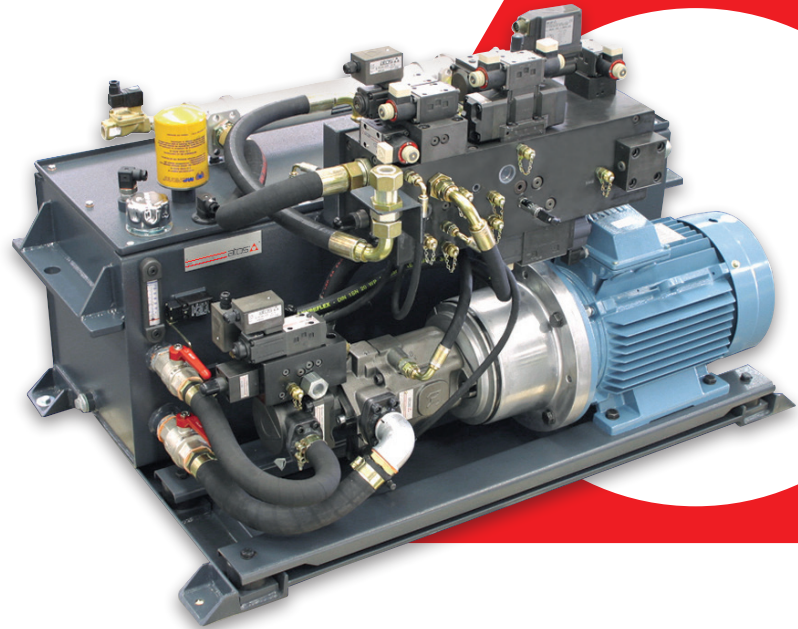


Atos systems division

Full range of power units, hydraulic blocks and systems, certified to international standards

Designed & engineered for industry, energy and marine sectors



atos[®] 
the Italian electrohydraulics

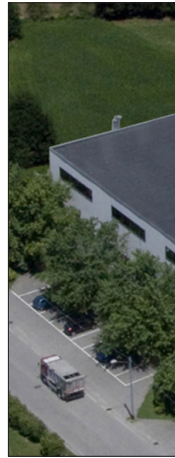
Atos systems division

Angera, Varese - Italy

Plant surface 5.000 m²

Yearly production:

- 3.000 hydraulic blocks
- 1.500 power units
- 500 complete systems



Systems & power units

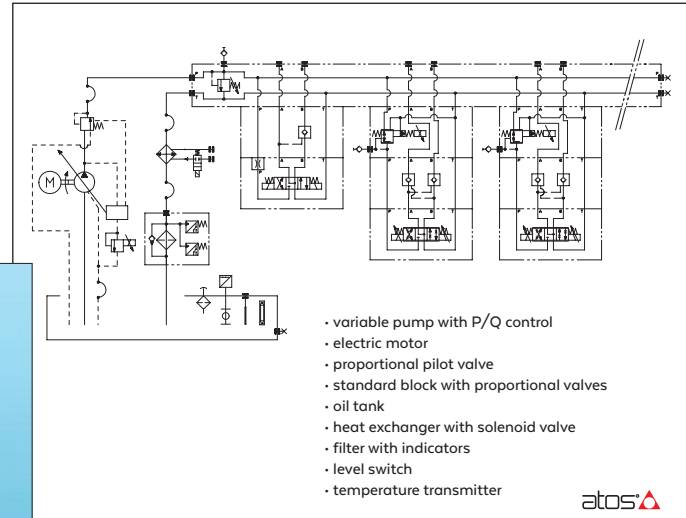
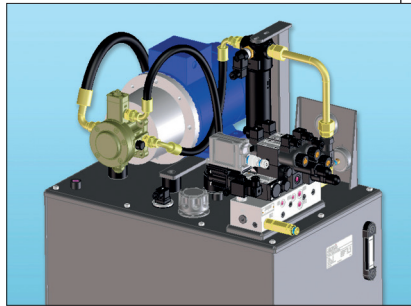
- CE declaration of incorporation
- PED certification for pressure explosion risk
- Ex-proof execution for hazardous environments
- fully tested and preset



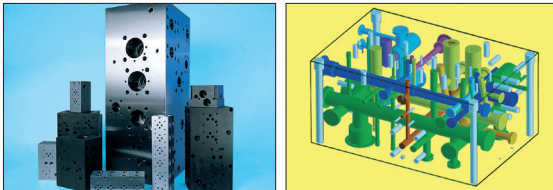
Hydraulic power units

Atos supply both standard power packs and special customized units, integrating all the required elements to supply a flow of hydraulic fluid under pressure to the system or directly to the actuators

Power units in according to Machine Directive and to international ISO, SAE standards



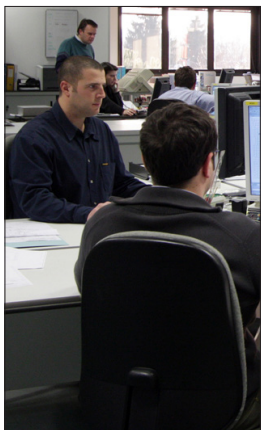
Hydraulic blocks



Standard & customized blocks integrate the electrohydraulic valves into machined manifolds fully assembled and wired.

Atos blocks are:

- tailored to the specific requirements
- conceived for the optimum system's performances
- designed and machined using CAD/CAM technology
- cast iron, stainless steel, carbon steel or aluminium alloy

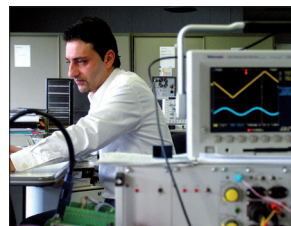
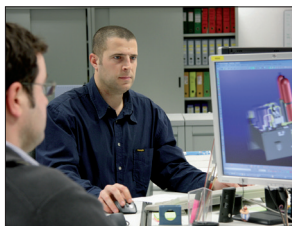


Know how

A team of technical specialists develops:

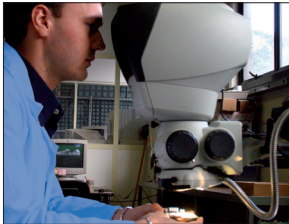
- customized electrohydraulic solutions for best system's performances
- 3D CAD projects highly engineered, with modern design
- complete solutions including manifolds and power units
- electric boxes and relevant wirings
- electronic units for axes motion control

Skilled technicians support customers with in field start-up of new solutions



Productive structure

- modern facilities
- qualified personnel, for an efficient production ensuring highest quality
- automatic testing benches for best reliability and safety
- excellent cleanliness level thanks to vigorous washing and constant oil contamination monitoring



Quality policy

Atos excellence is featured through high specialization and constant improvement philosophy. Quality activities are managed to ensure systems' best reliability, targeted to obtain full customers satisfaction



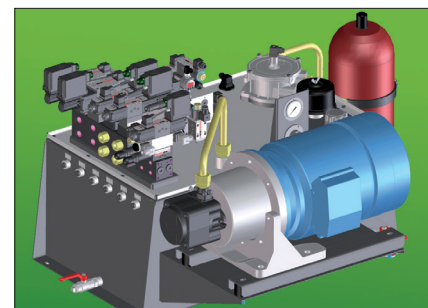
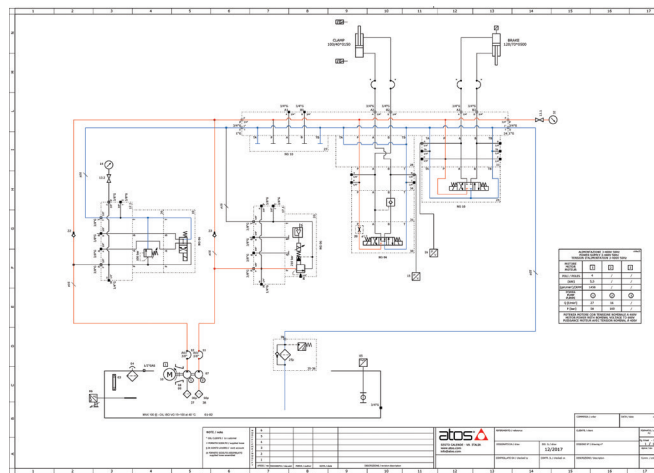
Technical documentation

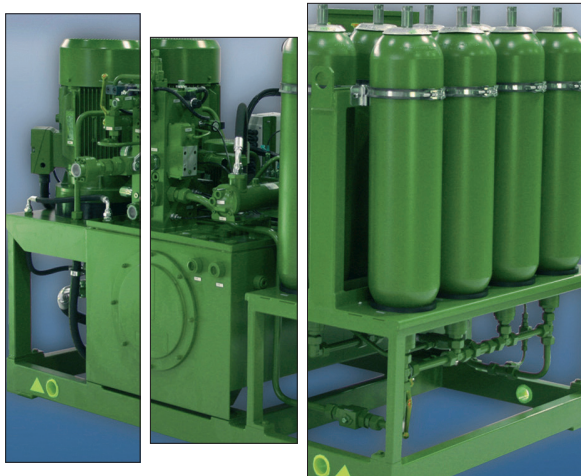
Atos systems are supplied with “Technical dossier” and “Use & Maintenance manual” including: declaration of incorporation, components list & datasheets, power unit’s layout, hydraulic scheme, testing certificates, CE / PED declaration of conformity, prescriptions, etc.

ISO 9001



CE / PED





PED certifications

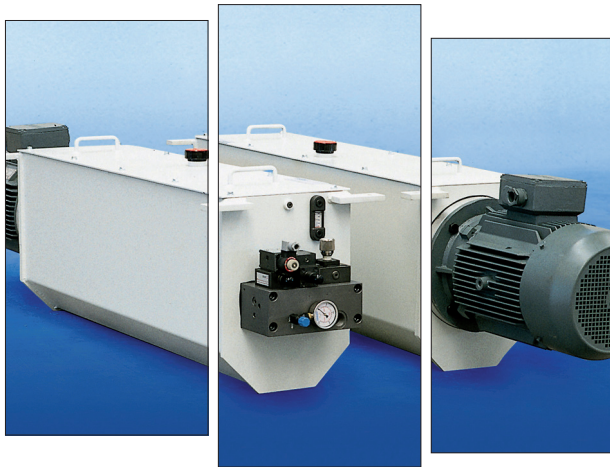
- power units with accumulators, CE mark and certification according to PED Directive 2014/68/UE
- systems engineered within the limits fixed by the 4 classes of the Directive for circuits under pressure
- safety functions certified to pressure risk
- accumulator safety blocks with leak-free pressure relief valves, PED certified
- reduced time for the machine's certification
- hoses are equipped with retaining cables to avoid dangerous whip effects, as per ISO 4413



Ex-proof & stainless steel

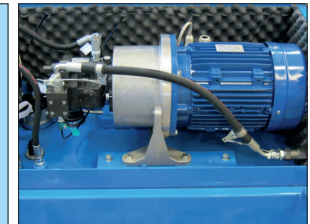
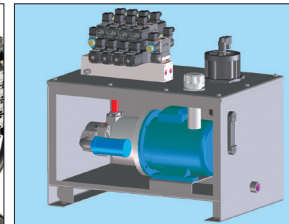
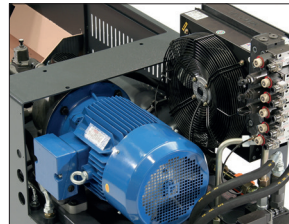
- ex-proof executions according to international standards: ATEX/EAC/IECEX, UL, PESO
- certified by: ABS, BV, DNV, RINA, GL, CCS, etc.
- protection / insulation cabinets; certified electrical boxes and relevant wiring
- perfect sealing connections
- working temperatures up to -40°C
- fully in stainless steel systems for aggressive environments and for water based fluids or other synthetic fluids
- Atos ex-proof, on/off and proportional valves, also with integral electronic drivers and axis controllers





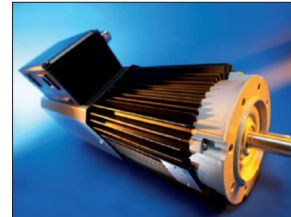
Silenced systems

- according to the European prescriptions for noise emission: lower than 80 dB (A)
- engineered solutions with reduction of the noise emissions up to -14 dB (A) compared to traditional executions
- structures conceived to reduce the acoustic resonance
- sound absorbing panels
- submerged or soundproof pumps
- electric motors maximum speed 1.000 rev/min (6 poles)
- generous piping sizing



Energy saving systems

- asynchronous motor with inverter plus fixed displacement internal or external gear pump
- synchronous motor with closed-loop drive plus fixed displacement internal gear pump
- asynchronous motor plus axial piston servopumps with digital electrohydraulic P/Q regulation
- accumulation groups for high instant flows

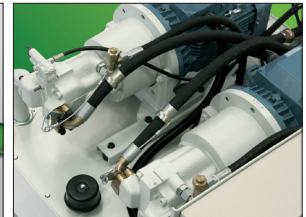
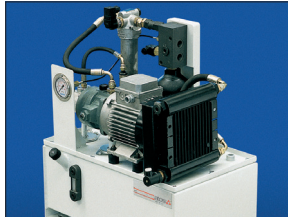


Systems for continuous & remotes operation

- power units pre-arranged for remote control
- best reliability for continuous cycle operation (24/7)
- redundant safety devices with monitored alarms and emergency operation
- hydraulic valves with inductive proximity sensors, CE certified

Power units type ASA

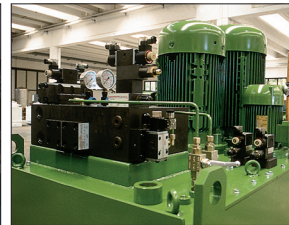
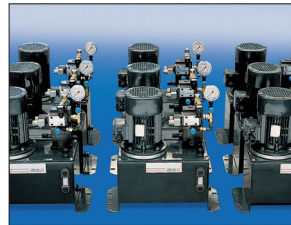
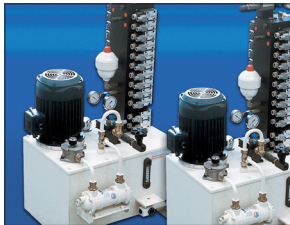
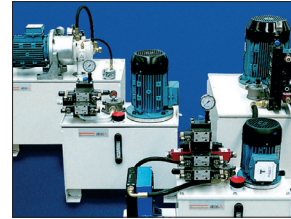
- motor-pump groups horizontal on the cover
- easy settings and maintenance
- electronic temperature and level transducers, silenced couplings also with integrated cooling
- electronic control units for machine and axes motion control



- single or multiple pumps, fixed (vane, piston, gear) or variable displacement (piston)
- pressure up to 350 bar, flow up to 500 l/min
- tanks from 50 to 3.000 liters
- electric motors up to 150 kW - 4 or 6 poles
- filtration on pressure/return line from 3 to 25 μ
- air or water heat exchangers

Power units type ASH, ASM

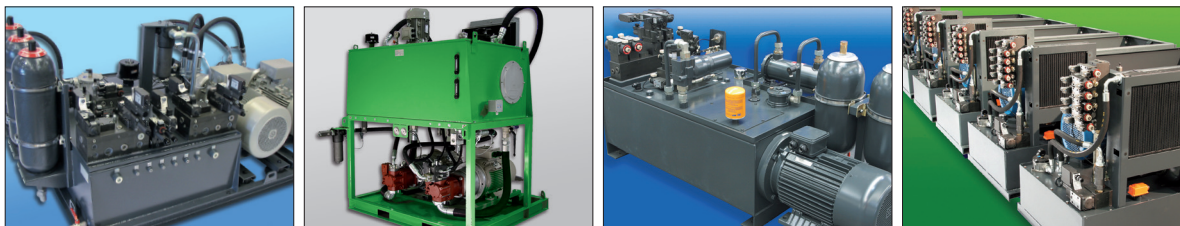
- standard and customized power units, with compact design and tanks from 10 to 2.000 liters
- tailored hydraulic circuits, with standard components according to ISO 4401:2005
- motor-pump groups vertical on the cover, submerged pumps for low noise level
- single or multiple pumps, fixed (vane, piston, gear) or variable displacement (piston)
- pressure up to 350 bar, flow up to 300 l/min
- electric motors up to 150 kW - 4 or 6 poles
- filtration on pressure/return line from 3 to 25µ
- air or water heat exchangers





Power units type ASF, ASJ

- systems integrated into the machine's structure:
tanks from 50 to 5.000 liters, motor-pump group
and components integrated in the frame
- reduction of the machine's assembly time
- customized manifolds assembled on board
- single or multiple pumps, fixed (vane, piston, gear)
or variable displacement (piston)
- pressure up to 350 bar, flow up to 500 l/min
- electric motors from 0,40 to 400 kW - 4 or 6 poles
- filtration on pressure/return line from 3 to 25 μ
- air or water heat exchangers



steel / foundry / die-casting ¹⁻²

Largely sized power units for high flows, through axial piston multiple pumps. 350 bar pressure allows oil volume reduction. Water glycol fluids are commonly used in hot lines

power plants / eco-generators ³⁻⁴

Continuous cycle operation (24/7) requires best reliability and remote control. Power units are properly designed with redundant safety hydraulic valves & devices, with monitored alarms and emergency operation

machine tools / presses ⁵⁻⁶

Modular construction allows to tailor hydraulic systems to specific machine tool configurations.

Variable displacement pumps with inverter drives provide high energy efficiency

injection / blow moulding ⁷⁻⁸

Power units for plastics are ready to use once assembled into machinery, thus requiring integrated construction of tank, proportional motor-pump groups, blocks & accumulators

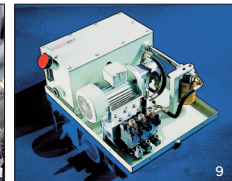
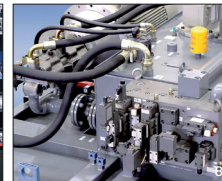
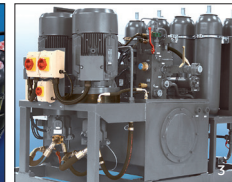
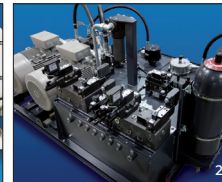
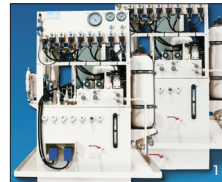
wood / paper / leather ⁹

Complete processing lines are equipped with multiple power units and controlled by fieldbus, rugged proportional valves and auxiliary equipment to withstand high vibration

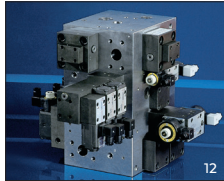
oil & gas / off-shore / marine ¹⁰⁻¹¹

Stainless steel cabinets protect power units from aggressive environments. Ex-proof executions and unflammable fluids require a specific system engineering and construction

Power units & systems



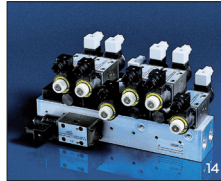
Hydraulic blocks



12



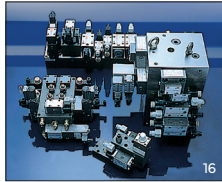
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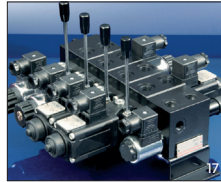
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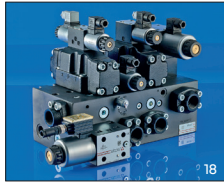
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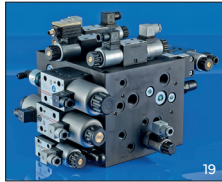
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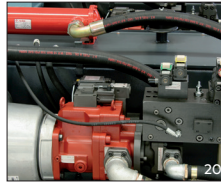
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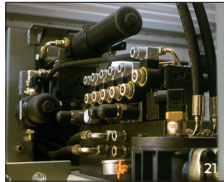
18



19



20



21



22

steel plants 12-13

Electrohydraulic benches fitted with manifold blocks ensure high reliability and best performances

$Q_{max} = 3.000 \text{ l/min}$ - $P_{max} = 350 \text{ bar}$

machine tools 14-15

Standard multi-stations subplates, assembled with solenoid valves and modulators, provide easy servicing

$Q_{max} = 60 \text{ l/min}$ - $P_{max} = 200 \text{ bar}$

drilling 16-17

Customized blocks are designed for the best operation of drilling machines.

New ECP protection treatment is a valuable plus

$Q_{max} = 120 \text{ l/min}$ - $P_{max} = 350 \text{ bar}$

plastics 18-19

Customized blocks control clamping and injection actuation by servoproportional valves, also with fieldbus interface

$Q_{max} = 1.000 \text{ l/min}$ - $P_{max} = 280 \text{ bar}$

ceramics 20-21

Steel blocks in rugged execution fit ISO cartridges in on/off and proportional versions

$Q_{max} = 900 \text{ l/min}$ - $P_{max} = 350 \text{ bar}$

PED blocks 22

With PED valves for overpressure safety & other auxiliary functions for easy & safe accumulators use.

Certified by IMQ to PED Directive 2014/68/EU

$Q_{max} = 600 \text{ l/min}$ - $P_{max} = 350 \text{ bar}$



Seminars on digital electrohydraulics are regularly held at Atos headquarters
Our engineers are available for on-site technical support at customer locations



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