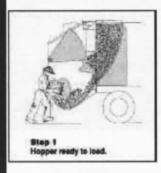
## **Pivot Packing Cycle**

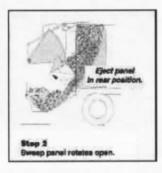
The pack cycle is comprised of four individual pivoting motions. The pack cycle meets the ANSI Z245.1 safety standard of split cycle operation.

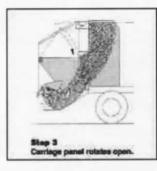
A complete cycle is accomplished with two actions from the operator.

- First, the operator depresses both pack and sweep control handles. This starts the sweep panel pivoting upward through a 100-degree arc, followed by the pack panel pivoting downward. The cycle then stops with a 6" minimum gap between the panel and the hopper lip.
- The operator then pulls both pack and sweep controls handles. This action starts the sweep panel pivoting down (sweeping the garbage from the hopper) followed by the pack panel pivoting upwards (packing the garbage into the body).

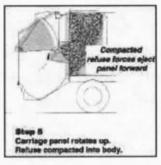
The 2" hardened pins and spherical bearings eliminate the mess, service and maintenance of typical side track/wear block designs.

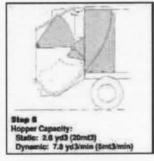






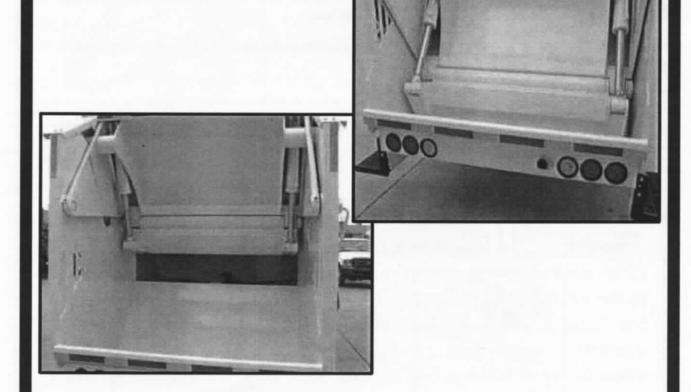






## 3 Yard Hopper with Fast 18-20 Second Cycle Time

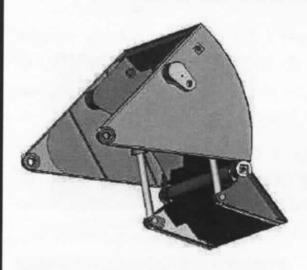
The PowerLynx hopper accepts more garbage. The PowerLynx deep hopper allows garbage from rear load containers or residential carts to empty; shallow hoppers can hold garbage in the container.

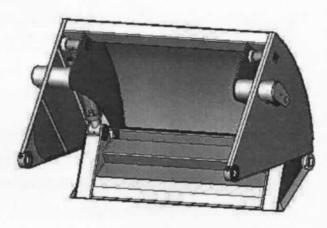


The cycle time is fast, completing a full cycle in only 18-20 seconds. The hopper has a 6 second reload time...NO WAITING.

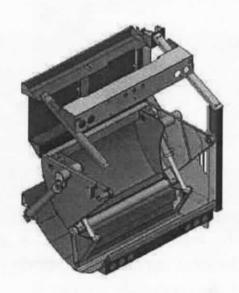
## **Built Tough**

The PowerLynx is designed to withstand the environmental beating of high compaction and heavy-duty use. The High Strength pack panels rotate on 2" diameter hardened high strength pins. All movements of the panels is on the pins, resulting in less wear and maintenance.





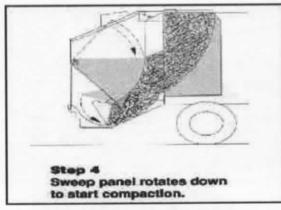
The PowerLynx is designed with state-of-the-art Solid Works™, solid modeling CAD (computer aided design) system. The design is fully evaluated using FEA (finite element analysis) stress-strain technology. The result is a design that WORKS.



# Largest Legal Payload Due To A Lightweight, Ultra High Strength-To-Weight Curved Shell Body

The 20-yard PowerLynx can pack over a 2:1 garbage-to-body weight ratio. This means that the 9,300 lb body can pack over 20,000 pounds of garbage carry a larger legal payload. The PowerLynx has become the industry's most efficient body.

The PowerLynx packs garbage into a column that is compressed between the roof and the packing panel. When the column of garbage is thoroughly "compressed", the column collapses and moves forward into the eject panel, making room for more garbage.







12 Yard PowerLynx

The body sides are made of a single sheet for a sleek, smooth chiseled surface. The body floor can be updated for heavy-duty use at the customer's request.

## Safe and Convenient Unloading

The PowerLynx ejection design is greatly enhanced for safer operation.

Easy to Unload with it's automating latching tailgate - The PowerLynx can be unloaded quickly from the safety of the cab. No more jumping out to hassle with turnbuckles.



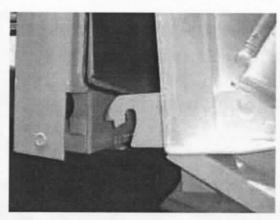
In Cab Control Box: Tailgate and Eject Functions are operated from in-the-cab.



Curved Ejector Panel Cleanly ejects garbage



Tailgate Hinge



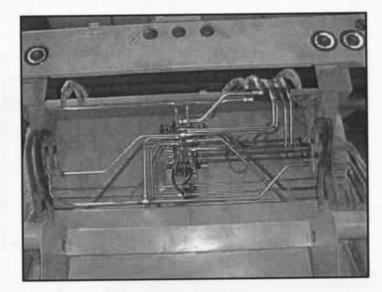
Automatic Tailgate Locks

## **Hydraulic Design**

- The PowerLynx has a **SINGLE** hydraulic valve bank centrally located in the upper tailgate.
- The tailgate open/close and eject/retract controls are located in the cab, like a front-loader.

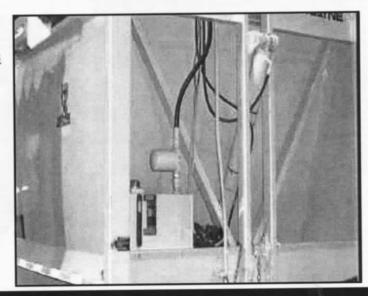
#### Single Operative Valve

- Shown with two added valve sections for roll bar and winch.
- Hydraulic tubing with tinc dichromate coating.



#### Body front is open - Clean hydraulics

- -Reservoir with 100% return filtration
- -Sight gauge with temperature gauge



## **Available in Narrow Widths**

- The WAYNE PowerLynx is the <u>only</u> high compaction rear-loader offering 86" wide ("narrow") bodies.
- The narrow bodies are available in 11, 15, 17 and 19 cubic yard capacities.

## Available in models with CDL and FET Exemptions

#### **CDL EXEMPT**

With a 25,900 lb GVW requirement, the 12-yard PowerLynx is CDL exempt!

#### FET EXEMPT

All PowerLynx bodies up to 20 cubic yard are FET exempt, under 33,000 GVW.



Narrow 86" Wide 15 Yd PowerLynx



96" Wide 12 Yd PowerLynx



With over 40 years in operation, Wayne Engineering Corporation is providing the solid waste industry worldwide with innovative garbage trucks. Founded by Wayne H. Worthington and Stan Worthington in 1961, WAYNE began operations with one product, the CargoMaster, a semi trailer mounted bridge crane designed for material handling application. Today, WAYNE is a leader in the refuse industry with a full line of Automated Side-Loader bodies and an arsenal of manual side and rear loaders from the small 6 yard PUP to the powerful 25 yard PowerLynx. With a professional staff of over 100 employees and a nation-wide authorized distribution network, we are proud to offer our full product line:



- Curbtender Automated Side-Loader: 16 to 31 yds
- PowerLynx High Compaction Rear-Loader: 12 to 25 yds
- Royal GT Medium Compaction Rear-Loader: 10 to 16 yds
- Super Series Small Rear-Loader: 6 & 8 yds
- TomCat Side-Loader: 6 to 14 yds
- Pup Small Side-Loader: 6 yds
- AutoCat Automated Side-Loader: 10 to 14 yds

701 Performance Drive, Cedar Falls IA 50613 Phone: 319-266-1721 Fax: 319-266-8207 www.WayneUSA.com

Illustrations and/or specifications published herein are informational in nature and shall not be construed to warrant suitability of the unit for any particular purpose, as individual performances may vary. WAYNE ENGINEERING CORPORATION, reserves the right under its Product Improvement Program to, without notice, modify construction and/or design and furnish equipment that varies from the illustrations or specifications contained herein. Except as specifically provided for in WAYNE ENGINEERING CORPORATION New Equipment Warranty, there are no other warranties, expressed or implied, including not limited to the implied warranty of merchantability and the implied warranty of fitness for a particular purpose, which are hereby disclaimed.

970-190-002 Printed January 2004