

SHS-Series, SyncHoist Load Positioning

ENERPAC
POWERFUL SOLUTIONS. GLOBAL FORCE.

▼ SHS-Series 4-Point SyncHoist System



- High precision load manoeuvring, vertically and horizontally – using one crane
- Reduces the risk of damage from oscillations of wire rope due to sudden crane starts/stops
- Vastly improving operating speed and worker safety
- Weather conditions play less critical role
- Intelligent hydraulics turn lifting into high accuracy hoisting and load positioning system
- High accuracy (+/- 1,0 mm)
- 700 bar double-acting push/pull cylinders with parachute valves for added safety in case of hose rupture or coupler damage
- Cost reduction when compared to conventional load positioning methods.

Options for system management & control:

- Manual control: stroke control and system warning functions
- Extended manual control: stroke control, load and stroke display and system warning functions
- PLC-control: fully monitorized system with programmable functions using touch screen and wireless remote control and system warning functions
- Contact Enerpac for stroke, capacity or control options.

Accurate Hoisting and Load Positioning Enhancing a Crane's Capability



Typical SyncHoist Functions and Applications

Functions

- High precision load positioning
- Pre-programmed positioning, tilting and aligning
- Counterweighing – determining centre of gravity.

Applications

- Positioning of roof sections, concrete elements, steel structures
- Positioning of turbines, transformers, fuel rods
- Precise machinery loading, mill rod changes, bearing changes
- Precise positioning of pipe lines, blow out valves
- Positioning and aligning of ship segments prior to assembly.

▼ Bridge segments are hoisted from the ground, being positioned with a 4-point SyncHoist system with fully monitorized cylinders.



SyncHoist - High Precision Load Positioning

SHS-Series, Enerpac SyncHoist Systems

System Load Capacity	240 ton (2350 kN)	320 ton (3125 kN)	440 ton (4310 kN)
Max. handling load ¹⁾	4x60 ton	4x80 ton	4x110 ton
Number of lifting points ²⁾	4	4	4
System reach	1500 mm	1500 mm	1500 mm
Cylinder configuration			
Push force @ 90 bar	10,5 ton	14,0 ton	22,0 ton
Pull force @ 700 bar	60,0 ton	80,0 ton	110,0 ton
Plunger stroke ²⁾	1500 mm	1500 mm	1500 mm
Pump single-stage			
Oil flow at 700 bar	4,0 l/min	4,0 l/min	4,0 l/min
Control options & system management ³⁾			
Manual control	Manual directional control valves		
Extended manual control	Joystick controls with position display		
PLC-control ⁴⁾	Fully closed-loop control system		

¹⁾ Subject to angle and position of lifting cylinders.

²⁾ Each cylinder equipped with parachute valve for added safety in event of hose/coupler damage.
Note: Enerpac SyncHoist have standard 4 lifting points. In the event that more or less lifting points are required, contact your local Enerpac representative.

³⁾ See chart below for detailed control features.

⁴⁾ Required for counterweighing (centre of gravity).

SHS Series



Capacity Per Lifting Point:

60 - 110 ton

Maximum Stroke:

1500 mm

Accuracy Over Full Stroke:

± 1,0 mm

Maximum Operating Pressure:

700 bar



▲ Perfectly synchronised balance: Naval ship superstructure weighing over 600 tons placed on the hull using Enerpac's hydraulic SyncHoist.

▼ Designs of Santiago Calatrava (architect) often require creative technological solutions. Enerpac SyncHoist System is one of them and was used for roof positioning of the Palace of the Arts in Valencia (Spain). Segments are hoisted from the ground, being positioned with four fully monitored cylinders.



Three options for system management and control

Contact Enerpac for the following options, or other customised stroke, capacity and control configurations.

1. Manual control

- Plunger stroke control
- System warnings for:
 - oil level, filter indication, thermal motor protection.

2. Extended manual control

- Plunger stroke control
- Load & stroke display
- System warnings for:
 - maximum cylinder load control setting
 - oil level, filter indication, thermal motor protection.

3. PLC-control

- Touch screen
- Remote wireless radio control
- Load and stroke monitoring
- Load calculations (centre of gravity)
- Pre-programmable motions and data recording
- System warnings for:
 - maximum cylinder load control setting
 - stroke and position control
 - oil level, filter indication, thermal motor protection.