

SLS-Series, Synchronous Systems

ENERPAC
Hydraulic Technology Worldwide

▼ Typical layout for a 4 points synchronous lifting system.



- 4 to 64 points, load and stroke monitored and controlled
- Capacities from 10 up to 1000 ton per lifting point
- Up to 1 mm accuracy over full plunger stroke
- PLC-control unit with user-friendly touch screen
- Automatic data storage and read-out for reporting and graphical representation
- System secured with warning and stop features to achieve optimal safety.

System Options:

- Load and force measurement
- Load cells for precise force measurement up to 0,1% of full scale
- Digital stroke sensors for:
 - up to 0,1 mm accuracy over full stroke
 - up to max. 1 km distance between control unit and lifting points
- Two-axis tilting control to level structures
- Oil heater or heat exchanger for extreme conditions.

Controlled Hydraulic Movement



Typical Synchronous Lifting Applications

- Bridge lifting and repositioning
- Bridge launching
- Lifting and lowering of heavy equipment
- Leveling of existing structures and buildings
- Structural testing
- Lifting and weighing of oil platforms
- Tunnel jacking and pushing.



Heavy Lifting Cylinders

For a complete line of double-acting cylinders see the Enerpac Cylinder Overview.

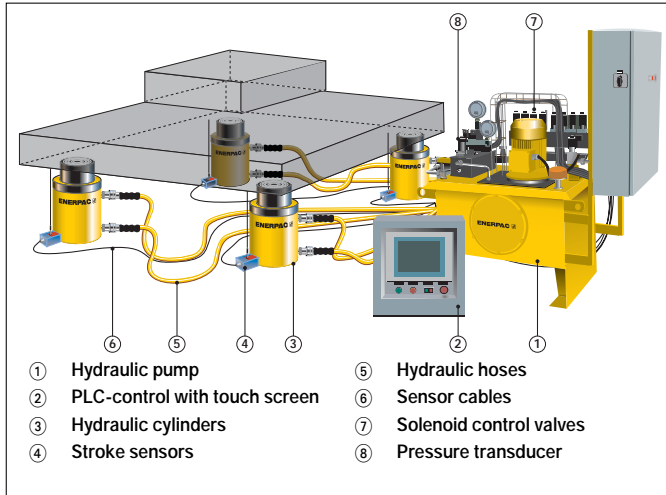
Page: 7

▼ One of the world's first and largest lifting jobs for maintenance of a 3500 ton mining dragline was successfully done with an Enerpac synchronous hydraulic system: exact aligning of bearings on the rail on which this dragline rotates.



Multiple Points Synchronous Lift System

Typical layout for a 4 points synchronous lifting system.



SLS Series



Capacity Per Lifting Point:
10 - 1000 ton

Maximum Stroke:
5000 mm

Accuracy Over Full Stroke:
Up to 0,1 mm

Maximum Operating Pressure:
700 bar



◀ Bridge lifting and launching system. The load is balanced on groups of CLL-Series lock nut cylinders. The hydraulic lifting, launching and balancing movements are synchronized with PLC-control.

▼ Enerpac synchronous lifting system with PLC-control unit used to lift temporary support towers during launching of the Millau Viaduct in France.



Basic & Premium System Management & Control Features

X = Standard, O = Optional

| Features | Basic | Premium |
|---------------------------------------|----------|----------|
| Analog stroke sensors | X | X |
| Digital stroke sensors | - | O |
| Stroke controlled movement | X | X |
| Load controlled movement | - | X |
| Max. accuracy (depends on components) | ± 1,0 mm | ± 0,1 mm |
| Recording capabilities | - | X |
| Graphical representation | - | O |
| Intercommunication capabilities | - | O |
| Sensor cables | X | X |
| Alarms | Basic | Premium |
| Stroke limitation | X | X |
| Load limitation | - | X |
| Low oil level | - | X |
| Oil filter warning | - | X |
| Oil temperature warning | - | X |

