

Hygienic Design Reliably clean

optimal seal
new design freedom
reliable cleaning



Hygienic Design

Reliably clean

Is the ability to drive, manufacture and pack reliably in a hygienically clean environment a top priority for your company? **Hygienic Design**, our newest gearhead series, provides innovative and incomparable alternatives for existing and future production processes.

Ideal for challenging applications:

- Food production
- Food packaging
- Pharmaceuticals
- Medical technology
- Process technology



The principal goal of EHEDG is the promotion of safe food by improving hygienic engineering and design in all aspects of food manufacture.

WITTENSTEIN alpha is a member.

Source: www.ehedg.org

Benefits for you:

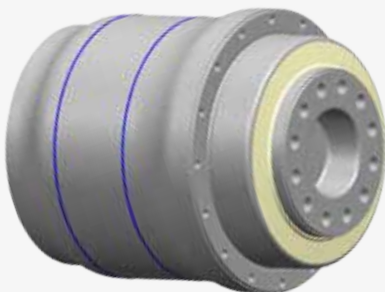
- optimal sealing properties
- suited for hygienic production
- new design freedom because the drive is integrated directly in the process
- fast, efficient and reliable cleaning
- high-pressure cleaning also possible depending on the operating environment
- all standard motor mounting concepts
- special hygienic steel affords excellent resistance to corrosion

Hygienic Design vs. conventional solutions alternatives

			
Hygienic requirement	Corrosion protection	Stainless steel	Hygienic Design
Surface	Special varnish	Turned	Electropolished
Seal	Standard	Standard	PTFE seal
Contact surfaces	Nickel plated / stainless steel	Stainless steel	Hygienic steel 1.4404
IP protection	65	65	69 Kx ^{a)}
Gearhead design	Standard	Standard	Conforms to hygienic design rules
Certification	None	None	EHEDG ^{a)}

^{a)} Data subject to change – external approval pending

Options for you:



Hygienic Design with output flange

Our Hygienic Design gearheads with an output flange represent the solution of choice for highly dynamic and compact applications (e.g. delta robots).

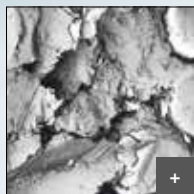


axenia version

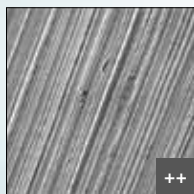
This special motor version helps you save space and costs. The gearhead and motor are combined in a single compact, reliable and optimally matched unit that reduces installation and maintenance costs to a minimum and increases your application's availability.

Gearhead of hygienic steel

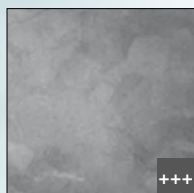
Comparison of the surfaces
for assessing
the dirt adhesion:



Blasted surface



Ground surface



Electropolished surface
manufactured from
hygienic steel 1.4404,
IP protection: IP 69 Kx[®]

Reduced dirt adhesion!

Seals resistant
to cleaning materials

Triple sealing concept
guarantees optimal reliability

Hygienic steel 1.4404
resistant to cleaning materials



Food grade lubrication

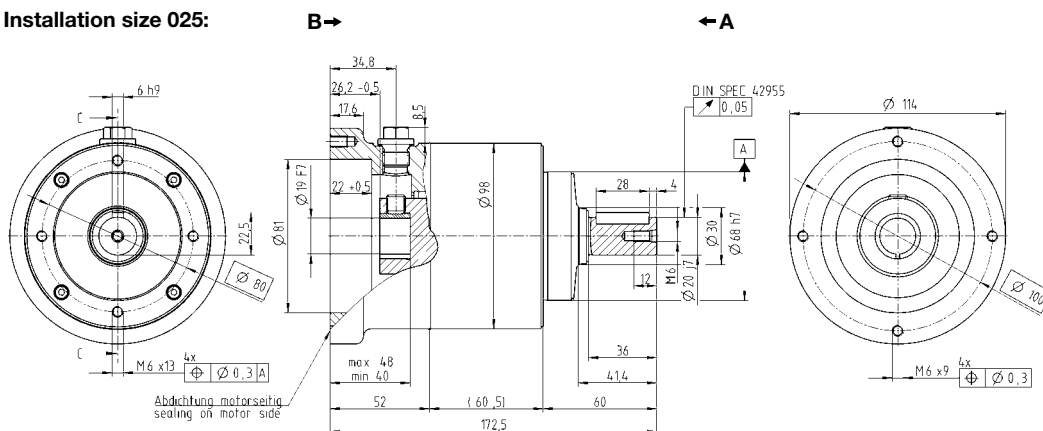
No dead spaces



Installation size			015	025	035
Ratio	i	1-stage	4/5/7/10		
		2-stage	16/20/25/35/50/70/100		
Max. acceleration torque (max. 1000 cycles per hour)	T_{2B} Nm	$i = 4/5/7/16/20/25/35/50/70$	32	80	200
		$i = 10/100$	29	72	180
Nominal output torque (with n_{1N})	T_{2N} Nm	$i = 4/5/7/16/20/25/35/50/70$	16	40	100
		$i = 10/100$	15	35	90
Emergency stop torque (permitted 1000 times during the service life of the gearhead)	T_{2Not} Nm		75	190	480
Nominal input speed (with T_{2N} and 20°C ambient temperature)	n_{1N} rpm	1-stage	3000	2700	2000
		2-stage	3700	3400	2600
Max. input speed	n_{1Max} rpm		6000	6000	4800
Max. torsional backlash	j_t arcmin	1-stage	≤ 10		
		2-stage	≤ 15		
Max. axial force (refers to center of the output shaft or flange)	F_{2Amax} N		500	500	1700
Max. radial force (relates to center of the output shaft at 100 rpm)	F_r N		350	500	1200
Efficiency at full load	η %	1-stage	> 97		
		2-stage	> 95		
Service life	L_h h		20000		
Operating noise (with $n_1=3000$ rpm no load)	L_{PA} dB(A)		≤ 60	≤ 63	≤ 68
Max. permitted housing temperature	°C		90		
Ambient temperature	°C		-10 bis +40		
Lubrication			Lubricated for life H1		
Housing surface			Electropolished		
Direction of Rotation			Motor and gearhead opposite directions		
Protection class			IP 69 Kx ^{a)}		
Moment of inertia (relates to the drive)	J_1 kgcm ²		0.17	0.54	1.8
Clamping hub diameter	mm		Ø 14	Ø 19	Ø 24

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Installation size 025:



- Non-tolerated dimensions ± 1 mm
- 1) Check motor shaft fit.
 - 2) Min./Max. permissible motor shaft length. Longer motor shafts are adaptable, please contact us.
 - 3) The dimensions depend on the motor.
 - 4) Smaller motor shaft diameter is compensated by a bushing.

! Motor mounting according to operating manual

Further technical data sheets on request.

Your expert partner worldwide



alpha

30 years experience

For more than three decades now, WITTENSTEIN alpha has been supplying complete mechanical rotary and linear actuator systems, optimally interacting accessories and comprehensive engineering for customized solutions in the field of drive technology. The company is innovation leader and the world's premier manufacturer when it comes to the development, production and marketing of low-backlash planetary gearheads. Continuous innovation as well as maximum quality, precision and reliability are the hallmarks of the entire product portfolio.

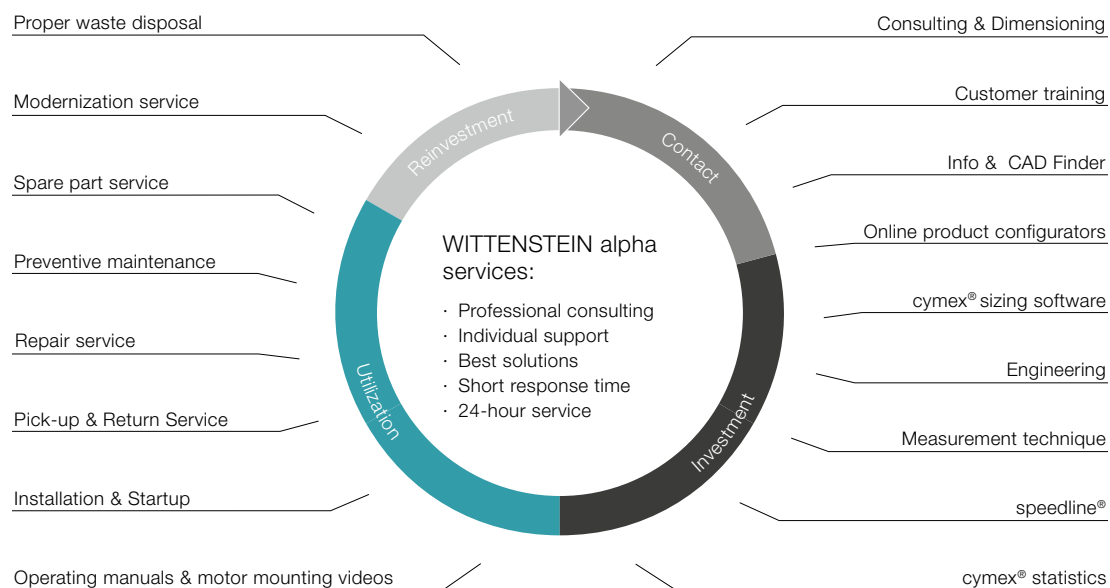
cymex® sizing tool

WITTENSTEIN alpha supports developers and designers with its cymex® software – a powerful tool for sizing complete powertrains.

- cymex® Motion Profiler
- utilization view
- Offline CAD generator
- sizing documentation

Download at: www.wittenstein-alpha.de

WITTENSTEIN alpha services



Worldwide sales & customer service

Regardless of where you happen to be located, our dense sales and customer service network guarantees prompt and competent support around the globe.

Our experienced specialists in your local market are at hand to answer any questions you may have.

Technical support

If you'd like to learn more about our Hygienic Design series, we invite you to get in touch with one of our highly qualified sales engineers: **Tel. +49 7931 493-12900**

24h-Service-Hotline

You can reach our Customer Service team 24 hours a day: **Tel. +49 7931 493-12900**



alpha

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WITTENSTEIN alpha – intelligent drive systems

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