



WGN

带有空心轴的准双曲面齿轮直角行星减速机 —— 低噪音，压入式安装

我们的 **WGN** 是一种运行噪音特别轻的直角式空心轴减速机。与此同时，准双曲面齿轮提高了您的工件表面质量。借助胀紧套可以直接连接应用 —— 这样做简单、安全，而且为您的设计节省了更多空间。

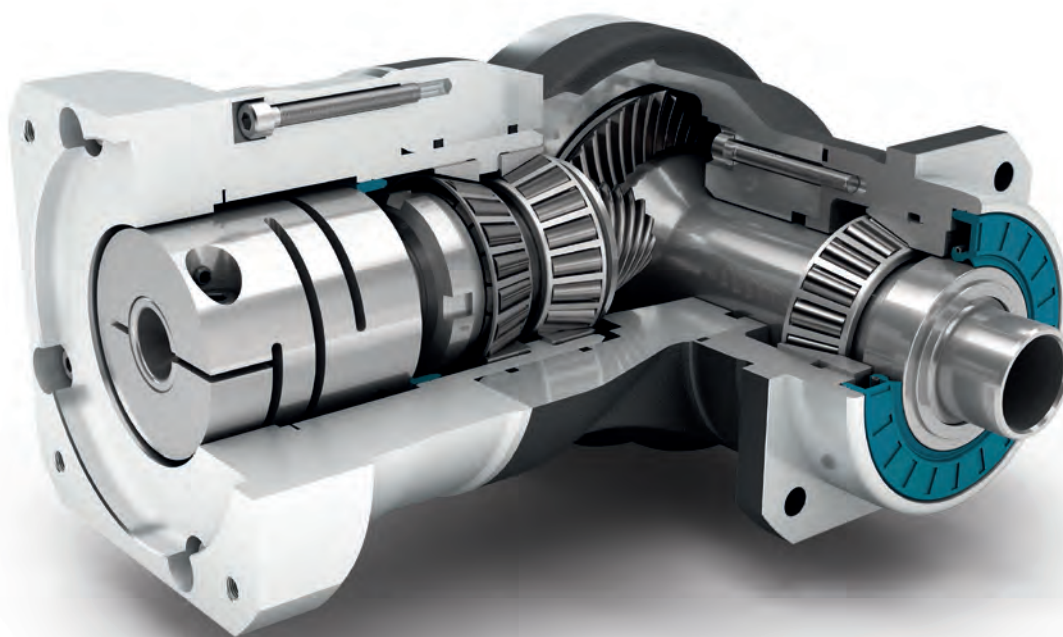
周期性扭矩 Cyclic torque	22 - 320 Nm
径向力 Radial force	2700 - 10000 N
轴向力 Axial force	4300 - 14500 N
回程间隙 Torsional backlash	5 arcmin
防护等级 Protection class	IP65

The hypoid-toothed right-angle gearbox with hollow shaft – low-noise and force-fit mounting

Our **WGN** is the right-angle hollow shaft gearbox that operates particularly quietly. At the same time, the hypoid gearing increases the quality of the surface of your work-piece. With a shrink disc, it can be connected directly to the application - this is uncomplicated, safe and opens up new design possibilities.

结构尺寸 Frame sizes

70	90	115	142
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精密型
Precision Line



旋转方向 反方向
Counterdirectional rotation



正方形输出法兰
Square type output flange



径向轴密封
Rotary shaft seal



夹紧系统的空心轴，带有胀紧套
Hollow shaft for clamping system
with shrink disc



直角型减速机
Right angle gearbox



准双曲面齿轮 直角箱
Hypoid gear right angle stage



配有预紧的圆锥滚子轴承
Preloaded tapered roller bearings



输出端带有超长定心环
Extra long centering collar



可选：喷漆表面
——RAL 9005 黑色
Option: Painted surface
– RAL 9005 Jet black

技术特点的详细解释，请从第201页读起。
Detailed explanations of the technical features starting on page 201.

Code	减速机参数	Gearbox characteristics			WGN070	WGN090	WGN115	WGN142	p ⁽¹⁾
	使用寿命 ⁽²⁾	Service life ⁽²⁾	L _h	h	20.000				
	有效系数 ⁽³⁾	Efficiency ⁽³⁾	η	%	95				
	最低工作温度	Min. operating temperature	T _{min}	°C	-25				
	最高工作温度	Max. operating temperature	T _{max}		90				
	防护等级	Protection class			IP65				
S	标准润滑	Standard lubrication			润滑油 (终生润滑) / Oil (lifetime lubrication)				
F	食品级润滑	Food grade lubrication			润滑油 (终生润滑) / Oil (lifetime lubrication)				
	安装位置	Installation position			任意 / Any				
S	标准回程间隙	Standard backlash	φ	arcmin	< 5				
R	降低回程间隙	Reduced backlash			-				
	抗扭刚度 ⁽³⁾	Torsional stiffness ⁽³⁾	C _{2t}	Nm / arcmin	1,6 - 2,2	4,2 - 5,7	9,2 - 12,4	23,5 - 31,5	
	减速机重量 ⁽³⁾	Gearbox weight ⁽³⁾	m	kg	3,2	5,1 - 5,5	10,7 - 10,8	22,9 - 23,5	
S	标准的箱体表面	Standard surface			直角箱体: 铝 - 阳极氧化处理 (黑色) Right angle housing: Aluminum - anodized (black)				
B	喷漆表面 ⁽⁴⁾	Painted surface ⁽⁴⁾			RAL 9005 黑色 RAL 9005 Jet black				
	运行噪音 ⁽³⁾	Running noise ⁽³⁾	L _{pA}	dB(A)	66	67	68	70	

输出轴载荷	Output shaft loads			WGN070	WGN090	WGN115	WGN142	p ⁽¹⁾
最大径向力	Maximum radial force	F _{r max}	N	2700	4000	6500	10000	
最大轴向力	Maximum axial force	F _{a max}		4300	5900	7000	14500	
最大倾斜力矩	Maximum tilting moment	M _{K max}	Nm	253	442	970	1505	

输入特性	Input characteristics			WGN070	WGN090	WGN115	WGN142	p ⁽¹⁾
输入端锁紧系统直径 (代码)	Clamping system diameter input (Code)	D26	mm	14 (D) ⁽⁵⁾	19 (E) ⁽⁵⁾	24 (F) ⁽⁵⁾	35 (G) ⁽⁵⁾	
				19 (E)	24 (F)	35 (G)	42 (H)	
转动惯量 ⁽³⁾⁽⁵⁾	Mass moment of inertia input ⁽³⁾⁽⁵⁾	J _i	kgcm ²	0,502 - 0,834	1,018 - 1,417	4,805 - 6,111	12,934 18,905	
平均空载扭矩 ⁽³⁾⁽⁵⁾	Average idle torque ⁽³⁾⁽⁵⁾	T ₀	Nm	1,20 - 1,50	1,85 - 2,35	6,00 - 6,90	16,00 - 16,10	
基于减速机输入法兰的最大弯矩	Max. bending moment based on the gearbox input flange	M _{b1}		12	25,5	53	120	

(1) 减速机级数

(2) 利用 NCP 针对应用进行专门设计 - www.neugart.com

(3) 传动比相关的数值可在 Tec Data Finder 中检索 - www.neugart.com

(4) 更多信息见第 183

(5) 参考 锁紧系统直径

(1) Number of stages

(2) Application specific configuration with NCP - www.neugart.com

(3) The ratio-dependent values can be retrieved in Tec Data Finder - www.neugart.com

(4) More information on page 183

(5) Reference clamping system diameter

输出扭矩	Output torques			WGN070	WGN090	WGN115	WGN142	i ⁽¹⁾	p ⁽²⁾
周期性扭矩 ⁽³⁾⁽⁴⁾	Cyclic torque ⁽³⁾⁽⁴⁾	T _{2Z}	Nm	45	90	160	320	4	1
				42	75	140	280	5	
				28	51	91	189	7	
				27	50	90	180	8	
				22	40	75	160	10	
最大扭矩 ⁽³⁾⁽⁴⁾	Maximum torque ⁽³⁾⁽⁴⁾	T _{2max}	Nm	60	140	255	510	4	
				67	120	220	445	5	
				44	81	145	300	7	
				43	80	144	285	8	
				35	64	120	255	10	
连续扭矩 ⁽³⁾	Continuous torque ⁽³⁾	T _{2D}	Nm	30	42	105	240	4	
				32	40	102	235	5	
				23	41	77	160	7	
				22	38	76	153	8	
				18,5	34	63	136	10	

输入转速	Input speeds			WGN070	WGN090	WGN115	WGN142	i ⁽¹⁾	p ⁽²⁾
连续输入转速 ⁽³⁾⁽⁴⁾	Continuous input speed ⁽³⁾⁽⁴⁾	n _{1D}	min ⁻¹	1600	1600	1000	850	4	1
				1750	1750	1100	850	5	
				2000	2000	1250	1100	7	
				2050	2050	1250	940	8	
				2250	2150	1350	970	10	
最高机械输入转速 ⁽³⁾	Max. mechanical input speed ⁽³⁾	n _{1max}	min ⁻¹	16000	14000	9500	8000		

输出扭矩	Output torques			WGN070	WGN090	WGN115	WGN142	i ⁽¹⁾	p ⁽²⁾
急停扭矩 ⁽⁴⁾⁽⁵⁾	Emergency stop torque ⁽⁴⁾⁽⁵⁾	T _{2Stop}	Nm	80	200	400	800	4	1
				100	200	400	800	5	
				75	150	300	700	7	
				75	150	300	700	8	
				75	150	300	700	10	

(1) 传动比 (i=n₁/n₂)

(2) 减速机级数

(3) 利用 NCP 针对应用进行专门设计 - www.neugart.com

(4) 参考夹紧系统直径

(5) 允许 1000 次

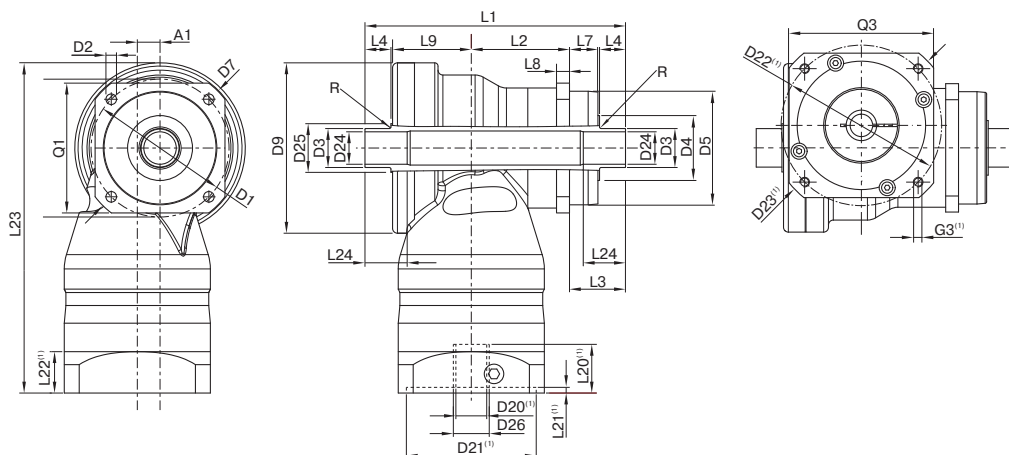
(1) Ratios (i=n₁/n₂)

(2) Number of stages

(3) Application specific configuration with NCP - www.neugart.com

(4) Based on reference clamping system diameter

(5) Permitted 1000 times



图示为带平键的 WGN090 / 1 级 / 双侧空心输出轴 / 19 mm 锁紧系统 / 适配电机法兰 - 2 件式 - 圆形通用法兰 / B5 电机法兰类型

Drawing corresponds to a WGN090 / 1-stage / hollow output shaft on both sides / 19 mm clamping system / motor adaptation - 2-part - round universal flange / B5 flange type motor

⁽¹⁾ 具体尺寸视电机/减速机法兰而定。可以在 www.neugart.com 下 Tec Data Finder。中针对每个电机适配电机特有的输入法兰几何尺寸。

⁽¹⁾ The dimensions vary with the motor/gearbox flange. The input flange dimensions can be retrieved for each specific motor in Tec Data Finder at www.neugart.com

几何尺寸 ⁽²⁾	Geometry ⁽²⁾			WGN070	WGN090	WGN115	WGN142	p ⁽³⁾	Code
轴向偏差	Axis offset	A1		10	14	20	26	1	
输出端安装孔节圆直径	Pitch circle diameter output	D1		68 - 75	85	120	165		
输出端安装孔直径	Mounting bore output	D2	4x	5,5	6,5	9,0	11,0		
输出轴直径	Shaft diameter output	D3	h8	18	24	36	50		
输出轴轴肩直径	Shaft collar output	D4		30	34	45	70		
输出端定位凸台直径	Centering diameter output	D5	g7	60	70	90	130		
输出法兰对角线尺寸	Diagonal dimension output	D7		92	100	140	185		
最大直径	Max. diameter	D9		86	105	120	170		
输出端法兰外方	Flange cross section output	Q1	■	70	80	110	142		
箱体长度	Housing length	L2		46,5	60,5	73,5	76		
输出轴轴长	Shaft length output	L3		33	34,5	48	54		
输出端定位凸台深度	Centering depth output	L7		18	17,5	27	28		
输出端法兰厚度	Flange thickness output	L8		7	8	10	12		
偏差距离	Offset length	L9		43	48,5	56,5	87		
最小总高度	Min. overall height	L23		179	203,5	247,5	318		
最大半径	Max. radius	R		1,5	1,5	1,5	1,5		
电机轴直径j6/k6	Motor shaft diameter j6/k6	D20		更多信息见第 191/192 页 More information on page 191/192					
输入端锁紧系统直径	Clamping system diameter input	D26		更多信息见第 154 页 More information on page 154					
单侧空心输出轴	Hollow output shaft on one side							F	
空心轴直径	Hollow shaft diameter	D24	H6	15	20	30	40		
总长	Total length	L1		122,5	143,5	178	217		
到轴肩的距离	Shaft length from shoulder	L4		14	16	20	25		
最小配合长度	Min. fit length	L24		20	25	30	35		
双侧空心输出轴	Hollow output shaft on both sides							G	
空心轴直径	Hollow shaft diameter	D24	H6	15	20	30	40		
轴肩	Shaft collar	D25		25	30	42	55		
总长	Total length	L1		137,5	160,5	199	243		
到轴肩的距离	Shaft length from shoulder	L4		14	16	20	25		
最小配合长度	Min. fit length	L24		20	25	30	35		

⁽²⁾ 所有的尺寸单位为mm

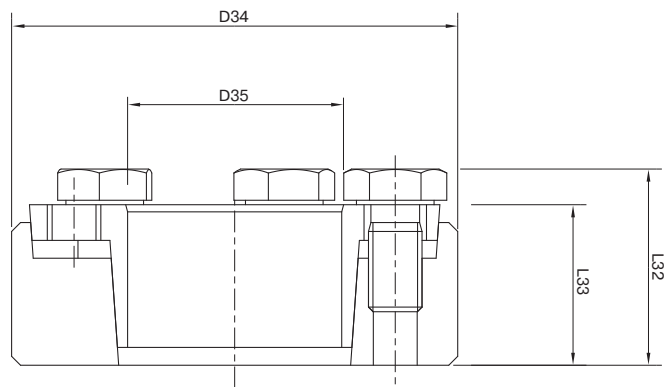
⁽³⁾ 减速机级数

⁽²⁾ Dimensions in mm

⁽³⁾ Number of stages

WGN 胀紧套

WGN Shrink disc



此胀紧套可以通过胀紧力锁紧的方式连接您的设备轴与WGN直角减速机中空输出轴。

This shrink disc can be used to make a force-fit connection between your machine shaft and the right angle hollow shaft gearbox WGN.

				WGN070	WGN090	WGN115	WGN142
产品编号	Art. No.			58365	58366	58367	58368
外径	Outside diameter	D34	mm	44	50	72	90
内径	Inner diameter	D35		18	24	36	50
总长 ⁽¹⁾	Overall length ⁽¹⁾	L32		19	22	27,3	31,3
夹紧长度 ⁽¹⁾	Clamp length ⁽¹⁾	L33		15	18	22	26
对边宽度	Width across flats	SW30		10	10	13	13
夹紧螺钉数量	Number of clamp screws	N30		4	5	5	5
转动惯量	Mass moment of inertia	J ₁		kgcm ²	0,4251	0,7831	4,212

建议承载轴公差为 h6，表面粗糙度 Ra < 3.2 μm。CAD数据下载地址：unter www.neugart.com

For the load shaft, we recommend a tolerance of h6 and a surface roughness of Ra < 3.2 μm. CAD data can be accessed at www.neugart.com

关于胀紧套的安装步骤，请参考相应的安装说明 (www.neugart.com)。

For correct installation of the shrink disc, please refer to the corresponding mounting instructions (www.neugart.com)

供货范围

1 x 胀紧套 (含螺钉)

Included parts

1 x Shrink disc (incl. screws)

⁽¹⁾ 未夹紧状态下的尺寸

⁽¹⁾ Dimensions in unclamped state