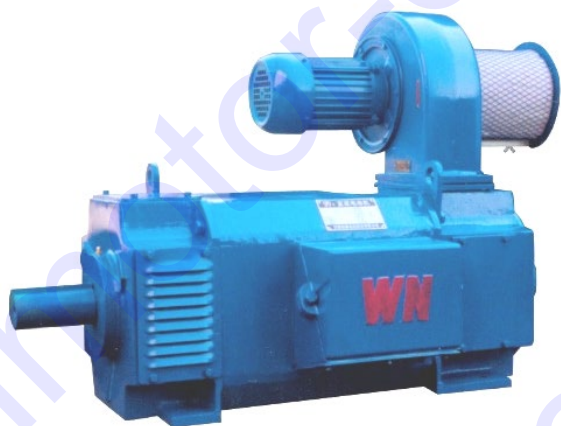


ZH4 Series DC Motors



- Frame sizes: 112-200
- Insulation class: F
- Excitation mode: Separate excitation
- Ration speed: 3000,1500,1000,750,600r/min
- Rated output: 1.5-55kW
- Duty cycle: S1
- Voltage: 440V - 400V

Application: ZH4 series motor is mainly used in dusty environment or on machinery for driving, as well as for metal cutting machine.

Features: Steady and good speed regulation system which has wide speed range; reduce speed by lowering the voltage with constant torque or raise speed by reducing exciting field current with constant power; large output power; great overload capacity; protection grade IP44 or above, cooling method IC411 or IC416; step less speed regulation.

Circumstance: Altitude not exceeds 1000m; ambient temperature no higher than +40°C; motor can be connected to rectifier power or DC generator; the standard excitation voltage is 180V, reinforced excitation is allowed whereas its voltage can't be higher than 500V.

Designation of Type

ZH4 - 112/2 - 1

电枢铁心长度代号
Armature core length code
极数 Poles Quantity
机座中心高(mm)
Motor frame size (mm)
直流电机系列代号
DC Motor Series

ZH4 - 180 - 21

端盖代号 End cover code
电枢铁心长度代号
Armature core length code
机座中心高(mm)
Motor frame size (mm)

- 1、The protection degree provided by motor enclosure and mounting arrangement
 - a. Protection degree IP44 or IP54.
 - b. Frame with feet, and the installation type are IMB3、IMB35、IMB5、IMV1、IMV15.
- 2、Terminal box is at the top of the frame from the view from DE.
- 3、Connected with flexible coupling
- 4、Cooling method

Totally enclosed, cooling method is IC411 or IC416

IC411 motor can reach step less speed regulation from min speed 300r/min (constant power) to max speed (constant output power)

IC416 motor can reach step less speed regulation from min speed 20r/min (constant power) to max speed (constant output power)

Performance Data

Type	Rated Output POW	Rated Speed		Speed with Weakened Field	Arm. Current	Field POWER	Eff.	Moment of inertia GD ²	Weight
		400V	440V						
	kW	r/min		r/min	A	W	%	kg·m ²	kg
ZH4-112/2-1	1.9	2630		3600	6.9	320	61.1	0.072	95
	2.2		2960	3600	7.1		63.5		
ZH4-112/2-2	2.6	2630		3500	9.0	350	65.1	0.088	102
	3		2940	3500	9.1		67.3		
	1.4	1310		3000	5.1		60.3		
	1.5		1480	3000	4.77		63.2		
ZH4-112/4-1	3.7	2680		3500	11.7	500	74.1	0.128	101
	4		2950	3500	11.2		76		
	1.9	1340		1800	6.9		61.1		
	2.2		1480	1800	7.1		63.5		
	1.4	855		1100	5.1		60.3		
	1.5		980	1100	4.77		63.2		
ZH4-112/4-2	5	2740		3600	15.7	570	74.3	0.156	109
	5.5		3035	3600	15.4		75.7		
	2.6	1330		1800	9.0		65.1		
	3		1480	1800	9.1		67.3		

Performance Data

Type	Rated Output POW	Rated Speed		Speed with Weakened Field	Arm. Current	Field POW	Eff.	Moment of Inertia GD ²	Weight
		400V	440V						
	kW	r/min		r/min	A	W	%	kg·m ²	kg
ZH4-112/4-2	1.9	955		1200	6.9	570	61.1	0.156	109
	2.2		1025	1200	7.1		63.5		
ZH4-132-1	6.7	2610		3600	20.6	650	76.8	0.32	132
	7.5		2850	3600	20.6		78.4		
	3.7	1330		2200	13.0		65.2		
	4		1480	2200	12.2		68.7		
	2.6	865		1600	9.0		65.1		
	3		975	1600	9.1		67.3		
ZH4-132-2	5	1340		1800	15.7	730	74.3	0.4	152
	5.5		1480	1800	15.4		75.7		
	3.7	855		1500	13.0		65.2		
	4		980	1500	12.2		68.7		
ZH4-132-3	10	2610		3600	31.1	800	75.6	0.48	172
	11		2850	3600	30.5		77.7		
	7	1330		2100	22.7		71.9		
	7.5		1480	2100	21.4		74.5		
	5	945		1600	16.1		71.1		
	5.5		1050	1600	15.7		71.9		
ZH4-160-11	13.5	2710		3500	40.5	820	79.4	0.64	210
	15		3000	3500	40.5		80.5		
ZH4-160-21	16.5	2710		3500	50.5	920	77.9	0.76	232
	18.5		3000	3500	50.5		79.4		
	6.7	900		1800	20.6		76.8		
	7.5		1000	1800	20.6		78.4		
ZH4-160-31	19.5	2710		3500	58.8	1050	80.4	0.88	259
	22		3010	3500	58.8		82.6		
	10	1350		3000	31.1		75.6		
	11		1500	3000	30.5		77.7		
ZH4-180-11	13.5	1350		3000	40.5	1200	79.4	1.52	311
	15		1500	3000	40.5		80.5		
	7	670		1900	22.7		71.9		
	7.5		750	1900	21.4		74.5		
	5	540		1400	16.1		71.1		
	5.5		600	1400	15.7		71.9		
ZH4-180-21	27	2710		3400	77.8	1400	84.7	1.72	335
	30		3000	3400	77.8		85.7		
	16.5	1350		2800	51.4		75.5		
	18.5		1500	2800	51.4		78.1		
	10	900		2000	31.1		75.6		
	11		1000	2000	30.5		77.7		
	7	540		1600	22.7		71.9		
	7.5		600	1600	21.4		74.5		

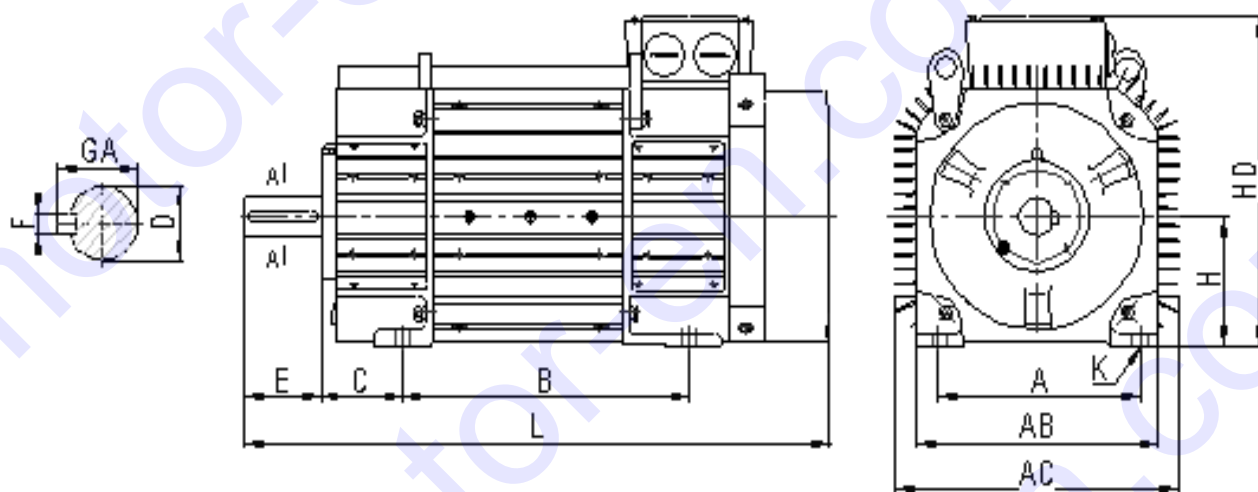
Performance Data

Type	Rated POW	Rated Speed		Speed with Weakened Field	Arm. Current	Field POW	Eff.	Moment of Inertia GD^2	Weight
		400V	440V						
	kW	r/min		r/min	A	W	%	$kg \cdot m^2$	kg
ZH4-180-31	13	900		2000	42.4	1500	73	1.92	365
	15		1000	2000	42.4		74.1		
ZH4-180-41	33	2710		3200	97	1700	82.8	2.2	395
	37		3000	3200	97		83.6		
	19.5	1350		3000	61		77.3		
	22		1500	3000	61		79.7		
	10	670		2000	31.1		75.6		
	11		750	2000	30.5		77.7		
ZH4-200-11	40.5	2710		3200	118	1400	83.4	3.68	465
	45		3000	3200	118		85.5		
	16.5	900		2000	52		73.8		
	18.5		1000	2000	52		76.8		
ZH4-200-11	13	670		1600	42.4	1400	73	3.68	465
	15		750	1600	42.4		74.1		
ZH4-200-21	27	1350		3000	82	1500	78.8	4.2	510
	30		1500	3000	82		80.4		
	10	540		1000	31.1		75.6		
	11		600	1000	30.5		77.7		
ZH4-200-31	49.5	2710		3200	141	1750	85.6	4.8	560
	55		3000	3200	141		87.1		
	33	1350		2800	101		79.6		
	37		1500	2800	101		82		
	19.5	900		2000	64		72.2		
	22		1000	2000	64		77.4		
	16.5	670		1400	52		73.8		
	18.5		750	1400	52		76.8		
	13	540		1200	42.4		73		
	15		600	1200	42.4		74.1		

Note: When start-up, the excitation voltage of the motor must be raised to rated value before connected to armature loop; when stop, cut off the armature circuit and magnetic field circuit successively, which will avoid over speed caused by weakening magnetic field.

Dimensions

mm

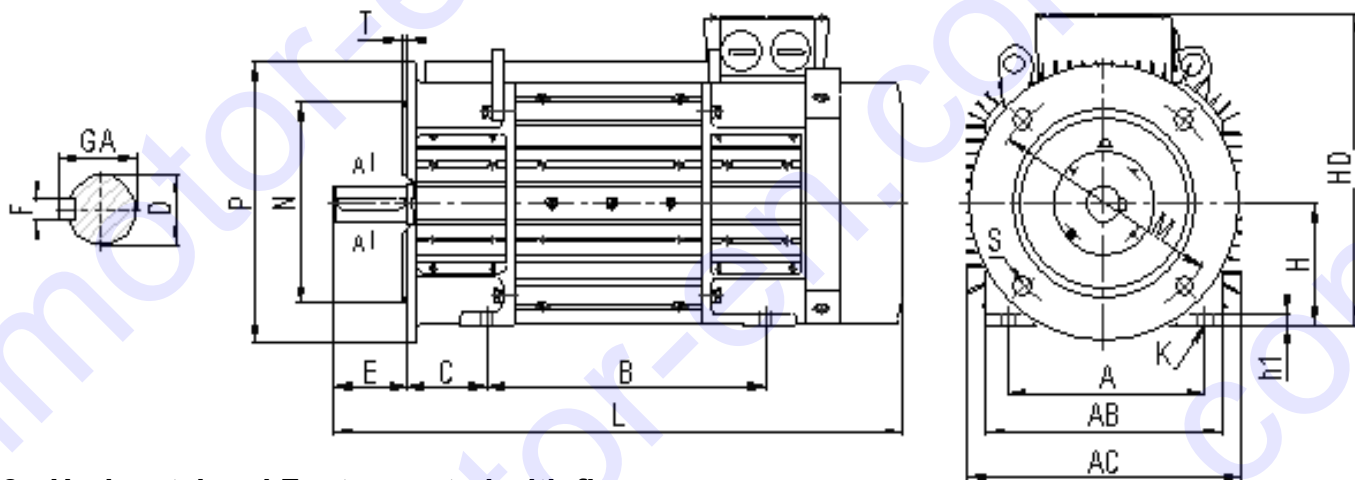


1. Horizontal and Foot mounted

Type	Mounting Dimensions									Outline Dimensions			
	A	B	C	D	E	F	GA	H	K	AB	AC	HD	L
ZH4-112/2-1	190	337	70	28	60	8	31	112	12	225	290	375	783
ZH4-112/2-2		367											813
ZH4-112/4-1		347											823
ZH4-112/4-2		387											863
ZH4-132-1	216	355	89	38	80	10	41	132	12	260	325	415	858
ZH4-132-2		405											908
ZH4-132-3		465											968
ZH4-160-11	254	411	108	48	110	14	51.5	160	15	320	385	520	1020
ZH4-160-21		451											1060
ZH4-160-31		501											1110
ZH4-180-11	279	436	121	55	110	16	59	180	15	356	420	560	1075
ZH4-180-21		476											1115
ZH4-180-31		526											1165
ZH4-180-41		586											1225
ZH4-200-11	318	566	133	65	140	18	69	200	19	396	460	600	1255
ZH4-200-21		606											1295
ZH4-200-31		686											1375

Dimensions

mm



2. Horizontal and Foot mounted with flange

Type	Mounting Dimensions														Outline Dimensions					
	A	B	C	D	E	F	GA	H	K	M	N	S	Holes	T	P	AB	AC	HD	L	h1
ZH4-112/2-1	190	337	70	28	60	8	31	112	12	215	180	15	4	4	250	225	290	375	783	10
ZH4-112/2-2		367																	813	
ZH4-112/4-1		347		32	80	10	35												823	
ZH4-112/4-2		387																	863	
ZH4-132-1	216	355	89	38	80	10	41	132	12	265	230	15	4	4	300	260	325	415	858	12
ZH4-132-2		405																	908	
ZH4-132-3		465																	968	
ZH4-160-11	254	411	108	48	110	14	51.5	160	15	300	250	19	4	5	350	320	385	520	1020	14
ZH4-160-21		451																	1060	
ZH4-160-31		501																	1110	
ZH4-180-11	279	436	121	55	110	16	59	180	15	350	300	19	4	5	400	356	420	560	1075	16
ZH4-180-21		476																	1115	
ZH4-180-31		526																	1165	
ZH4-180-41		586																	1225	
ZH4-200-11	318	566	133	65	140	18	69	200	19	400	350	19	8	5	450	396	460	600	1255	16
ZH4-200-21		606																	1295	
ZH4-200-31		686																	1375	

* Dimensions here are indicative only. Actual product may differ. Data above may be changed without prior notice.

* Order Description

1. Specify the motor type, power, voltage, rotation speed, exciting voltage, cooling method, shaft quantity, terminal box position etc.
2. Specify the auxiliary device type, specification, quantity etc.
3. When the motor operates in humid topics, make mark of "TH" behind original motor type
4. If the motor on the sample book can't meet clients' requirement, various motor of other technical requirement are also available. Contact the producer directly.