



Hygienic servo actuator: axenia value No chance for germs and bacteria

EHEDG-compliant system design suitable for CIP and SIP affords maximum protection against microorganisms and corrosion

Microbiologically safe, residue-free cleaning, resistant to corrosion, a hygienic system design that is ideal for integration into open machine architecture – all of these attributes are united in the hygienic servo actuators in WITTENSTEIN alpha's axenia value series. Developed for use in the sterile and wet areas of production and packaging machines, these motor / gearbox systems can be incorporated into open units without any additional protective measures. That not only saves time and money for integration; it also avoids the multiple performance, process and product risks associated with enclosed or encapsulated servo actuator solutions.

axenia value servo actuators in single-cable technology complement WITTENSTEIN alpha's portfolio of Hygienic Design and EHEDG*-compliant planetary gearboxes (HDV and HDP). WITTENSTEIN cyber motor, a sister company of WITTENSTEIN alpha, also offers the compact servo actuators in its cyber® dynamic line for output ratings up to 335 watts as mechatronic drive solutions for sterile applications where germs, bacteria, microorganisms and dirt pockets must be ruled out and machine components have to be cleaned fast, reliably and without residue.

System toolkit enables scalable variants

Using the system toolkit provided for this purpose, the hygienic servo actuators in the axenia value series can be configured in three motor sizes with a maximum acceleration torque of 32 Nm, 80 Nm or 200 Nm and gear ratios from $i=10$ to $i=25$, depending on the desired task and the performance requirements. A holding brake, temperature sensors and analog and digital encoder systems for position and speed can be built in as options. Regarding the controller, these servo actuators in Hygienic Design are specified for more than 20 possible types from different manufacturers to ensure optimal connectivity.

* The abbreviation EHEDG stands for *European Hygienic Engineering & Design Group*, which is a non-profit knowledge sharing community supporting European legislators and their aim of promoting hygiene during the production, processing and packaging of food products.

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WITTENSTEIN SE develops customized products, systems and solutions for highly dynamic motion, maximum-precise positioning and smart networking for mechatronic drive technology.



"axenia value", the stainless steel actuator from WITTENSTEIN alpha

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Complete system hygienically designed through and through

The axenia value series stands for precision actuators designed to strictly hygienic principles. The exterior housing surfaces and the cable glands are made from extra-hard-wearing 1.4404 / AISI 316L stainless steel. The rolled steel surfaces are very smooth with roughness of less than Ra 0.8 µm. This minimizes the risk of product adhesion and allows cleaning materials and disinfectants to be rinsed or drained off without leaving any residue. The housing has IP69X(30 bar) protection to prevent the ingress of moisture during CIP or SIP cleaning or when using a high pressure cleaner. axenia value users profit from the overall hygienic system, in which the mechanical transitions, dead spaces, gaps, screw heads and housing corners that frequently provide a breeding ground for microorganisms when individual motors and gearboxes are combined are nowhere to be found. The sealing materials used in the servo actuators likewise conform to EHEDG and FDA requirements for hygienic design. The actuator can therefore be assembled and operated as an open unit, that is without additional hoods or covers. This avoids the otherwise possible risks of hidden dirt pockets, corrosive spots or leaks associated with enclosed or encapsulated gearbox motors.

Guaranteed uncompromised performance

The servo actuators in the axenia value series comprise a compact, high performance motor with a precision planetary gearbox that is mounted directly, in other words coupling-free, in order to save space. The two system components have perfectly matched electrical characteristics. This represents a significant advantage – with motor and gearbox combinations from different manufacturers, the system has to be derated by anything between 30 and 50 percent in order to estimate the servo unit's actual performance at least reasonably accurately, whereas axenia value offers the security of tested performance data and hence robust information on how the servo actuator performs in practice in the application. Furthermore, owing to the system design, this performance data is scalable – for instance to ensure that the servo actuator does not exceed the maximum permitted surface temperature. Apart from protecting against burn injuries if the surface is touched, this also prevents substances from baking or coagulating on the housing.

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Approved for worldwide use

Thanks to the UL approval for North America (in prep.) and the DFC certification which is necessary to meet labeling requirements in China, axenia value – the servo actuator in Hygienic Design – is suitable for worldwide use.

Picture: (source: WITTENSTEIN SE)



“axenia value”, the enhanced stainless steel actuator in single-cable technology from WITTENSTEIN alpha, complements the Hygienic Design portfolio.

Texts and photographs in printable quality can be downloaded from presse.wittenstein.de

WITTENSTEIN – one with the future

With around 2800 employees worldwide and sales of € 461 million in 2021/22, WITTENSTEIN SE enjoys an impeccable reputation for innovation, precision and excellence in the field of cybertronic motion – not just in Germany but internationally. The Group possesses exceptional expertise for the mastery and further development of all technologies relevant to mechatronic drives and comprises six innovative Strategic Business Divisions. We develop, produce and sell products such as high-precision servo drives and linear systems, servo systems and motors as well as cybertronic drive systems for many areas of application including machine and plant construction, aerospace or oil and gas exploration. Nanotechnology and software components round off the portfolio. With 25 sites in more than 45 countries, the WITTENSTEIN Group (www.wittenstein.de) is represented in all major technology and sales markets.

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