



Solution of Steering Drive Wheel System for Industrial Vehicles

Qingdao Honest Electric Drive Equipment Co., Ltd.

About us



Qingdao Honest Electric Drive Equipment Co., Ltd. was established in 2016 and has been committed to the research, development, manufacturing and sales of electric drive systems for new energy industrial vehicles. Products cover motors, electromagnetic brakes, steering wheel assemblies, etc. They are applied in many industries such as various mobile robots, electric pallet trucks, and electric stackers.

After years of continuous research , development and innovation, the company has the the full series delivery capabilities for steering wheel assembly products of shock-absorbing steering wheels, heavy-duty steering wheels, differential steering wheels, vertical steering wheels, and light-duty steering wheels, and Strive to be the industry's leading supplier of core components for mobile robots

With the mission of "**providing competitive electric drive system solutions and services; continuously creating the greatest value for users!**", Honest Edrive develops products and operates business with an innovative and pragmatic spirit. It has long adhered to the research and development and production of core components of mobile robots and contributes its own strength to the development of the industry.

Honors & Qualifications



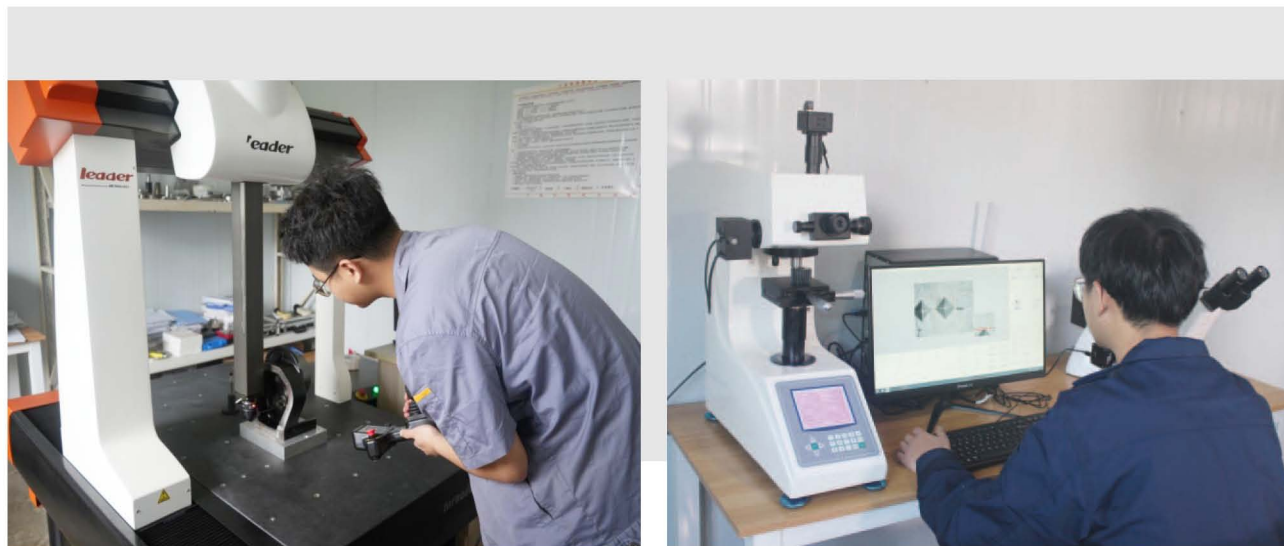
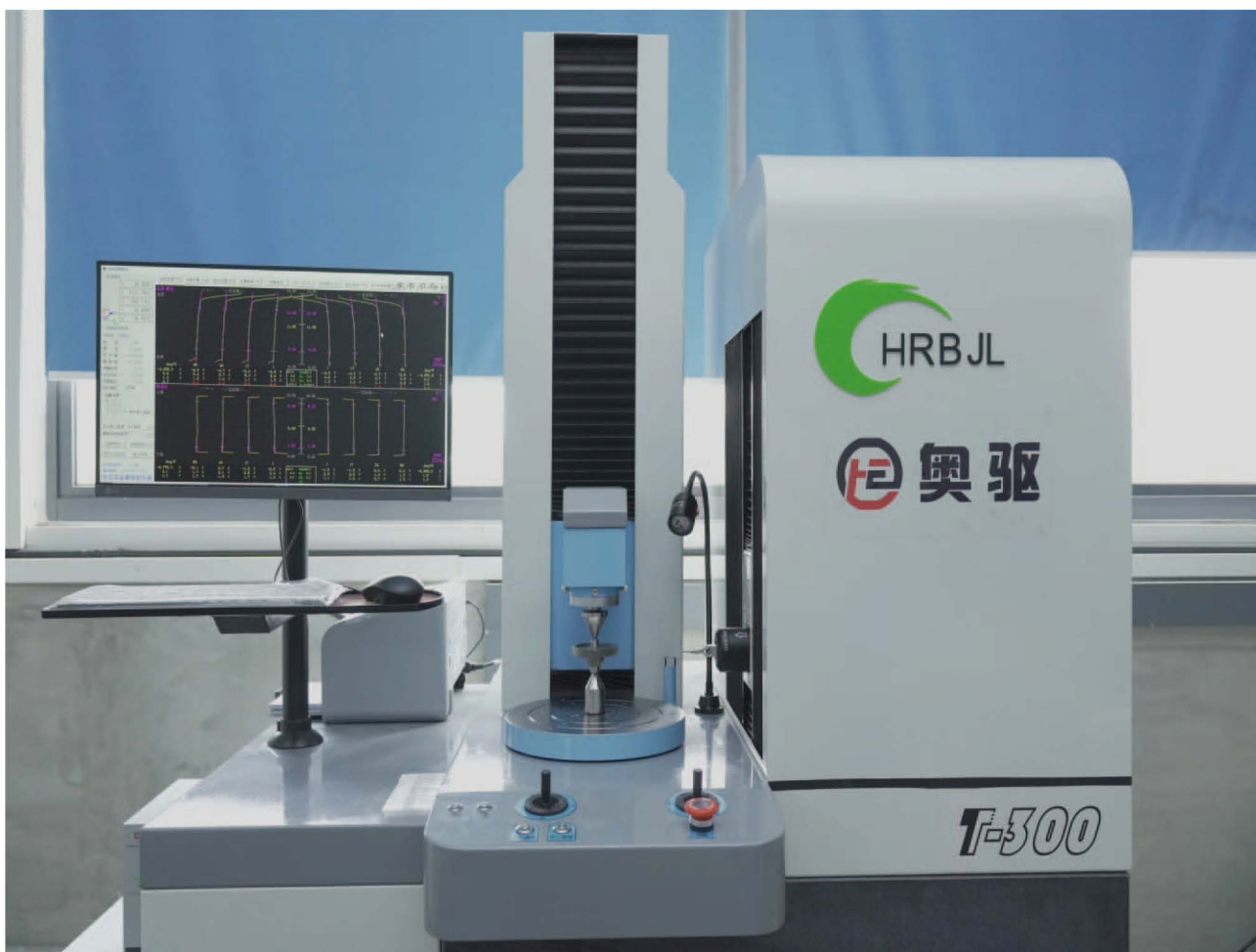
▶▶▶ Demonstration of production capability



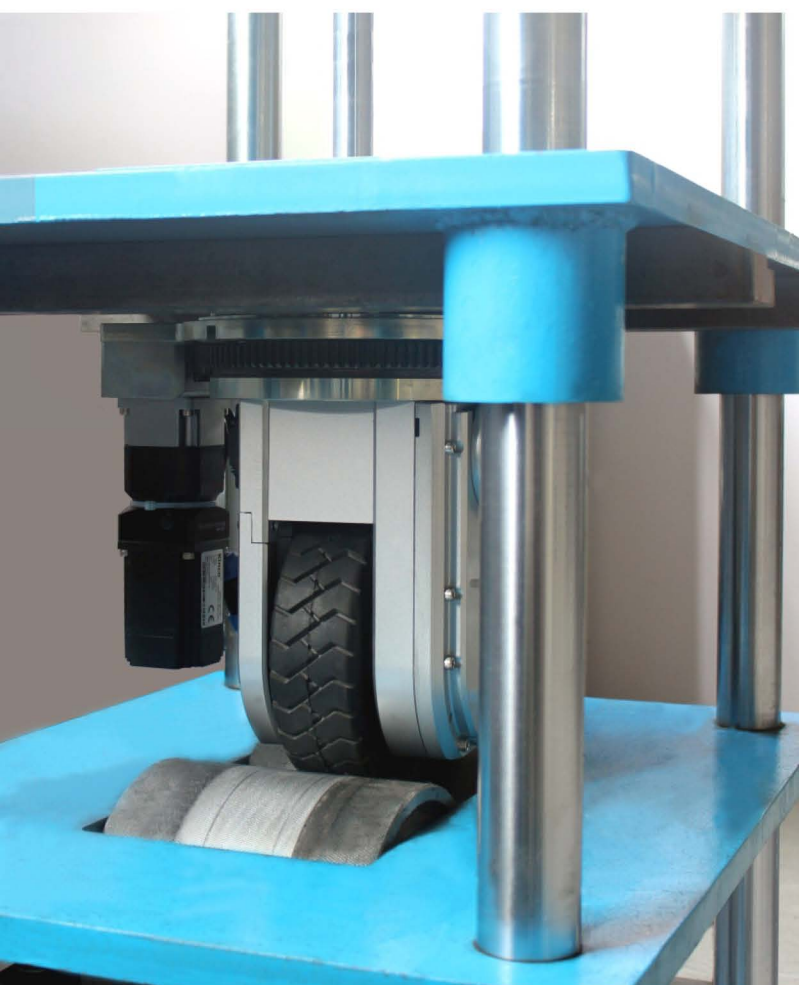
We imported world first-class processing equipment: high efficiency CNC gear grinding machine, CNC gear shaper machine, high efficiency hobbing machine, imported Haas machining center, CNC turning and milling complex equipment more than 30 sets; We use three or four axis CNC machining equipment to ensure high precision and high efficiency processing.



Demonstration of product test capability

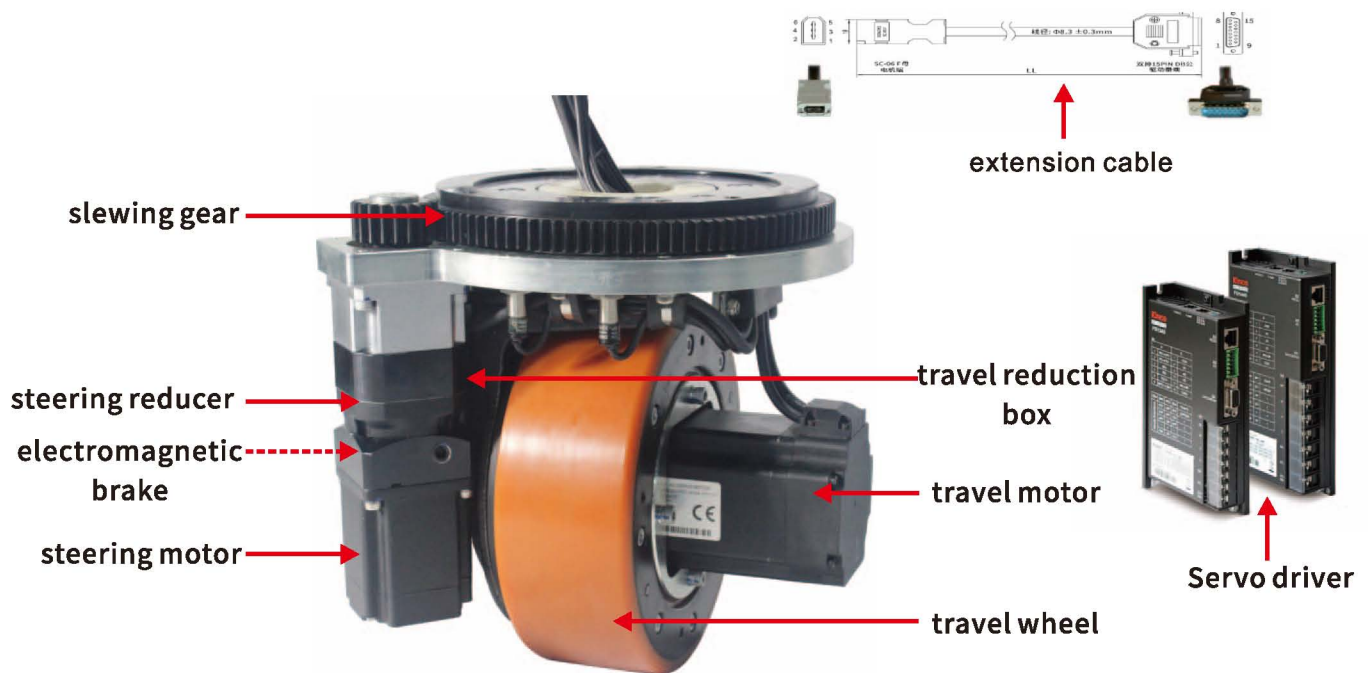


We've got complete testing method, Our equipments covered a pressure tester, coordinate detector, metallographic microscope, gear measuring center, dynamometer, comprehensive test bench and other testing equipment, We have the testing capabilities on electrical performance and structural dimensions of the product.



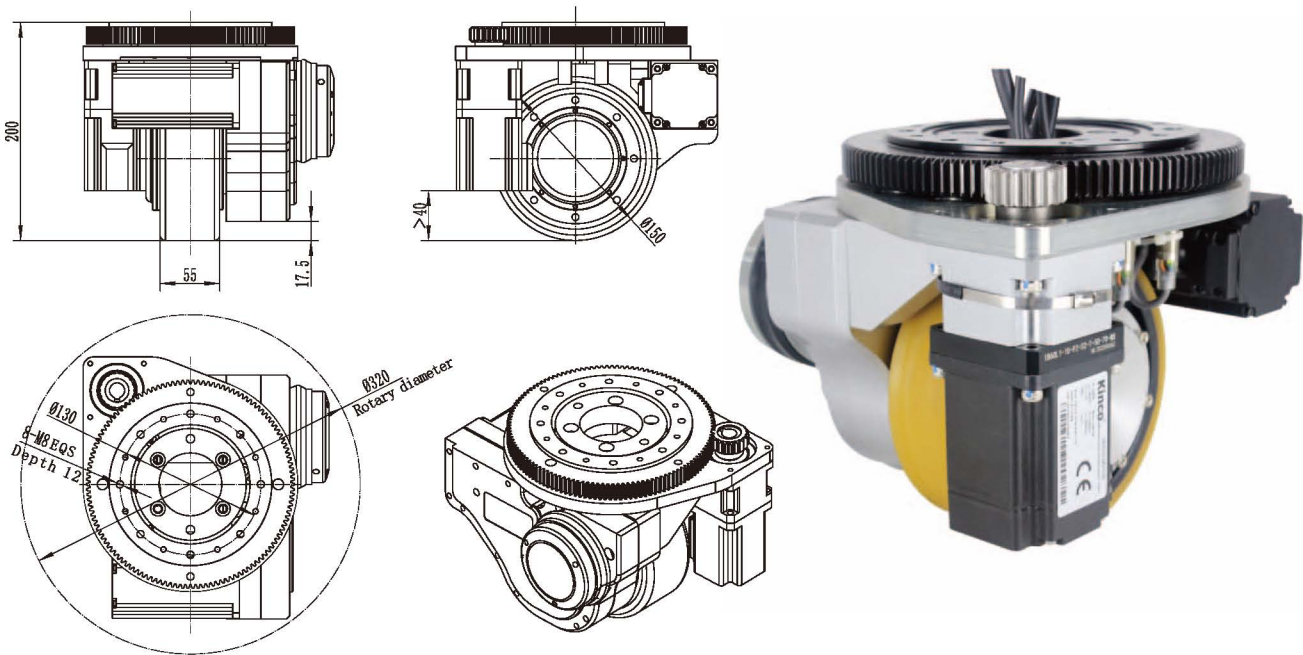
The self-developed and assembled multifunctional load test bench can simulate the actual running state of the steering wheel and perform durability test on the steering wheel.

Product Characteristics



1. Overall high strength and long life design.
Meet the stringent requirements of vehicles for steering wheel system
2. Low-voltage servo system is usually adopted, which supports Canopen, EtherCAT, 485 and other communication modes, especially applicable to industries with high control accuracy requirements
3. Compact structure, integrated with walking, steering, braking, position feedback and other functions
4. The tyres can be made of polyurethane or rubber according to the working conditions
5. High-precision rotary mechanism with hard tooth surface
6. Stable and low noise operation, easy to achieve high control accuracy

HW150 Horizontal Drive Wheel Series



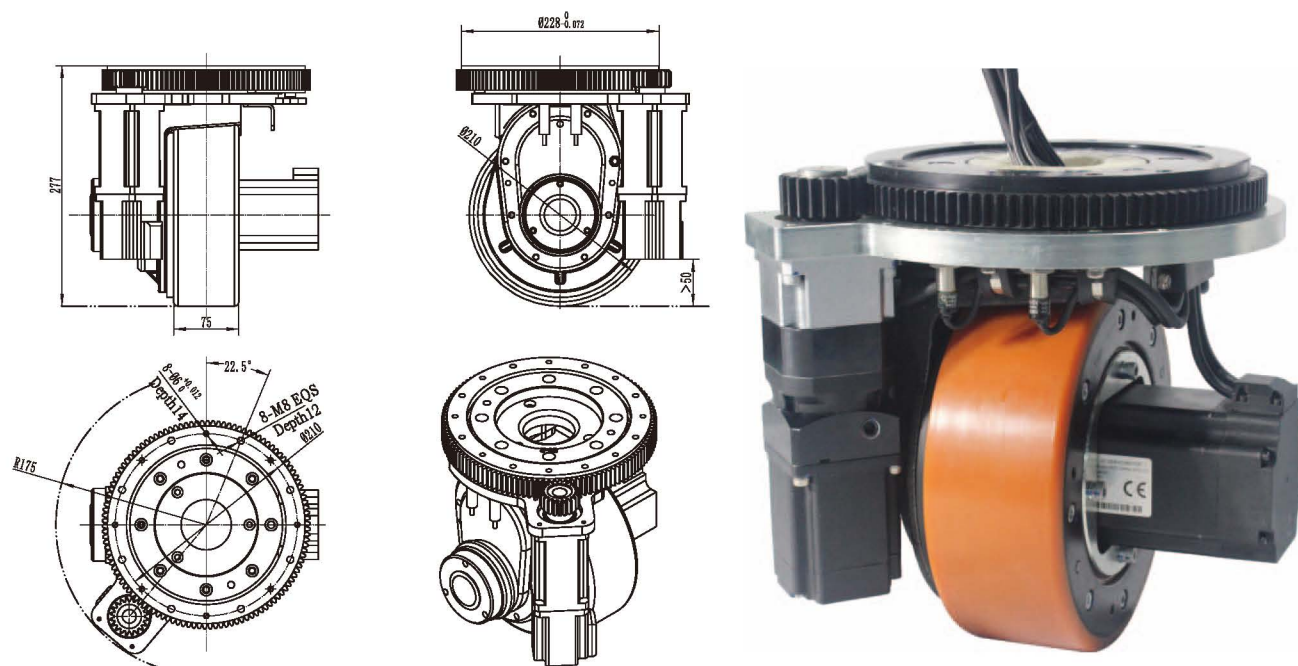
Main performance parameter

Model		HW150-SM400-48-36-JAZ
	Performance index	Parameter
Travel motor	Motor type	Permanent magnet synchronous servo motor
	Motor power kW	0.4
	Voltage V	48
	Rated current A	10.1
	Rated torque Nm	1.27
	Rated speed r/min	3000
Gearbox	Speed fbk sel	Incremental encoder
	Reducer type	Secondary gear reduction
Brake	Reduction ratio	35.67: 1
	Brake torque Nm	4
Tyre	Rated voltage V	DC24
	Wheel material	Polyurethane/Rubber
Steering part	Wheel size	φ 150X55
	Motor type	Permanent magnet synchronous servo motor
	Motor power kW	0.2
	Voltage V	48
	Rated current A	5.1
	Rated torque Nm	0.64
	Rated speed r/min	3000
	Reducer type	Double planetary gear reduction
Other	Reduction ratio	63:1
	Encoder Type	Incremental encoder/Absolute encoder
	Steering limit angle	± 110°
	Travel speed m/min	0-39
	Rated traction N	540
	Carrying capacity Kg	400
	Net weight Kg	22

※ Reduction ratio optional 20 32.1

※ Used for mobile robots (AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HW210 Horizontal Drive Wheel Series



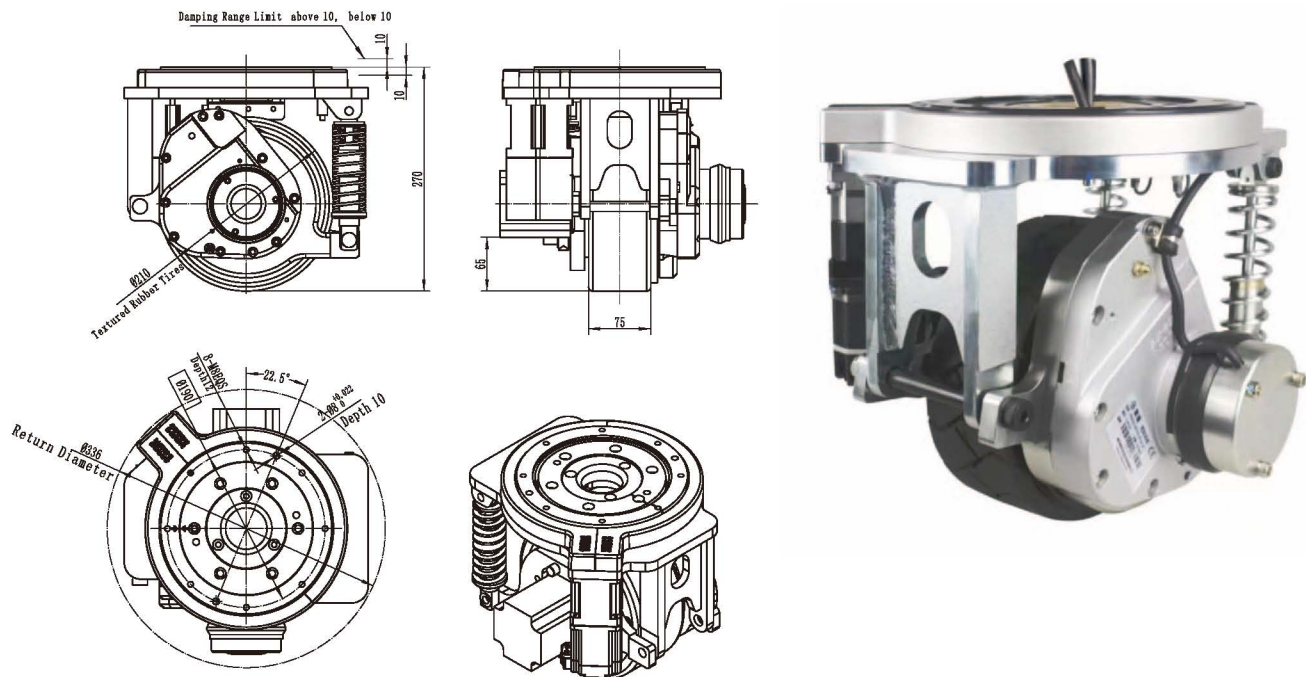
Main performance parameter

Model		HW210-SM750-48-B	HW210-SM1000-48-B
	Performance index	Parameter	Parameter
Travel motor	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	0.75	1
	Voltage V	48	48
	Rated current A	19	26.4
	Rated torque Nm	2.39	3.18
	Rated speed r/min	3000	3000
	Speed fbk sel	Incremental encoder	Incremental encoder
Gearbox	Reducer type	Secondary gear reduction	Secondary gear reduction
	Reduction ratio	27.43: 1	27.43
Brake	Brake torque Nm	6	6
	Rated voltage V	DC24	DC24
Tyre	Wheel material	Polyurethane/Rubber	Polyurethane/Rubber
	Wheel size	φ 210X75	φ 210X75
Steering part	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	0.2	0.2
	Voltage V	48	48
	Rated current A	5.1	5.7
	Rated torque Nm	0.64	0.64
	Rated speed r/min	3000	3000
	Reducer type	Secondary planetary gear reduction	Secondary planetary gear reduction
	Reduction ratio	295:1	295:1
Other	Encoder type	Incremental encoder/Absolute encoder	Incremental encoder/Absolute encoder
	Steering limit angle	±110°	±110°
	Travel speed m/min	0-72	0-72
	Rated traction N	570	748
	Carrying capacity Kg	700	700
	Net weight Kg	34	36

※ Reduction ratio optional 24.685 27.43 48.9

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HW210 Horizontal Damping Drive Wheel Series



Main performance parameter

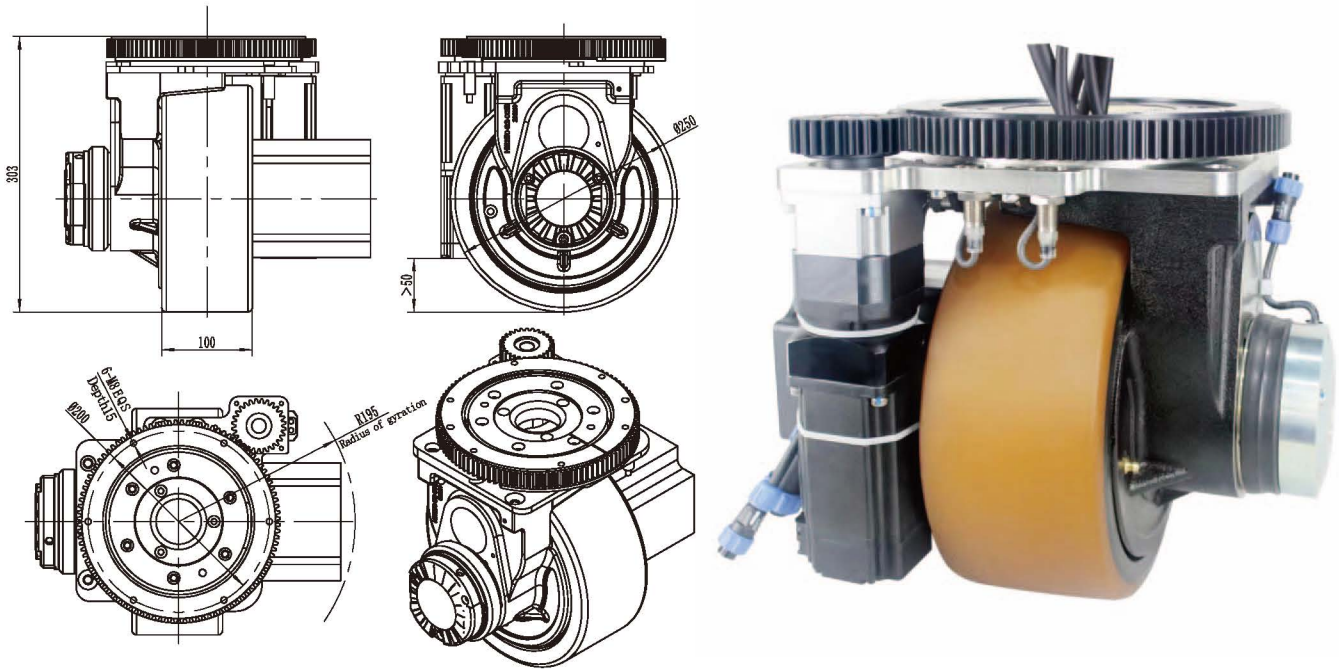
Model		HW210-SM750-48-44-JZ	
	Performance index	Parameter	
Travel motor	Motor type	Permanent magnet synchronous servo motor	
	Motor power kW	0.75	
	Voltage V	48	
	Rated current A	19	
	Rated torque Nm	2.39	
	Rated speed r/min	3000	
Gearbox	Speed fbk sel	Incremental encoder	
	Reducer type	Secondary gear reduction	
Brake	Reduction ratio	44.03: 1	
	Brake torque Nm	6	
Tyre	Rated voltage V	DC24	
	Wheel material	Rubber	
Steering part	Wheel size	Φ210X75	
	Motor type	Servo motor	
	Motor power kW	0.2	
	Voltage V	48	
	Rated current A	5.1	
	Rated torque Nm	0.64	
	Rated speed r/min	3000	
	Reducer type	Secondary planetary gear reduction	
Other	Reduction ratio	275:1	
	Encoder type	Absolute encoder	
	Steering limit angle	±110°	
	Travel speed m/min	0-44.9	
	Rated traction N	910	
	Carrying capacity Kg	500	
	Net weight Kg	38	

※Reduction ratio optional 24.685 27.43 48.9

※ Motor power optional 1Kw

※ Used for mobile robots (AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HW250 Horizontal Drive Wheel Series

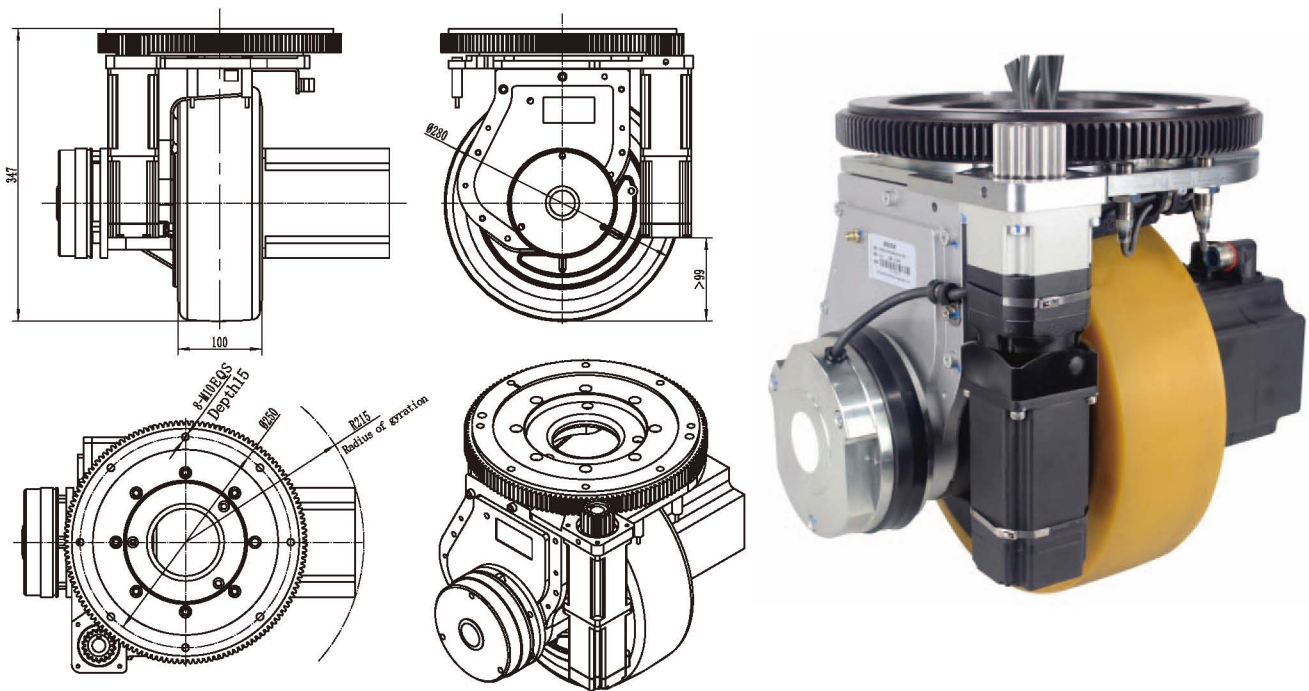


Main performance parameter

	Model	HW250-SM1500-48	HW250-SM2500-48
	Performance index	Parameter	Parameter
Travel motor	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	1.5	2.5
	Voltage V	48	48
	Rated current A	37.4	61
	Rated torque Nm	5	7.96
	Rated speed r/min	3000	3000
	Speed fbk sel	Incremental encoder	Incremental encoder
Gearbox	Reducer type	Secondary gear reduction	Secondary gear reduction
	Reduction ratio	31. 43: 1	31. 43
Brake	Brake torque Nm	8	16
	Rated voltage V	DC24	DC24
Tyre	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber
	Wheel size	φ 250X100	φ 250X100
Steering part	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	0.4	0.4
	Voltage V	48	48
	Rated current A	10.1	10.1
	Rated torque Nm	1.27	1.27
	Rated speed r/min	3000	3000
	Reducer type	Secondary planetary gear reduction	Secondary planetary gear reduction
	Reduction ratio	196:1	327:1
Other	Encoder type	Incremental encoder/Absolute encoder	Incremental encoder/Absolute encoder
	Steering limit angle	±110°	±110°
	Travel speed m/min	0-70	0-75
	Rated traction N	1140	1800
	Carrying capacity Kg	1500	1500
	Net weight Kg	51	52

※Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HW280 Horizontal Drive Wheel Series



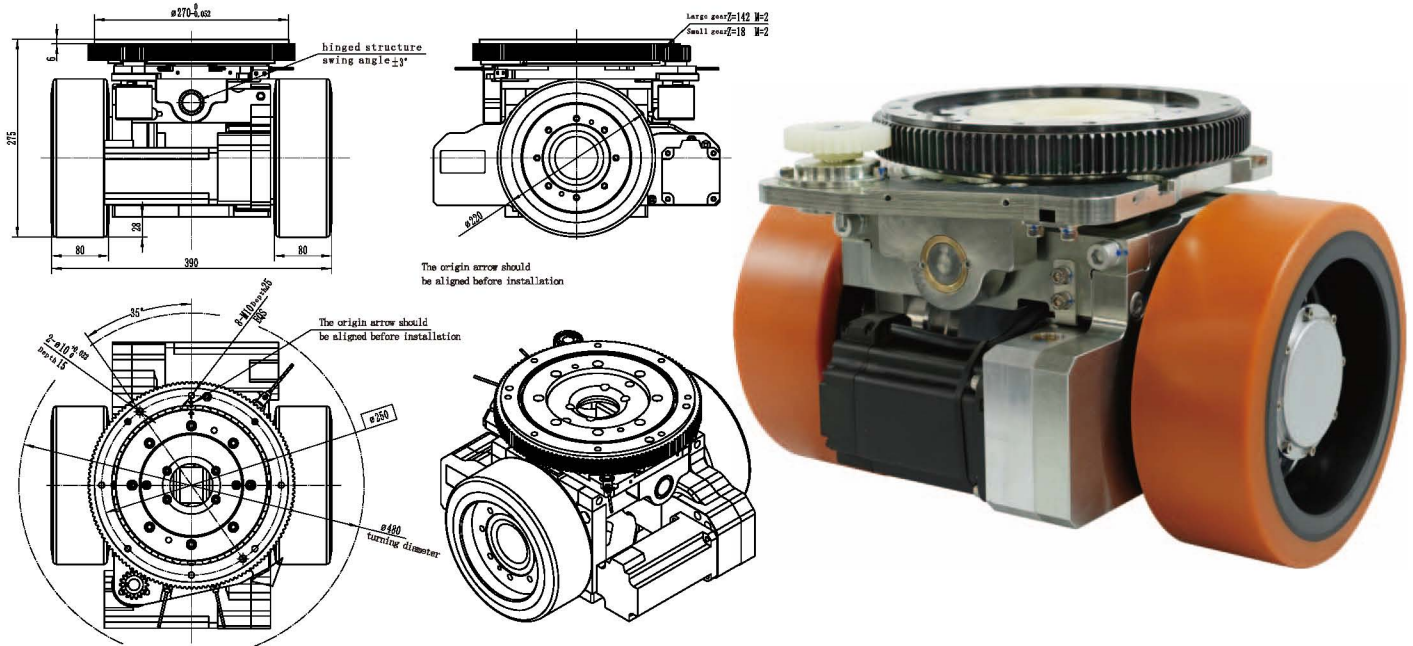
Main performance parameter

Model		HW280-SM1500-48	HW280-SM2500-48
	Performance index	Parameter	Parameter
Travel motor	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	1.5	2.5
	Voltage V	48	48
	Rated current A	37.4	61
	Rated torque Nm	5	7.96
	Rated speed r/min	3000	3000
Gearbox	Speed fbk sel	Incremental encoder	Incremental encoder
	Reducer type	Secondary gear reduction	Secondary gear reduction
Brake	Reduction ratio	31. 43: 1	43
	Brake torque Nm	16	16
Tyre	Rated voltage V	DC24	DC24
	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber
Steering part	Wheel size	φ 280X100	φ 280X100
	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	0.4	0.4
	Voltage V	48	48
	Rated current A	37.4	61
	Rated torque Nm	1.27	1.27
	Rated speed r/min	3000	3000
	Reducer type	Secondary planetary gear reduction	Secondary planetary gear reduction
Other	Reduction ratio	394:1	394:1
	Encoder type	Incremental encoder/Absolute encoder	Incremental encoder/Absolute encoder
	Steering limit angle	±110°	±110°
	Travel speed m/min	0-60	0-60
	Rated traction N	1010	1600
	Carrying capacity Kg	2000	2000
	Net weight Kg	60	63

※ Reduction ratio optional 43, 62.86

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

Light Load Electric Differential Steering Wheel Series



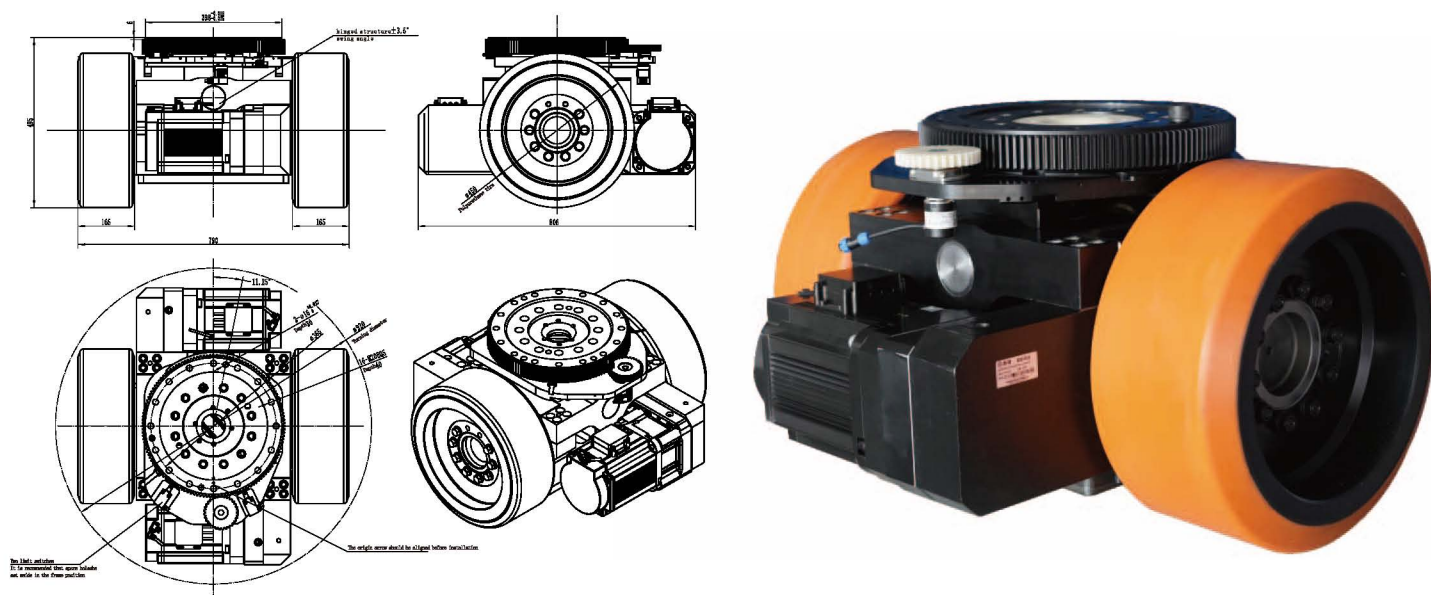
Main performance parameter

Model		HW155-SM1000-48-22-DS02	HW220-SM1000-48-28-DS	HW280-SM3000-48-52-DS
Performance index		Parameter	Parameter	Parameter
Travel motor	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power KW	1 (two)	1 (two)	3kw (two)
	Voltage V	48	48	48
	Rated current A	26.4	26.4	77.7
	Rated torque Nm	3.18	3.18	14.33
	Rated speed r/min	3000	3000	2000
	Speed fbk sel	Incremental encoder	Incremental encoder	Incremental encoder
Gearbox	Reducer type	Secondary gear reduction	Secondary gear reduction	Secondary gear reduction
	Reduction ratio	22.76	28	51.81
Brake	Brake torque Nm	3.2	3.2	16.5
	Rated voltage V	DC24	DC24	DC24
Tyre	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber	Polyurethane /Rubber
	Wheel size	155X65	220X80	280X120
Other	Steering limit angle	>180°	±110°	±110°
	Travelspeed m/min	0-65	0-45	0-34
	Rated traction N	1780	2380	9790
	Carrying capacity Kg	1200	2500	6000
	Net weight Kg	120	150	255

※ Motor power optional

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

Heavy-duty Electric Differential Steering Wheel Series



Main performance parameter

Model		HW400-SM3000-48-86-DS12-B	HW450-SM5000-96-55-DS20-B
Travel motor	Performance index	Parameter	
	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power KW	3KW (two)	5KW (two)
	Voltage V	48	96
	Rated current A	72	62.5
	Rated torque Nm	9.55	23.88
	Rated speed r/min	3000	2000
	Speed fbk sel	Incremental encoder	Incremental encoder
Gearbox	Reducer type	Secondary gear reduction	Secondary gear reduction
	Reduction ratio	86	56
Brake	Brake torque Nm	16.5	16.5
	Rated voltage V	DC24	DC24
Tyre	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber
	Wheel size	400x165	450X165
	Steering limit angle	±110°	±110°
Other	Travelspeed m/min	0-43	0-50
	Rated traction N	18500	11870
	Carrying capacity Kg	12000	20000
	Net weight Kg	500	550

※Motor power optional

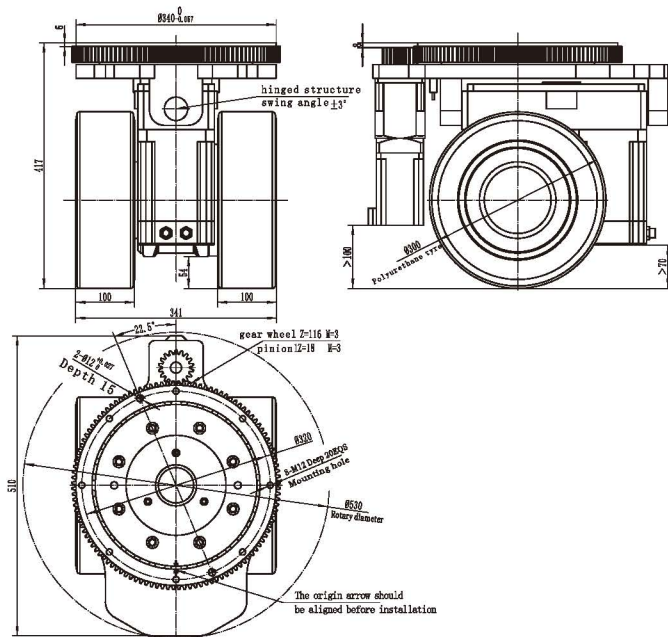
※Voltage optional

※Load capacity: 12 t, 15 t, 20 t optional

※Gear ratio optional: 56, 86

※Suitable for various mobile robots (AGV), pallet trucks, pallet stackers, sweepers, aerial work platforms, etc.

HW300 Mechanical Differential Drive Wheel Series



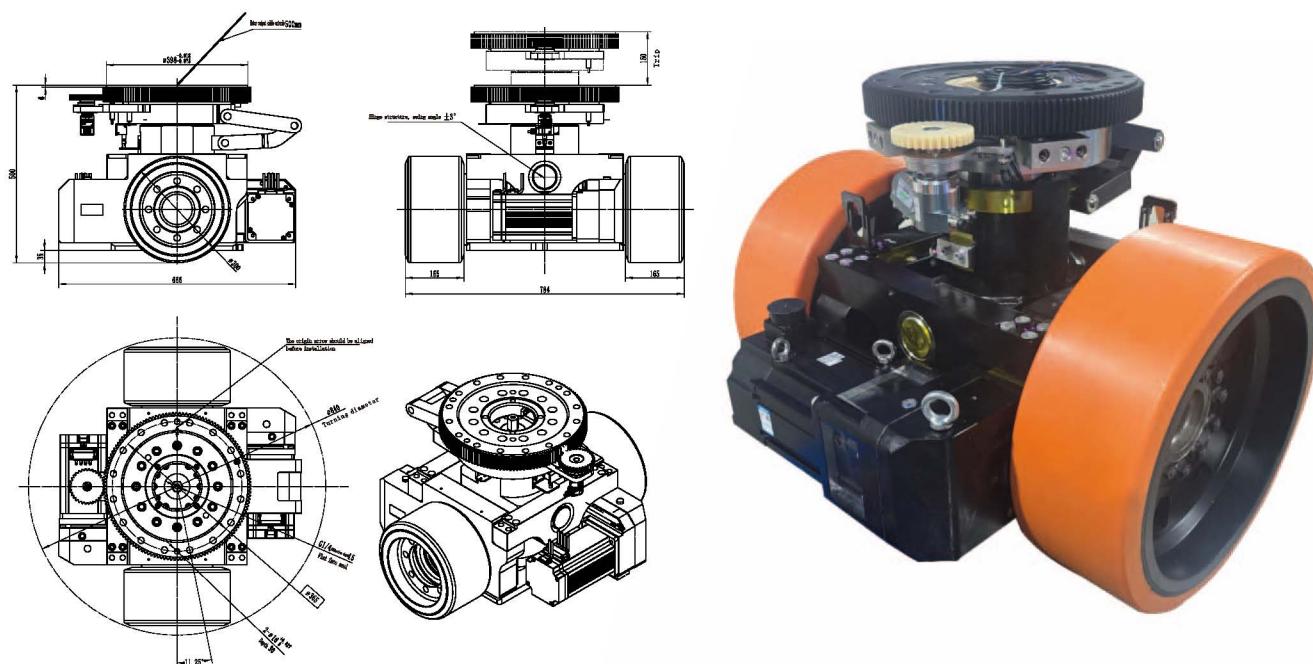
Main performance parameter

Model		HW250-SM1500-48-74-SL	HW300-SM3000-48-65-SL
Travel motor	Performance index	Parameter	Parameter
	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	1.5	3
	Voltage V	48	48
	Rated current A	42.4	72
	Rated torque Nm	5	9.55
	Rated speed r/min	3000	3000
Gearbox	Speed fbk sel	Incremental encoder	Incremental encoder
	Reducer type	Secondary gear reduction	Secondary gear reduction
Brake	Reduction ratio	74.05	63.72
	Brake torque Nm	16.5	16.5
Tyre	Rated voltage V	DC24	DC24
	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber
Steering part	Wheel size	250X100	300X100
	Motor type	Synchronous servo	Synchronous servo
	Motor power kW	0.75	1
	Voltage V	48	48
	Rated current A	19	26.7
	Rated torque Nm	2.39	3.18
	Rated speed r/min	3000	3000
	Reducer type	Secondary planetary gear reduction	Secondary planetary gear reduction
	Reduction ratio	322.22: 1	394: 1
	Encoder type	Incremental encoder/Absolute encoder	Incremental encoder/Absolute encoder
Other	Installation Height mm	370	417
	Steering limit angle	± 110°	± 110°
	Travel speed m/min	0-32	0-45
	Rated traction N	2660	3650
	Carrying capacity Kg	3000	5000
		Net weight Kg	150
			170

※ Motor power optional

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

Hydraulic Lifting Differential Steering Wheel Series



Main performance parameter

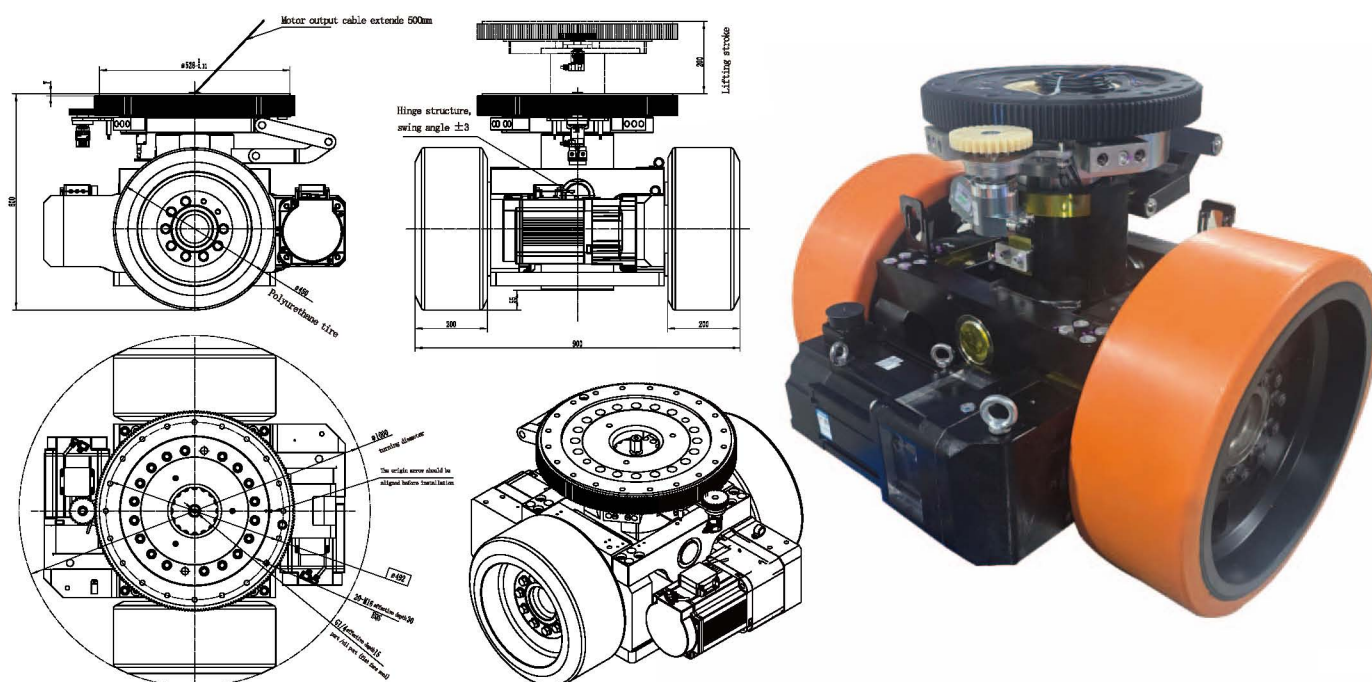
Model		HW280-SM3000-48-52-DS06A-150	HW300-SM3000-48-52-DS08A-150
Performance index		Parameter	Parameter
Travel motor	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	3KW(two)	3KW(two)
	Voltage V	48	48
	Rated current A	72	72
	Rated torque Nm	9.55	9.55
	Rated speed r/min	3000	3000
	Speed fbk sel	Incremental encoder	Incremental encoder
Gearbox	Reducer type	Secondary gear reduction	Secondary gear reduction
	Reduction ratio	51.81	51.81
Brake	Brake torque Nm	15	15
	Rated voltage V	DC24	DC24
Tyre	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber
	Wheel size	280x120	280x120
Lifting Height Mm	System Allowable PressureMpa	7.5	10
	LiftingHeight Mm	150	150
Other	Steering limit angle	±110°	±110°
	Travel speed m/min	0-50	0-50
	Rated traction N	6360	5930
	Carrying capacity Kg	6000	8000
		Net weight Kg	400
			450

※ Motor power optional

※ Load capacity: 5t, 6 t, 8 t, 11 t optional

※ Suitable for various mobile robots (AGV), pallet trucks, pallet stackers, sweepers, aerial work platforms, etc.

Heavy-duty Hydraulic Lifting Electric Differential steering Wheel



Main performance parameter

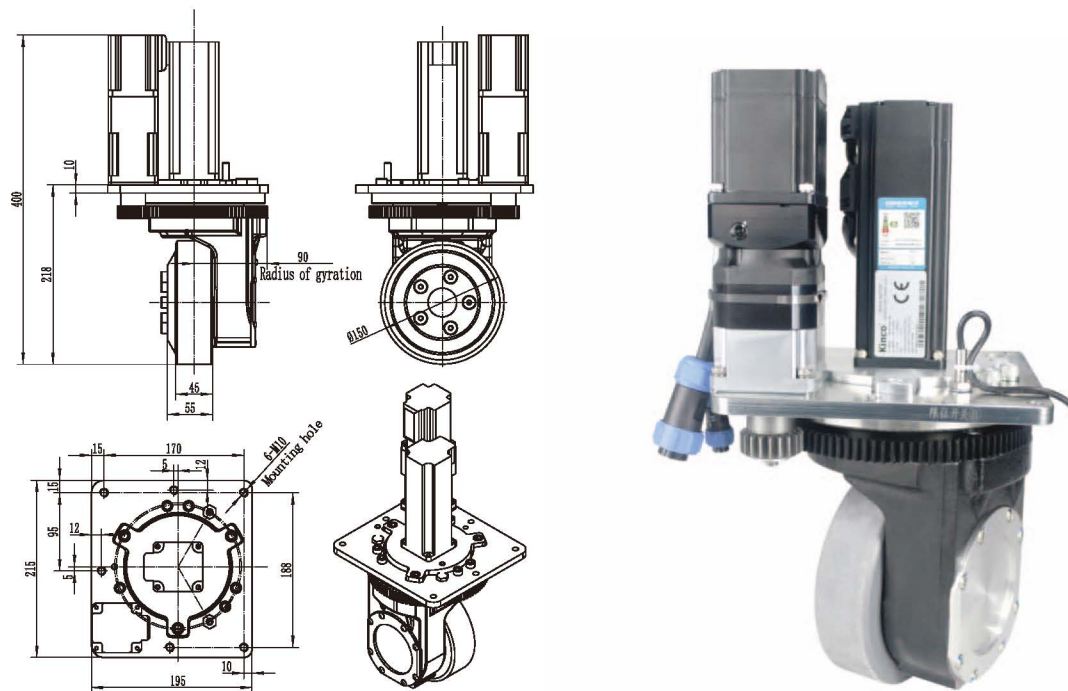
Model		HW400-SM5000-96-56-DS16A-200	HW450-SM5000-96-86-DS20A-200
Performance index		Parameter	
Travel motor	Motor type	Permanent magnet synchronous servo motor	
	Motor power kW	5KW(two)	
	Voltage V	96	
	Rated current A	62.5	
	Rated torque Nm	23.88	
	Rated speed r/min	2000	
Gearbox	Speed fbk sel	Incremental encoder	Incremental encoder
	Reducer type	Secondary gear reduction	Secondary gear reduction
	Reduction ratio	56.87	86
Brake	Brake torque Nm	50	50
	Rated voltage V	DC24	DC24
Tyre	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber
	Wheel size	400x165	450X200
Lifting Height Mm	System Allowable PressureMpa	9	15
	LiftingHeight Mm	200	200
Other	Steering limit angle	±110°	±110°
	Travel speed m/min	0-44	0-32
	Rated traction N	12220	16445
	Carrying capacity Kg	16000	20000
		Net weight Kg	750
			800

※ Motor power optional ※ Gear ratio optional:56, 86

※ Load capacity: 16 t, 20t, 25t optional

※ Suitable for various mobile robots (AGV), pallet trucks, pallet stackers, sweepers, aerial work platforms, etc.

HL150 Vertical Drive Wheel Series

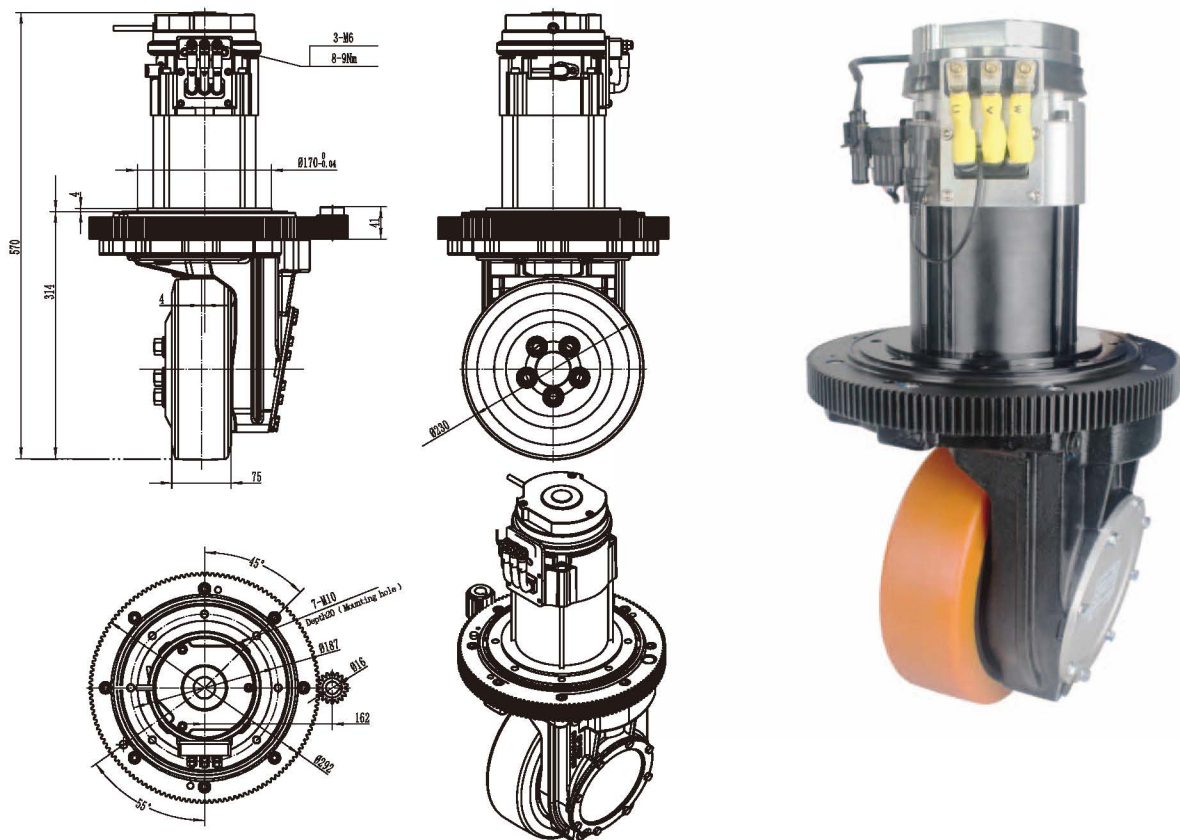


Main performance parameter

Model		HL150-SM400-48-19-A1	HL150-SM600-48-19
	Performance index	Parameter	Parameter
Travel motor	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	0.4	0.6
	Voltage V	48	48
	Rated current A	10.1	16.5
	Rated torque Nm	1.27	1.91
	Rated speed r/min	3000	3000
	Speed fbk sel	Incremental encoder	Incremental encoder
Gearbox	Reducer type	Secondary gear reduction	Secondary gear reduction
	Reduction ratio	18.9	18.9: 1
Brake	Brake torque Nm	1.5	4
	Rated voltage V	DC24	Dc24
Tyre	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber
	Wheel size	150X45	φ 150X45
Steering part	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	0.2	0.2
	Voltage V	48	48
	Rated current A	5.1	5.1
	Rated torque Nm	0.64	0.64
	Rated speed r/min	3000	3000
	Reducer type	Secondary planetary gear reduction	Secondary planetary gear reduction
	Reduction ratio	250: 1	250:1
Other	Encoder type	Incremental encoder/Absolute encoder	Incremental encoder/Absolute encoder
	Steering limit angle	± 110°	±110°
	Travel speed m/min	0-74	0-74
	Rated traction N	390	430
	Carrying capacity Kg	300	300
	Net weight Kg	18	20

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HL230 Vertical Drive Wheel Series



Main performance parameter

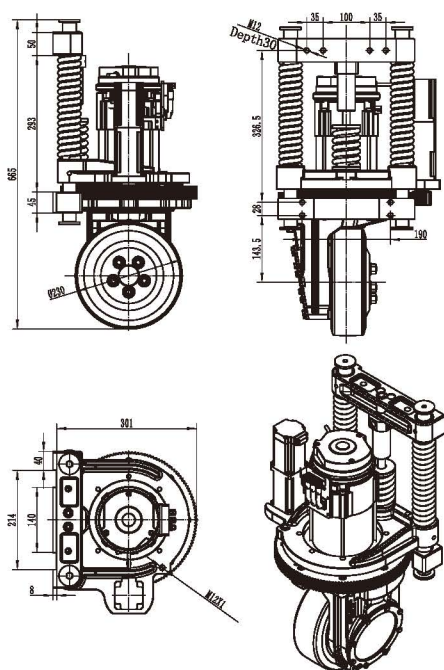
Model		HL230-AC1600-24-22B	HL230-AC2200-24-22B
Travel motor	Performance index	Parameter	Parameter
	Motor type	AC induction motor	AC induction motor
	Motor power kW	1.6	2.2
	Voltage V	24	24
	Rated current A	78	105
	Rated torque Nm	5.66	6.26
	Rated speed r/min	2560	3352
	Speed fbk sel	Pulse type	Pulse type
Gearbox	Reducer type	Secondary gear reduction	Secondary gear reduction
	Reduction ratio	22.07: 1	22.07: 1
Brake	Brake torque Nm	16	16
	Rated voltage V	DC24	DC24
Tyre	Wheel material	Polyurethane/Rubber	Polyurethane/Rubber
	Wheel size	φ 230X75	φ 230X75
	Steering limit angle	None	None
Other	Travel speed m/min	0-100	0-100
	Rated traction N	1000	1080
	Maximum traction N	2500	2700
	Carrying capacity Kg	1200	1200
		Net weight Kg	58
			60

※ Voltage optional DC48V

※ Reduction ratio optional 14.5 16.7 22.07 27.31

※ Used for mobile robots (AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HL230 Vertical Drive Wheel Series

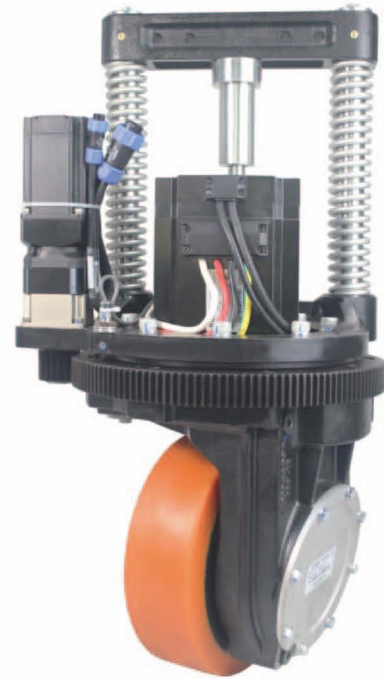


Main performance parameter

Model		HL230-AC1600-24-22-FD-SM	HL230-AC2200-24-22-FD-SM
Travel motor	Performance index	Parameter	Parameter
	Motor type	AC induction motor	AC induction motor
	Motor power kW	1.6	2.2
	Voltage V	24	24
	Rated current A	47	105
	Rated torque Nm	5.66	6.26
	Rated speed r/min	3250	2560
	Speed fbk sel	Pulse type	Pulse type
Gearbox	Reducer type	Secondary gear reduction	Secondary gear reduction
	Reduction ratio	22.07: 1	22.07/27.31
Brake	Brake torque Nm	16	16
	Rated voltage V	DC24	DC24
Tyre	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber
	Wheel size	φ 230X75	230*75
Steering part	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	0.4	0.4
	Voltage V	48	48
	Rated current A	10.1	10.1
	Rated torque Nm	5.66	6.26
	Rated speed r/min	3000	3000
	Reducer type	Secondary planetary gear reduction	Secondary planetary gear reduction
	Reduction ratio	200:1	200:1
Other	Encoder type	Incremental encoder/Absolute encoder	Incremental encoder/Absolute encoder
	Steering limit angle	None	None
	Travel speed m/min	0-105	0-105
	Rated traction N	1000	1080
	Carrying capacity Kg	1200	1200
	Net weight Kg	91	92

※ Reduction ratio optional 22.07, 27.31

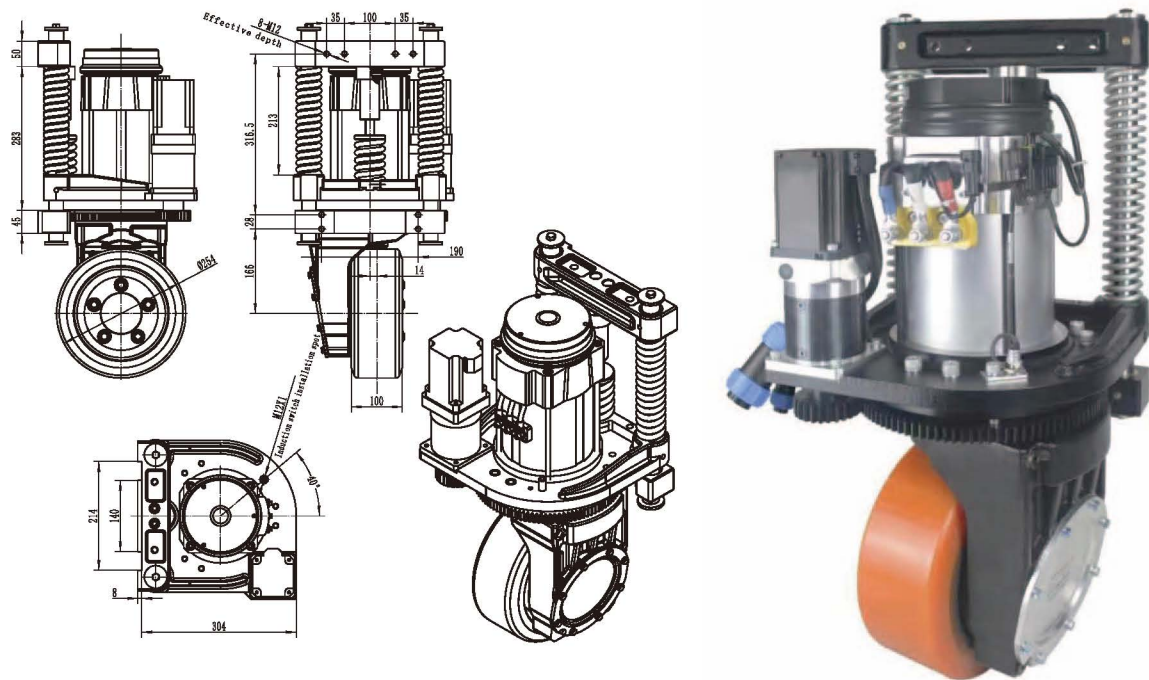
※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.



Model		HL230-SM2500-48-17	
	Performance index	Parameter	
Travel motor	Motor type	Permanent magnet synchronous servo motor	
	Motor power kW	2.5	
	Voltage V	48	
	Rated current A	61	
	Rated torque Nm	7.96	
	Rated speed r/min	3000	
	Speed fbk sel	Incremental encoder	
Gearbox	Reducer type	Secondary gear reduction	
	Reduction ratio	27.31	
Brake	Brake torque Nm	8	
	Rated voltage V	DC24	
Tyre	Wheel material	Polyurethane /Rubber	
	Wheel size	230X75	
Steering part	Motor type	Permanent magnet synchronous servo motor	
	Motor power kW	0.4	
	Voltage V	48	
	Rated current A	10.1	
	Rated torque Nm	1.27	
	Rated speed r/min	3000	
	Reducer type	Secondary planetary gear reduction	
	Reduction ratio	400:1	
Other	Encoder type	Incremental encoder/Absolute encoder	
	Steering limit angle	± 110°	
	Travel speed m/min	0-78	
	Rated traction N	1374	
	Carrying capacity Kg	1200	
	Net weight Kg	82	

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HL254 Vertical Drive Wheel Series



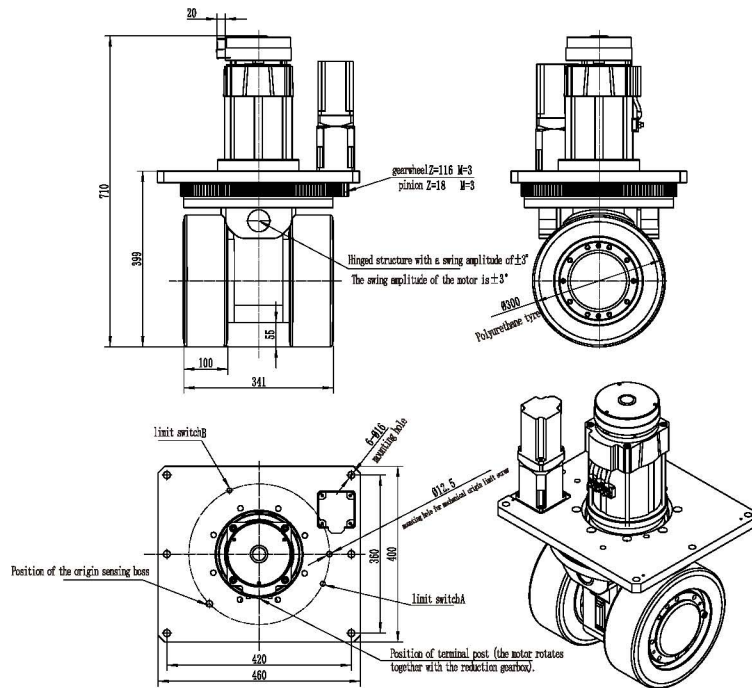
Main performance parameter

Model		HL254-AC2500-48-24-FD-SM	
	Performance index	Parameter	
Travel motor	Motor type	AC induction motor	
	Motor power kW	2.5	
	Voltage V	48	
	Rated current A	60	
	Rated torque Nm	7.1	
	Rated speed r/min	3350	
	Speed fbk sel	Incremental encoder	
Gearbox	Reducer type	Secondary gear reduction	
	Reduction ratio	24.1: 1	
Brake	Brake torque Nm	16	
	Rated voltage V	DC24	
Tyre	Wheel material	Polyurethane	
	Wheel size	φ 254X100	
Steering part	Motor type	Servo Motor	
	Motor power kW	0.75	
	Voltage V	48	
	Rated current A	19	
	Rated torque Nm	2.39	
	Rated speed r/min	3000	
	Reducer type	Secondary planetary gear reduction	
	Reduction ratio	200:1	
	Encoder type	Absolute encoder	
Other	Steering limit angle	360 revolving	
	Travel speed m/min	0-110	
	Rated traction N	1180	
	Carrying capacity Kg	1560	
	Net weight Kg	105	

※ Pillar suspension can be an option according to the request.

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HL300 Vertical Heavy-Duty Differential Steering Wheel Series

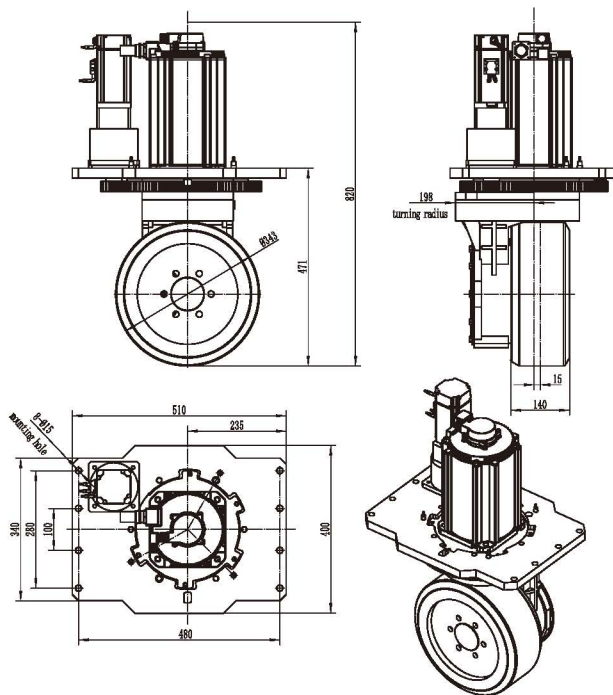


Main performance parameter

Model		HL300-AC2500-48-33-SL	HL300-SM3000-48-74-SL
Travel motor	Performance index	Parameter	Parameter
	Motor type	AC induction motor	Permanent magnet synchronous servo motor
	Motor power kW	2.5	3
	Voltage V	48	48
	Rated current A	65	72
	Rated torque Nm	7.1	9.55
	Rated speed r/min	3352	3000
Gearbox	Speed fbk sel	—	Incremental encoder
	Reducer type	Secondary gear reduction	Secondary gear reduction
Brake	Reduction ratio	33.07	74
	Brake torque Nm	25	16.5
Tyre	Rated voltage V	DC24	DC24
	Wheel material	Polyurethane /Rubber	Polyurethane /Rubber
Steering part	Wheel size	300X100	300X100
	Motor type	Permanent magnet synchronous servo motor	Permanent magnet synchronous servo motor
	Motor power kW	1	1
	Voltage V	48	48
	Rated current A	26.7	26.7
	Rated torque Nm	3.18	3.18
	Rated speed r/min	3000	3000
Other	Reducer type	Secondary planetary gear reduction	Secondary planetary gear reduction
	Reduction ratio	322.22:1	322.22:1
	Encoder type	Incremental encoder/Absolute encoder	Incremental encoder/Absolute encoder
	Steering limit angle	±180°	±180°
	Travel speed m/min	0-96	0-40
	Rated traction N	1410	4240
	Carrying capacity Kg	4000	4000
	Net weight Kg	170	180

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HL343 Vertical Drive Wheel Series



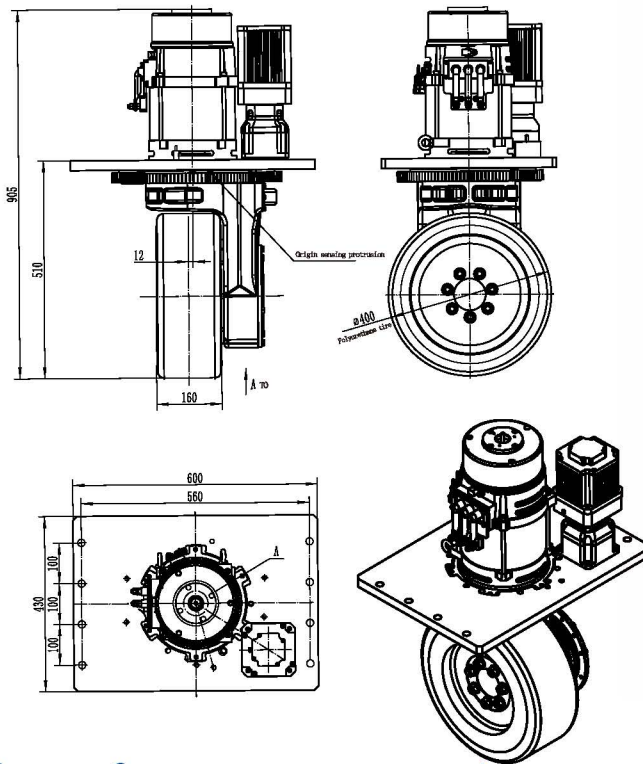
Main performance parameter

产品型号		HL343-AC4500-48-22
Travel motor	Performance index	Parameter
	Motor type	AC induction motor
	Motor power kW	4.5
	Voltage V	48
	Rated current A	107
	Rated torque Nm	14.8
	Rated speed r/min	2890
Gearbox	Speed fbk sel	-
	Reducer type	Secondary gear reduction
Brake	Reduction ratio	22.32: 1
	Brake torque Nm	40
Tyre	Rated voltage V	DC24
	Wheel material	Polyurethane /Rubber
Steering part	Wheel size	φ343X140
	Motor type	Permanent magnet synchronous servo motor
	Motor power kW	0.75
	Voltage V	48
	Rated current A	19
	Rated torque Nm	2.39
	Rated speed r/min	3000
	Reducer type	Secondary planetary gear reduction
	Reduction ratio	300:1
	Encoder type	Incremental encoder/Absolute encoder
Other	Steering limit angle	±110°
	Travel speed m/min	0-139
	Rated traction N	1700
	Carrying capacity Kg	3000
Net weight Kg		120

※ Motor power optional

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

HL400 Vertical Drive Wheel Series



Main performance parameter

Model		HL400-AC8000-80-22-WL
Travel motor	Performance index	Parameter
	Motor type	AC induction motor
	Motor power kW	8
	Voltage V	80
	Rated current A	116
	Rated torque Nm	32
	Rated speed r/min	2363
Gearbox	Speed fbk sel	Incremental encoder
	Reducer type	Secondary gear reduction
	Reduction ratio	22.5:1
Brake	Brake torque Nm	100
	Rated voltage V	DC48
Tyre	Wheel material	Polyurethane /Rubber
	Wheel size	φ400X100
Steering part	Motor type	Permanent magnet synchronous servo motor
	Motor power kW	1.5
	Voltage V	80
	Rated current A	26
	Rated torque Nm	5
	Rated speed r/min	3000
	Reducer type	Secondary planetary gear reduction
	Reduction ratio	276:1
Other	Encoder type	Incremental encoder/Absolute encoder
	Steering limit angle	±110°
	Travel speed m/min	0-131.9
	Rated traction N	
	Carrying capacity Kg	4000
	Net weight Kg	160

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

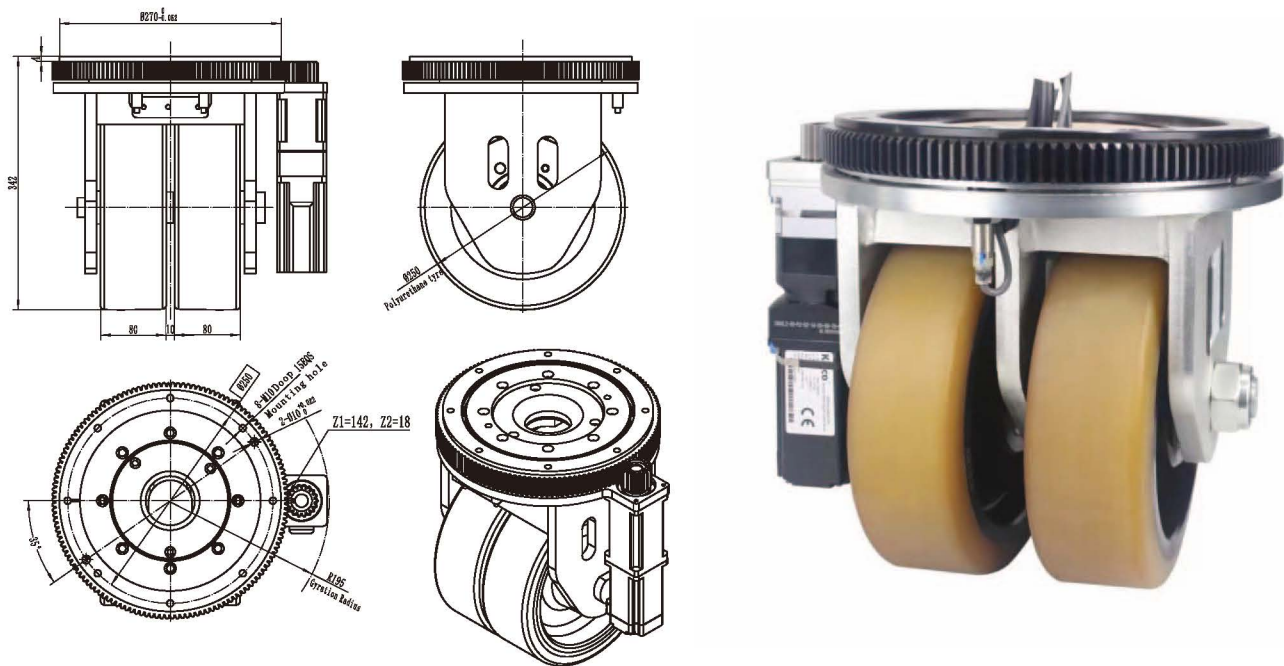
Technical drawings of the Z1-118, Z2-118 rotary encoder. The drawings include a side view, a front view, and a perspective view. The side view shows a total height of 39mm and a mounting flange diameter of 80mm. The front view shows a rotary diameter of 80mm and a depth of 15mm. The perspective view shows the encoder mounted on a wheel with a polyurethane tire. The encoder is labeled 'Z1-118, Z2-118'.



Model		HK250-SM400-48-ZK-DL	
	Performance index	Parameter	
Travel motor	Motor type	—	
	Motor power kW	—	
	Voltage V	—	
	Rated current A	—	
	Rated torque Nm	—	
	Rated speed r/min	—	
Gearbox	Speed fbk sel	—	
	Reducer type	—	
	Reduction ratio	—	
Brake	Brake torque Nm	—	
	Rated voltage V	—	
Tyre	Wheel material	Polyurethane /Rubber	
	Wheel size	250X80	
Steering part	Motor type	Permanent magnet synchronous servo motor	
	Motor power kW	0.4	
	Voltage V	48	
	Rated current A	10.1	
	Rated torque Nm	1.27	
	Rated speed r/min	3000	
	Reducer type	Secondary planetary gear reduction	
	Reduction ratio	327: 1	
	Encoder type	Incremental encoder/Absolute encoder	
Other	Steering limit angle	± 110°	
	Travel speed m/min	—	
	Rated traction N	—	
	Carrying capacity Kg	1500	
	Net weight Kg	35	

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HK250 Controllable Swivel Caster Series

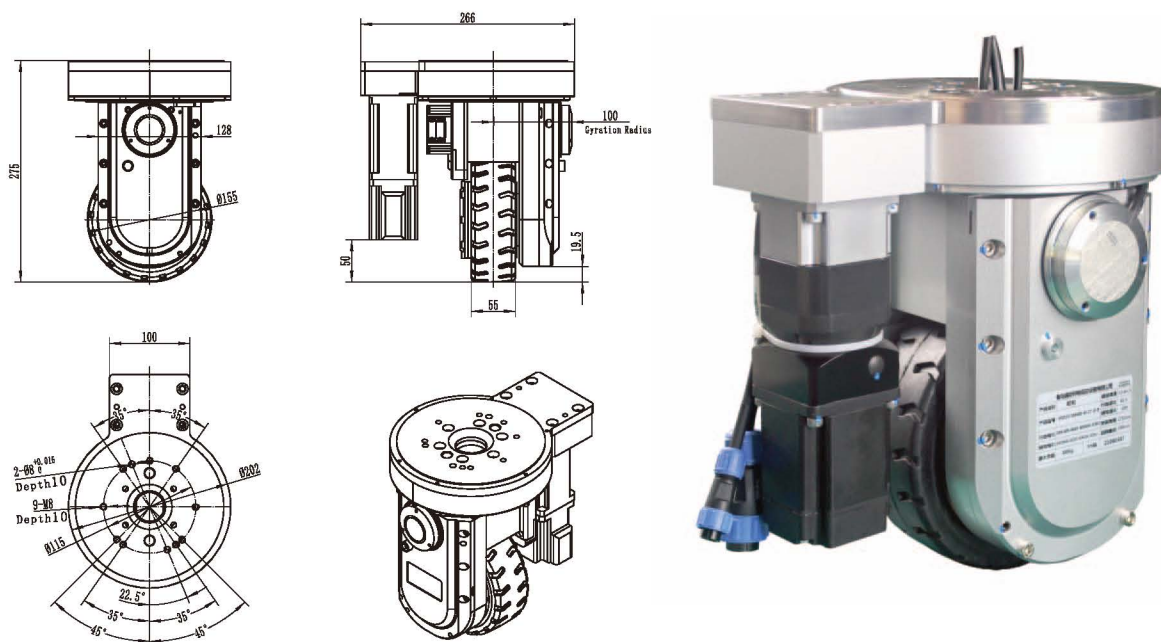


Main performance parameter

Model		HK250-SM400-48
	Performance index	Parameter
Travel motor	Motor type	--
	Motor power kW	--
	Voltage V	--
	Rated current A	--
	Rated torque Nm	--
	Rated speed r/min	--
	Speed fbk sel	--
Gearbox	Reducer type	--
	Reduction ratio	--
Brake	Brake torque Nm	--
	Rated voltage V	--
Tyre	Wheel material	Polyurethane
	Wheel size	φ 250X80
Steering part	Motor type	Servo Motor
	Motor power kW	0.4
	Voltage V	48
	Rated current A	10.1
	Rated torque Nm	1.27
	Rated speed r/min	3000
	Reducer type	Secondary planetary gear reduction
	Reduction ratio	394:1
	Encoder type	Absolute encoder
	Steering limit angle	±110°
Other	Travel speed m/min	--
	Rated traction N	--
	Carrying capacity Kg	2000
	Net weight Kg	45

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

Industry Customization (Construction Robot)

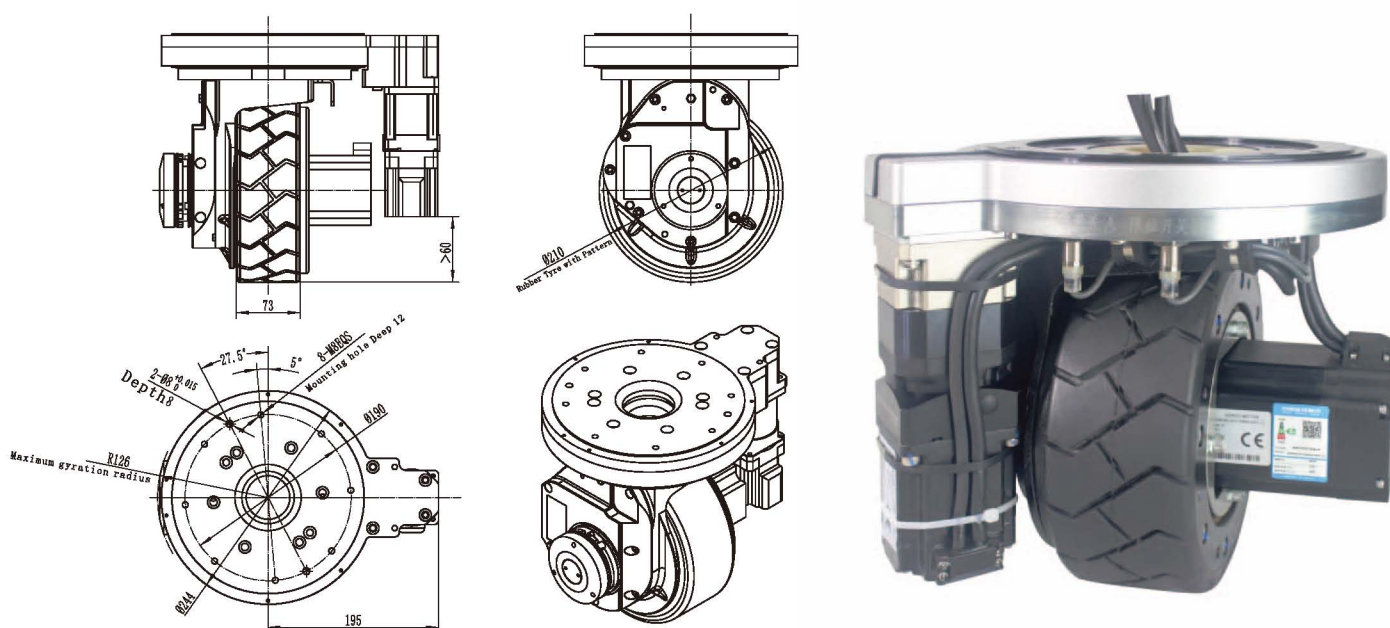


Main performance parameter

Model		HW155-SM400-48-JD-C	
	Performance index	Parameter	
Travel motor	Motor type	Permanent magnet synchronous servo motor	
	Motor power kW	0.4	
	Voltage V	48	
	Rated current A	10.1	
	Rated torque Nm	1.27	
	Rated speed r/min	3000	
	Speed fbk sel	Incremental encoder	
Gearbox	Reducer type	Secondary gear reduction	
	Reduction ratio	45.5: 1	
Brake	Brake torque Nm	4	
	Rated voltage V	DC24	
Tyre	Wheel material	Polyurethane /Rubber	
	Wheel size	φ 155X55	
Steering part	Motor type	Permanent magnet synchronous servo motor	
	Motor power kW	0.2	
	Voltage V	48	
	Rated current A	5.1	
	Rated torque Nm	0.64	
	Rated speed r/min	3000	
	Reducer type	Secondary planetary gear reduction	
	Reduction ratio	138.6:1	
Other	Encoder type	Incremental encoder/Absolute encoder	
	Steering limit angle	±130°	
	Travel speed m/min	0-32	
	Rated traction N	670	
	Carrying capacity Kg	300	
	Net weight Kg	29	

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

Industry Customization (Construction Robot)



Main performance parameter

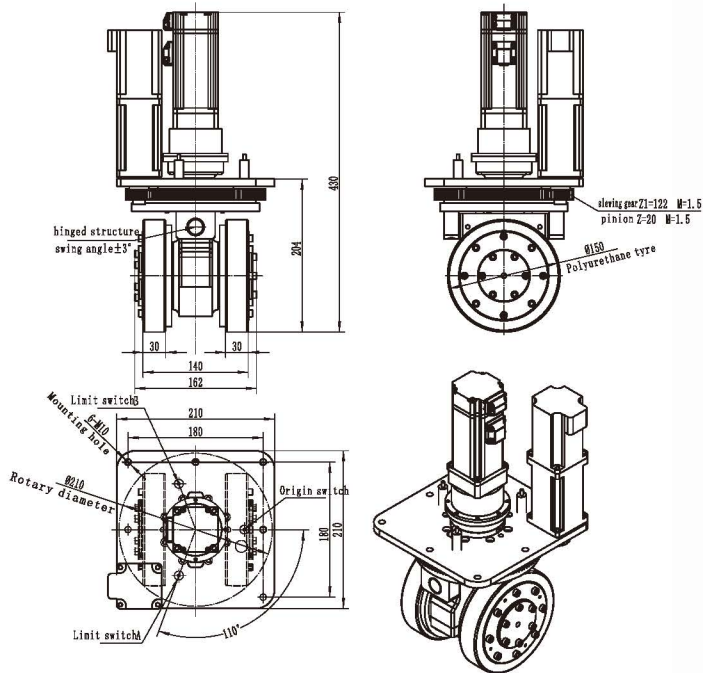
Model		HW210-SM750-48-44-35-190-SP	
	Performance index	Parameter	
Travel motor	Motor type	Permanent magnet synchronous servo motor	
	Motor power kW	0.75	
	Voltage V	48	
	Rated current A	19	
	Rated torque Nm	96	
	Rated speed r/min	3000	
	Speed fbk sel	Incremental encoder	
Gearbox	Reducer type	Secondary gear reduction	
	Reduction ratio	44.03	
Brake	Brake torque Nm	6	
	Rated voltage V	DC24	
Tyre	Wheel material	Rubber	
	Wheel size	210X75	
Steering part	Motor type	Permanent magnet synchronous servo motor	
	Motor power kW	0.4	
	Voltage V	48	
	Rated current A	6.5	
	Rated torque Nm	0.64	
	Rated speed r/min	3000	
	Reducer type	Secondary planetary gear reduction	
	Reduction ratio	192: 1	
	Encoder type	Incremental encoder/Absolute encoder	
Other	Steering limit angle	± 110°	
	Travel speed m/min	0-50	
	Rated traction N	590	
	Carrying capacity Kg	800	
	Net weight Kg	52	

※ Reduction ratio optional

※Motor power optional 1KW

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

Industry Customization (Medical Robot)



Main performance parameter

Model		HL150-SM400-48-19-A1
	Performance index	Parameter
Travel motor	Motor type	Permanent magnet synchronous servo motor
	Motor power kW	0.4
	Voltage V	48
	Rated current A	10.1
	Rated torque Nm	1.27
	Rated speed r/min	3000
Gearbox	Speed fbk sel	Incremental encoder
	Reducer type	Secondary gear reduction
Brake	Reduction ratio	25.95
	Brake torque Nm	1.5
Tyre	Rated voltage V	DC24
	Wheel material	Polyurethane /Rubber
Steering part	Wheel size	150X45
	Motor type	Permanent magnet synchronous servo motor
	Motor power kW	0.2
	Voltage V	48
	Rated current A	5.1
	Rated torque Nm	0.64
	Rated speed r/min	3000
	Reducer type	Secondary planetary gear reduction
	Reduction ratio	250: 1
Other	Encoder type	Incremental encoder/Absolute encoder
	Steering limit angle	±110°
	Travel speed m/min	0-55
	Rated traction N	590
	Carrying capacity Kg	300
	Net weight Kg	23

※ Motor power optional 600W

※ Used for mobile robots(AGV), pallet stackers, pallet trucks, sweepers, aerial work trucks, etc.

Application Case



Cooperative Partner



The above are some partners, in no particular order.

Memorandum

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Memorandum

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Memorandum

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