

Synchronisation control

If several drives have to drive with the same velocity at the same time or they all have to follow the same definite trajectory accurately they have to be controlled by an open or a closed loop synchronisation controller. Therefore, every drive is in a separate (inferior) closed loop position control (see above). A superior unit controls that the actual position of every drive is in a predefined range permanently. With hyTRax such synchronisation controllers can be implemented from two to eight hydraulic axes by default.

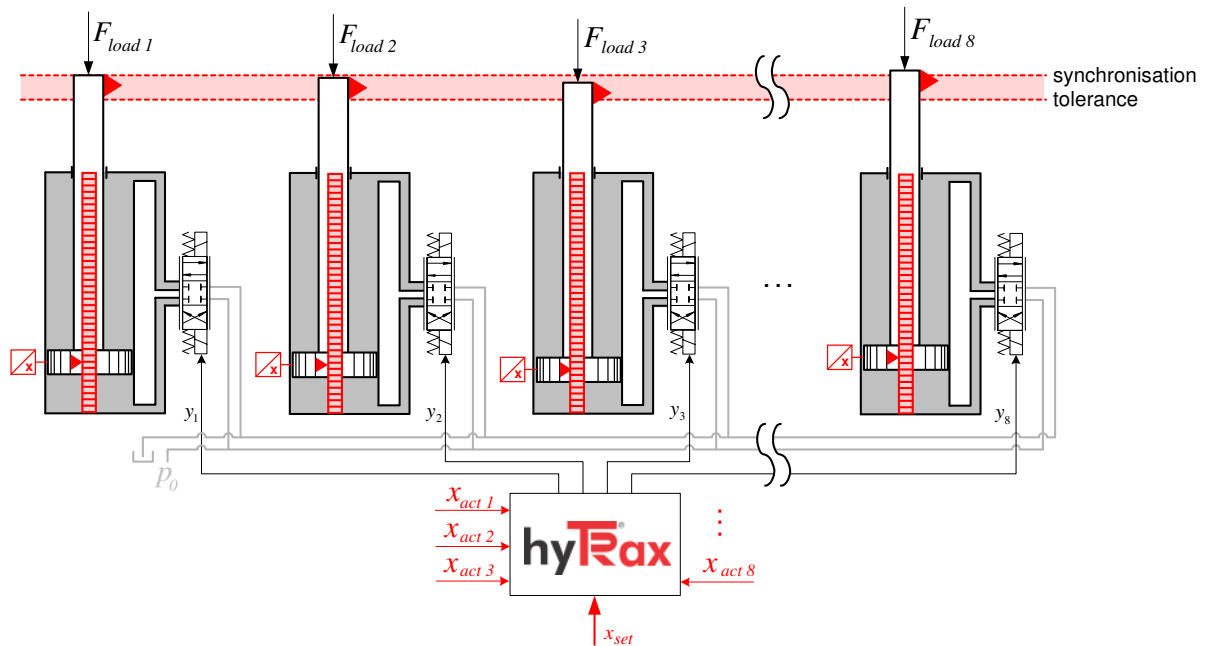


Fig.: Hydraulic cylinder drives in a synchronisation control system

Open and closed loop synchronisation control differs in the following:

If at least one hydraulic cylinder leaves the position range in the open loop control mode hyTRax's superior unit doesn't take actions returning that drive back into the range respectively adjusting the other axes to the slowest one. Only a message is given to the master (e. g. PLC) that at least one drive has left the position range. Further actions have to be activated by the master itself.

Using a closed loop synchronisation control by contrast hyTRax's superior control unit influences the hydraulic drives in an active way if one of them is out of the permitted range, e. g. by ac- or deceleration. Only in case of failure of such actions hyTRax gives an according message to the master. Further actions have to be activated by the master itself as well in case of the closed loop synchronisation control.