100% digital electrohydraulics

Atos digital proportionals offer a powerful mix of innovative features

Complete range of valves and controls with rugged design and outstanding performance

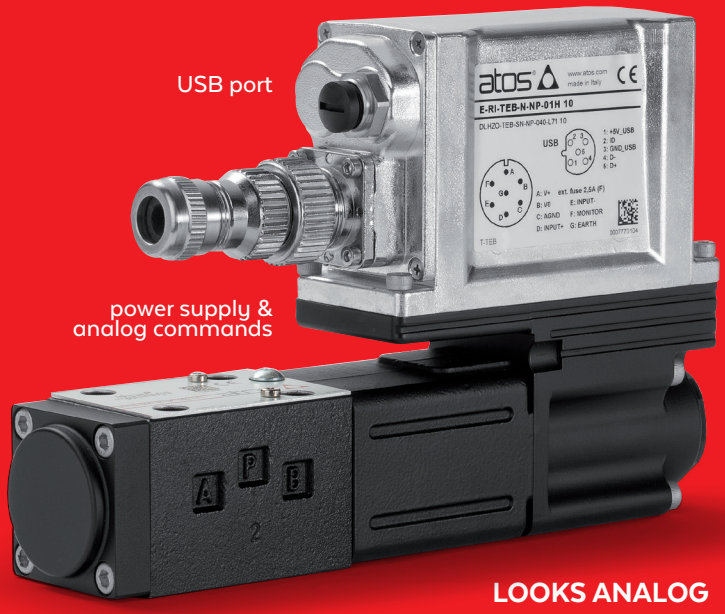


atos®
the Italian electrohydraulics

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Digital range

The outstanding performances of Atos digital proportionals are the result of long lasting R&D activities



LOOKS ANALOG
WORKS DIGITAL

Basic B silver execution:

- digital performances at analog price
- analog commands signal
- rugged design - up to 50g
- temperature range -40°C ÷ +60°C
- water & dust proof - IP66/67
- 200 h in salt spray

Full S black execution:

- wide range of fieldbus interfaces
- P/Q control function
- TÜV certified safety functions



1 high performance proportional
2 direct & pilot operated servoproportionals
3 pilot operated servoproportional, size 35

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Fieldbus

BC CANopen

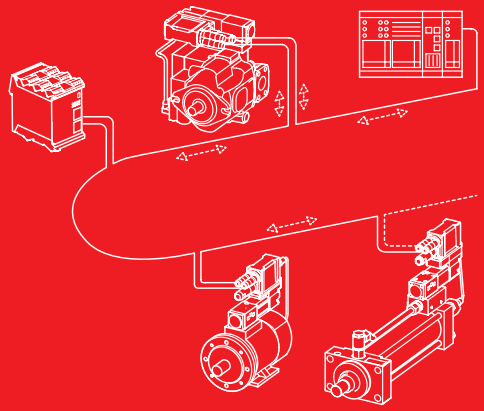
BP PROFIBUS DP

EH EtherCAT

EW POWERLINK

EI EtherNet/IP

EP PROFINET

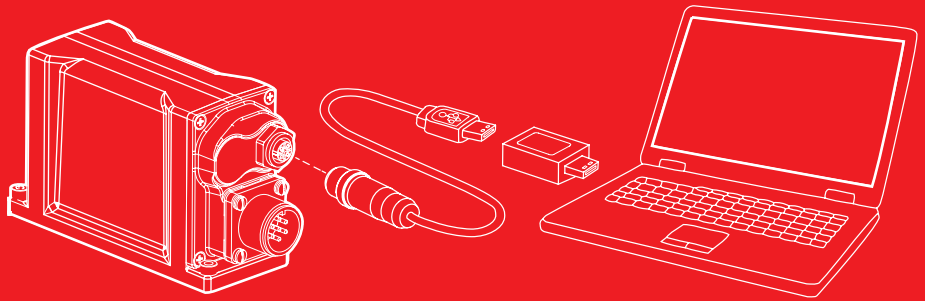


Real time access to valves' parameters and diagnostics

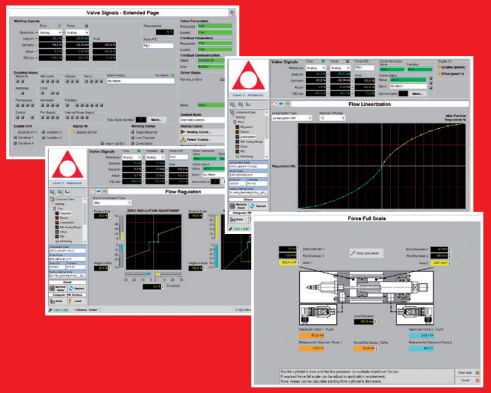
Software

E-SW programming software allows to set the electronic driver's functional parameters

Basic version is available by free web download



- graphics organized in pages and levels
- numerical optimization of factory preset parameters
- real time monitoring
- advanced diagnostics
- internal oscilloscope



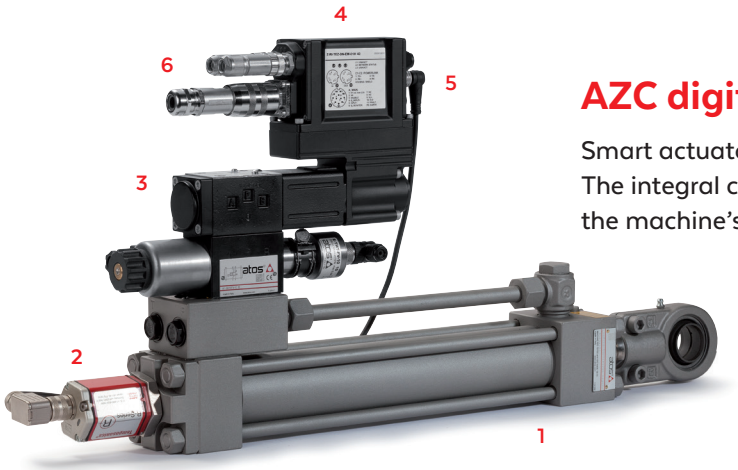
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TEZ servoproportionals with axis control

Servoproportional valves with LVDT transducer, on-board digital driver & axis card perform position, speed and force controls of any electrohydraulic axis

Axis cards are also available for cabinet installations in off-board execution, with or without driver function

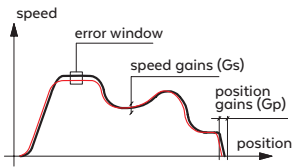




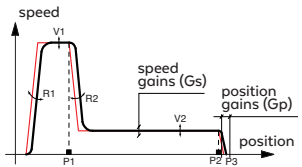
servocylinder 1 with position transducer 2, servoproportional valve 3, integral TEZ controller 4, connections to position transducer 5, to electric power, electronic signals and fieldbus 6

AZC digital servoactuators

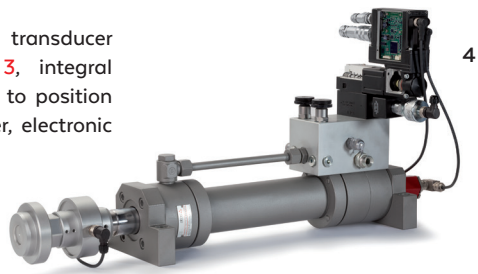
Smart actuators performing the complete axis motion cycle
The integral construction improves the performance and simplifies the machine's wiring



external reference generation



internal reference generation





4 AZC servoactuator with flow/force control by load cell
5 Z-BM-TEZ off-board digital axis card with driver function

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TEB & TES proportionals with LVDT transducer

Directional and flow control valves with on-board digital driver
Off-board digital drivers are available for cabinet installation



6

High Performance proportionals

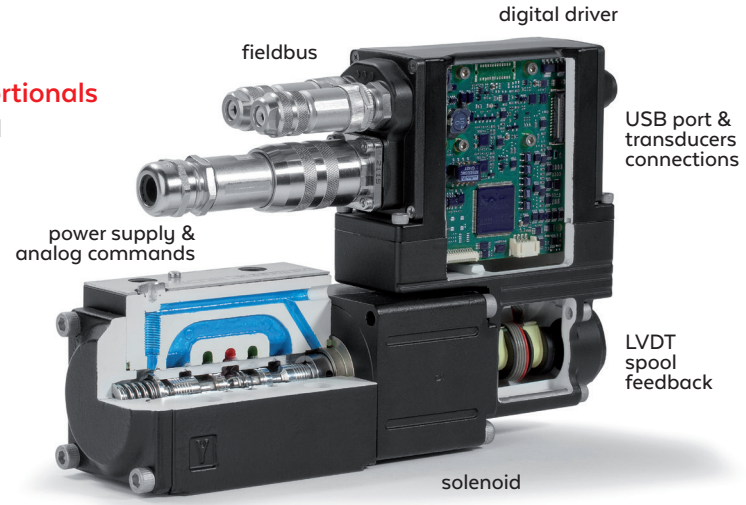
With positive overlap spool and central rest position

Servoproportionals

Sleeve execution with zero overlap spool for accurate closed loop position controls & fail safe function
Pilot operated directional control valves 6 & high dynamic servocartridges 7 are equipped with 2 position transducers



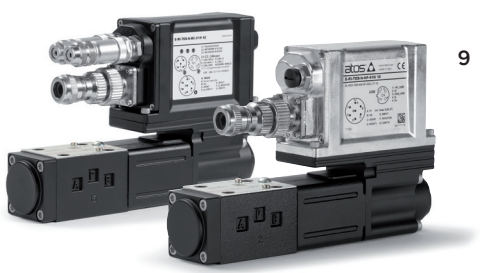
7



valve body with spool-sleeve



8



9

8 E-BM-TES off-board digital driver, DIN rail mounting
9 TEB & TES servoproportionals

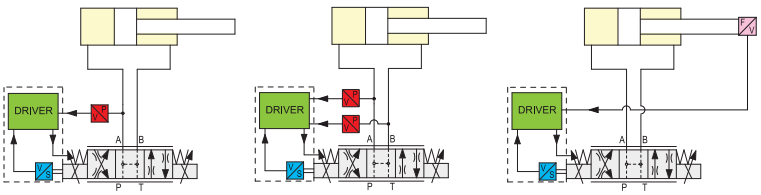
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P/Q options for TES & TEZ proportionals

SP, SF, SL options add pressure (force) closed loop control combined to the flow (speed) regulation of proportional directional control valves

Functional schemes

SP - 1 pressure transducer SF - 2 pressure transducers SL - load cell



electronic driver

valve position transducer

pressure transducer

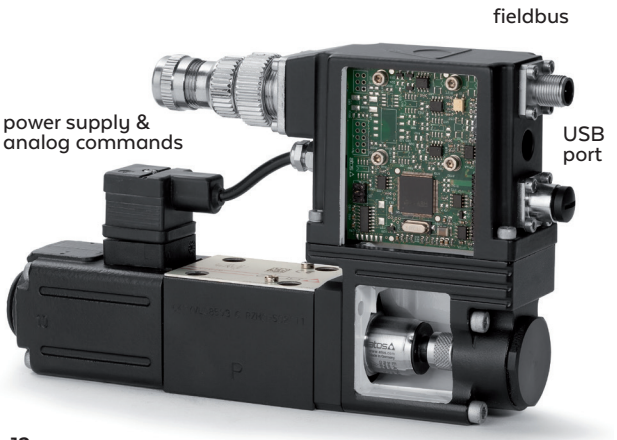
load cell

REB & RES pressure controls

Relief or reducing proportionals with pressure closed loop to ensure best accuracy and repeatability

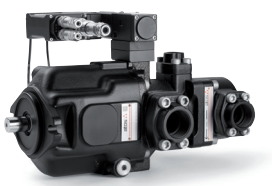
These on board digital drivers offer four preset dynamic configurations:

1 fast - **2** standard - **3** smooth - **4** open loop



pressure transducer

10



11



12



10 PES axial piston pump with P/Q control
11 TES servoproportional with SF option
12 E-BM-RES digital driver, DIN rail mounting

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AEB & AES proportionals without LVDT transducer

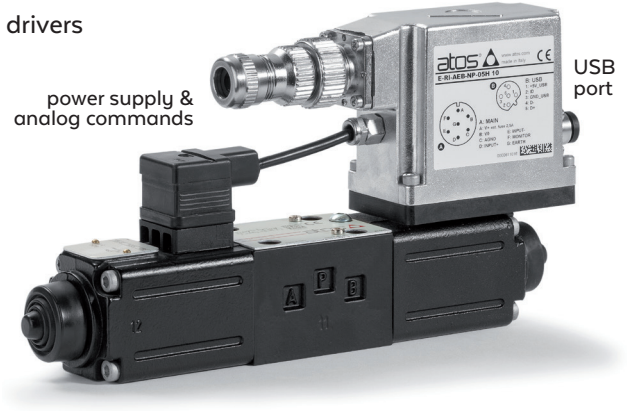
Directional, flow and pressure control valves with on-board digital drivers

13



14





13 AEB directional proportional
14 AES pilot operated pressure control
18 DHZO-A directional proportional
19 AGMZE-A pilot operated pressure control

Digital off-board drivers

DIN rail mounting for cabinet installation

E-BM-AS cost-effective solution 15

E-BM-AES high performance with fieldbus 16

W option adds max power limitation PxQ

ZO-A & ZE-A proportionals

Directional, flow and pressure control valves without LVDT transducer & electronic driver:

ZO-A high performance

ZE-A cost-effective solution

E-MI-AS digital driver, coil mounting 17

15



16



17



18



19



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Atos regularly hold technical training courses on digital electrohydraulics
Our specialists are available for on-site technical support at customer locations






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