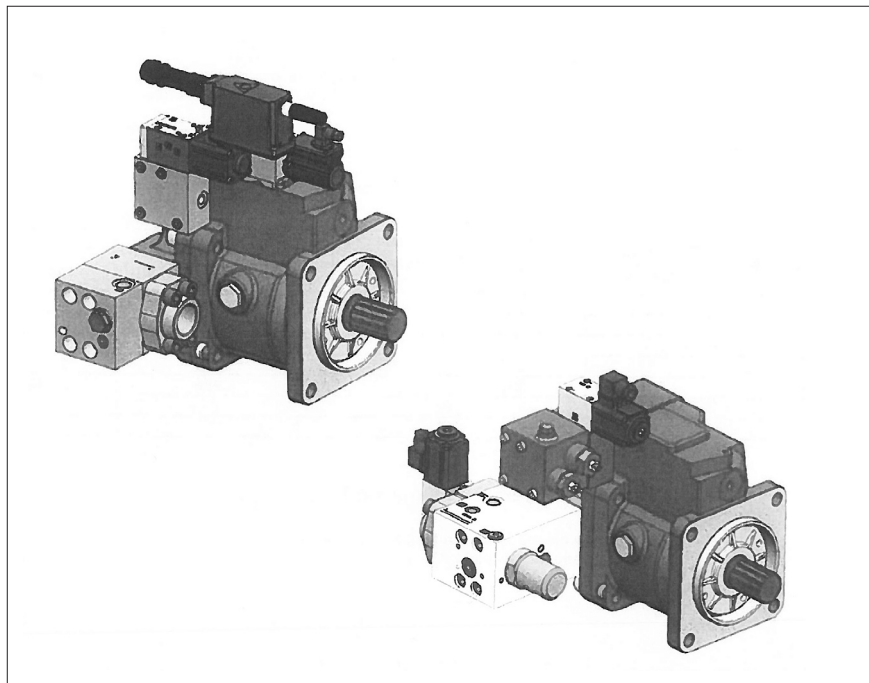


# Axial piston pumps type PVPK with ISO mounting flange

variable displacement, hydraulic control

**obsolete components - availability on request**



## General informations

The Atos PVPK Series swash-plate type axial piston pump for open circuit is a Heavy Duty Variable Displacement Pump for mobile and industrial applications.

The controls and general construction have been optimized for load sensing and pressure constant requirements.

## Proportional controls

The pumps can be supplied with integrated Atos advanced electro-hydraulic proportional controls:

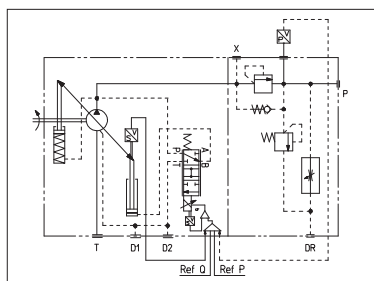
- open loop pressure control
- load sensing control of the flow
- P/Q controls, a complete range with open or closed loop regulation of pressure and flow.

These controls perform high dynamics and fine regulations, directly commanded from PC or from the machines numeric control.

They are available with separated driver or with on board electronics.

New PES digital controllers, integrated to the pump, realize combined closed loop control of pressure, flow and max power and they are also available with optional sequence module (PERS version) that allows to operate the circuit with minimum pressure (close to zero).

The digital version is available with communication protocol RS232 (option PS), CAN-Bus (option BC) or PROFIBUS (option BP).



## Electro Hydraulic control example

Double closed loop with feedback trasducer plus sequence module PERS/X

For technical characteristics and features of PVPK pumps see as follows:

Pump model	Displacement cm³/n	Rated pressure bar	Peak pressure bar	Rotation speed n/min	
				max for self priming	max
PVPK*112	112	320	350	2200	2700
PVPK*140	140	320	350	2200	2500

## Functional descriptions - Control principle

The command values for pressure and flow are set electronically on the pump.

The output flow is determined by the swivel angle, which is feedback to the electronics by means of the positional transducer.

A pressure sensor is used as the feedback element for the pressure control.

The difference of signals thus generated for both the pressure and for the flow are then used as the inputs for a high speed proportional valve with spool position feedback.

By feeding oil into and out of the pump control cylinder, the pump swivel angle is controlled quiddy and accurately with excellent repeatability and minimum hysteresis.

Pressure dependent flow losses are compensated by means of an electronic leakage oil compensator.

## Serial programming software E-SW-PS

This software is supported on CD-ROM and can be easily installed on a personal computer.

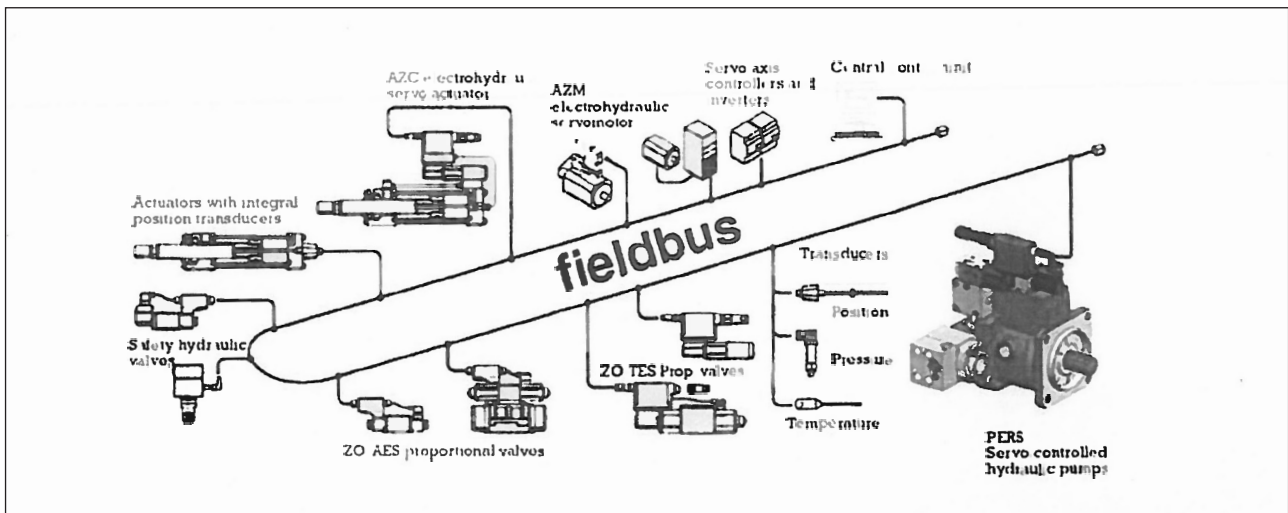
The graphic interface is user friendly and is organized in pages related to the setttable parameters of valves with digital electronics with serial communication -PS, CAN-bus -BC or PROFIBUS -BP, using the relevant interfaces.

## Linking Interfaces

They ensure the physical communication layer from PC to digital proportional valve to execute the functional parameter settings.

## Features:

- automatic valve recognition
- preset data storing
- internal DataBase management
- real time parameters modification
- some setttable parameters: scale, bias, ramp, compensation of non-linearities
- diagnostic and monitor signals (fault, actual values)



## 2 INSTALLATION

### PVPK 112/140

Installation drawing

