

# Performance table HS-Version

# POWER GEAR<sup>HS</sup>

	Abbr	Unit	S75	S90	S110	S140	S170	
<b>Output torque ①</b>								
Nominal torque	i=1.0:1	T <sub>2N</sub>	Nm	25	45	78	150	360
Maximum acceleration ②		T <sub>2B</sub>	Nm	38	68	117	225	540
EMERGENCY STOP torque ③		T <sub>2Not</sub>	Nm	50	90	156	300	720
Nominal torque	i=1.5:1	T <sub>2N</sub>	Nm	25	45	78	150	360
Maximum acceleration ②		T <sub>2B</sub>	Nm	38	68	117	225	540
EMERGENCY STOP torque ③		T <sub>2Not</sub>	Nm	50	90	156	300	720
Nominal torque	i=2.0:1	T <sub>2N</sub>	Nm	24	42	68	150	330
Maximum acceleration ②		T <sub>2B</sub>	Nm	36	63	102	225	495
EMERGENCY STOP torque ③		T <sub>2Not</sub>	Nm	48	84	136	300	660
<b>Input speed</b>	i=1.0:1	n <sub>1nenn</sub>	min <sup>-1</sup>	3300	3000	2800	2500	2000
<b>Applies at 50% of nominal torque at 20° C ambient temperature</b>	i=1.5:1; 2.0:1	n <sub>1nenn</sub>	min <sup>-1</sup>	4000	3500	3200	3000	2600
	i=1.0:1 - 2.0:1	n <sub>1max</sub> ④	min <sup>-1</sup>	8500	8500	7000	5500	4000
<b>Output backlash ⑤</b>	nominal	j <sub>t</sub>	arcmin	≤16	≤15	≤14	≤13	≤12
	reduced	j <sub>t</sub>	arcmin	≤10	≤9	≤8	≤8	≤7
<b>Permissible radial load ⑥</b>		F <sub>1Rmax</sub>	N	650	900	1300	2000	3500
		F <sub>2Rmax</sub>	N	800	1100	1600	2500	4500
<b>Permissible axial load ⑥</b>		F <sub>1Amax</sub>	N	325	450	650	1000	1750
		F <sub>2Amax</sub>	N	400	550	800	1250	2250
<b>Efficiency at max load</b>		η	%	>98	>98	>98	>98	>98
<b>Running noise at 1500 min<sup>-1</sup>, partial load</b>		L <sub>pA</sub>	db(A)	≤70	≤70	≤74	≤76	≤77
<b>Weight approx.</b>		m	kg	3.9	4.5	8.0	13.0	22.0
<b>Service life</b>		L <sub>n</sub>	h	>15000	>15000	>15000	>15000	>15000
<b>Lubrication</b>	Synthetic oil ISO VG 150							
<b>Average oil quantity</b>			l	0.1	0.2	0.3	0.4	1.0
<b>Operating temperature</b>			°C	-30 to 100				
<b>Paint</b>	Primer RAL 9005 - dull black							
<b>Mass moments of inertia ⑦ related to input</b>	i=1.0:1	I <sub>1</sub>	kgcm <sup>2</sup>	0.73	1.33	3.88	9.26	31.6
	i=1.5:1	I <sub>1</sub>	kgcm <sup>2</sup>	0.49	0.95	2.88	6.31	19.6
<b>for shaft arrangement WA 13</b>	i=2.0:1	I <sub>1</sub>	kgcm <sup>2</sup>	0.38	0.77	2.38	4.60	13.8

Ex-protection: Ex II 2 G/D EEx c k IIB T4

Type of protection: IP 64

① Design K: permissible torque depends on selected coupling

② Max. 1000 cycles per hour, otherwise please contact us

③ Max. 1000 times during the service life of the gearbox

④ Observe permissible operating temperatures

⑤ Assuming 2% load and max. 10 Nm at the output

⑥ Point of force application center of shaft at an output speed of n = 400 min<sup>-1</sup>

⑦ Design K: without mass moments of inertia of coupling

**As a function of the thermal power limit, higher speeds at a reduced torque are possible.  
For an optimal design of your application, please contact us.**

### Please note that

All information contained in this catalogue is provided without guarantee and is not binding. In particular, dimensions and values only provide guidance. Any exact, specific requirements must be agreed with us. Specifications and features listed in the catalogue are subject to a written contract.