# ZV rack and pinion drives for automation and robotics



Rack and pinion system for the ServoFit<sup>®</sup> gear unit series: P / PA / PK / PKX PE KS K KL





# **Ready-to-install solutions**

### Pinions and options for ServoFit<sup>®</sup> servo gear units <sup>①</sup> with solid shaft output

For the gear units in the series P / PA / PK / PKX / PE / KS / K / KL the pinions on the rack and pinion drives are supplied in a backlashfree shaft-hub connection (shrinkfit and keyed).

For accurate mounting and for lubrication of the rack and pinion system optional accessories are available.

### **Option: Setting plates**

There are specific setting plates for mounting and positioning of the different rack and pinion drives. Positioning can be made easier by an optional adjustment device.

### **Option: Lubrication**

A felt gear (with mounting kit) is used to lubricate the pinion or alternatively the rack. The grease can be supplied either decentrally via an automated lubricator (optional) or via a central lubricant supply.

### **Option: Clamping set**

For the gear unit models P5, P7, PE5, K2, K3 and K4, it is possible to attach the pinion with a clamping set.



Pinion attached by clamping set

① or synchronous servo geared motors from STÖBER, e.g. SMS P planetary geared motor



Setting plate (adjustment path > tooth height) for P and PE gear units with optional adjustment device, pinion in mounting position E

Example: gear unit models K and P

#### Gearing

Helical and spur gearing (with crowning) Case hardened and ground Gearing quality 7 Modules 2, 3, 4

**Technical data** 

Setting plate for K and KL gear units with adjustment device (front) and lubricating pinion with bracket, pinion in mounting position S

## **Pinion mounting positions**

Mounting position **E** Gearing flush with shaft end

Mounting position **S** Gearing flush with shaft shoulder



Helical pinions m 2/3/4



Spur pinions m2/3/4 Small pinion on left mounting position S

Туре	Module m	Helical gearing				Spur gearing			
		No. of teeth Z	Feed force Fv2B [N] pos <b>S</b> ③	Feed force Fv2B [N] pos <b>E</b>	Linear backlash Δs [µm]	No. of teeth Z	Feed force Fv2B [N] pos <b>S</b> ③	Feed force Fv2B [N] pos <b>E</b>	Linear backlash Δs [μm]
K1	2	20	4 900	3 350	74	21	6 670	4 100	74
	2	25	8 290	5 240	78	26	8 470	6 000	76
К2	3	18	7 680	5 410	84	19	7 720	6 320	82
	2	25	12 180	5 200	78	26	12 420	5 960	75
КЗ	3	18	10 750	5 340	83	19	13 680	6 260	83
	3	22	16 450	6 570	103	23	17 390	7 510	100
K4	4	18	14 950	6 780	110	19	15 790	7 790	110
P3 ②	2	16	2 000	1 750	20	17	2 690	2 240	20
P4 2	2	20	4 855	3 280	25	21	5 710	4 050	24
	2	25	8 670	5 130	23	26	10 380	5 650	23
P5 ②	3	18	8 480	5 270	25	19	10 140	5 860	25
	3	22	10 340	7 050	31	23	12 490	8 060	30
P7 @	4	18	9 980	7 360	33	19	10 030	8 630	33

② also applies to versions PA / PK / PKX

③ Mounting position S: In this mounting position the feed force can be increased to up to 2.3 times compared to mounting position E because the point of force application is closer to the gear unit bearings.

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