FPT SYNCHRO Series

Synchronous lifting systems

For millimetre precision lifting

F.P.T. makes integrated PLC controlled lifting systems
The F.P.T. Synchro system allows the operator to carry out each stage of the lifting and lowering process in synchronicity via integrated management of the hydraulic and control elements. Unbalanced loads are kept level during the up and down phases, with a maximum levelling error of +/- 1 mm.
The system has been designed to adapt to all the customer's lifting requirements and can be fully personalised with a series of options. It's the ideal tool for lifting or weighing operations that need dedicated control functions.
The F.P.T. system is easy, safe and modulable for the operator to use.

Typical synchronous lifting application from 4 to 48 points:

The system through the signals from the stroke and pressure transducers allow synchronous lifting and lowering with precision of +/- 1 mm, reducing the risk of excessive strain due to unequal distribution of the loads across the lifting points.
The operator can use the PC screen to set parameters for the operation to be carried out, decide the number of cylinders to use, the stroke, the precision and speed at which to operate. All the data throughout the operation is constantly monitored by the system and allows greater productivity and safety during the operations.
All the data is recorded and can then be downloaded.

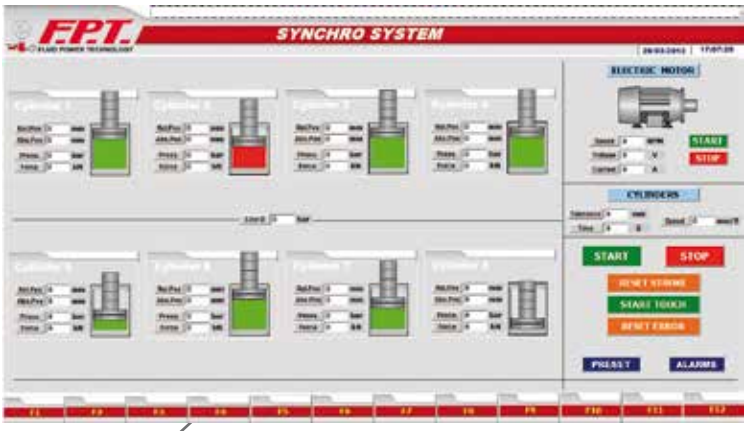
Basic composition of the system:

- 700 bar hydraulic pump with radial piston pump, three-phase engine controlled by a frequency changer
- portable PC or touch screen panel
- wire transducers to control the stroke
- plated cables complete with industrial connectors

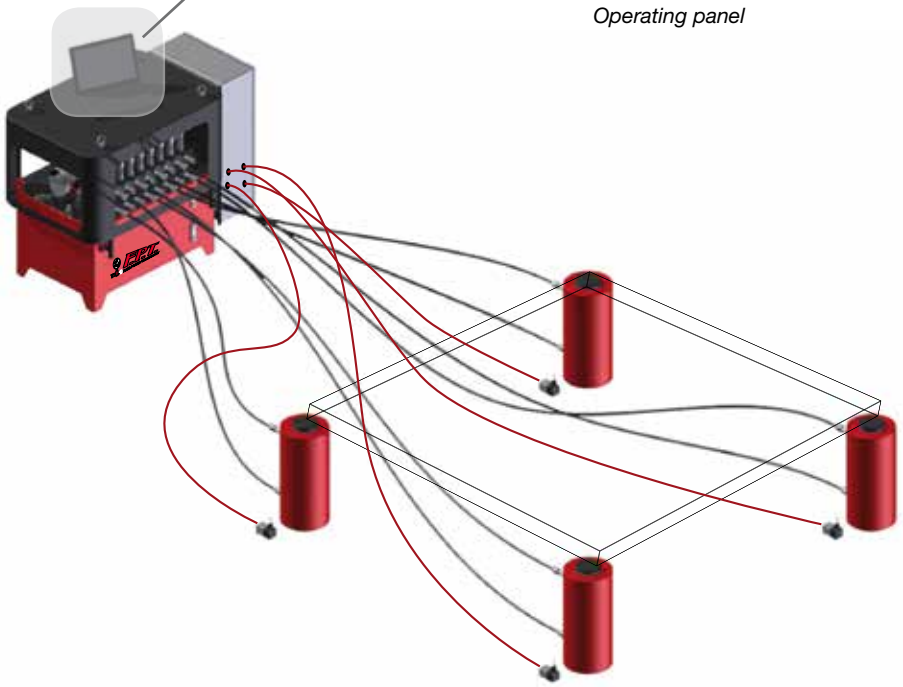
To use single- or double-acting hydraulic pumps

CONTROLS - OPERATOR PANEL:

- control from 4 to 48 lifting points
- controlled movement for lifting/lowering manoeuvres
- possible to select which cylinders to move
- 2 possible settings: automatic or manual
- possible to set maximum error
- synchronicity precision +/- 1 mm
- visual alarms for the load and stroke for maximum safety during operations
- visible indicator of relative maximum error for the various cylinders
- download and storage of lifting data



Operating panel



Typical layout for synchronous system from 4 to 8 points:

Wire transducers to control the stroke

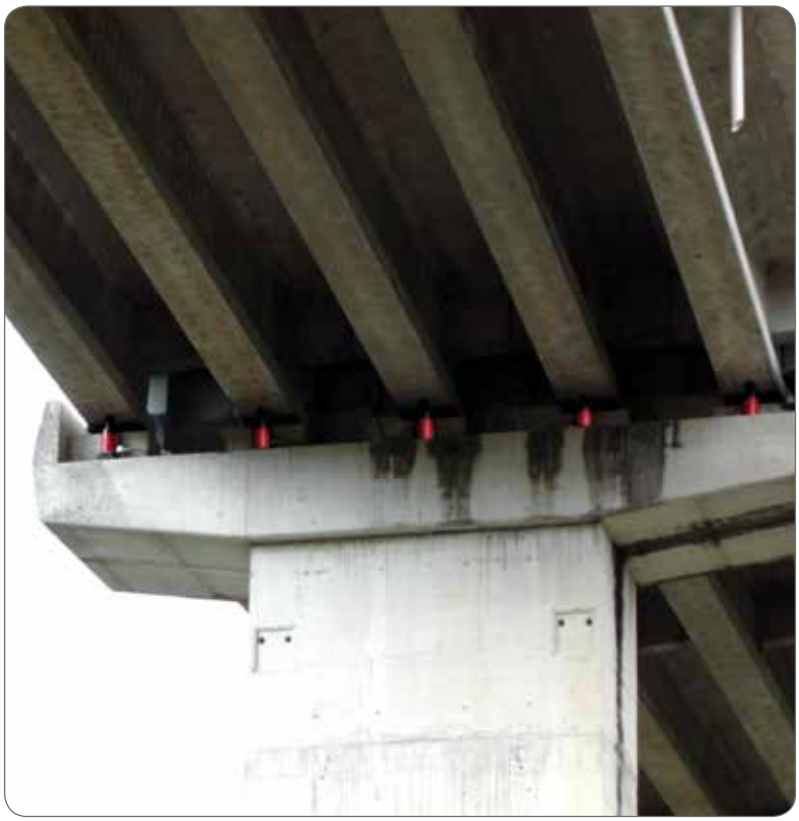
OPTIMISING SPEED

The system is capable of optimising the lifting/lowering speed of the load regardless of the number or size of the cylinders, maintaining the error margin within the limits set.
The operating panel allows the “contact operation” of the cylinders on the structure/decks being lifted to be carried out, saving a substantial amount of time.

The following information is visible for each cylinder:
- relative and absolute position
- pressure
- force
- direction (up/down)
- information on errors

TYPICAL APPLICATIONS OF SYNCHRONOUS LIFTING:

- Moving heavy structures
- Maintenance, launch or construction of bridges
- Load transfer operations
- Installation or maintenance of heavy plant
- Positioning off-shore platforms
- Weighing operations



OPTIONAL - SYSTEM PERSONALISATION:

- High flow rate pump to feed 700 bar high-tonnage cylinders
- Operating panel
- Synchronous systems can be created for environments with temperatures from -20C° to +50C° and 100% humidity
- Synchronous systems can be created in explosion proof version - ATEX
- Pressure transducers
- Heat exchangers
- Lifting on inclined cylinder axis
- Operations to weigh the load and calculate the centre of gravity
- Creating cylinders with integrated transducers

LIFTING CYLINDERS:

The synchronous system can be used with:

- single-acting cylinders
- single-acting cylinders with safety ring
- Double-acting cylinders
- Double-acting cylinders with safety ring