

NEUGART NEUGART NEUGART NEUGART NEUGART NEUGART NEUGART NEUGART NEUGART NEUGART NEUGART NEUGART

力。高精度。合作伙伴

power. precision. partnership.



高精度变速器
precision gearboxes



高强度、高精度。
良好的合作伙伴关系。

尊敬的女士们，先生们，
超强动力，高精度以及良好的合作伙伴关系是本公司80多年来始终贯彻执行的经营理念。

今天呈现在您面前的全新编辑的产品目录中，将用90多页的篇幅向您介绍我们多年的宝贵经验和公司专业实力。

当前的供货目录中包括许多成熟的，具有创新和技术性的驱动及变速器解决办法。本公司可以向您提供六种不同的行星齿轮传动减速器系列，分别具备经济、高精度和高效等不同应用特点。作为您卓越的技术合作伙伴我们还将研发并生产高精度齿轮啮合部件以及完全遵照客户需求的特殊变速器。

特别说明：WPLN代表了变速器行业技术标准。新型高精度锥齿轮变速器的运行噪音明显降低、其具有坚固的结构设计、高效以及完美的实际应用。

如果您对产品目录2009或我们的产品/服务有疑问，欢迎随时查询，我们时刻为您服务。

*Impress with power and precision.
Inspire with partnership.*

*Dear Sir or Madame,
Power, precision and partnership – these values characterise our business philosophy and our work, and have for over 80 years.*

In our newly designed and newly structured catalogue, introduced to you today, we present over 90 pages of our experience and performance.

The current product range includes numerous innovative and technologically mature drive and gear solutions. We now offer six different planetary gear series for the sectors Economy, Precision and High Performance. As a competent technology partner, we develop and manufacture highly precise gear parts as well as specialised gearboxes – adapted precisely to your specific needs.

We would especially like to point out the absolute highlight of this edition: The WPLN sets a new benchmark in gearbox technology. Our new angle-precise gearbox distinguishes itself with its significantly reduced operating noise and compactness, its efficiency and excellent performance.

Please contact us if you have any questions about the 2009 catalogue, our products or services – we're happy to help.

Bernd Neugart
管理成员
managing partner



Thomas Herr
管理成员
managing partner



2-5 企业 / *The Company*



PLN 6-19

低回程间隙行星减速机
low backlash planetary gear box
最高精密级
precision at highest level

WPLN 20-33

低回程间隙角度输出减速机
low backlash angle gear box
高精度锥齿轮变速器
the precision angular gear box

PLE 34-51

低回程间隙行星减速机
low backlash planetary gear box
相对PLN-系列，合理的经济型产品
the economy alternative to the PLN-line

WPLE 52-67

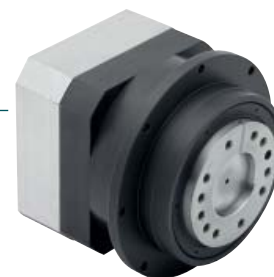
低回程间隙角度输出减速机
low backlash angle gear box
PLE系列的转角式减速机
the angular gear box of PLE-line

PLFE 68-77

低回程间隙经济型法兰输出减速机
low backlash economy flange gear box
结构紧凑，性能卓越
compact efficiency

PLF HP 78-87

高效法兰连接式减速机
high performance flange gearbox
高刚度、高性能和结构紧凑短小
high stiffness with high performance data and short construction



PLN

WPLN

PLE

WPLE

PLFE

PLF HP

88-89 减速机关键尺寸/选型 / *gearhead sizing/selection*

90-91 最大可传递输出转矩
Max. transferable output torque

92-93 热容技术符合S1模式
thermal specifications for S1 operation

94-95 特种减速机 / *custom made gear boxes*

96-97 用户定制齿轮 / *custom made toothings*

98-100 联系 / *contact*

注重细节， 打造完美。 公司产品。

高效、功能强劲：
高精度行星齿轮传动变速器。

无论在机床、铸塑机中，还是在包装机、印刷机和纺织器械中，或在自动控制技术、喷涂机械手设备中：我们的高精度行星齿轮传动变速器对于各种不同的应用领域将是最好的选择。
此外本公司还提供非标准类的器械。
本公司将持续研发高品质的驱动设备。

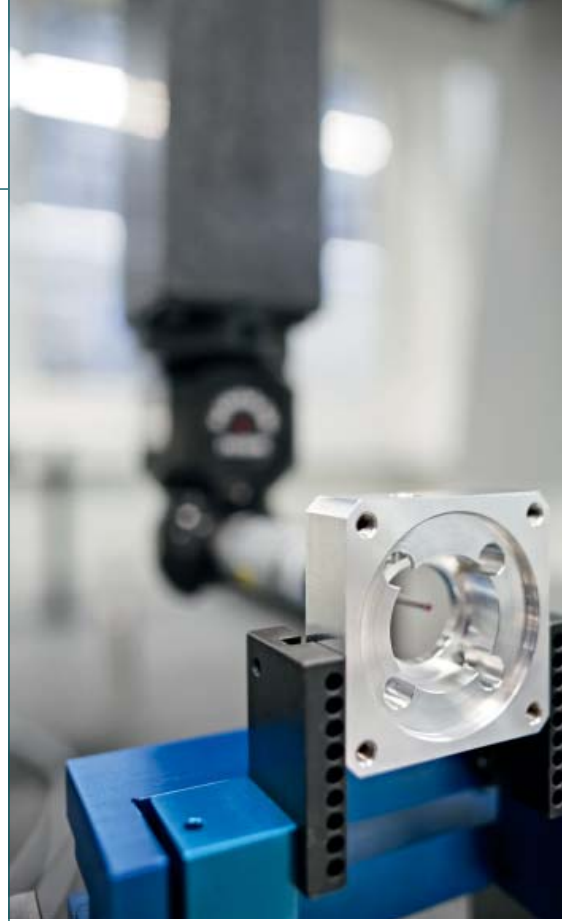
- 概览：**
- > 产品种类丰富 - 标准变速器，特殊变速器和啮合件。
 - > 六种标准产品系列 - 多种选择。
 - > 特殊变速器 - 根据客户要求量身打造。
 - > 啮合件 - 提供不同的加工方式。
 - > 高质量、灵活性 - 理想供货时间。

创新和独特：
特殊变速器。

坚固的结构设计及高性能、特殊的结构需求。
食品级的认证或独特的设计：本公司可以满足客户在机械领域中的各种复杂要求。
高素质的技术工程师设计变速器系统并解决变速器各种问题。
服务、成本和质量恰到好处。
创新优势：本公司将长期的专业经验以及不断的研发成果运用到客户解决办法中。

值得信赖、高精度：
我们的结合点。

本公司提供驱动技术领域里的各种部件。
根据客户要求。



Perfection – in every detail. Our products.

Powerful and efficient:
Our precision planetary gearboxes.

*Whether in machine tools or die-casting machines, in packaging, printing and textile machines, in automation technology or in robotic painting systems: Our precision planetary gearboxes are ideally suited for numerous applications.
We offer much more than just standard. The high-quality drive elements are continuously being developed further.*

At a glance:

- > *A broad product range – standard gearboxes, specialised gearboxes and gear parts.*
- > *Six strong standard model series – many options.*
- > *Specialised gearboxes – individually customised to your needs.*
- > *Gear parts – a wide range of options.*
- > *High quality and flexibility – with optimal delivery times.*

Innovative and individual:
Our specialised gearboxes.

*Compact form and high performance, special construction requirements. Food grade certification or individual design: We fulfil even your most complex requirements – in all sectors of machine building. The qualified specialists of our engineering department design gearbox solutions and systems according to your performance, quality and quality needs.
Your benefit from innovation: We utilise our experience and at the same time take advantage of new developments, integrating them into our customer solutions.*

Reliable and highly precise:
Our gear parts.

We offer you numerous additional components relating to drive technology. Perfect for your needs and demands.

质量好。 服务优。

顾客满意是本公司的终极目标，产品质量和服务是我们的首要任务。

本公司的质量-环保理念保证并保持了我们在国际市场上不断地取得巨大成功。

概览：

> 目标明确。

针对领导层、所有工作人员以及工作质量本公司制定了具体的质量目标。

> 承诺。

应重点强调的是我们是一支高效、高素质的团队。除了权威的培训与指导之外，我们的员工会相应的对自己的任何行为负责。

> 持续。

我们坚持完善每个工作流程，从小做起构成了我们进行重大革新和完善的基石

> 可证明的。

我们设计制定、执行了质量-环保管理系统并对其进行详细记录，该管理系统涵盖了本公司所有产品。在质量-环保管理系统文件中包含了所有一般重要规则。

Power – at a high level. Our quality.

Your satisfaction is our measuring stick – that's why the quality of our products and services are always our top priority.

With our quality and environmental policy we secure and expand our economic success on all international markets.

At a glance:

> *Goal oriented.*

We declare concrete quality goals – under the responsibility of the management and involvement of all employees as well as consideration of the quality of work.

> *Committed.*

We put emphasis on a highly motivated and qualified team. In addition to training and instruction, our employees receive authority as well as responsibility for their activities.

> *Consistent.*

We are in a process of continuous improvement – and we connect the large steps of innovation with the small steps of continual optimisation.

> *Verifiable.*

We maintain and document a comprehensive quality and environment management system that comprises all phases of the rendering goods and services. All regulations relevant to the standards are described in the documentation of the QM/EM system.



尽情享受。 我们的服务。

我们不仅创造产品，还有根据不同功能，以经济、长远的方式解决各种不同的问题。对此，本公司期待与您的合作以及为您提供更为舒适的服务。

> **直接来讲：**

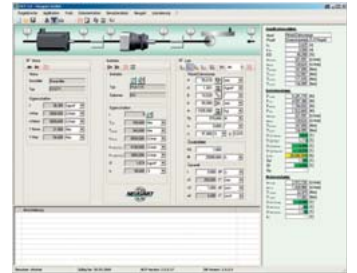
本公司提供由咨询到研发设计的服务。您的问题就是我们的任务：我们向您提供咨询服务并与您一起讨论研发新的、适当的解决问题的办法。我们员工中的10%在设计 and 研发部门工作。

> **处于领先地位：**

专业技能和技术。
创新的、先进的生产工艺值得信赖，高素质的员工队伍值得信赖。本公司免费提供NCP传动系设计软件。在网页下载区域为您提供CAD制图，尺寸图或使用说明。

> **对所有情况：**

高效。
生产面积总计扩建11.000 m²，这样足以保证我们标准产品的理想供货时间。另外您可从我们高品质的产品中获得公平的市场价格以及长期的成本优势。



Simply greater benefit. Our service.

We don't just make products, we create solutions – functional, economical and forward-looking. Therefore, intensive collaboration and the right service for you are important to us.

> **From one source:**

From consulting to development. Your task, our job: We provide consulting and develop new and customised solutions together with you. Roughly 10% of our employees work in development and design.

> **At a new level:**

Know-how and technology. Trust in innovative and proven manufacturing methods and in the knowledge of our employees. NCP, the design software for the power train, is available to you at no cost. And our website offers you a comprehensive download area – with CAD drawings, dimension sheets or operating instructions.

> **On all accounts:**

Focus on efficiency. With our expanded production area of 11,000 m² we can guarantee optimal delivery times for our standard products. You also profit from fairly calculated market prices, from permanent cost optimisation – with consistent high quality.



公司网络全球化。 竭诚为您服务。

本公司在产品质量、技术支持和服务上的高标准要求得到了国际认可：在全世界所有重要的工业国家中我们拥有超过20家代理和分支机构。

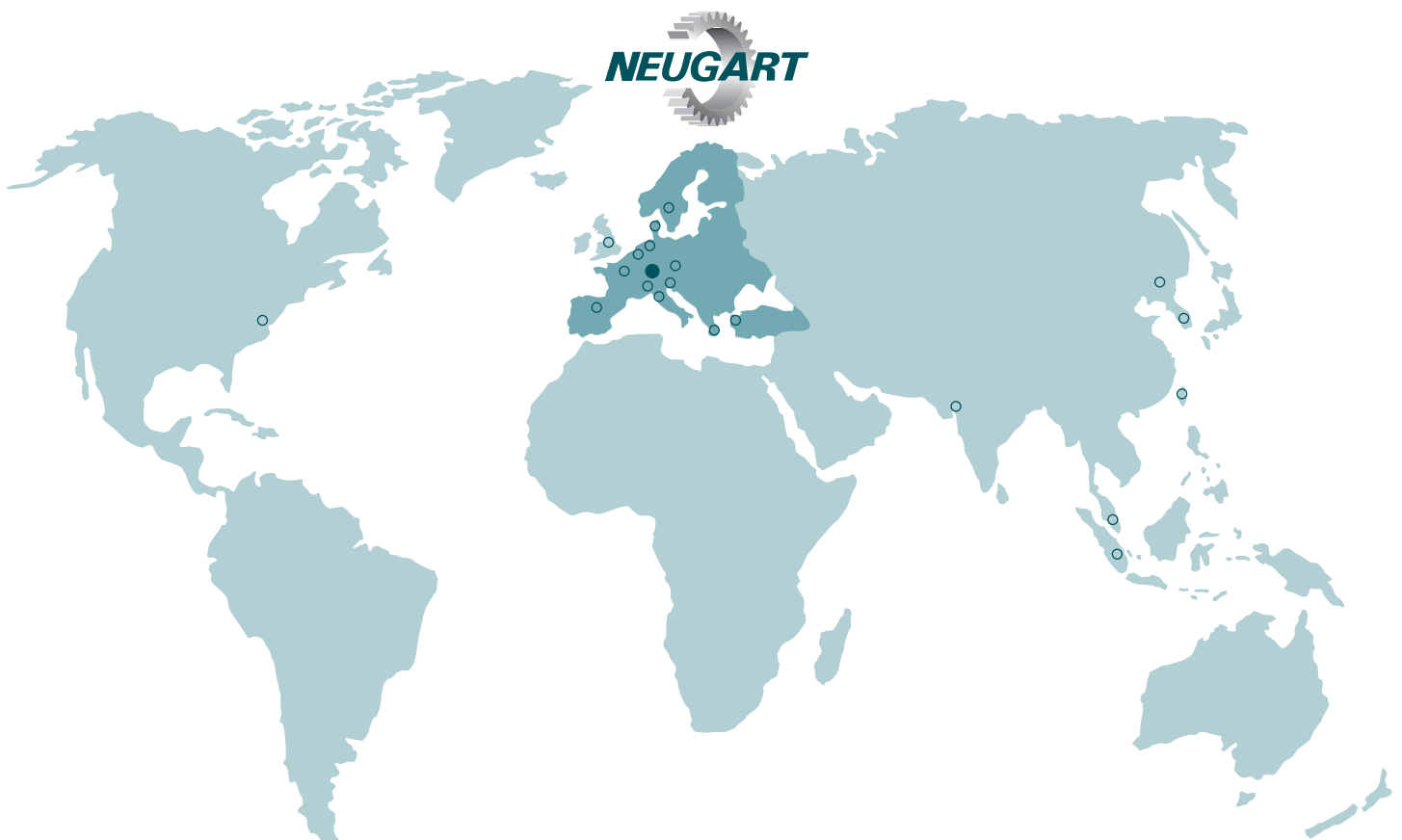
本公司只在德国进行产品制造。在美国和中国的组装厂可以满足不同地区的需求并保证供货时间和货物调度的灵活性。



*Globally active
for you.
Our network.*

Our high standard in product quality, support and service appreciated internationally: With over 20 representatives and branches, we are represented in all important industrial nations.

We manufacture our products exclusively in Germany. In the USA and China, our assembly factory serve regional markets, guaranteeing a high level of flexibility for adaptations as well as the shortest delivery times.





坚固耐用、动力强、 持续低噪音

*Compact, powerful,
yet quiet*

效率更高，运行更佳，更低的运行噪音：该系列新型产品以低运行噪音，
坚实的结构及其更为简便易行的安装方式更加值得信赖。

*Higher efficiencies, better performance, quieter operation: Our new model series
distinguishes itself with its reduced operating noise, compact design and its im-
proved ease of assembly.*





- > 转动间隙小 (<5')
 - > 输出转矩高
 - > 结构占地较小
 - > 效率高 (96%)
 - > 11种减速比 $i=4, \dots, 100$
 - > 噪音低 (< 66 dB(A))
 - > 质量高 (ISO 9001)
 - > 安装位置随意
 - > 电机安装简便
 - > 终身润滑
 - > 其它选件
 - > 旋转方向
 - > 平衡的电机连接
- > *minimal backlash (<5')*
 - > *high output torque*
 - > *small installation space*
 - > *high degree of efficiency (96%)*
 - > *11 Transmission ratios $i=4, \dots, 100$*
 - > *low noise (< 66 dB(A))*
 - > *high quality (ISO 9001)*
 - > *universal mounting positions*
 - > *simple motor mounting*
 - > *permanent lubrication*
 - > *further options*
 - > *direction of rotation see page 31*
 - > *balanced motor connection*

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9	CAD 图, 参数表格	www.neugart.de
	CAD drawings, dimension sheets	www.neugart.de
10	基本数据与计算方法	NCP Software
	dimensioning/calculation	NCP Software

型号	size		WPLN 70	WPLN 90	WPLN 115	WPLN 142	i ⁽¹⁾	Z ⁽²⁾
额定输出扭矩 T _{2N} ⁽³⁾⁽⁵⁾	nominal output torque T _{2N} ⁽³⁾⁽⁵⁾	Nm	45	90	160	-	4	1
			42	75	140	-	5	
			27	50	90	-	8	
			22	40	75	-	10	
			77	150	300	640	16	2
			77	150	300	800	20	
			65	140	260	700	25	
			77	108	200	360	32	
			65	135	250	450	40	
			40	80	150	450	64	
			27	60	125	305	100	

型号	size		WPLN 70	WPLN 90	WPLN 115	WPLN 142	i ⁽¹⁾	Z ⁽²⁾
最大输出扭矩 ⁽³⁾⁽⁵⁾⁽⁸⁾	max. output torque ⁽³⁾⁽⁵⁾⁽⁸⁾	Nm	72	144	256	-	4	1
			67	120	224	-	5	
			43	80	144	-	8	
			35	64	120	-	10	
			123	240	480	1024	16	2
			123	240	480	1280	20	
			104	224	416	1120	25	
			123	172	320	576	32	
			104	216	400	720	40	
			64	128	240	720	64	
			43	96	200	488	100	

系列	line		WPLN				Z ⁽²⁾
寿命	lifetime	h	20.000				
寿命以 T _{2N} × 0,88	lifetime at T _{2N} × 0,88		30.000				
急停扭矩 ⁽⁶⁾	emergency stop ⁽⁶⁾	Nm	2倍于 T _{2N} / 2 - times of T _{2N}				
满载效率 ⁽⁷⁾	efficiency with full load ⁽⁷⁾	%	96				1
			94				2
最低工作温度 ⁽⁴⁾	min. operating temp. ⁽⁴⁾	°C	-25				
最高工作温度 ⁽⁴⁾	max. operating temp. ⁽⁴⁾		+90				
防护等级	degree of protection		IP 65				
润滑	lubrication		终生润滑 /life lubrication				
装配方式	mounting position		任意 /any				
电机法兰精度	motor flange precision		DIN 42955-R				
旋转方向	Direction of rotation		驱动及输出侧反向/ Drive and output sides in opposite directions				

(1) 减速比(i=n_{an}/n_{ab})

(2) 级数

(3) 这些数据在下列条件下测得:输出转速n₂=100min⁻¹,电机在占空因数K_A=1及S1连续工作制下,温度T=30°C

(4) 参考体表面的中部

(5) 取决于电机轴的直径

(6) 1000次以内

(7) 取决于减速比; n₂=100min⁻¹

(8) 输出轴最大允许30000转; 见90页

(1) ratios (i=n_{an}/n_{ab})

(2) number of stages

(3) these values refer to a speed of the output shaft of n₂=100min⁻¹ on duty cycle K_A=1 and S1-mode for electrical machines and T=30°C

(4) referring to the middle of the body surface

(5) depends on the motor shaft diameter

(6) allowed 1000 times

(7) depends on ratio, n₂=100min⁻¹

(8) allowable for 30.000 revolutions at the output shaft; see page 91

型号	size		WPLN 70	WPLN 90	WPLN 115	WPLN 142	Z ⁽²⁾
回程间隙 ⁽⁸⁾	backlash ⁽⁸⁾	arcmin	<5	<5	<5	-	1
			<7	<7	<7	<7	2
Fr _{max.} 于 20.000 h ⁽³⁾⁽⁴⁾	Fr _{max.} for 20.000 h ⁽³⁾⁽⁴⁾	N	3200	5200	6000	-	1
			3200	5500	6000	12500	2
Fa _{max.} 于 20.000 h ⁽³⁾⁽⁴⁾	Fa _{max.} for 20.000 h ⁽³⁾⁽⁴⁾		4300	5900	7000	-	1
			4400	6400	8000	15000	2
Fr _{max.} 于 30.000 h ⁽³⁾⁽⁴⁾	Fr _{max.} for 30.000 h ⁽³⁾⁽⁴⁾		3200	5200	6000	-	1
			3200	4800	5400	11400	2
Fa _{max.} 于 30.000 h ⁽³⁾⁽⁴⁾	Fa _{max.} for 30.000 h ⁽³⁾⁽⁴⁾		3700	5200	6100	-	1
			3900	5700	7000	13200	2
抗扭刚性	torsional stiffness	Nm / arcmin	2,4	6,6	14,3	-	1
			2,4	11	34	58	2
重量	weight	kg	3,0	5,0	10,5	-	1
			3,9	5,3	9,2	21,5	2
运转噪音 ⁽⁵⁾	running noise ⁽⁵⁾	dB(A)	66	67	68	70	
最大输入速度 ⁽⁶⁾	max. input speed ⁽⁶⁾	min ⁻¹	16000	14000	9500	-	1
			16000	16000	14000	9500	2

型号	size		WPLN 70	WPLN 90	WPLN 115	WPLN 142	i ⁽¹⁾
最大输入速度在50% T _{2N} 和 S1模式 ⁽⁶⁾⁽⁷⁾	max. middle input speed at 50% T _{2N} and S1 ⁽⁶⁾⁽⁷⁾	min ⁻¹	2850	2450	1700	-	4
			3250	2900	1950	-	5
			4150	3700	2450	-	8
			4500	4050	2600	-	10
			3100	3150	2650	1700	16
			3400	3500	2900	1750	20
			3700	3900	3350	2000	25
			3800	4300	3700	2450	32
			4100	4450	3900	2600	40
			4500	5300	4700	2900	64
4750	5700	5050	3200	100			

型号	size		WPLN 70	WPLN 90	WPLN 115	WPLN 142	i ⁽¹⁾
最大输入速度在100% T _{2N} 和 S1模式 ⁽⁶⁾⁽⁷⁾	max. middle input speed at 100% T _{2N} and S1 ⁽⁶⁾⁽⁷⁾	Nm	2100	1700	1200	-	4
			2450	2150	1450	-	5
			3450	3050	2050	-	8
			3900	3500	2250	-	10
			2550	2350	1900	1200	16
			2850	2700	2150	1200	20
			3250	3150	2650	1500	25
			3300	3650	3100	2100	32
			3700	3750	3250	2150	40
			4300	4900	4300	2550	64
4650	5450	4800	3000	100			

(1) 减速比(i=n_{an}/n_{ab})

(2) 级数

(3) 这些数据在下列条件下测得:输出转速n₂=100min⁻¹,电机在空占因数K_A=1及S1连续工作制下,温度T=30°C

(4) 沿着输出轴长度方向上一半处

(5) 噪音检测标准;距离1m;在输入转速n₁=3000min⁻¹;i=5

(6) 必须保证允许的工作温度;特殊的输入转速请联系确认

(7) 定义见92页

(8) 更低的回程间隙请联系确认

(1) ratios (i=n_{an}/n_{ab})

(2) number of stages

(3) these values refer to a speed of the output shaft of n₂=100min⁻¹ on duty cycle K_A=1 and S1-mode for electrical machines and T=30°C

(4) half way along the output shaft

(5) sound pressure level; distance 1m; measured on idle running with an input speed of n₁=3000min⁻¹; i=5

(6) allowed operating temperature must be kept; other input speeds on inquiry

(7) definition see page 93

(8) lower backlash on inquiry



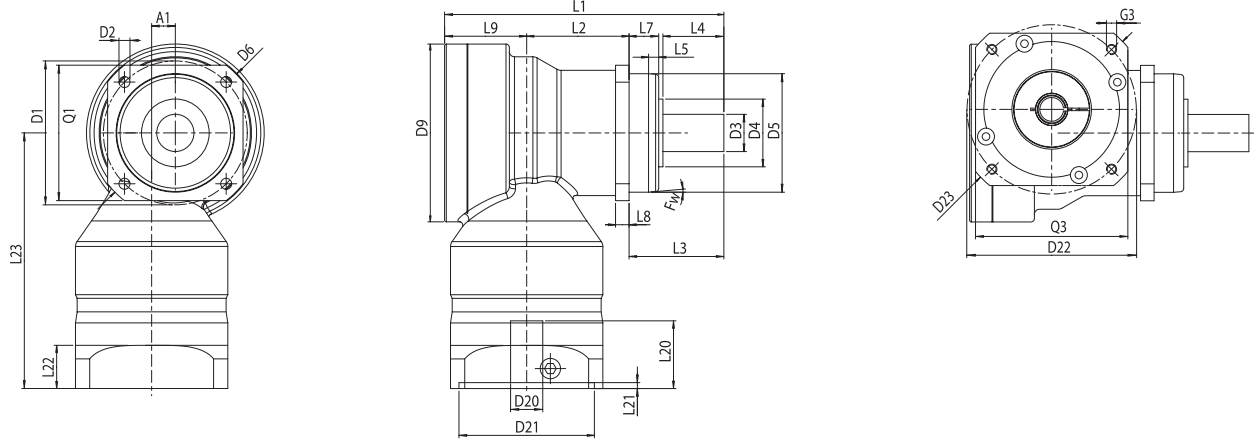
型号	size		WPLN 70	WPLN 90	WPLN 115	WPLN 142	i ⁽¹⁾
惯量 ⁽²⁾	inertia ⁽²⁾	kgcm ²	0,654	1,331	5,924	-	4
			0,6	1,168	5,441	-	5
			0,532	1,004	4,989	-	8
			0,516	0,966	4,883	-	10
			0,639	0,642	1,366	6,082	16
			0,591	0,593	1,190	6,016	20
			0,590	0,591	1,186	5,5	25
			0,528	0,529	1,013	5,028	32
			0,528	0,528	1,011	5,012	40
			0,528	0,528	1,01	5,004	64
			0,514	0,514	0,97	4,892	100

⁽¹⁾ 减速比($i=n_{an}/n_{ab}$)

⁽²⁾ 转动惯量与传动轴和标准发动机轴直径D20有关。

⁽¹⁾ ratios ($i=n_{an}/n_{ab}$)

⁽²⁾ the moment of inertia relates to the input shaft and to standard motor shaft diameter D20



型号	size		WPLN 70	WPLN 90	WPLN 115	WPLN 142	Z ⁽²⁾
所有尺寸均以毫米为单位	all dimensions in mm						
L1 总长	L1 overall length		137,5	165	218	-	1
			185	207	248,5	342,5	2
L2 箱体长度	L2 body length		46,5	60,5	73,5	-	1
			94	108	112	176	2
L23 轴高 ⁽³⁾	L23 Axle height ⁽³⁾		136	151	187,5	-	1
			136	136	151	187,5	2
A1 轴偏距	A1 Axle offset		10	14	20	-	1
			10	10	14	20	2
输出	output						
D3 轴径	D3 shaft diameter	k6	16	22	32	40	
L3 输出轴长	L3 shaft length from output		48	56	88	110	
D5 定位凸台	D5 centering	g7	60	70	90	130	
D6 对角尺寸	D6 diagonal dimension		92	100	140	185	
D1 法兰定位圆直径	D1 flange hole circle		68-75	85	120	165	
D2 安装螺孔	D2 mounting bore	4x	5,5	6,5	8,5	11	
Q1 减速机截面	Q1 gear box section	□	70	80	110	142	
D4 轴肩	D4 shaft root	-3	30	40	45	70	1
			35	40	45	70	2
L4 轴长自定位凸台起	L4 shaft length from spigot		28	36	58	80	
L7 定位凸台厚度	L7 spigot depth		19	17,5	28	28	
L5 倒角长度	L5 bevel length		8	6	8	8	
L8 法兰厚度	L8 flange thickness		7	8	10	12	
Fw 倒角	Fw bevel angle	°	5	5	5	5	
D9 最大直径	D9 max. diameter		86	105	120	-	1
			86	86	105	120	2
输入端	input						
D20 轴中心孔 ⁽¹⁾⁽⁴⁾	D20 pinion bore ⁽¹⁾⁽⁴⁾		11	14	19	-	1
			11	11	14	19	2
L20 马达轴长度 ⁽³⁾	L20 motor shaft length ⁽³⁾		23	30	40	-	1
			23	23	30	40	2
D21 中心孔 ⁽¹⁾	D21 center bore for motor ⁽¹⁾		60	80	95	-	1
			60	60	80	95	2
D22 安装孔分布圆 ⁽¹⁾	D22 hole circle ⁽¹⁾		75	100	115	-	1
			75	75	100	115	2
D23 对角尺寸 ⁽¹⁾	D23 diagonal dimension ⁽¹⁾		92	116	145	-	1
			92	92	116	145	2
G3 安装螺纹x深度 ⁽¹⁾	G3 mounting thread x depth ⁽¹⁾	4x	M5 x 10	M6 x 12	M8 x 16	-	1
			M5 x 10	M5 x 10	M6 x 12	M8 x 16	2
L21 电机定位凸台深度	L21 motor location depth		3	3,5	3,5	-	1
			3	3	3,5	3,5	2
Q3 法兰截面 ⁽¹⁾	Q3 flange section ⁽¹⁾	□	70	90	115	-	1
			70	70	90	115	2
L22 适配法兰长度 ⁽³⁾	L22 Adapter plate length ⁽³⁾		19	25,5	27,5	-	1
			19	19	25,5	27,5	2

(1) 这些参数与所配套的电机型号有关，详见第27页

(2) 级数

(3) 如果所配的电机轴L20比表中所给的尺寸更长,那么L22和L23应根据所配电机轴长适当加长

(4) 与电机轴配合精度: j6; k6

(1) dimensions refer to the mounted motor-type, see page 27

(2) number of stages

(3) for longer motor shafts L20 applies: The measure motor flange length L22 and the Axle height L23 will be lengthen

(4) for shaft fit: j6 ; k6



OP 2: 电机装配
机械参数 第27页

OP 2: **motor mounting**
dimensions page 27

OP 5: 花键轴 ⁽¹⁾
机械参数 第28页

OP 5: **spline shaft ⁽¹⁾**
dimensions page 28

OP 7: 带键的输出轴
DIN 6885 T1⁽¹⁾
机械参数 第28页

OP 7: **output shaft with key**
DIN 6885 T1⁽¹⁾
dimensions page 28

OP 8: 特殊输出轴 ⁽¹⁾
机械参数 第28页

OP 8: **special shaft ⁽¹⁾**
dimensions page 28

OP 14: WPLS系列减速器输出轴尺寸
机械参数 第29页

OP 14: **dimensions for the**
WPLS output
dimensions page 29

其他选项请联系确认

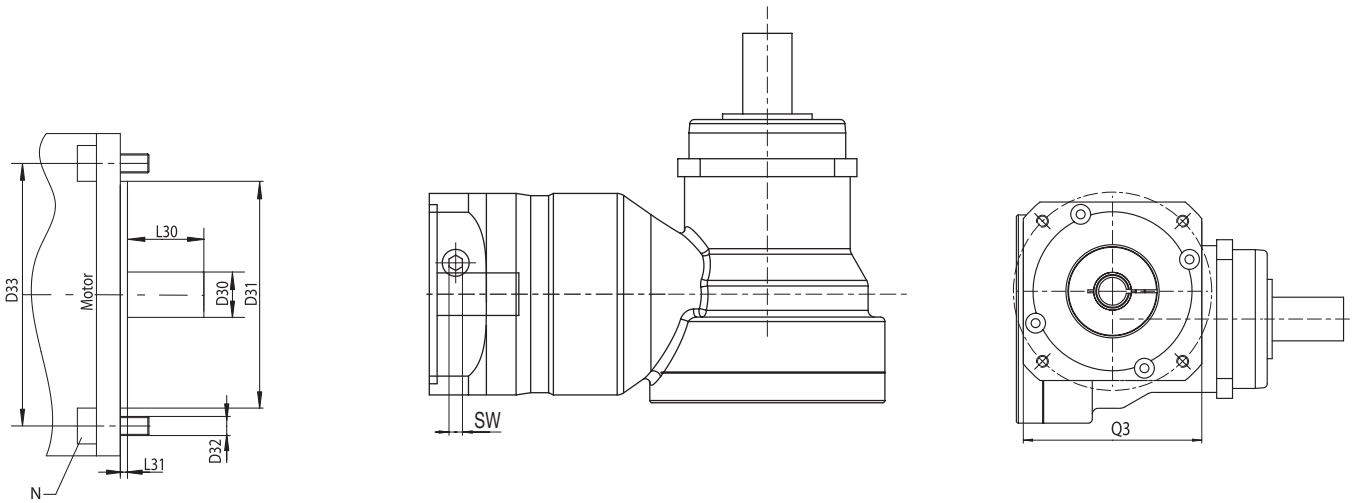
other options on inquiry

⁽¹⁾ 请联系确认

⁽¹⁾ on inquiry

OP 2: 可能的电机装配方式

OP 2: possible motor mounting



型号	size		WPLN 70		WPLN 90		WPLN 115		WPLN 142		Z ⁽²⁾
D30 电机轴直径 ⁽¹⁾⁽⁵⁾	D30 motor shaft diameter ⁽¹⁾⁽⁵⁾	mm	8/9/9,525/ 10/11/12/ 14/16/19		9,525/10/ 11/12/12,7/14/ 16/19/22/24		11/12,7/14/ 15,87/16/19/22/ 24/28/32/35		-		1
			8/9/9,525/ 10/11/12/ 14/16/19		8/9/9,525/10/ 11/12/12,7/14/ 16/19		9,525/10/11/ 12,7/14/15,87/ 16/19/22/24		11/12,7/14/ 15,87/16/19/22/ 24/ 28/32/35		2
L30 最短马达轴长度 ⁽¹⁾	L30 min. motor shaft length ⁽¹⁾		20 (23 ⁽⁶⁾)		23 (25 ⁽⁷⁾)		25 (32 ⁽⁸⁾)		-		1
			20 (23 ⁽⁶⁾)		20 (23 ⁽⁶⁾)		23 (25 ⁽⁷⁾)		25 (32 ⁽⁸⁾)		2
D31 电机定位凸台 ⁽³⁾	D31 motor spigot ⁽³⁾		任意/any		任意/any		任意/any		任意/any		
D33 安装孔分布圆 ⁽³⁾	D33 hole circle diameter ⁽³⁾		任意/any		任意/any		任意/any		任意/any		
马达类型 ⁽¹⁾	motor type ⁽¹⁾		B5		B5		B5		B5		
D32 轴中心孔 ⁽³⁾	D32 pinion bore ⁽³⁾		任意/any		任意/any		任意/any		任意/any		
N 安装孔的数量	N numbers of mounting bores		4		4		4		4		
L31 定位凸台厚度	L31 spigot depth		任意/any		任意/any		任意/any		任意/any		
Q3 法兰截面 ⁽¹⁾	Q3 flange section ⁽¹⁾	□	70		90		115		140		
最大电机重量 ⁽⁴⁾	max. motor weight ⁽⁴⁾	kg	10		15		34		50		
紧固螺丝扭矩	torque clamping screw	Nm	4,5	9,5 ⁽⁶⁾	9,5	16,5 ⁽⁷⁾	16,5	40 ⁽⁸⁾	16,5	40 ⁽⁹⁾	
SW 内六角扳手型号	SW wrench width	mm	3	4 ⁽⁶⁾	4	5 ⁽⁷⁾	5	6 ⁽⁸⁾	5	6 ⁽⁹⁾	

⁽¹⁾ 其它尺寸请联系确认

⁽²⁾ 级数

⁽³⁾ 如果可能请给出法兰的相关参数

⁽⁴⁾ 与电机装配的水平度和稳定性有关

⁽⁵⁾ 与电机轴配合精度: j6; k6

⁽⁶⁾ D30 > 14 mm

⁽⁷⁾ D30 > 19 mm

⁽⁸⁾ D30 > 24 mm

⁽⁹⁾ D30 = 42 mm

⁽¹⁾ other dimensions on inquiry

⁽²⁾ number of stages

⁽³⁾ if possible with the given flange dimensions

⁽⁴⁾ referred to horizontal and stationary mounting

⁽⁵⁾ shaft fit: j6; k6

⁽⁶⁾ D30 > 14 mm

⁽⁷⁾ D30 > 19 mm

⁽⁸⁾ D30 > 24 mm

⁽⁹⁾ D30 = 42 mm

• 根据电机输出轴承端盖 (A) 热调长度。

• thermal length compensation with respect to the A end shield of the motor

OP 5: 花键轴 ⁽⁴⁾OP 5: spline shaft ⁽⁴⁾

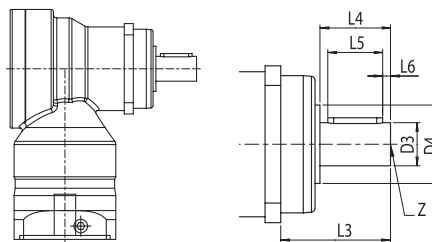
型号 size	花键轴 spline shaft	花键或键槽的长度 tooth width	Z 中心孔 Z centre bore
WPLN 70	DIN 5480 - W 16 x 0,8 x 30 x 18 x 7 m	15	DIN 332 DR M5x12,5
WPLN 70-OP14	DIN 5480 - W 19 x 0,8 x 30 x 22 x 7 m	15	DIN 332 DR M6x16
WPLN 90	DIN 5480 - W 22 x 0,8 x 30 x 26 x 7 m	21	DIN 332 DR M8x19
WPLN 115	DIN 5480 - W 32 x 1,25 x 30 x 24 x 7m	42	DIN 332 DR M12x28
WPLN 142	DIN 5480 - W 40 x 1,25 x 30 x 30 x 7m	65	DIN 332 DR M16x35

OP 7: 带键的输出轴 DIN 6885 T1 ⁽¹⁾⁽⁴⁾OP 7: output shaft with key DIN 6885 T1 ⁽¹⁾⁽⁴⁾

型号	size		WPLN 70	WPLN 70-OP14	WPLN 90	WPLN 115	WPLN 142
标题	title		A5 x 5 x 25	A6 x 6 x 20	A6 x 6 x 28	A10 x 8 x 50	A12 x 8 x 65
D3 [k6] 轴径	D3 [k6] shaft diameter		16	19	22	32	40
L5 键长	L5 key length	mm	25	20	28	50	65
L6 至轴末端的距离	L6 distance from shaft end		2	4	4	4	8
Z 中心孔	Z centre bore		M5 x 12,5	M6 x 16	M8 x 19	M12 x 19	M16 x 35
最大输出扭矩 ⁽²⁾	max. output torque ⁽²⁾	Nm	70	75	100	250	800

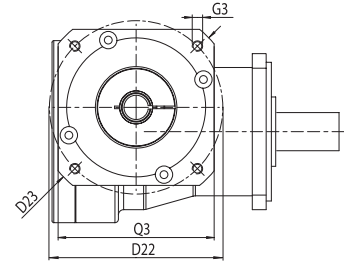
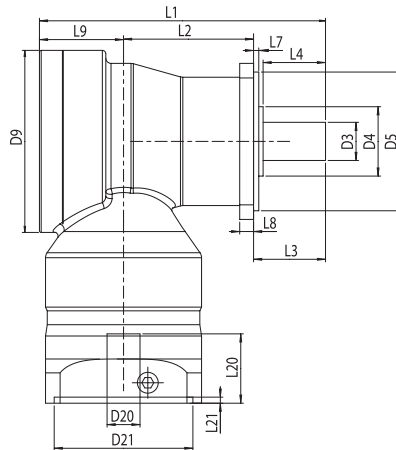
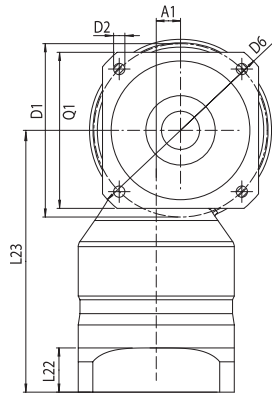
OP 8: 特殊输出轴 ⁽³⁾⁽⁴⁾OP 8: special shaft ⁽³⁾⁽⁴⁾

轴径	shaft diameter	D3	
轴长自定位凸台起	shaft length from spigot	L4	
输出轴长	shaft length from output	L3	
键长	key length	L5	
至轴末端的距离	distance from shaft end	L6	
键宽	key width	B	
中心孔	centre bore	Z	

⁽¹⁾ 其它草图请见 OP 8⁽²⁾ 仅对峰值负载⁽³⁾ 根据您的需要将数据页或草图传真或发送给您⁽⁴⁾ 请联系确认⁽¹⁾ sketch for variables see OP 8⁽²⁾ only for tumscent load⁽³⁾ fax page with data or send sketch with your inquiry⁽⁴⁾ on inquiry

OP 14: WPLS系列减速器输出轴尺寸

OP 14: dimensions for the WPLS output



型号	size		WPLN 70 OP 14	WPLN 90 OP 14	WPLN 115 OP 14	WPLN 142 OP 14	Z ⁽²⁾
所有尺寸均以毫米为单位	all dimensions in mm						
L1 总长	L1 overall length		137,5	165	218	-	1
L2 箱体长度	L2 body length		185	207	248,5	342,5	2
			62,5	75	97	-	1
L23 轴高 ⁽³⁾	L23 Axle height ⁽³⁾		110	122,5	135,5	199	2
			136	151	187,5	-	1
A1 轴偏距	A1 Axle offset		136	136	151	187,5	2
			10	14	20	-	1
输出	output		10	10	14	20	2
D3 轴径	D3 shaft diameter	k6	19	22	32	40	
L3 输出轴长	L3 shaft length from output		32	41,5	64,5	87	
D5 定位凸台	D5 centering	h7	60	80	110	130	
D6 对角尺寸	D6 diagonal dimension		92	116	145	185	
D1 法兰定位圆直径	D1 flange hole circle		75	100	130	165	
D2 安装螺孔	D2 mounting bore	4x	5,5	6,5	8,5	11	
Q1 减速机截面	Q1 gear box section	□	70	80	110	142	
D4 轴肩	D4 shaft root		30	40	45	70	1
			35	40	45	70	2
L4 轴长自定位凸台起	L4 shaft length from spigot		28	36	58	80	
L7 定位凸台厚度	L7 spigot depth		3	3	4,5	5	
L8 法兰厚度	L8 flange thickness		7	8	10	20	
D9 最大直径	D9 max. diameter		86	105	120	-	1
			86	86	105	120	2
输入端	input						
D20 轴中心孔 ⁽¹⁾⁽⁴⁾	D20 pinion bore ⁽¹⁾⁽⁴⁾		11	14	19	-	1
			11	11	14	19	2
L20 马达轴长度 ⁽³⁾	L20 motor shaft length ⁽³⁾		23	30	40	-	1
			23	23	30	40	2
D21 中心孔 ⁽¹⁾	D21 center bore for motor ⁽¹⁾		60	80	95	-	1
			60	60	80	95	2
D22 安装孔分布圆 ⁽¹⁾	D22 hole circle ⁽¹⁾		75	100	115	-	1
			75	75	100	115	2
D23 对角尺寸	D23 diagonal dimension		92	116	145	-	1
			92	92	116	145	2
G3 安装螺纹x深度 ⁽¹⁾	G3 mounting thread x depth ⁽¹⁾		M5 x 10	M6 x 12	M8 x 16	-	1
			M5 x 10	M5 x 10	M6 x 12	M8 x 16	2
L21 电机定位凸台深度	L21 motor location depth		3	3,5	3,5	-	1
			3	3	3,5	3,5	2
Q3 法兰截面 ⁽¹⁾	Q3 face section ⁽¹⁾		70	90	115	-	1
			70	70	90	115	2
L22 适配法兰长度 ⁽³⁾	L22 Adapter plate length ⁽³⁾		19	25,5	27,5	-	1
			19	19	25,5	27,5	2

⁽¹⁾ 这些参数与所配套的电机型号有关，详见第27页

⁽²⁾ 级数

⁽³⁾ 如果所配的电机轴L20比表中所给的尺寸更长,那么L22和L23应根据所配电机轴长适当加长

⁽⁴⁾ 与电机轴配合精度: j6; k6

⁽¹⁾ dimensions refer to the mounted motor-type, see page 27

⁽²⁾ number of stages

⁽³⁾ for longer motor shafts L20 applies: The measure motor flange length L22 and the Axle height L23 will be lengthen

⁽⁴⁾ for shaft fit: j6 ; k6

型号	size		WPLN 70 OP 14	WPLN 90 OP 14	WPLN 115 OP 14	WPLN 142 OP 14	i ⁽¹⁾
最大输入速度在50% T _{2N} 和 S1模式 ⁽²⁾⁽³⁾	max. middle input speed at 50% T _{2N} and S1 ⁽²⁾⁽³⁾	min ⁻¹	2650	2250	1600	-	4
			3000	2700	1800	-	5
			3850	3450	2250	-	8
			4150	3800	2400	-	10
			2900	2900	2400	1550	16
			3150	3200	2700	1600	20
			3450	3600	3100	1850	25
			3550	3950	3450	2300	32
			3800	4150	3600	2400	40
			4200	4900	4350	2700	64
4450	5300	4700	3000	100			

型号	size		WPLN 70 OP 14	WPLN 90 OP 14	WPLN 115 OP 14	WPLN 142 OP 14	i ⁽¹⁾
最大输入速度在100% T _{2N} 和 S1模式 ⁽²⁾⁽³⁾	max. middle input speed at 100% T _{2N} and S1 ⁽²⁾⁽³⁾	min ⁻¹	1900	1600	1100	-	4
			2250	1950	1300	-	5
			3200	2850	1850	-	8
			3600	3250	2050	-	10
			2350	2150	1700	1100	16
			2600	2450	1950	1100	20
			3000	2850	2400	1350	25
			3050	3350	2850	1950	32
			3400	3450	2950	2000	40
			4000	4550	4000	2350	64
4350	5050	4450	2800	100			

(1) 减速比($i=n_{an}/n_{ab}$)

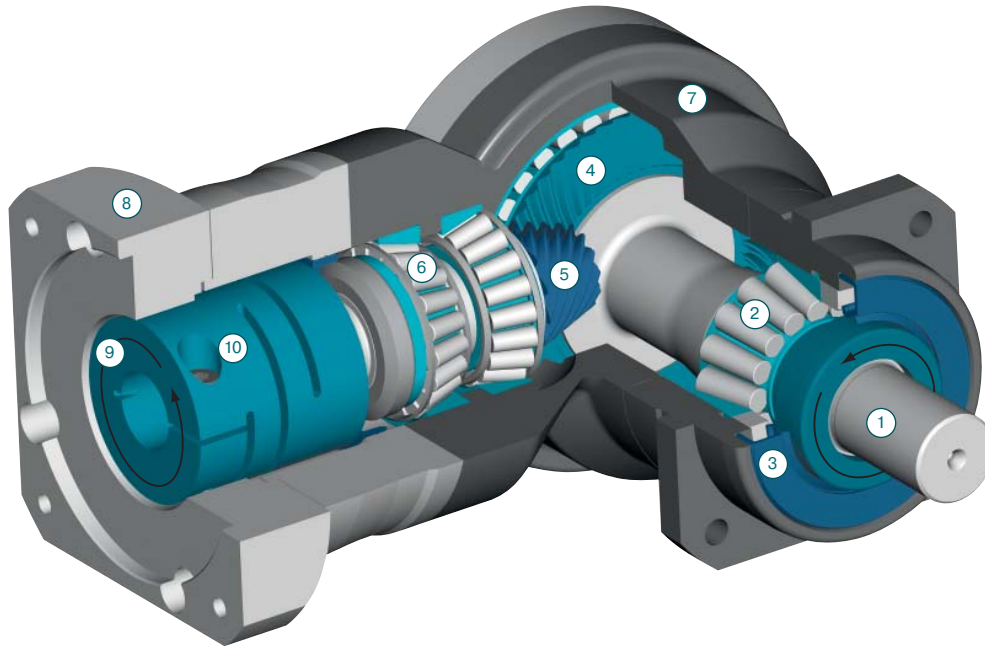
(2) 必须保证允许的工作温度; 特殊的输入转速请联系确认

(3) 定义见92页

(1) ratios ($i=n_{an}/n_{ab}$)

(2) allowed operating temperature must be kept; other input speeds on inquiry

(3) definition see page 93



- | | |
|--|---|
| <p>1 输出轴
高张力不锈钢制，可最大程度确保轴的安全</p> <p>2 输出轴轴承
高精度预加载荷滚柱轴承，零间隙</p> <p>3 密封圈
特殊的双层密封圈，可以保留润滑剂在里面，阻止污染物在减速机之外</p> <p>4 准双曲面轮
啮合精确、荷载能力极高且运行安静</p> <p>5 准双曲面齿
啮合精确、荷载能力极高且运行安静</p> <p>6 驱动轴轴承
高精度预加应力圆锥滚子轴承，驱动轴间无间隙</p> <p>7 变速器外壳
黑色铝制外壳防腐蚀、重量轻且安装简便</p> <p>8 适配法兰
减速机输入端允许与任何伺服电机相连接，材质为铝合金导热性更好</p> <p>9 联轴器
联轴器已校过平衡，支持高转速，夹紧力强，确保转矩安全传输</p> <p>10 夹紧螺钉
高强度钢制螺栓，确保转矩安全传输</p> | <p>1 output shaft
made of high-strength stainless steel for utmost shaft reliabilities</p> <p>2 output shaft bearing
large high precision preloaded taper roller bearings for zero clearance</p> <p>3 sealing ring
dedicated double lip seal, keeps the lubricant inside, the external contaminant outside the gearbox; IP 65</p> <p>4 hypoid gear
Gearing optimised for maximal load capacity and quiet operation</p> <p>5 hypoid pinion
Gearing optimised for maximal load capacity and quiet operation</p> <p>6 drive shaft bearing
pretensioned precision tapered roller bearing for zero play of the drive shaft</p> <p>7 gearbox housing
black corrosion-protected housing made of aluminium for minimal mass and optimal ease of mounting</p> <p>8 motor adapter plate
allows to match up the gear head with virtually any servo motor, made of aluminum for enhanced thermal conductivity</p> <p>9 coupling
balanced coupling for high rotational speeds and strong tension force for reliable transfer of torques</p> <p>10 clamping screw
heavy-duty steel screw for reliable transfer of torques</p> |
|--|---|



WPLN 115 - 100 / MOTOR - OP 2 + 5 + ...

减速机型号 / gear box size

WPLN 70; WPLN 90;
WPLN 115; WPLN 142

电机详述
(制造商-型号)

motor designation
(manufacturer-type)

减速比 i / ratio i

1-级 / 1-stage:
4; 5; 8; 10
2-级 / 2-stage:
16; 20; 25; 32;
40; 64; 100

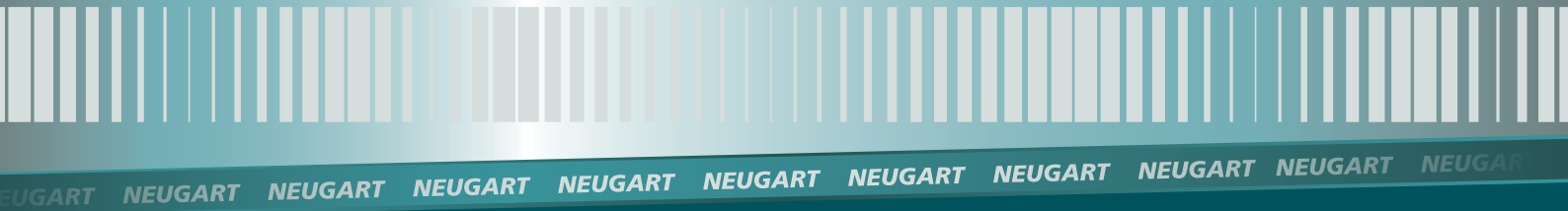
选择

OP 2: 电机装配
OP 5: 花键轴
OP 7: 带键的输出轴
DIN 6885 T1
OP 8: 特殊输出轴
OP 14: WPLS系列减速器输出轴尺寸

options

motor mounting
spline shaft
output shaft with
key DIN 6885 T1
special shaft
dimensions for the
WPLS output





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