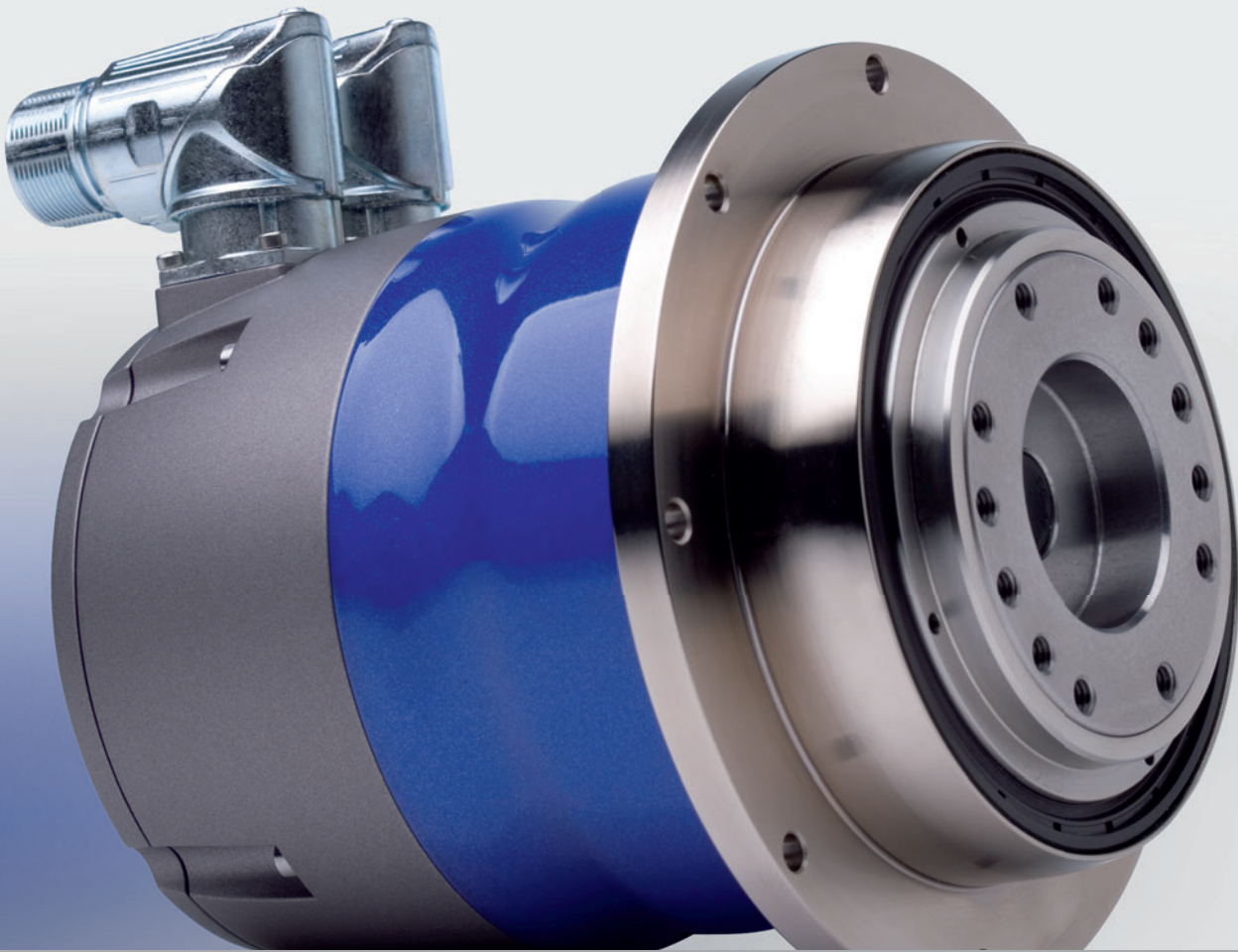


## Rotary Servo Actuator



More dynamic · Shorter · Smoother

**TPM<sup>+</sup>**

# Servo actuator **TPM+** The new compact **motor-gearhead unit**

TPM+ is the logical successor to the successful TPM servo actuator

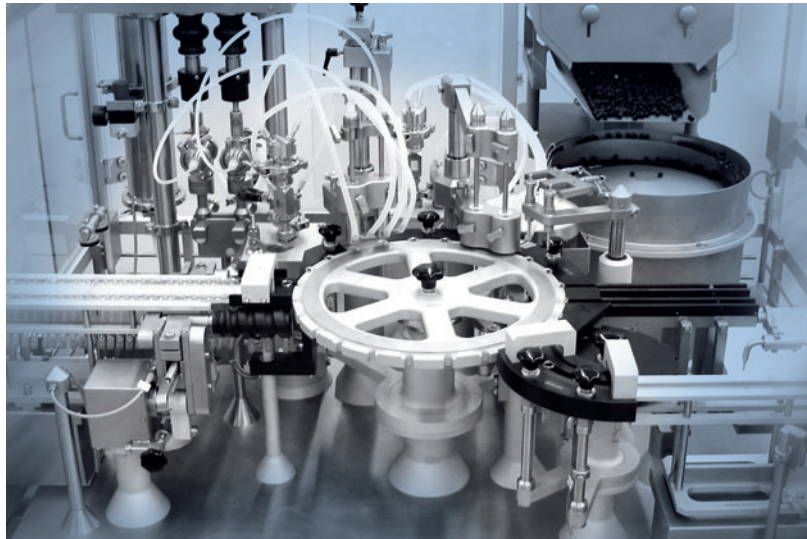
- **Superior dynamics** thanks to the latest motor technology
- **Superior running** thanks to the helical teeth
- **Superior power density** and **reduced length** thanks to the **unification** of the motor and gearhead
- **Reduced sensitivity to dirt** thanks to the functional design



WITTENSTEIN motion control develops bus-capable, electromechanical, rotary and linear servo systems. These systems are characterised by the high integration of the following components: motor, precision gearhead, electronics, sensor technology and software. In addition to development, WMC is also responsible for production and sales. Servo systems from WMC are used in automation and special applications, handling systems, highly dynamic robots, machine tools and production machines.

WITTENSTEIN motion control GmbH – a company of the WITTENSTEIN AG Group that has established a name for itself with a variety of innovations in machine building, aerospace, medical technology, elevator drives and Formula One racing.

**Perfect solutions for packaging • automation • robotics**



**Packaging industry**

Source: groninger & co. GmbH



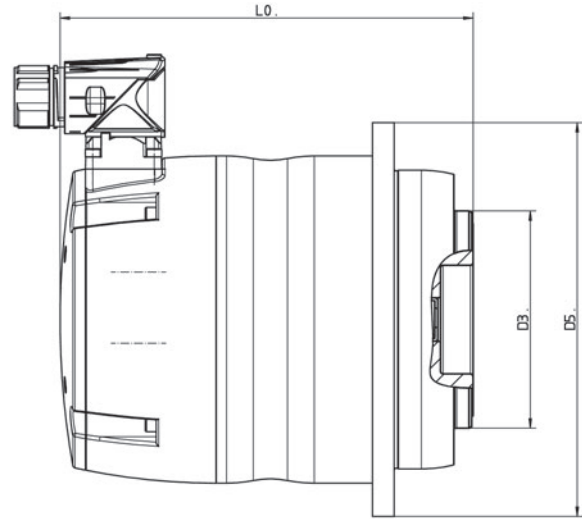
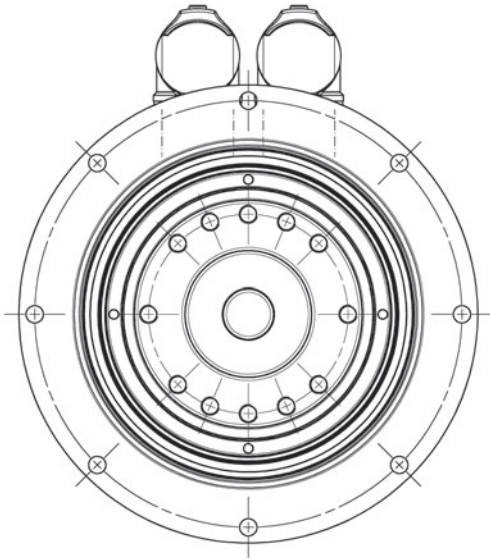
**Robotics**

Source: Sigpack Systems AG

TPM+		Size				
Dimension	Unit	004	010	025	050	110
Ratios		16, 21, 31, 61, 64, 91				
Max. output torque	Nm	40	100	300	650	1600
Max. output speed	rpm	431	413	394	356	325
Torsional backlash (reduced)	arcmin	4 (2)	3 (1)			
Torsional stiffness	Nm/arcmin	10	33	80	180	520
Degree of protection		IP 65				
Installation position		Any				
Insulation class		F				

**Versions**

- Straight and right-angle plug connections
- TP ratios: 21, 31, 61, 91  
Optional: 16, 64
- Temperature sensor KTY + PTC  
Optional: NTC
- DC bus 600 V DC  
Optional: 320 V DC
- Synthetic oil  
Lubricated for lifetime  
Optional: grease, food-grade lubrication
- UL approval
- Torsional backlash: < 3 arcmin  
Optional: < 1 arcmin
- Feedback resolver  
Optional: Optical encoders
- Optional: Brake



TPM <sup>+</sup>		Size				
Dimension	Unit	004	010	025	050	110
Diameter D3 h7	mm	40	63	80	100	160
Diameter D5	mm	86	118	145	179	247
Length L0						
Resolvers from	mm	113	142	153	187	268
Opt. encoders from	mm	138	163	174	208	289

Sizes indicated here apply to versions without a brake and with a reduction ratio of 61, 64 or 91