

WGV PLANETARY REDUCER FOR WHEEL HUB



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WANSHSIN Seikou(Hunan)Co., Ltd.

WANSHSIN is a professional gearbox, gear motor and inverter manufacturer and intelligent automation complete solution provider, integrating R&D, production, sales and service. The products cover the light and heavy industry, are widely used in new energy, robots, automobile manufacturing, warehousing, logistics, food industry and other industries. WANSHSIN has gradually become a reliable long-term partner of those leading enterprises of relevant industries.

Product Advantages of WGV Planetary Reducer for Wheel Hub

Direct Installation

With the installation interface, the reducer can be installed directly on the vehicle without requiring an additional adapters.

Save Installation Space

The reducer is almost entirely enclosed by the wheel hub. Thus, it requires less installation space inside the vehicle

High Load-bearing Capacity

Two large-sized deep groove ball bearings can withstand high radial forces while ensuring low operating resistance and higher efficiency.

High Positioning Accuracy

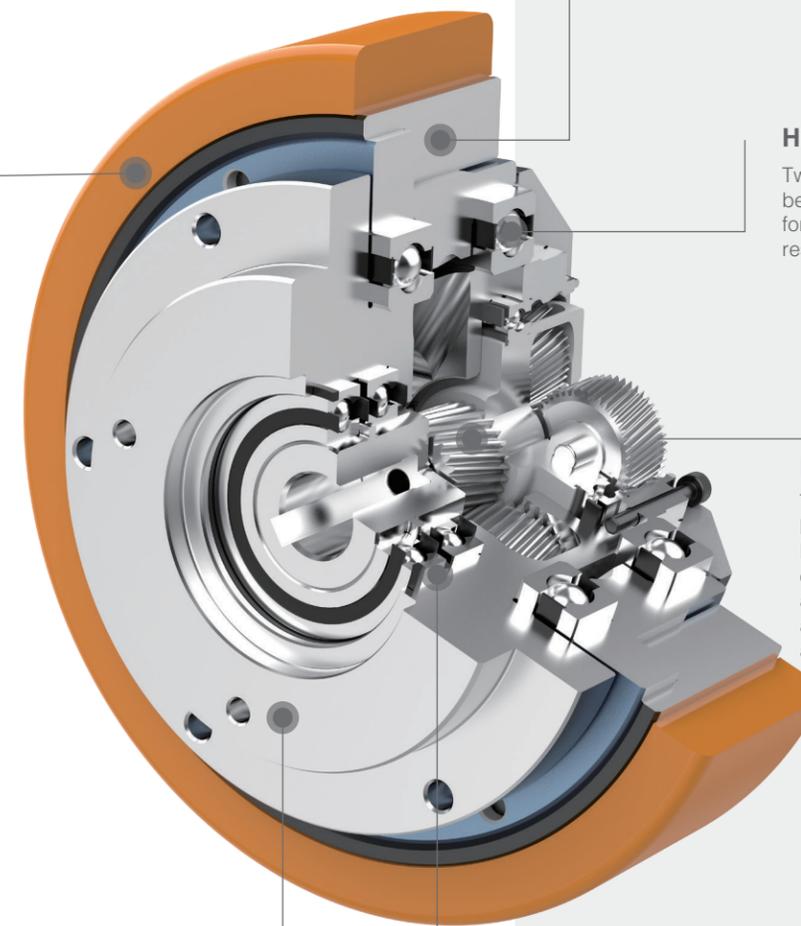
The product features a high-precision helical gear design, which reduces backlash and noise, enhances gear overload capacity, enabling more accurate positioning of the AGV operations, along with improves reliability and adaptability

Adapted to Various Motors

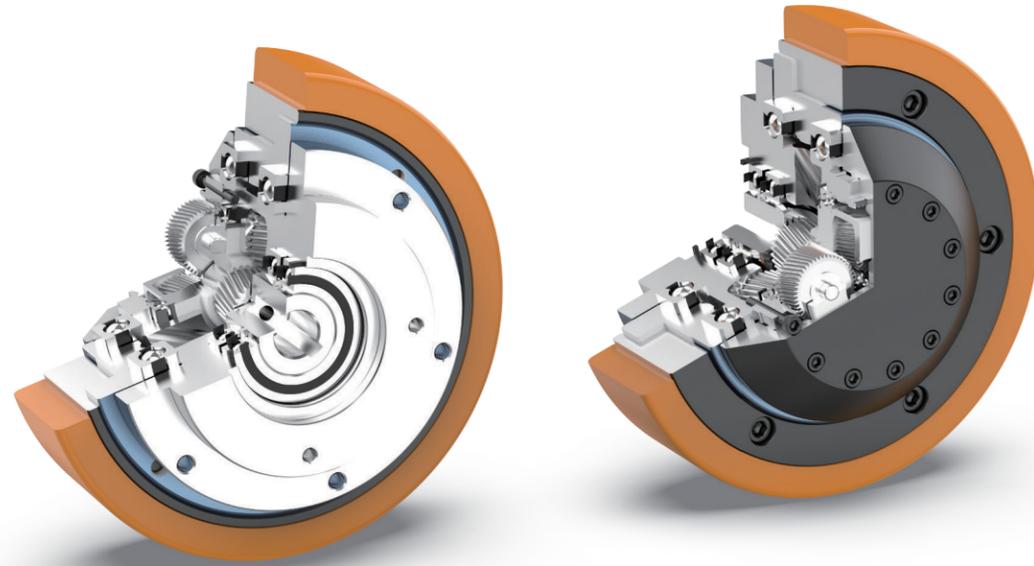
With various motor adapters, it can be assembled with almost any type of motor and even directly installed onto the motor.

Highly Efficient & Reliable

With highly efficient and permanent lubrication, thus it requires no maintenance and remains extremely reliable even during continuous operation.



Technical Parameters of WGV Planetary Reducer for Wheel Hub



Specification	Unit	Stage	Ratio	WGV100	WGV115	WGV135	WGV160	
Rotational Inertia J1	kg.cm ²	1	2	0.16	0.61	3.25	12.3	
			3	0.14	0.48	2.74	7.5	
			4	0.13	0.47	2.71	7.4	
			5	0.13	0.45	2.62	7.2	
			6	0.13	0.45	2.62	7.2	
			7	0.13	0.4	2.5	6.8	
			9	0.13	0.4	2.5	6.8	
			2	14	0.1	0.2	1.6	2
				16	0.08	0.18	1.3	1.7
		18*		0.09	0.19	1.4	1.8	
		20		0.08	0.18	1.3	1.7	
		21		0.09	0.19	1.4	1.8	
		24		0.08	0.18	1.3	1.7	
		28		0.09	0.19	1.4	1.8	
		30		0.08	0.18	1.3	1.7	
		32		0.08	0.18	1.3	1.7	
		40		0.08	0.18	1.3	1.7	

Specification	Unit	Stage	Ratio	WGV100	WGV115	WGV135	WGV160		
Rated Output Torque T2N ^(b)	Nm	1	2	75	90	135	250		
			3	90	115	200	400		
			4	95	115	200	520		
			5	90	110	200	480		
			6	90	110	200	430		
			7	75	85	150	400		
			9	75	85	150	340		
			2	14	75	100	150	250	
				16	75	100	150	220	
		18*		90	115	240	450		
		20		70	70	150	180		
		21		90	115	240	420		
		24		90	115	240	330		
		28		95	125	260	520		
		Rated Input Speed n1N ^(a)	rpm	1	2~9	3000	3000	3000	3000
				2	14~40	4000	4000	4000	4000
Max Input Speed n1B ^(a)	rpm	1	2~9	5000	5000	5000	5000		
		2	14~40	6000	6000	6000	6000		
Standard Backlash P2	arcmin	1	2~9	≤5	≤5	≤5	≤5		
		2	14~40	≤8	≤8	≤8	≤8		
Weight	kg	1	2~9	4.5	7.5	11	15		
		2	14~40	5.5	9	13.5	18		
Efficiency	%	1	2~9	≥95					
		2	14~40	≥93					
Allowable Radial Force F2R ^(b)	N	1-2	2~40	4000	8000	10000	13000		
Emergency Stop Torque T2NOT	Nm	1-2	2~40	2 Times T2N					
Service Life	h	1-2	2~40	20000					
Operating Temperature	°C	1-2	2~40	-20°C ~ 90°C					
Protection Class	/	1-2	2~40	IP64					
Lubrication	/	/	/	Synthetic Lubricating Grease					
Noise ^(c)	dB(A)	/	/	≤58	≤60	≤63	≤65		
Mounting Position	/	/	/	In Any Direction					

a. When the ambient temperature exceeds 20°C, it is recommended to appropriately reduce the speed for use.

b. When the output speed exceeds 100 rpm, it is recommended to appropriately reduce the load and output torque for use.

c. The noise is measured at 1 meter away with no load and an input speed of 3000 rpm.

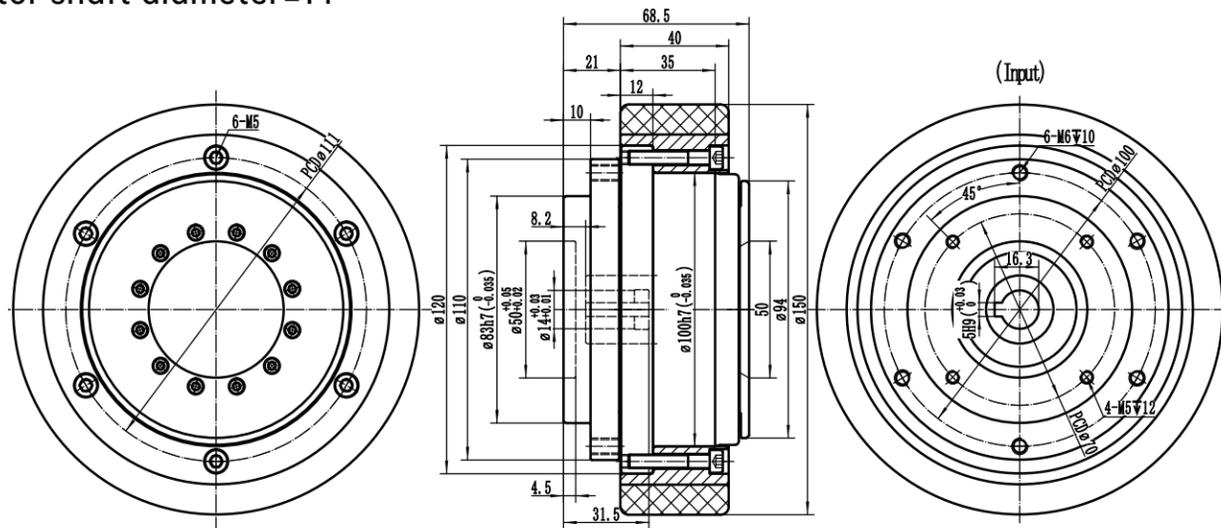
◆ 18 ratio is not recommended for selection.

◆ The input rotation direction of the drive wheel is opposite to the output rotation direction.

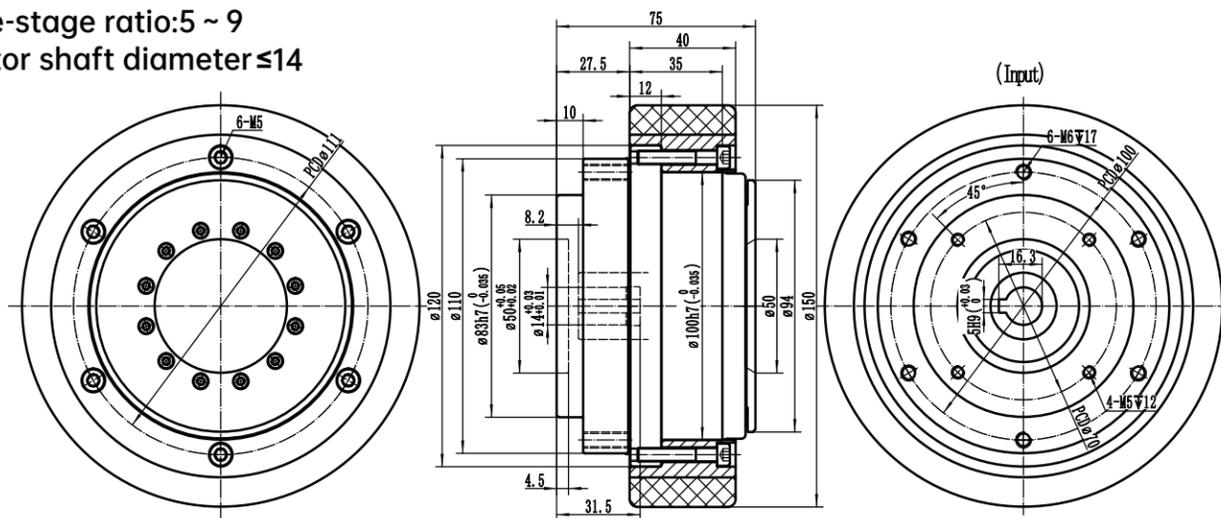
◆ Wheel material: yellow-orange polyurethane, hardness A90±2. For other requirements, please contact the factory.

WGV100 Outline Drawing

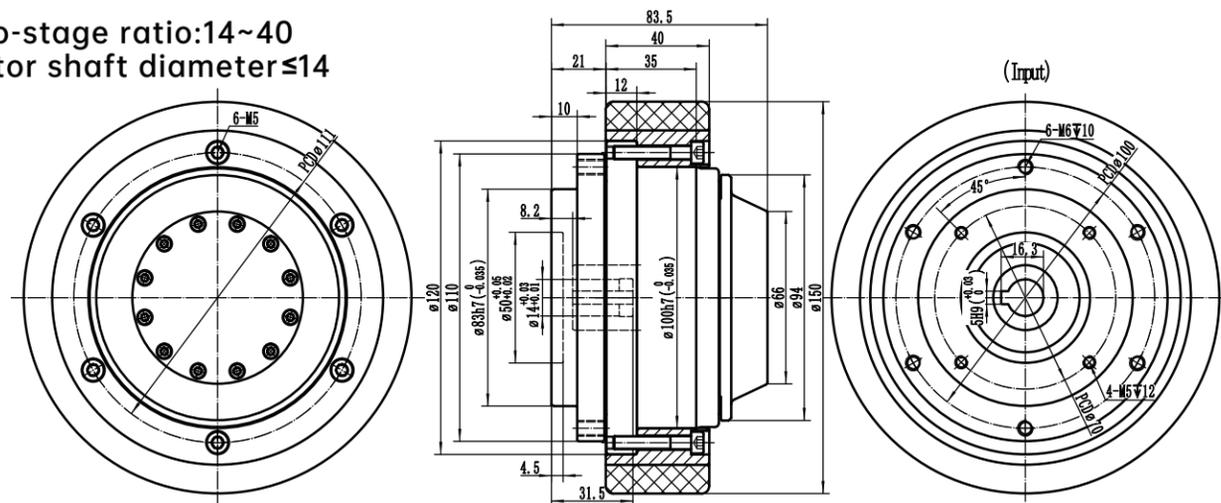
One-stage ratio:2 ~ 4
Motor shaft diameter ≤14



One-stage ratio:5 ~ 9
Motor shaft diameter ≤14

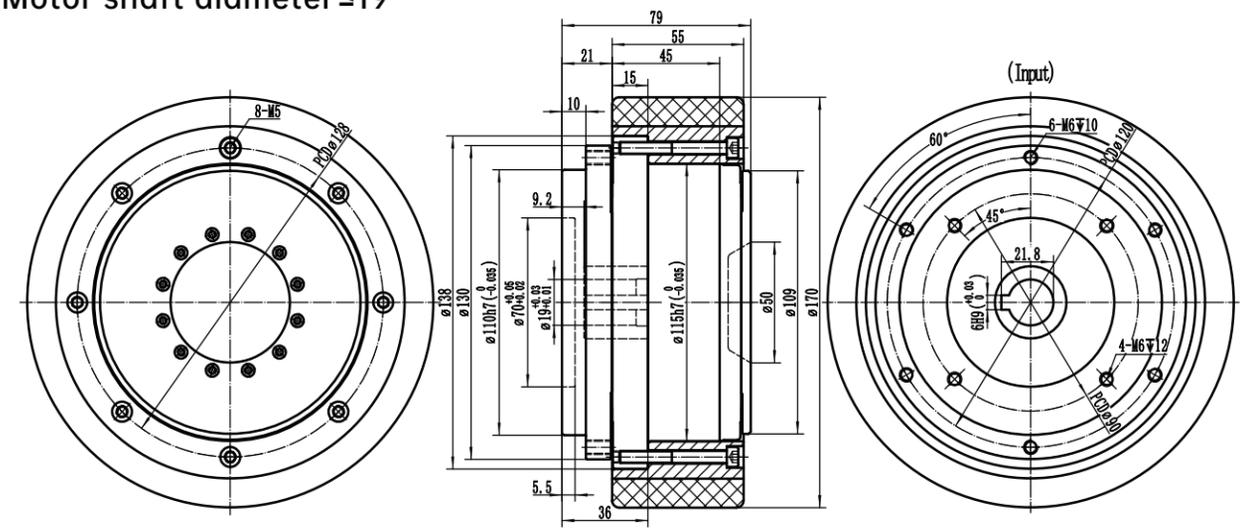


Two-stage ratio:14~40
Motor shaft diameter ≤14

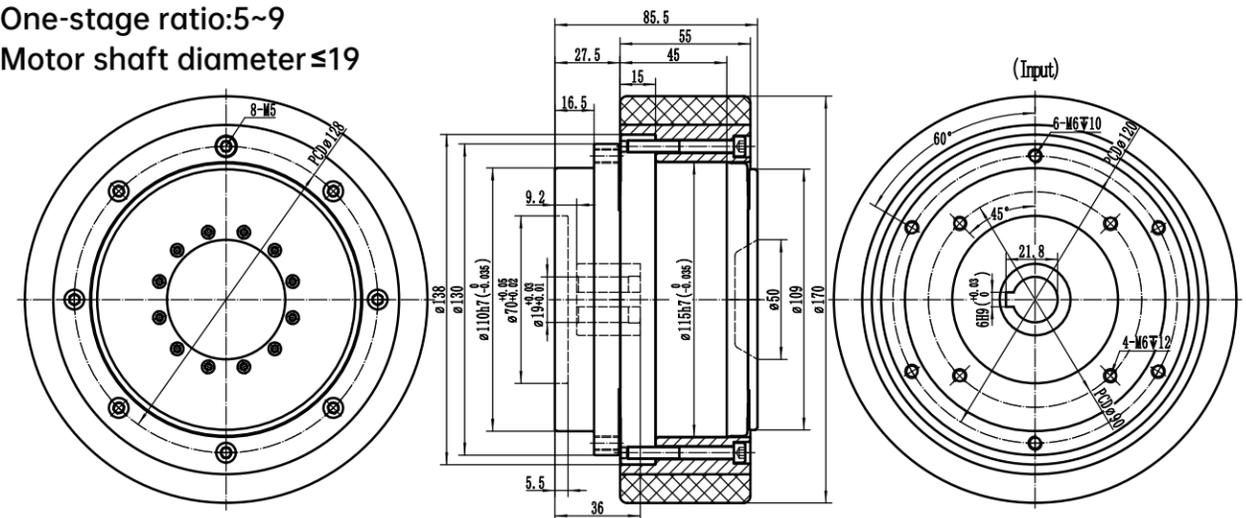


WGV115 Outline Drawing

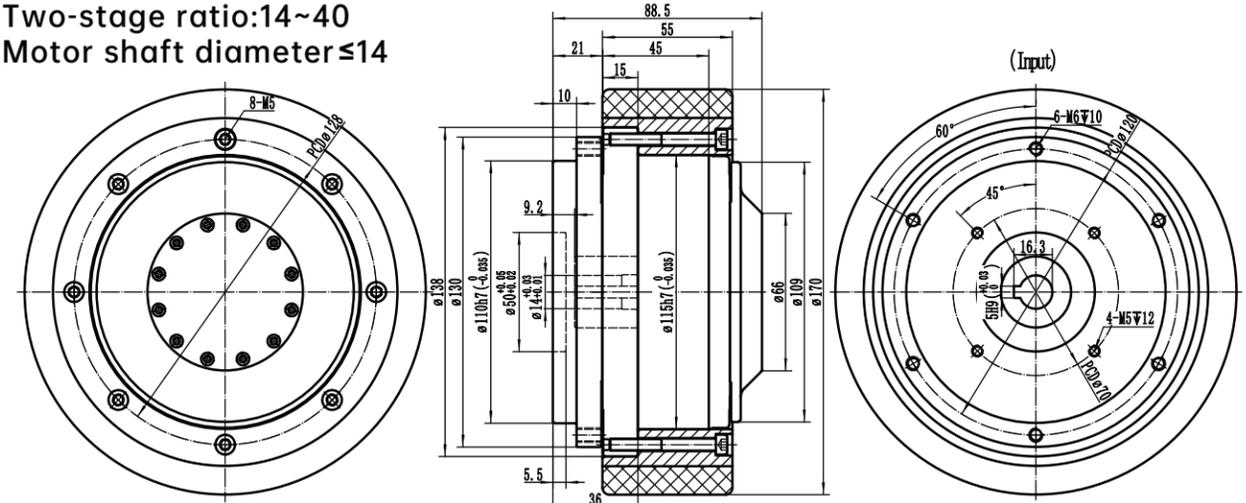
One-stage ratio:2~4
Motor shaft diameter ≤19



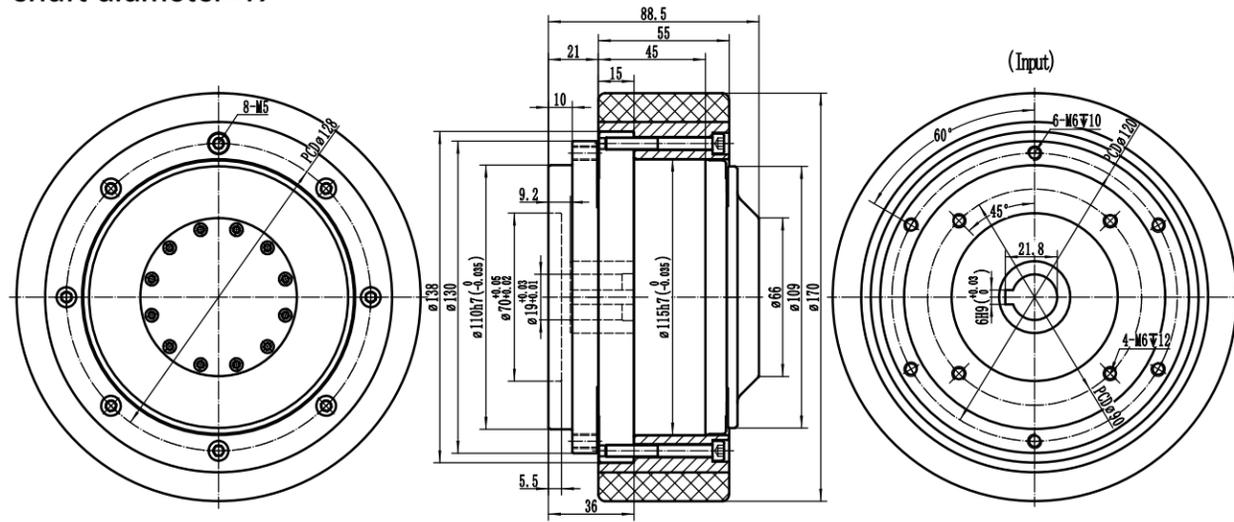
One-stage ratio:5~9
Motor shaft diameter ≤19



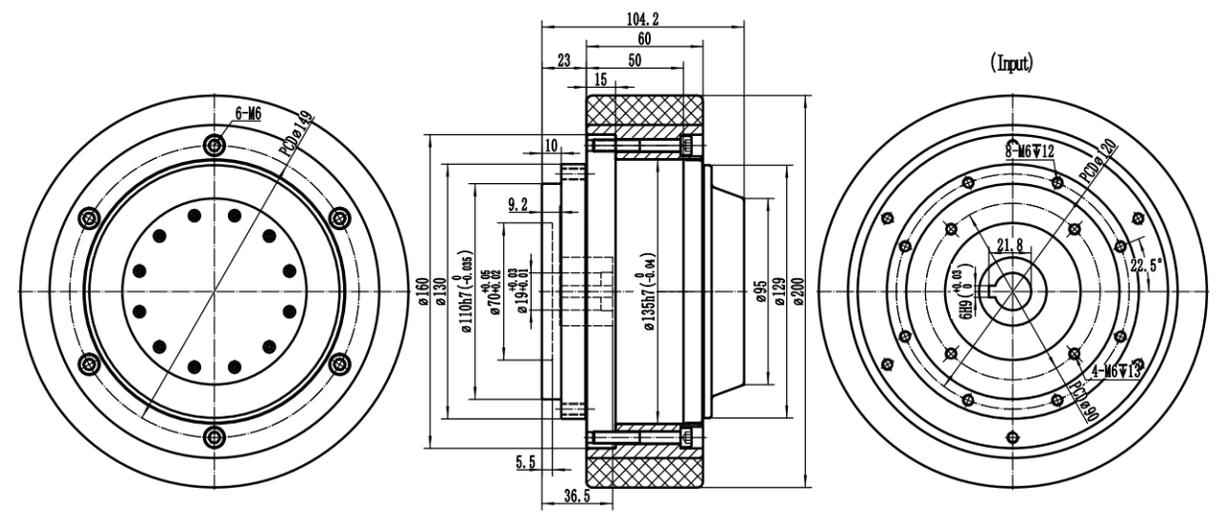
Two-stage ratio:14~40
Motor shaft diameter ≤14



Two-stage ratio:14~40
Motor shaft diameter≤19

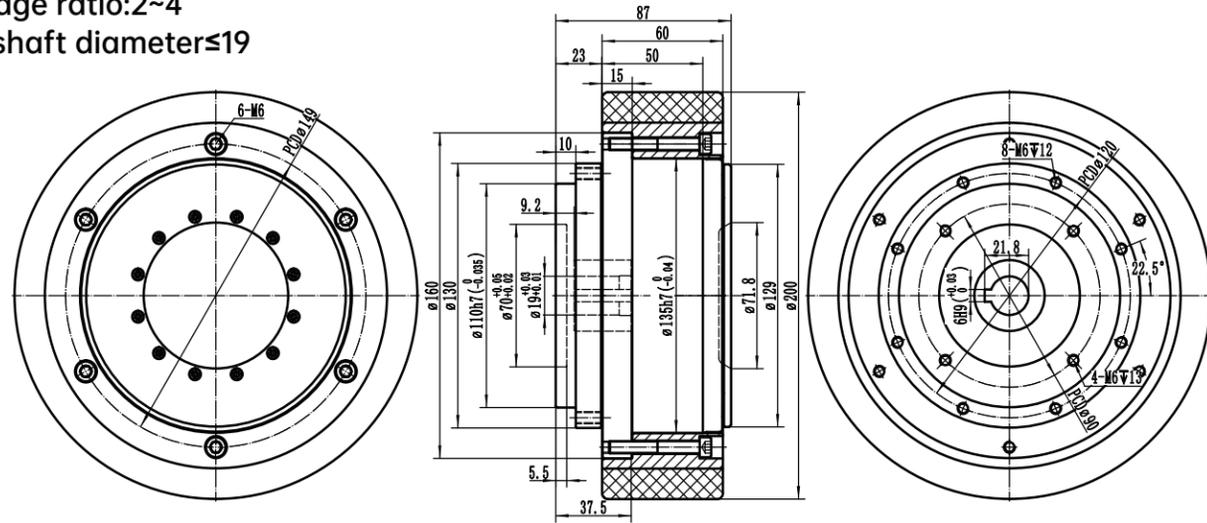


Two-stage ratio:14~40
Motor shaft diameter≤19



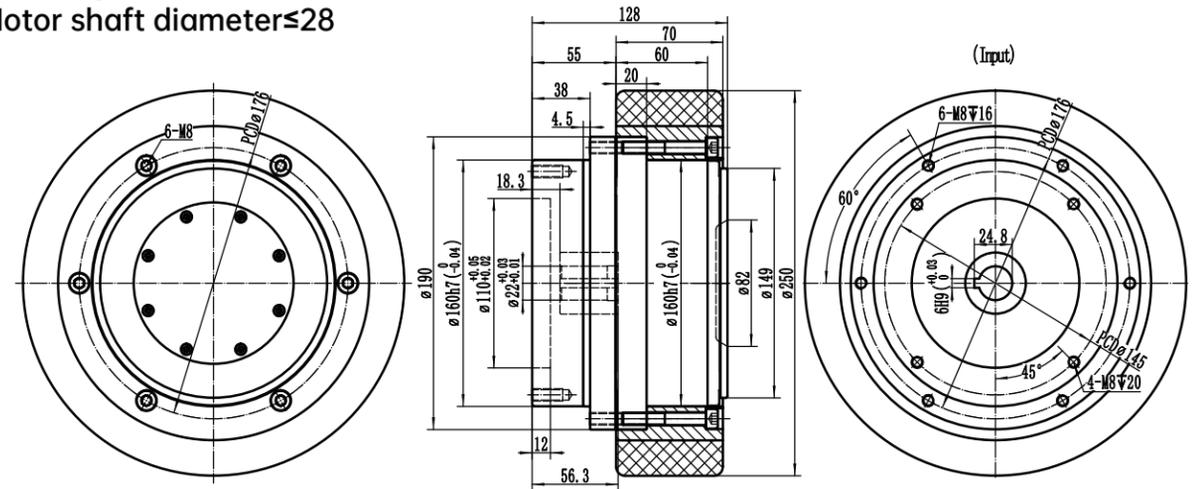
WGV135 Outline Drawing

One-stage ratio:2~4
Motor shaft diameter≤19

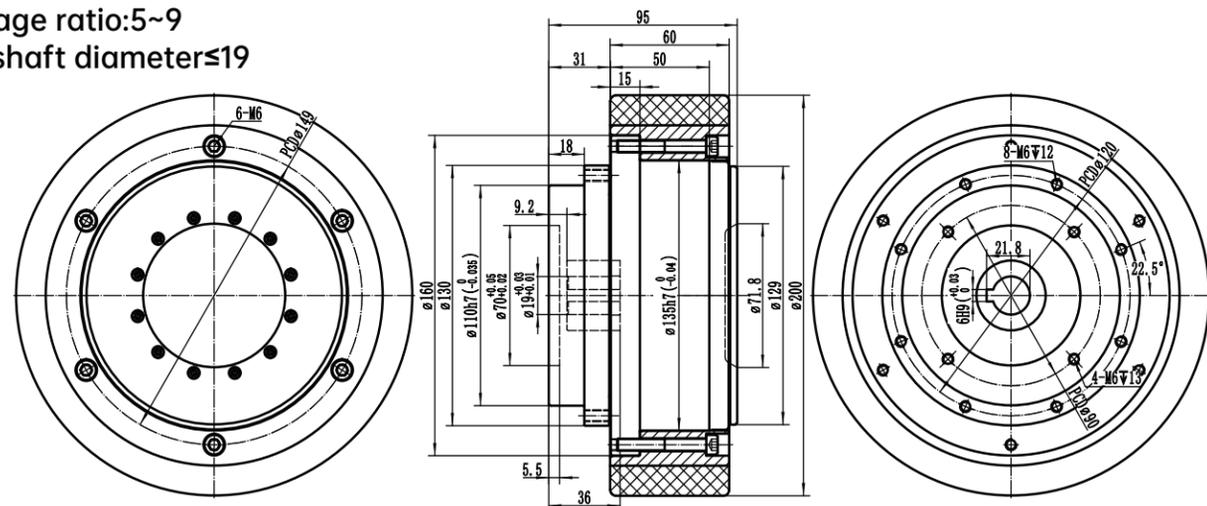


WGV160 Outline Drawing

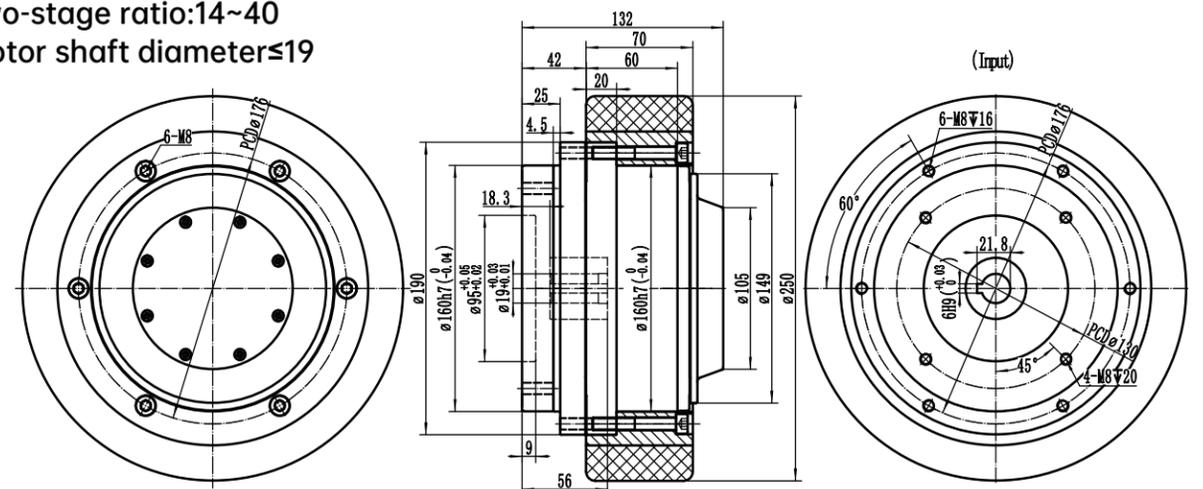
One-stage ratio:2~9
Motor shaft diameter≤28

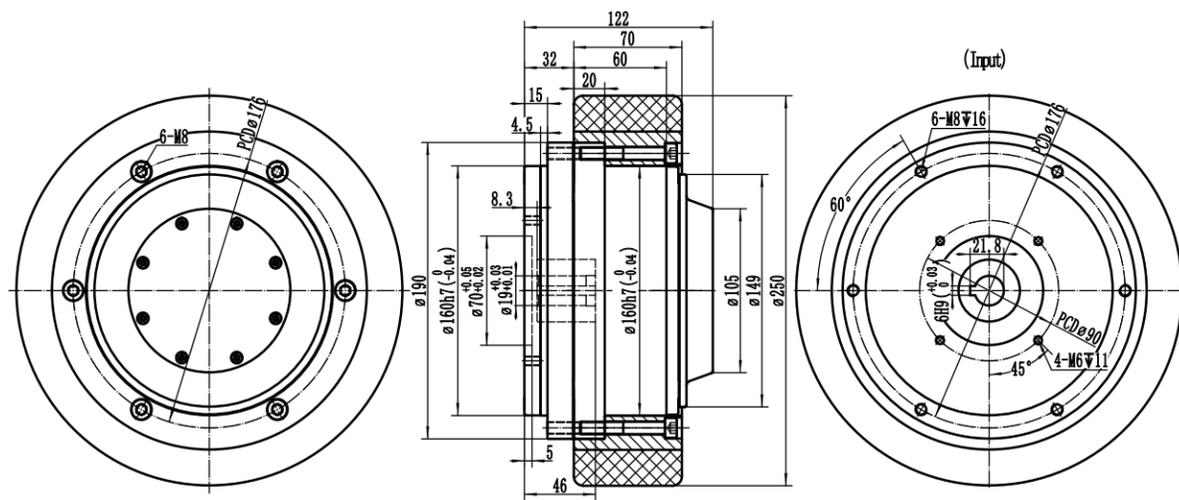


One-stage ratio:5~9
Motor shaft diameter≤19

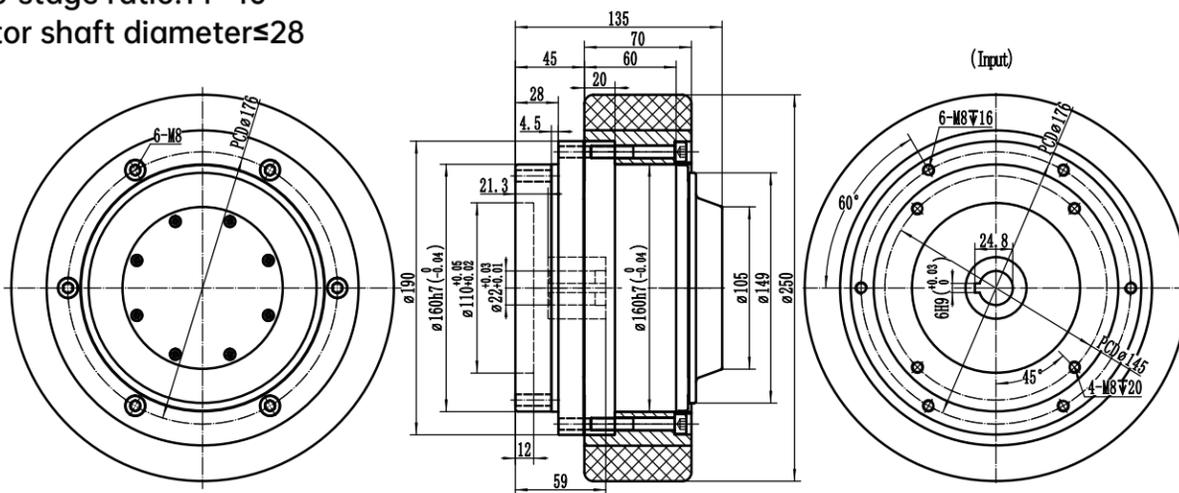


Two-stage ratio:14~40
Motor shaft diameter≤19





Two-stage ratio:14~40
Motor shaft diameter≤28



- Widely used in AGV, RGV and AMR driving systems.
- Low noise, high torque, strong radial bearing capacity
- Compact structure, easy to install
- Customizable production