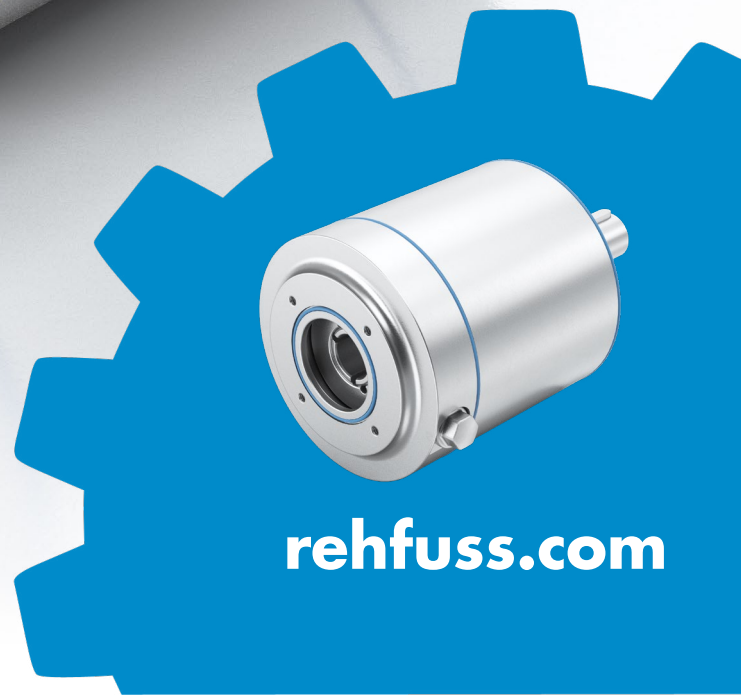




# PLANETARY GEARBOX PNH „Hygienic Design“



success based on  
quality and reliability

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# Technical data

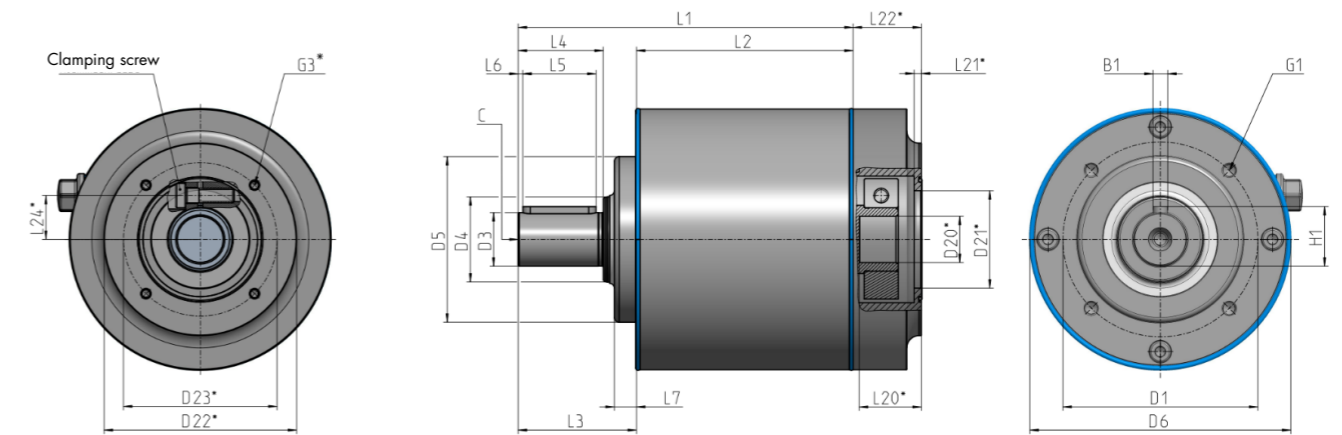
T2N = Nominal output torque, T2B = Max. acceleration torque, T2S = Emergency stop torque. (max. 500 times), T0 = idle torque, J = Mass moment of inertia, VS = Torsional stiffness

1-stage		PNH106Z						PNH108Z						PNH110Z					
Ratios	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	
i	Nm	Nm	Nm	Nm	kgcm <sup>2</sup>	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm <sup>2</sup>	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm <sup>2</sup>	Nm/arcmin	
3	25	38	78	0,22	0,44	2,4	47	75	155	0,65	1,33	7,1	110	165	363	1,39	4,43	17	
4	29	44	90	0,21	0,40	2,4	65	104	215	0,55	1,14	7,1	140	210	462	1,47	3,73	17	
5	29	44	90	0,19	0,38	2,4	65	104	215	0,5	1,07	7,1	140	210	462	1,13	3,33	17	
7	29	44	90	0,17	0,37	1,7	65	104	215	0,45	1,02	4,8	140	210	462	1,09	3,01	14	
10	20	30	62	0,21	0,36	1,3	51	82	168	0,45	0,99	3,4	110	165	363	0,56	2,81	8,3	
Torsional backlash [arcmin]		< 10						< 7						< 7					
Weight approx. [kg]		4,1						7,6						16,3					
Efficiency at full load [%]		92																	

2-stage		PNH206Z						PNH208Z						PNH210Z					
Ratios	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	T2N	T2B	T2S	T0	J	VS	
i	Nm	Nm	Nm	Nm	kgcm <sup>2</sup>	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm <sup>2</sup>	Nm/arcmin	Nm	Nm	Nm	Nm	kgcm <sup>2</sup>	Nm/arcmin	
9	41	49	78	0,23	0,44	2,4	78	94	155	0,5	1,33	7,1	182	206	363	1,13	4,43	17,0	
12	41	49	78	0,24	0,40	2,4	78	94	155	0,5	1,14	7,1	182	206	363	1,45	3,73	17,0	
16	48	57	90	0,22	0,40	2,4	107	130	215	0,4	1,14	7,1	231	263	462	1,60	3,73	17,0	
20	48	57	90	0,23	0,38	2,4	107	130	215	0,4	1,07	7,1	231	263	462	1,41	3,33	17,0	
25	48	57	90	0,24	0,38	2,4	107	130	215	0,4	1,07	7,1	231	263	462	1,23	3,33	17,0	
28	48	57	90	0,23	0,37	2,4	107	130	215	0,37	1,02	7,1	231	263	462	1,43	3,01	17,0	
30	48	57	90	0,22	0,36	2,4	107	130	215	0,35	0,99	7,1	231	263	462	1,61	2,81	17,0	
35	48	57	90	0,2	0,37	2,4	107	130	215	0,45	1,02	7,1	231	263	462	0,94	3,01	17,0	
40	48	57	90	0,21	0,36	2,4	107	130	215	0,35	0,99	7,1	231	263	462	1,61	2,81	17,0	
50	48	57	90	0,21	0,36	2,4	107	130	215	0,35	0,99	7,1	231	263	462	1,21	2,81	17,0	
70	48	57	90	0,19	0,36	1,7	107	130	215	0,3	0,99	4,8	231	263	462	0,83	2,81	14,0	
100	23	39	62	0,2	0,36	1,3	59	102	168	0,25	0,99	3,4	127	206	363	1,00	2,81	8,3	
Torsional backlash [arcmin]		< 12						< 9						< 9					
Weight approx. [kg]		4,7						9,0						19,7					
Efficiency at full load [%]		90																	

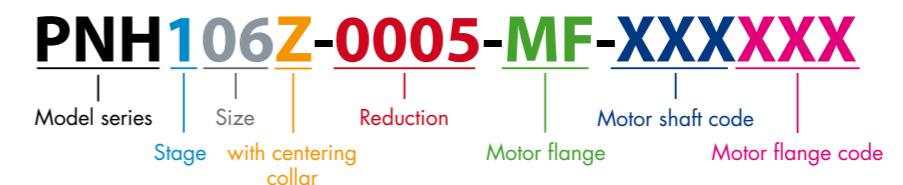
Radial force / Axial force [N] at n2 = 100 1/min	950 / 500	1500 / 1000	3000 / 1500
Noise emission (dbA) at n1= 3000 1/min, Measuring point 1m distance, without load	< 63	< 63	< 65
Nominal input speed / max. input speed [1/min] – allowed operation temperature must not be exceeded	3500 / 6000	3000 / 6000	2500 / 5000
Life time [h]	> 30.000		
Lubrication	H1 registered lifetime lubrication		
Protection class	IP69K		
Installation position	universal		
Operation temperature	-25°C to +90°C		

# Dimensions (in mm):



Type of gearbox	PNH106Z	PNH206Z	PNH108Z	PNH208Z	PNH110Z	PNH210Z
	1-stage	2-stage	1-stage	2-stage	1-stage	2-stage
D1	Pitch circle Ø		62		80	
D3 <sub>k6</sub>	Output shaft Ø		16		22	
D4	Shaft collar Ø		25		30	
D5 <sub>h7</sub>	Centering Ø		52		68	
D6	Housing Ø		88		107	
G1	Thread / depth 4x		M6/12		M6/14	
C	Centering thread / depth		M5/12		M8/19	
L1	Length without drive flange		110	132	137,5	170
L2	Housing length		70	92	89	121,5
L3	Installation dimension		40	48,5	74,5	
L4	Shaft length		28	35	58	
L7	Centering collar length		7,5	9	12	
L5	Feather key length		25	30	50	
L6	Feather key position		2	2	4	
B1	Feather key width		5	6	10	
H1	Height including feather key		18	24,5	35	
<b>Motor flange / motor shaft</b>						
	Max. drill hole clamping system		14	19	24	
D20*	Diameter hole motor shaft		*Motor-specific flange and motor shaft geometries. For motor shafts without feather key. Dimensions vary.			
D21 <sup>G7*</sup>	Inner diameter centering					
D22*	Diameter motor flange					
D23*	Bolt circle thread motor flange					
L20*	Length diameter motor shaft					
L21*	Length Inner centering					
L22*	Length motor flange					
L24*	Position clamping screw					
G3*	Mounting thread					

# Order key:



# Highlights

**EASY CLEANING  
DUE TO SMOOTH  
SURFACE  $RA \leq 0,8$**

**H1 REGISTERED  
LIFETIME LUBRICATION**

**SHAFT SEAL FREE OF  
DEAD SPACE**

**OPTIMIZED SEALING  
MATERIALS**

**LOW TORSIONAL  
BACKLASH**

**MADE OF STAINLESS STEEL**



**AXIAL LOAD-FREE  
DIRECT MOTOR MOUNTING  
WITH CLAMP  
CONNECTION**

**SAFE MOTOR SPECIFIC  
MOUNTING SYSTEM**

**MODULAR EXCHANGE-  
ABLE FLANGE SYSTEM**  
adaptable with all common  
servo motors

**HIGH PROTECTION  
CLASS IP69K**



**LOW NOISE AND OPTIMAL  
RUNNING SMOOTHNESS**



**INTEGER RATIOS**

**HIGH TORSIONAL  
RIGIDITY**

## Options:

- Can be combined with our stainless steel motors (SBH, SBE and N) as well as other motor connections
- Flange options for synchronous servo motors
- Suitable for food, beverage and pharmaceutical industries

## Characteristics:

- Robust and compact
- Lubricant suitable for the food industry (NFS H1 authorized)
- Lifetime lubrication
- Made of stainless steel (1.4404)
- Any mounting position

**Reh fuss Drive Solutions GmbH**

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