

Auma believes in excelling with its customers. Therefore, we take immense pleasure to thank our customers by bringing out their contribution to our success. We would also like to share information regarding Auma's attempt to enhance the quality and performance of our products.

Auma India Supplies Actuators for Vedanta Coal Fired Co-Generation Power Plant, Lanjigarh Project

Auma India has supplied actuators to M/s Vedanta Aluminum (Vedanta Coal Fired Co-generation Power Plant 3X30MW), Lanjigarh Project, which will replace the existing Chinese make actuators and gearboxes. To ensure the reliability of operation, customer has replaced the old Chinese make products with Auma products.



Message from the Design & Development Head

Auma India is a one-stop solution provider, offering Electric Actuators, Gearboxes and Components for Valve Automation as well as General Actuation. We have equipped ourselves with the best and latest software design tools for designing products in the most competent manner to deliver cost effective solutions to our customers. We consider any special requirement from our esteemed customers as a challenge and strive to deliver the best possible solution.



Yashwant M Jannu

Auma Receives Orders for CGPL, Ultra Mega Power (Tata Mundra) Project

CGPL will build and operate the 4000 MW Mundra Ultra Mega Power Project in the western region of Gujarat. This is one of the first in a series of large energy-efficient power plants to help ease power shortages across the country. Auma Germany has received the first batch of orders for 200 electric actuators for this project.

Delhi Jal Board Projects

Auma India has supplied actuators with Integral Motor Controls to Delhi Jal Board for the 12 MGD STP, Keshopur and 45 MGD STP, Kondli projects.

Indian Oil Corporation Limited, EPCC-8 Panipat Project

Auma India has supplied AUMATIC 2-wire control actuators for Modbus communication with master station & hot stand-by master for EPCC-8, offsite & storage package. Apart from AUMATIC actuators, the scope of supply included Fibre Optic Cables, Desktop PC & TFT Monitor for remote control, Marshalling Cabinet and FO Couplers (Ethernet switches).



Marshalling Cabinet

- » Auma India Supplies Actuators for:
 - Vedanta Coal Fired Co-generation Power Plant, Lanjigarh Project
 - Auma Receives Orders for CGPL, Ultra Mega Power (Tata Mundra) Project
 - Indian Oil Corporation Limited, EPCC-8 Panipat Project
 - Delhi Jal Board Projects
 - Other Projects
- » Auma India Products Receive Category II Recognition from NTPC
- » Foot Mounted GF 315 Gearbox Manufactured by Auma India
- » Auma Procures an Additional Test Rig for Gearbox Testing
- » Auma Group - Service Centres Worldwide
- » Auma Offers Actuators with Thyristor Starters having PWM Feature for Closed Loop Regulating Duty Applications
- » An Insight into Selection Criteria of Worm Gearbox for Part-turn Valve Automation
- » Customer Training Program Conducted in China during 9-13 Mar'09

Proven Reliability



Auma India had supplied a worm gearbox GS 315/GZ 30 to Pune Municipal Corporation Water Project to operate 3030 mm size gear operated butterfly valve in 1993. This combination has been working reliably for the last 16 years.

Foot Mounted GF 315 Gearbox Manufactured by Auma India



Auma India manufactured Foot Mounted worm gearbox GF 315/GZ 30, which is suitable for electrical operation, with the maximum output torque of 63000 Nm based on 15000 lifecycles.

Application: ID FAN Inlet for Coal Fired Thermal Power Plant.

Auma India Products Receive Category II Recognition from NTPC

NTPC has accorded Category II status for Auma Products due to the smooth supply of quality products. This will enable Auma India to supply products to NTPC without Physical Inspection being done by them in future. The products will be self-certified by the Auma Quality Assurance Division and NTPC will be verifying only the Quality Inspection Documents before accepting the products.

Auma India Procures an Additional Test Rig for Gearbox Testing

Auma India has procured an additional gearbox test rig with a magnetic brake system, which is designed for testing gearboxes up to a nominal torque of maximum 2000 Nm. This test bench is designed for validating the design limits and performance features of the gearboxes such as:

- Input torque measurement
- Lifecycle / endurance test
- Evaluating the efficiency

The test sequences for endurance test are programmed through a PC based control system operating with dedicated engineering software.



Auma Group - Service Centres Worldwide

The service headquarter of Auma Group is located in Cologne, Germany. There are seven other service centres worldwide and these are:



- Auma India - Bangalore
- Auma Singapore - Singapore
- Auma USA - Pennsylvania
- Auma Russia - Moscow
- Auma South Africa - Johannesburg
- Auma Middle - East - Bahrain
- Auma South America - Chile

Auma India provides service support for Auma Germany, SIPOS and Haselhofer products along with their own products in neighbouring countries like Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka apart from India. Similarly, various other service centres can service Auma India products globally. This helps Auma as a group to increase the customer satisfaction worldwide by offering prompt service at their doorstep.

Auma Offers Actuators with Thyristor Starters having PWM Feature for Closed Loop Regulating Duty Applications

Auma India is a leader in providing actuators for closed loop regulating duty applications. An electronic positioner card in a regulating duty actuator compares the actual value (position feedback of actuator) with the set point (command signal or set point value from the customer) and accordingly moves the actuator so that the actual value meets the set point value. The important factors to be considered for selecting actuators for closed loop applications are:

- High positioning accuracy of the valve
- Sensitivity of the electronic positioner to the demand value
- Minimum dead band of the positioner

However limitations of pull-in time and release time of electro-mechanical starters is also an important factor in the actuator overshooting to a desired position long before the positioner switches off the starters. This affects both accuracy and sensitivity. The other factors affecting accuracy like fixed speed of motor, load inertia and rpm are mechanical constraints of the system that cannot be done away with.

To overcome the delay time in contactor switch-on & switch-off, Auma has initiated using solid-state starters (Thyristor) for motor switching along with PWM (Pulse Width Modulation) feature of the positioner. The use of Thyristor means that switch-on & switch-off times can be controlled to as low as one cycle. This PWM feature in the positioner makes the actuator move in series of reducing switch-on periods or pulses as it approaches the set point.

The effect is to reduce the inertia and position the actuator near the set point as far as possible, which results in high positioning accuracy and sensitivity. It has been observed in most cases that the accuracy of using Thyristor starters along with PWM feature of the positioner is double the accuracy levels compared to a conventional service consisting of electro-mechanical starters with a normal positioner.

Customers who demand high accuracy in closed loop regulating services of an electric actuator will benefit from this useful feature.

An Insight into Selection Criteria of Worm Gearbox for Part-turn Valve Automation

Worm gearboxes are used for operating part-turn valves like ball valves, butterfly valves etc., either for manual or electrical operation. General features required for a worm gearbox to ensure smooth operations are:

- Rigid housing
- 360 ° worm wheel (Other 3 quadrants are available for repositioning)
- Suitable for all position mounting
- High mechanical advantage combined with different reduction ratios (This choice enables optimum economic sizing of electric actuators, maintaining torque and operating time considerations)
- High standard of enclosures IP67/IP68
- Self-locking feature
- Removable spline coupling to facilitate correct seating of the Gearbox (No orientation hassles)
- Choice of versions to meet all types of end user requirements (Input directional rotation to output directional rotation with specified mounting arrangements)
- Heat-treated gears (Gas nitrided for best quality) ensures **Long Life** in operation
- Mechanical Safety Stoppers to sense input torque, thus avoiding damage to the gearbox housing and to impart a positive feeling when the end position are reached during manual operation

How to size a correct gearbox for an application is always a challenge for the plant engineer. After having the minimum requirement features mentioned above, the selection has to be done based on torque capacity versus intended lifecycle of the gearbox. A worm gearbox can be rated for a higher torque with decreased number of lifecycles and lower torque with increased number of lifecycles. This phenomenon is directly related to the wear factor in the gearbox, needless to say that heat-treated gears will have longer life in any case. Choice has to be made by the designer keeping in mind the torque required to operate the valve and the number of lifecycles required. This also calls for understanding of torque profile characteristics of the valve in a cycle open-close-open.

Usually less reputed gearbox manufacturers declare maximum torque without giving the suitability of the lifecycle. Some others mention maximum torque in their catalogue and in fine print it will be stated as lifecycle is considered for 1/3rd of the load. Therefore the gearbox selection has to be made with careful consideration. Auma gearboxes have torque figures for 2000 / 15000 lifecycles.

According to the European standard BS EN1074-2:2000 for valve in water applications, a gearbox should have a life of 250 cycles for manual operation and 2500 cycles for motor operation.

An optimum selection has to be made by the designer using complete data at his hand based on operational requirement of valves or designer can use the specified requirements in tune with BS EN standard mentioned above for water applications. Without the above considerations of application and selection, one may tend to over size or under size the gearboxes.

Customer Training Program Conducted in China during 9-13 Mar'09

Auma India recently conducted a training program in China during 9-13 Mar'09. Various customers from China participated in this training program along with Auma China employees. This training program was aimed at imparting theoretical know-how along with the detailed demonstration of Auma India products, which was conducted by Mr. Deshpande (Marketing Manager) and Mr. Raichur (Service Engineer) of Auma India.



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Solutions for a world in motion.

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