

# Roller Combo™ HOIST

Patent #4,741,576



- For loads to 34 tons
- Exclusive roller principle provides more breakaway power
- Subframe mounted

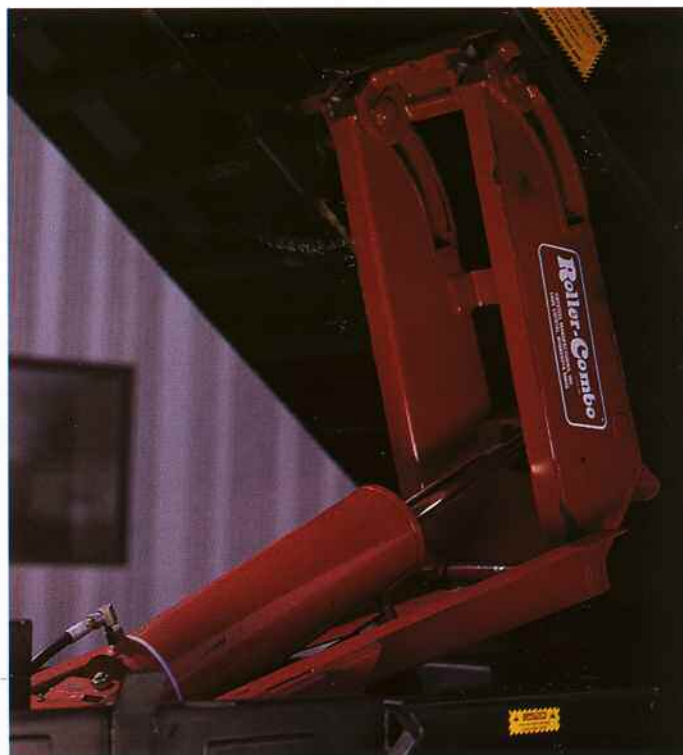


# CRYSTEEL



*Building the World's Best Truck Bodies & Hoists*

# 8 Reasons to Take a Close Look at Our Roller-Combo Hoist



## 1 Advanced Design

Every Roller-Combo includes a full-length sub-frame, engineered to provide stability and added strength to the truck frame. Channel-type subframes are used on all models. This, along with the square box frame and far-forward lifting point on the hoist, adds stability and rigidity not possible with older hoist designs.

Crysteel's super heavy-duty, angle-type rear hinge is another built-in quality feature of every subframe. The rear hinge is standard with welded pins. Removable pins or greaseless composite bearings are available.

## 2 Efficient Hydraulics

**High-Pressure Hydraulics:** Our high-pressure hydraulics deliver maximum efficiency. Our smaller pumps and cylinders weigh less but do more. That's why the aircraft industry uses high-pressure hydraulics exclusively. And it's why you'll get superior performance from your Crysteel hoist.



**Low-Pressure Hydraulics:** Crysteel's three low-pressure (2000 psi) Roller-Combo Hoists provide power and the capability to match up perfectly with your low pressure central hydraulic system. Built with the same high quality tubing and high pressure seals that are proven on all Crysteel cylinders. You'll get years of trouble-free operation you wouldn't have believed possible.

*The Crysteel Roller-Combo Hoist is made from 8 to 17 feet long. Take a look at these quality features standard on every Roller-Combo Hoist:*

## 3 Composite Bearings

Critical rotating pivot points on the Roller-Combo use greaseless Teflon® composite bearings which never need lubricating. They rotate on stainless steel shafts and are completely impervious to corrosion. They are maintenance-free and will extend the life of your hoist while helping ensure smooth operation.



## 4 Less Weight, More Strength

All Roller-Combo fabricated parts are made from high-strength, low alloy steel. All shafts and tubing are cold-drawn high-strength steel. It adds up to weight savings of up to one-third without sacrificing strength.

## 5 Premium Quality Cylinders

Crysteel cylinders are designed to last. That's because they're made from high-strength steel tubing and feature chromed shafts, close-tolerance pistons and high-pressure seals. An internal cylinder by-pass protects the system. Pressure is never more than is needed to lift the load, but full pressure is always available instantly.



## 6 Total Control and Flexibility

Crysteel's exclusive reservoir mounted valve provides the flexibility and features you want and demand. Power beyond port provides the flexibility to expand the system to power other equipment or add a filter kit or both. Proven features like built-in load check, voluminous flow characteristics and feather touch metering control help you control the load exactly the way you desire. Crysteel's locking lever pedestal control and SEALED cable provide the finishing touch and worry-free operation.



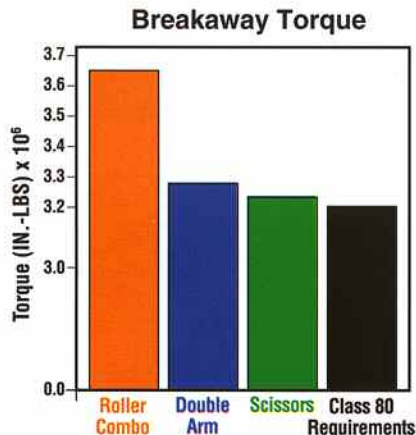
# er Look at

in seven sizes for dump bodies  
Quality Crysteel features you'll find

## 7 More Lifting Power

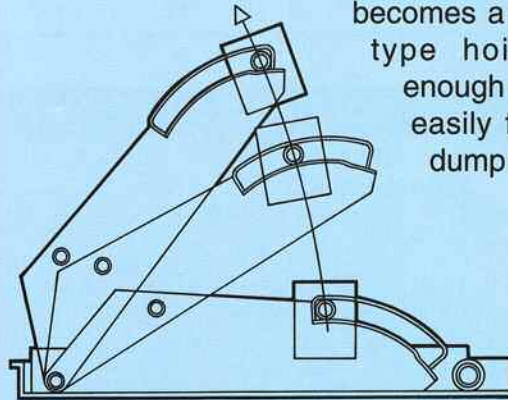
Crysteel's patented "Roller-Combo" feature provides almost a third more breakaway power for lifting heavy loads with power to spare at the end of the cycle.

Graph shows that the Roller-Combo always provides more power when you need it most . . . at breakaway. Power remains steady throughout the critical dumping cycle, staying well above requirements all the way.



## HOW THE ROLLER-COMBO WORKS

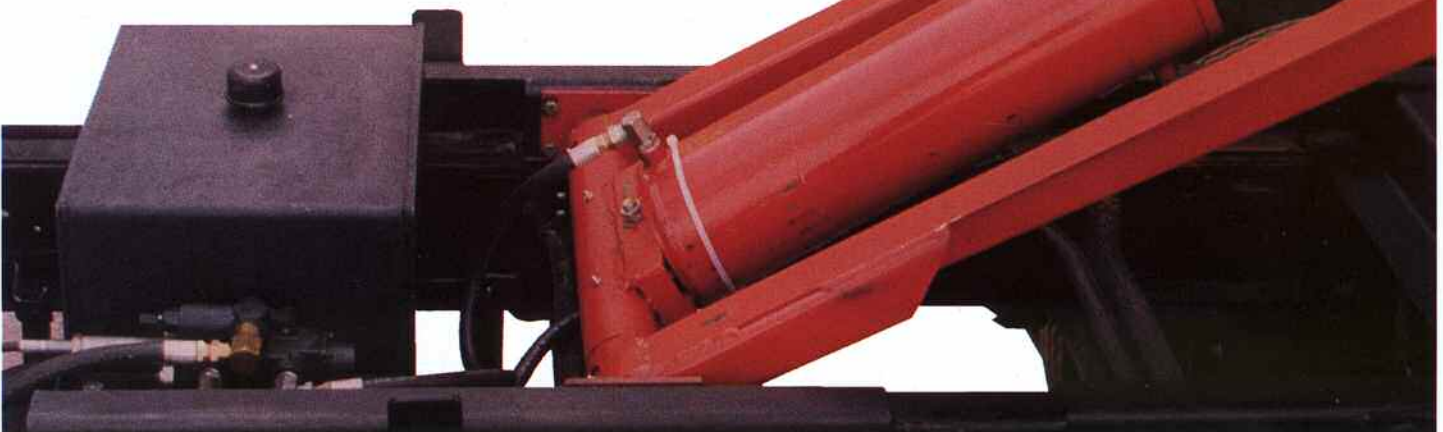
Crysteel's exclusive Roller-Combo feature is the secret to the Roller-Combo's power and efficiency. At the start of the lift cycle, the short arm position of the roller allows almost a third more breakaway power to start heavy loads. As the load rises, the roller moves smoothly along its track increasing the effective length of the upper hoist arm. When the roller reaches the end of the track, the hoist automatically becomes a scissors-type hoist, with enough power to easily finish the dump cycle.



First half of dump cycle illustrated.

## 8 Built for Years of Service

Modern technology provides the solid foundation on which we designed and built the Roller-Combo Hoist. Rugged high strength steel and proven gear pumps combined with UHMW wear plates, maintenance-free Teflon® composite bearings, o-ring porting, and Crysteel's CAD-CAM engineering experience provide you with the best possible hoist money can buy.



Full-length subframe and combination valve/reservoir are standard. Take a closer look at Crysteel's Roller Combo Hoist!

## ROLLER-COMBO HOIST SPECIFICATIONS

Model Number	RC 540	RC 650	RC 750	RC 860	RC 580	RC 690	RC 6100
NTEA Performance Class	40	50	50	60	80	90	100
Double-Acting Cylinder	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Number of Cylinders	1	1	1	1	2	2	2
Cylinder Bore and Stroke (in.)	5 x 21 5/8	6 x 21 5/8	7 x 21 5/8	8 x 21 5/8	5 x 28 7/8	6 x 32 1/2	6 x 32 1/2
Chromed Shaft Dia. (in.)	2	2 1/4	2 1/4	2 1/4	2 1/4	2 3/8	2 3/8
Maximum Operating Pressure (PSI)	3250	3250	2000	2000	3250	2200	2700
Std. Pump GPM @ 1000 RPM	6	6	10	10	10	15	15
Reservoir Size (gallons)	10	10	10	10	18	18	18
Recommended Body Length (ft.)	8-10	8-11	8-11	9-12	12-15	14-16	14-17
Mounting Height (in.)	13 1/2	13 1/2	13 1/2	13 1/2	15 1/2	16 1/2	16 1/2
Approximate Weight (lbs.)	745	770	795	830	1435	1850	1850

## ROLLER-COMBO HOIST LOAD CAPACITY IN TONS\*

Model Number	NTEA Performance Class	Body Length (ft.)									
		8	9	10	11	12	13	14	15	16	17
RC 540	40	18.4	15.8	13.8							
RC 650	50	26.6	22.8	19.9	17.7						
RC 750	50		19.7	17.2	15.3						
RC 860	60		25.7	22.4	20	17.9					
RC 580	80					30.4	27.6	25.3	23.4		
RC 690	90							28.4	26.2	24.3	
RC 6100	100							34.9	32.2	29.9	27.9

Specifications subject to change.

\*Capacities based on water-level load, 12" overhang, 50° dump angle, and includes body weight.

CAUTION: The combined weights of truck, body, hoist and load must not exceed the truck's Gross Vehicle Weight rating.

Roller-Combo Patent No: 4,741,576

### Crysteel High-Pressure Hoists Compatible With Load Sensing Systems

The Roller-Combo Hoist is especially suited to closed-center, load-sensing hydraulics using variable displacement piston pumps. The high-pressure hydraulics maximizes the efficiency of closed-center load-sensing over low-pressure hydraulics. This is because the hoist's hydraulic cylinders have low volume displacement. This can result in saving up to 20 horsepower on a typical highway department truck equipped with a hoist, sand spreader and snowplow.



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