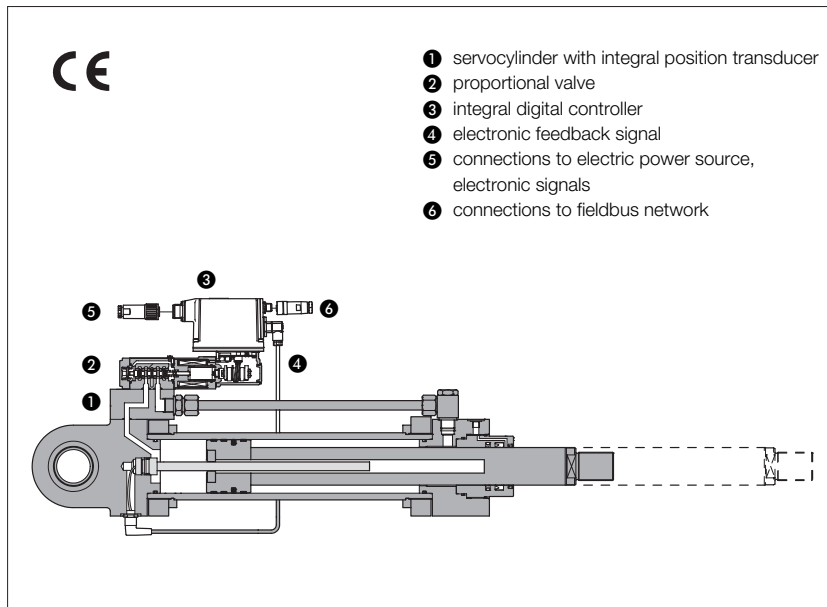


Electrohydraulic servoactuators type **AZC**

linear, with integral digital electronics



They are "smart" machine's elements performing in real time the input commands of the electronic control unit.

The motion cycle and the functional parameters can be programmed via software at pleasure.

Integral digital electrohydraulics provides the actuators' closed-loop control of position, speed and/or force.

Newly added features enable to save the external electronic axis card, so further improving the quality/price ratio of electrohydraulic system.

Supplied as standing-alone units, ready to use after piping to the oleohydraulic source.

1 MODEL CODE

AZC	-	K	P	-	AEZ	-	80/56 x 0200	-	1099
Atos linear servoactuator							Design number for detailed identification		
Cylinders type: K = according to ISO 6020 - 2'91 and DIN 24554 C = according to ISO 6022 and DIN 24333							Servocylinder size (see table B310)		
Transducer type: P = potentiometer V = inductive F = magnetosonic-analog M = magnetosonic					Electrohydraulic control: AEZ = proportional valve without transducer TEZ = proportional valve with one transducer LEZ = proportional valve with two transducers				

2 FEATURES

Atos AZC line of electrohydraulic linear servoactuators is designed to support innovative solutions on modern machines and systems: their modular conception and the many options enable to tailor the proper servoactuator according to the specific application, from the simplest to the more sophisticated.

AZC servoactuators may be used in any environment, as they are "sealed" elements, also available in water-proof configuration for outdoor, mobile, marine and defence applications.

3 SERVOCYLINDERS WITH INTEGRAL TRANSDUCER

Servocylinders are derived from the standard line of Atos hydraulic cylinders: square head (max 250 bar) or heavy duty round head (max 320 bar), in low friction executions for high dynamics.

They have integral position transducer, according to application requirements, at choice: potentiometric, inductive, magnetosonic (see KT02 master catalogue or www.atos.com).

Piston diameter from $\varnothing 40$ mm up to $\varnothing 200$ mm, forces up to 100 ton, strokes up to 2000 mm.

4 DIGITAL ELECTROHYDRAULICS

Servoactuators are driven by high-performance proportional valves with integral digital controller.

Digital electronics provides the closed-loop control of the axis, also acting as electronic driver for the proportional valve, with important advantages:

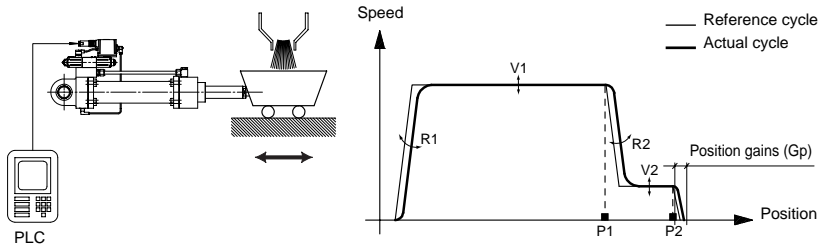
- software setting of hydraulic parameters: scale, bias, ramp, compensation of non-linearities, regulation of the dynamic response;
- better performances: hysteresis, response time, linearity;
- diagnostics (fault, monitor) and computer assisted maintenance of machines and systems;
- direct interfacing to field-bus networks;
- water-proof configuration (IP65).

5 TYPICAL APPLICATIONS

5.1 Fast-slow cycles with closed-loop control in rest position by AZC-KP-AEZ

The servoactuator is equipped with potentiometric transducer (P) and double solenoid proportional valve without transducer (control type AEZ). The external input command corresponds to the rest required position; the fast-slow cycle is automatically generated by the integral electronics.

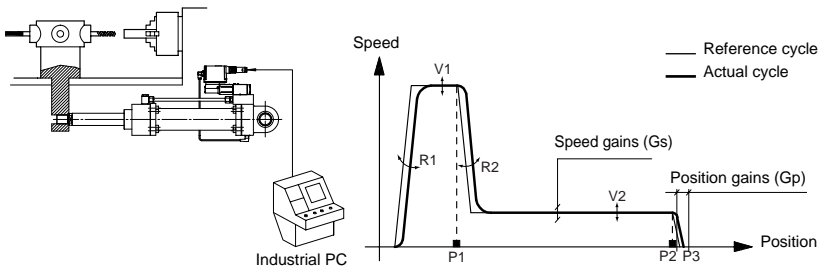
Parameters to be set: closed-loop positioning gains G_p , positions P_1 , P_2 , fast/slow speeds V_1 , V_2 , acceleration ramps R_1 , R_2 . A third speed V_3 (super-slow) can be selected to reach the max accuracy (0.1% of the stroke).



5.2 Machine tools feed cycles by AZC-KF-TEZ

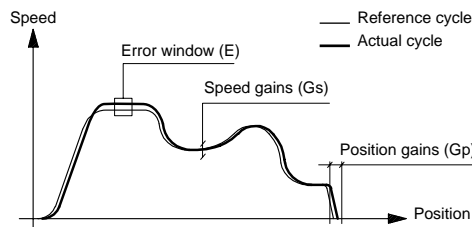
The servoactuator is equipped with analogic magnetosonic transducer (F) and high performance single solenoid proportional valve with transducer (control type TEZ). The external input command starts the self generated reference axis cycle; speed cycle and final rest position are controlled in closed-loop by the integral digital electronics.

Parameters to be set: positions P_1 , P_2 , P_3 , closed-loop gains G_p , G_s , fast/slow speeds V_1 , V_2 , acceleration ramps R_1 , R_2 . A third speed V_3 (super-slow) can be selected to reach the max accuracy (0.01% of the stroke).



5.3 Real-time position control by AZC-CM-TEZ

The servoactuator is equipped with SSI magnetosonic transducer (M) and high performance single solenoid proportional valve with transducer (control type TEZ). The external input command corresponds to the actual required position and it is controlled in closed-loop by the integral digital electronics. Therefore, the axis movement can be managed real-time with a proper reference position profile. Parameters to be set: closed-loop gains G_p , G_s and error window alarm E . The max accuracy is 0.01% of the stroke.



6 TYPICAL SKETCHES

AZC servoactuators allow innovative solutions to improve flexibility and performance and reduce overall cost of systems.

Below, some sketch examples of mobile or industrial machines.

