Infotec cylinders
nr. 2 - September '09

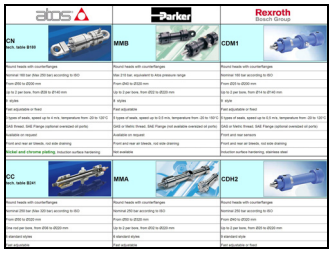
NEW KB catalog 2009

The new KB catalog 2009, now available, gives full information, data and drawings of the whole range of Atos cylinders and servocylinders. It has been completely renewed and enriched with new technical tables **B400** for CKA ATEX cylinders, **B450** for CKS = CK with adjustable proximity sensors, **B470** for CNX stainless steel cylinders and **B600** for "operating and maintenance norms".

KB Catalog 2009

NEW Cylinder's cross reference

The new "cylinder's cross reference", tab. **TB1020**, allows an easy comparison of the whole range of Atos cylinders with the Parker and Rexroth ones. This new tool points out the main cylinders features such as bore/rod size, mounting styles, sealing system and the relevant available options.



Cylinder's cross reference

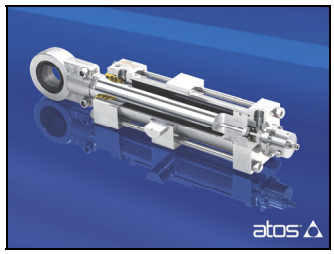
NEWS about Servocylinders

Modern machines and systems more and more require an accurate and rapid control of the motion axis, to improve the process quality and to reduce the cycle time = increase the production capability. Atos servocylinders with on-board proportional valves are compact motion control units and allow to achieve higher performance, top reliability and long working life. The wide range of servocylinders, see tech table **B310**, include now also ex-proof transducers and stainless steel executions. Special transducers for heavy duty applications are also available:

- **CKAM servocylinders for potentially explosive atmospheres**

CKAM servocylinders, see tech table **B400**, are derived from ATEX CKA cylinders with built-in Balluff magnetostrictive transducer, ATEX certified - **II 1/2 G Ex d IIB T6 X** for gas and **Ex tD IP67 T85°C** for dust. They are suitable for applications in hazardous environments such as Oil & Gas, Energy or Mining and they can work in explosive zones type 1, 2 and 22. Ex-proof transducers are available with current or voltage analog output.

Availability: already available

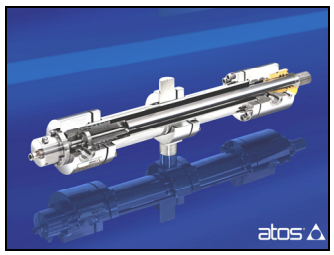


CKAM servocylinder

- **CNXM stainless steel cylinders**

These servocylinders are manufactured with high quality stainless steel to make them suitable for corrosive environments or aggressive water based fluids, particularly for industries such as Marine, Pharmaceutical and Chemical processing. Stainless steel materials limit the working pressure to max. 100 bar.

Documentation: tech tables **B470** and **B310**, see Atos catalog-on-line
Availability : already available

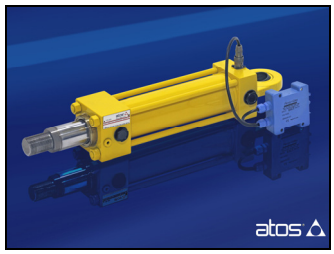


CNXM servocylinder

- **Special transducers for new applications fields**

CKM with remote electronics
These servocylinders are equipped with built-in magnetostrictive transducer and remote conditioning electronics (up to 25m far off), to give the possibility to achieve 105°C max temperature around the cylinder's application area.
They are particularly suited for Steel industry, Foundry, Steam turbines and for any kind of environment with high working temperatures that can stress the transducer electronics.

CKM with redundant transducer
These magnetosonic transducers include 2 or 3 measuring systems, totally independent with their own output signal, to ensures the continuous working in case of electronics failure of 1 or 2 measuring systems.
They are ideally suited for applications with high safety requirements such as nuclear energy, pitch setting for water or wind turbines and ship or railway control systems.



CKM with remote electronics

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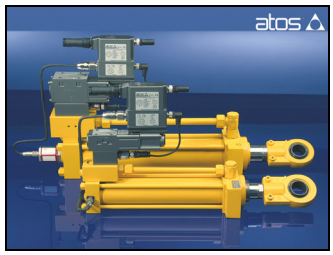
• Succesfull servocylinders applications

Rolling machines
The thickness control system is decisive for the accuracy and performance of modern rolling machines. **CKM** servocylinders permit to achieve an accurate thickness control and to reduce downtime thanks to their long lifetime and repeatability.

Plastic blow molding machines
The wall thickness distribution process (Parison) in the plastic blow molding machines is realized by means of a specific servoactuators operated in closed loop position control. **CKT** servoactuators, with low friction seals and LVDT position transducer, fully satisfy the requirements of the Parison process providing high performance and high regulation repeatability. For details see also article **AR05**.

Naval stabilizing system
New stabilizing systems reduce the vertical accelerations and pitching/rolling motions of ships, fast ferries and yachts. The high corrosion resistance and high strength of **CNXM** servocylinders make them the best solution to control the trailing edge flaps, the lateral fins and the steering system with high accuracy and reliability.

Wind energy
In wind power applications, the "pitch control" ensures constant rotation speed and high aerodynamic efficiency of the wind turbine. **CCM** servocylinders are the ideal solution to fulfil the demand for reliable and rugged components, capable to grant extended working life before maintenance.

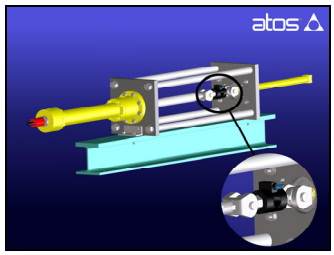


Servocylinders with on-board valves

Parison servoactuators

NEWS about R&D collaboration with Universities

University of Turin: rod strength
Atos is cooperating with the University of Turin for the fatigue life prediction of threaded rod ends. This research will make available a reliable mathematic model for the estimation of the expected life cycle of the rods, depending on the application characteristics. As soon as available, these data will be included in tech table **B015**.



Friction bench

University of Turin: sealing friction
Another interesting research has been activated for the calculation of the sealing friction effects and values. A new friction testing bench, with load cells and high precision transducers, is under construction in order to extend our knowledge on friction phenomena and stick-slip effects. This research will make available a mathematic model for the estimation of the sealing friction for special applications and for cylinders with big bore sizes.


Servocylinders test area

University of Modena: cushioning
To satisfy the frequent requests for cylinders with special cushioning speed and profile, Atos has signed a new important collaboration with the University of Modena. The target of the research is to realize a reliable mathematic model of the cushioning performances, which will make easier the design of special cushioning profiles, customized to the specific application.

NEWS from Cylinders Production

Atos cylinders are assembled and tested on special benches with hydraulic clamping and automatic PC testing. They are 100% tested to guarantee the quality of the product and to ensure the declared performances. The testing process conform to ISO 10100 and it is composed by stroke test, sealing test at max pressure and cushioning time verification. Servocylinders are then additional tested to verify the conformity of built-in position transducer. A new assembling and testing bench for big bores cylinders (max. pressure 400 bar) has been recently introduced in the workshop.


New bench for big bores