HPB MOTION CONTROL CO.,LTD.

VM SERIES

AC INDUCTION SERVOMOTOR
AC SPINDLE MOTOR



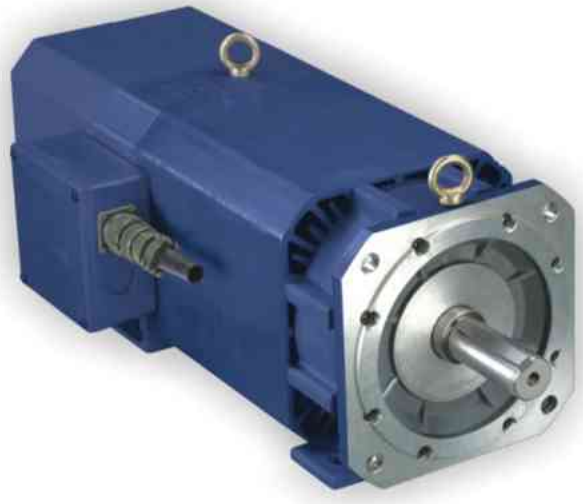


HIGH PERFORMANCE
AND FINE ACCURACY

The VM Series

AC INDUCTION SERVOMOTOR
AC SPINDLE MOTOR

are specially designed to operate with Closed Loop Flux Vector Drive which are capable for high performance for most of Industrial applications.





***FEATURES**

- FULLY LAMINATED YOKE, HIGH OUTPUT TORQUE WITH COMPACT SIZE
- LOW ROTOR INERTIA, FAST RESPONSE
- INDUCTION MOTOR WITH SQUIRREL CAGE, MAINTENANCE FREE
- HIGH OPERATION SPEED RANGE (UP TO 8000RPM)
- GOOD RELIABILITY AND STABLILITY
- AVAILABLE FOR CONTINUOUS & PEAK TORQUE EVAN AT STANDSTILL
- HIGH OVERLOAD CAPABILITY

***APPLICATIONS**

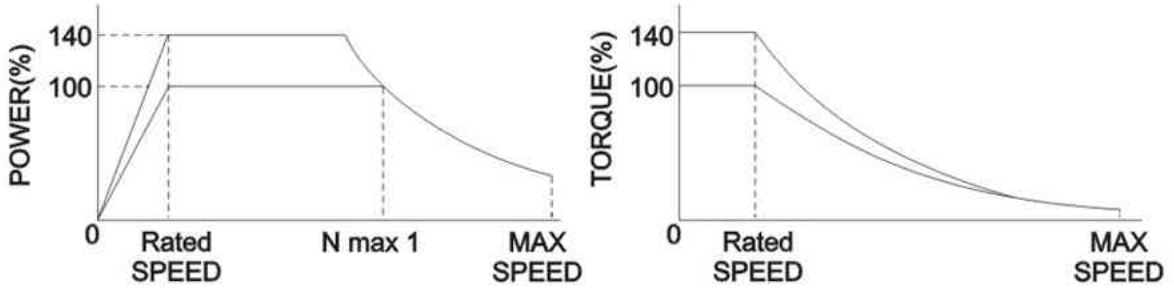
- INJECTION MOLDING MACHINE
- BLOW MOLDING MACHINE
- TESTING MACHINE
- WINDER
- PRESS FEEDER
- ROTARY CUTTER
- TRAVERSER
- PLANER
- TEXTILE
- PRINTING MACHINE
- MACHINE TOOL
- ROBOTIC
- HANDLING SYSTEM
- CUT TO LENGTH
- PACKAGING MACHINE
- FLY SHEAR

GENERAL SPECIFICATIONS

- Protection Level
  IP54 for Frame Size 80,90,100,132,160, 180, 225
  IP23 for Frame Size 132,160, 180, 225
- Mounting: B35 (Except Frame 225 is B3 only)
- Ambient Temperature: 0 ~ 40 ℃
- Ambient Humidity: 20 ~ 90% (non-condensing)
- Insulation Class: F
- Dielectric Voltage: 1500Vac, 1minute
- Thermal Protection: Thermal Switch
- Altitude: 1000M Seal Level
- Speed Feedback:
  +5V, TTL Line Driver 1024PPR Encoder
- Ventilation: Forced Air Cooling
- Insulation Resistance: 10MΩ or more at 500VDC
- Bearing: Ball Bearing
- Drive Method: Direct drive
  (To consider radial load in Belt Drive)
- Fan Motor: 1Φ 220VAC, 50/60Hz

OPTIONS
- H Class insulation
- Resolver
- Special Encoder
- Special Shaft
- Special Flange
- Special Mounting
- Special Color
- Special Voltage
- Special Speed

CHARACTERISTIC CURVES



The data shown in the above sheets refer to 4-pole motors with basic frequency of 50 Hz and basic speed of 1500 rpm.

The characteristic power curve applies only when the motor is powered at the basic speed by the voltage indicated and at a max. speed corresponding to 380 Volt or higher (see diagram for voltage regulation).
For other voltages, the regulation range at constant power may be reduced.
On request, motors with basic speeds different from 1000,1500,2000RPM.

The DATA which are shown on the charts, refer to motors powered with nominal voltage and frequency.
The power/torque rates on the shaft are to be understood for continuous and intermittent S1-S6 duty cycle, ambient temperature of 40°C, altitude not more than 1000 meters above sea-level.
In the operations at constant torque (until the Nominal speed) the motor flux is maintained constant so as to maximize the torque constant and to obtain a system ready for the load change.

In order to obtain this the E/F ratio is maintained constant therefore the torque depends directly from the rotor current. It is necessary to point out that "E" voltage is not the power supply voltage of the motor but differs from this in the voltage drop due to the resistance and to the stator leakage inductance.
The upper speed limit of this operation mode is determined by the voltage available from the converter beyond which the E/F ratio cannot be kept constant and consequently the flux decreases;The operation range besides the nominal speed is named "field weakening zone" for the flux reduction due to the frequency increase without the relative increase of the voltage. As indicated above between and MAX SPEED the nominal power of the motor is available: the flux decreases when the speed increases but at the same time even the load torque decreases in the same way, From the mentioned relations you can note that the rotor current remains constant as well as the induced voltage of the machine. The voltage at the motor does not remain constant but increases expecially at high field weakening ratio:it is logical consequence that the value of nmax1 is defined from the value of available voltage.

3 φ、230VAC、IP54、IC416、w/1024PPR Line Drive Encoder

FRAME	Rated (RPM)	Rated Output (KW)	Rated Torque (NM)	MAX Torque (NM)	Rated Current (A)	HZ	Eff (%)	Constant Power Max Speed	MAX Speed (RPM)	Rotor Inertia (Kg-cm²)	Weight (Kg)
80S	1000	0.63	6.0	16	2.53	33.3	82	2700	8000	60.46	23
	1500	0.89	5.7	16	3.55	50	83	4000	8000	60.46	23
	2000	1.13	5.4	16	4.33	66.7	84	5400	8000	60.46	23
	3000	1.51	4.8	16	5.78	100	84	8000	8000	60.46	23
90S	1000	1.10	10.5	32	4.37	33.3	82	2700	8000	78.87	26
	1500	1.57	10.0	32	6.01	50	83	4000	8000	78.87	26
	2000	1.99	9.5	32	7.62	66.7	83	5400	8000	78.87	26
	3000	2.67	8.5	32	10.22	100	83	8000	8000	78.87	26
90M	1000	1.68	16.0	47	6.41	33.3	82	2700	8000	98.82	30
	1500	2.36	15.0	47	8.69	50	83	4000	8000	98.82	30
	2000	3.02	14.4	47	10.86	66.7	83	5400	8000	98.82	30
	3000	3.96	12.6	47	14.43	100	82	8000	8000	98.82	30
90L	1000	2.93	28.0	79	10.56	33.3	84	2700	8000	135.82	38
	1500	4.08	26.0	79	14.33	50	85	4000	8000	135.82	38
	2000	5.17	24.7	79	17.38	66.7	86	5400	8000	135.82	38
	3000	6.91	22.0	79	23.46	100	85	8000	8000	135.82	38
100S	580	2.43	40.0	117	9.91	19.3	76	1500	8000	245	51
	1000	3.98	38.0	117	14.50	33.3	83	2700	8000	245	51
	1500	5.73	36.5	117	20.30	50	85	4000	8000	245	51
	2000	7.25	34.6	117	24.89	66.7	86	5400	8000	245	51
	3000	9.42	30.0	117	32.37	100	86	8000	8000	245	51
100M	580	3.80	62.5	159	15.28	19.3	77	1500	8000	353	68
	1000	6.24	59.6	159	22.47	33.3	84	2700	8000	353	68
	1500	8.92	56.8	159	30.78	50	86	4000	8000	353	68
	2000	11.83	56.5	159	40.12	66.7	86	5400	8000	353	68
	3000	14.95	47.6	159	50.76	100	86	8000	8000	353	68
100L	580	5.56	91.6	233	21.56	19.3	79	1500	8000	405	83
	1000	9.16	87.5	233	32.60	33.3	85	2700	8000	405	83
	1500	13.08	83.3	233	45.03	50	86	4000	8000	405	83
	2000	17.38	83.0	233	57.39	66.7	86	5400	8000	405	83
	3000	24.79	78.9	233	82.22	100	86	8000	8000	405	83
132S	580	7.59	125.0	318	28.00	19.3	83	1500	6000	650	105
	1000	12.57	120.0	318	42.20	33.3	89	2700	6000	650	105
	1500	17.37	110.6	318	55.12	50	92	4000	6000	650	105
	2000	22.03	105.2	318	68.36	66.7	93	5400	6000	650	105
	3000	29.34	93.4	318	91.04	100	93	6000	6000	650	105
132M	580	9.35	154.0	392	33.68	19.3	84	1500	6000	770	120
	1000	15.39	147.0	392	48.88	33.3	93	2700	6000	770	120
	1500	22.00	140.0	392	67.52	50	94	4000	6000	770	120
	2000	27.75	132.5	392	83.27	66.7	94	5400	6000	770	120
	3000	37.26	118.6	392	111.80	100	94	6000	6000	770	120
132L	580	11.11	183.0	467	40.51	19.3	84	1500	6000	1010	152
	1000	18.33	175.0	467	60.18	33.3	91	2700	6000	1010	152
	1500	26.17	166.6	467	81.20	50	93	4000	6000	1010	152
	2000	33.18	158.4	467	98.44	66.7	94	5400	6000	1010	152
	3000	44.83	142.7	467	133.02	100	94	6000	6000	1010	178
132X	580	13.79	227.0	636	49.06	19.3	85	1500	4500	1200	178
	1000	22.93	219.0	636	72.83	33.3	93	2700	4500	1200	178
	1500	32.61	207.6	636	100.10	50	94	4000	4500	1200	178
	2000	40.84	195.0	636	121.26	66.7	95	4500	4500	1200	178
	3000	56.08	178.5	636	168.27	100	94	4500	4500	1200	178

3 φ、400VAC、IP54、IC416、w/1024PPR Line Drive Encoder

80S	1000	0.63	6.0	16	1.47	33.3	82	2200	8000	60.46	23
	1500	0.89	5.7	16	2.04	50	83	3300	8000	60.46	23
	2000	1.13	5.4	16	2.49	66.7	84	4000	8000	60.46	23
	3000	1.51	4.8	16	3.32	100	84	6000	8000	60.46	23
90S	1000	1.10	10.5	32	2.51	33.3	82	2200	8000	79.87	26
	1500	1.57	10.0	32	3.46	50	83	3300	8000	79.87	26
	2000	1.99	9.5	32	4.38	66.7	83	4000	8000	79.87	26
	3000	2.67	8.5	32	5.88	100	83	6000	8000	79.87	26

3 φ、400VAC、IP54、IC416、w/1024PPR Line Drive Encoder

FRAME	Rated (RPM)	Rated Output (KW)	Rated Torque (NM)	MAX Torque (NM)	Rated Current (A)	HZ	Eff (%)	Constant Power Max Speed	MAX Speed (RPM)	Rotor Inertia (Kg-cm²)	Weight (Kg)
90M	1000	1.68	16.0	47	3.69	33.3	82	2200	8000	98.82	30
	1500	2.36	15.0	47	5.00	50	83	3300	8000	98.82	30
	2000	3.02	14.4	47	6.24	66.7	83	4000	8000	98.82	30
	3000	3.96	12.6	47	8.30	100	82	6000	8000	98.82	30
90L	1000	2.93	28.0	79	6.14	33.3	84	2200	8000	135.82	38
	1500	4.08	26.0	79	8.24	50	85	3300	8000	135.82	38
	2000	5.17	24.7	79	9.99	66.7	86	4000	8000	135.82	38
	3000	6.91	22.0	79	13.49	100	85	6000	8000	135.82	38
100S	580	2.43	40.0	117	5.77	19.3	76	1200	8000	245	51
	1000	3.96	38.0	117	8.44	33.3	83	2200	8000	245	51
	1500	5.73	36.5	117	11.68	50	85	3300	8000	245	51
	2000	7.25	34.6	117	14.31	66.7	86	4000	8000	245	51
	3000	9.42	30.0	117	18.18	100	86	6000	8000	245	51
100M	580	3.80	62.5	159	8.79	19.3	77	1200	8000	353	68
	1000	6.24	59.6	159	13.08	33.3	84	2200	8000	353	68
	1500	8.92	56.8	159	17.70	50	86	3300	8000	353	68
	2000	11.83	56.5	159	23.07	66.7	86	4000	8000	353	68
	3000	14.95	47.6	159	28.52	100	86	6000	8000	353	68
100L	580	5.56	91.6	233	12.55	19.3	79	1200	8000	405	83
	1000	9.16	87.5	233	18.75	33.3	85	2200	8000	405	83
	1500	13.08	83.3	233	25.89	50	86	3300	8000	405	83
	2000	17.38	83.0	233	33.00	66.7	86	4000	8000	405	83
	3000	24.79	78.9	233	46.74	100	86	6000	8000	405	83
132S	580	7.59	125.0	318	16.10	19.3	83	1200	6000	650	105
	1000	12.57	120.0	318	24.26	33.3	89	2200	6000	650	105
	1500	17.37	110.6	318	31.69	50	92	3300	6000	650	105
	2000	22.03	105.2	318	39.31	66.7	93	4000	6000	650	105
	3000	29.34	93.4	318	52.35	100	93	6000	6000	650	105
132M	580	9.35	154.0	392	19.60	19.3	84	1200	6000	770	120
	1000	15.39	147.0	392	28.11	33.3	93	2200	6000	770	120
	1500	22.00	140.0	392	38.83	50	94	3300	6000	770	120
	2000	27.75	132.5	392	47.88	66.7	94	4000	6000	770	120
	3000	37.26	118.6	392	63.57	100	94	6000	6000	770	120
132L	580	11.11	183.0	467	23.29	19.3	84	1200	6000	1010	152
	1000	18.33	175.0	467	34.20	33.3	91	2200	6000	1010	152
	1500	26.17	166.6	467	46.69	50	93	3300	6000	1010	152
	2000	33.18	158.4	467	56.60	66.7	94	4000	6000	1010	152
	3000	44.83	142.7	467	76.49	100	94	6000	6000	1010	152
132X	580	13.79	227.0	636	28.90	19.3	85	1200	4500	1200	178
	1000	22.93	219.0	636	42.37	33.3	93	2200	4500	1200	178
	1500	32.61	207.6	636	57.56	50	94	3300	4500	1200	178
	2000	40.84	195.0	636	69.72	66.7	95	4000	4500	1200	178
	3000	56.08	178.5	636	95.68	100	94	4500	4500	1200	178
160S	580	16.70	275.0	625	36.33	19.3	84	1200	4000	1860	240
	1000	27.75	265.0	625	52.53	33.3	93	2200	4000	1860	240
	1500	39.27	250.0	625	70.12	50	94	3300	4000	1860	240
	2000	50.27	240.0	625	87.78	66.7	95	4000	4000	1860	240
	3000	71.63	228.0	625	125.09	100	95	4000	4000	1860	240
160M	580	19.44	320.0	725	41.26	19.3	85	1200	4000	2300	265
	1000	31.94	305.0	725	60.37	33.3	92	2200	4000	2300	265
	1500	45.55	290.0	725	82.29	50	94	3300	4000	2300	265
	2000	58.64	280.0	725	102.53	66.7	96	4000	4000	2300	265
	3000	81.68	260.0	725	144.31	100	95	4000	4000	2300	265
160L	580	21.38	352.0	800	44.82	19.3	85	1200	4000	2560	282
	1000	35.08	335.0	800	65.52	33.3	92	2200	4000	2560	282
	1500	50.27	320.0	800	89.75	50	94	3300	4000	2560	282
	2000	60.74	290.0	800	104.87	66.7	95	4000	4000	2560	282
	3000	86.39	275.0	800	149.17	100	95	4000	4000	2560	282

3φ、400VAC、IP54、IC416、w/1024PPR Line Drive Encoder

FRAME	Rated (RPM)	Rated Output (KW)	Rated Torque (NM)	MAX Torque (NM)	Rated Current (A)	HZ	Eff (%)	Constant Power Max Speed	MAX Speed (RPM)	Rotor Inertia (Kg-cm²)	Weight (Kg)
180S	580	26.72	440.0	880	54.79	19.3	88	1200	4000	5000	370
	1000	40.98	391.3	880	78.40	33.3	92	2200	4000	5000	370
	1500	56.63	360.5	880	98.90	50	95	3300	4000	5000	370
	2000	71.78	342.7	880	121.26	66.7	96	4000	4000	5000	370
	3000	96.67	307.7	880	161.85	100	96	4000	4000	5000	370
180M	580	34.01	560.0	1111	68.95	19.3	89	1200	4000	6900	440
	1000	57.60	550.0	1111	110.36	33.3	93	2200	4000	6900	440
	1500	79.33	505.0	1111	146.57	50	93	3300	4000	6900	440
	2000	98.44	470.0	1111	175.76	66.7	94	4000	4000	6900	440
	3000	134.98	429.6	1111	238.44	100	95	4000	4000	6900	440
180L	580	38.87	640.0	1261	78.80	19.3	89	1200	4000	7770	500
	1000	64.93	620.0	1261	122.89	33.3	93	2200	4000	7770	500
	1500	90.01	573.0	1261	162.44	50	93	3300	4000	7770	500
	2000	117.29	560.0	1261	202.50	66.7	95	4000	4000	7770	500
	3000	152.49	485.4	1261	260.33	100	95	4000	4000	7770	500
225S	580	40.39	665.0	1200	80.08	19.3	91	1200	4000	14790	635
	1000	68.07	650.0	1200	130.24	33.3	92	2200	4000	14790	635
	1500	99.12	631.0	1200	177.17	50	95	3300	4000	14790	635
	2000	125.66	600.0	1200	217.18	66.7	96	4000	4000	14790	635
	3000	169.65	540.0	1200	289.62	100	95	4000	4000	14790	635
225M	580	55.88	920.0	1680	112.02	19.3	90	1200	4000	19300	735
	1000	94.25	900.0	1680	184.56	33.3	91	2200	4000	19300	735
	1500	131.95	840.0	1680	246.45	50	92	3300	4000	19300	735
	2000	157.08	750.0	1680	280.23	66.7	93	4000	4000	19300	735
	3000	224.62	715.0	1680	383.25	100	94	4000	4000	19300	735
225L	580	78.35	1290.0	2400	159.06	19.3	90	1200	4000	23260	860
	1000	123.57	1180.0	2400	242.34	33.3	92	2200	4000	23260	860
	1500	172.79	1100.0	2400	319.67	50	94	3300	4000	23260	860
	2000	226.20	1080.0	2400	400.12	66.7	96	4000	4000	23260	860
	3000	292.17	930.0	2400	499.20	100	96	4000	4000	23260	860

3φ、230VAC、IP23、IC06、w/1024PPR Line Drive Encoder

132S	580	9.72	160.0	406	38.14	19.3	82	1100	5000	650	143
	1000	15.92	152.0	406	55.50	33.3	90	1800	5000	650	143
	1500	22.78	145.0	406	74.74	50	90	2700	5000	650	143
	2000	29.95	143.0	406	91.82	66.7	92	3600	5000	650	143
	3000	42.73	136.0	406	129.58	100	93	5000	5000	650	143
132M	580	12.75	210.0	535	48.83	19.3	83	1100	5000	770	159
	1000	20.94	200.0	535	70.55	33.3	92	1800	5000	770	159
	1500	30.00	191.0	535	96.31	50	92	2700	5000	770	159
	2000	38.75	185.0	535	121.52	66.7	92	3600	5000	770	159
	3000	55.29	176.0	535	169.60	100	94	5000	5000	770	159
132L	580	16.10	265.0	672	62.47	19.3	84	1100	5000	1010	188
	1000	29.95	286.0	672	102.33	33.3	93	1800	5000	1010	188
	1500	39.58	252.0	672	127.20	50	93	2700	5000	1010	188
	2000	50.27	240.0	672	157.77	66.7	93	3600	5000	1010	188
	3000	72.26	230.0	672	221.63	100	93	5000	5000	1010	188
132X	580	19.44	320.0	801	74.47	19.3	84	1100	4500	1200	210
	1000	31.42	300.0	801	106.00	33.3	93	1800	4500	1200	210
	1500	44.92	286.0	801	141.14	50	94	2700	4500	1200	210
	2000	58.64	280.0	801	174.01	66.7	94	3600	4500	1200	210
	3000	84.19	268.0	801	249.83	100	94	4500	4500	1200	210

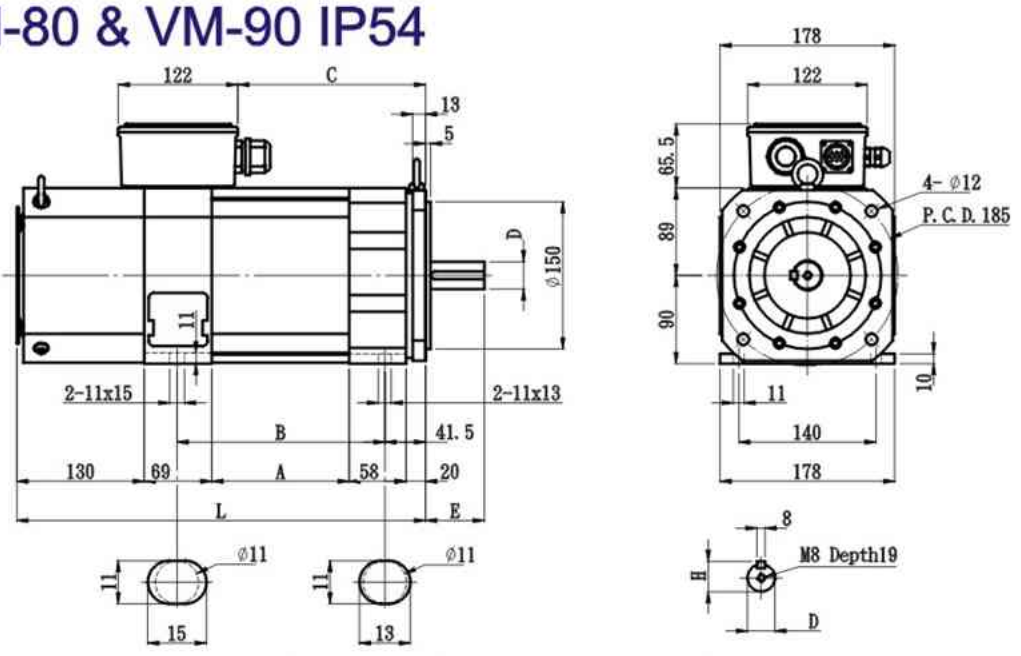
3ϕ、400VAC、IP23、IC06、w/1024PPR Line Drive Encoder

132S	580	9.72	160.0	406	21.93	19.3	82	850	5000	650	143
	1000	15.92	152.0	406	31.91	33.3	90	1400	5000	650	143
	1500	22.78	145.0	406	42.98	50	90	2100	5000	650	143
	2000	29.95	143.0	406	52.80	66.7	92	2700	5000	650	143
	3000	42.73	136.0	406	74.51	100	93	4200	5000	650	143

3φ、400VAC、IP23、IC06、w/1024PPR Line Drive Encoder

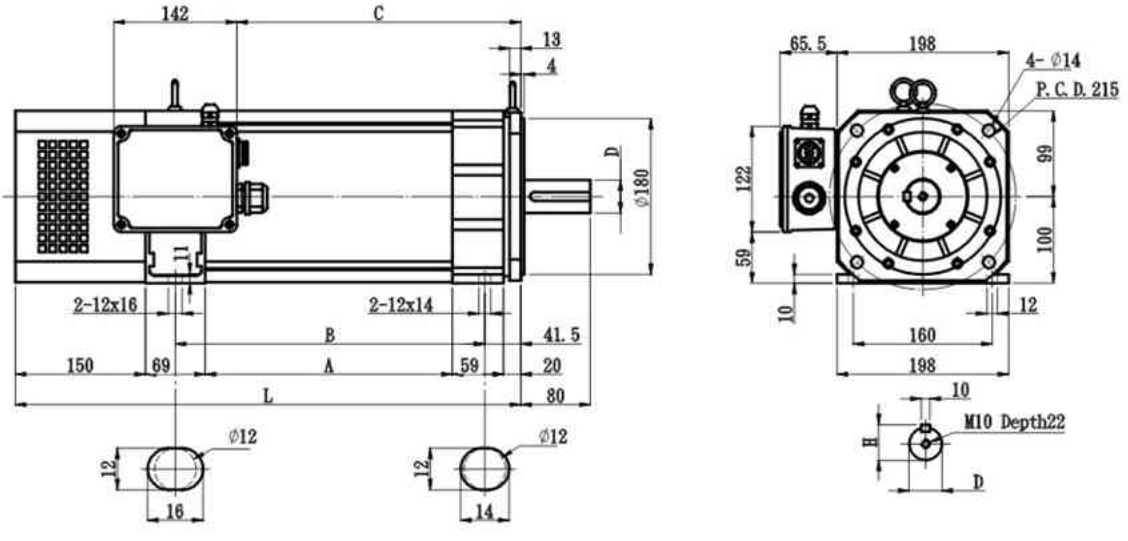
FRAME	Rated (RPM)	Rated Output (KW)	Rated Torque (NM)	MAX Torque (NM)	Rated Current (A)	HZ	Eff (%)	Constant Power Max Speed	MAX Speed (RPM)	Rotor Inertia (Kg-cm²)	Weight (Kg)
132M	580	12.75	210.0	535	28.08	19.3	83	850	5000	770	159
	1000	20.94	200.0	535	40.57	33.3	92	1400	5000	770	159
	1500	30.00	191.0	535	55.38	50	92	2100	5000	770	159
	2000	38.75	185.0	535	69.87	66.7	92	2700	5000	770	159
	3000	55.29	176.0	535	97.52	100	93	4200	5000	770	159
132L	580	16.10	265.0	672	35.46	19.3	84	850	5000	1010	188
	1000	29.95	286.0	672	58.84	33.3	93	1400	5000	1010	188
	1500	39.58	252.0	672	73.14	50	93	2100	5000	1010	188
	2000	50.27	240.0	672	90.72	66.7	93	2700	5000	1010	188
	3000	72.26	230.0	672	127.44	100	93	4200	5000	1010	188
132X	580	19.44	320.0	801	42.28	19.3	84	850	4500	1200	210
	1000	31.42	300.0	801	60.95	33.3	93	1400	4500	1200	210
	1500	44.92	286.0	801	81.16	50	94	2100	4500	1200	210
	2000	58.64	280.0	801	100.06	66.7	94	2700	4500	1200	210
	3000	84.19	268.0	801	143.65	100	94	4200	4500	1200	210
160S	580	27.33	450.0	902	58.02	19.3	85	850	4000	1860	289
	1000	45.03	430.0	902	87.10	33.3	91	1400	4000	1860	289
	1500	64.40	410.0	902	119.00	50	93	2100	4000	1860	289
	2000	81.68	390.0	902	141.03	66.7	95	2700	4000	1860	289
	3000	116.24	370.0	902	196.37	100	96	4000	4000	1860	289
160M	580	30.07	495.0	968	62.30	19.	86	850	4000	2300	325
	1000	50.27	480.0	968	97.36	33.3	92	1400	4000	2300	325
	1500	69.12	440.0	968	127.87	50	94	2100	4000	2300	325
	2000	87.96	420.0	968	152.02	66.7	96	2700	4000	2300	325
	3000	125.66	400.0	968	214.71	100	96	4000	4000	2300	325
160L	580	34.01	560.0	1166	70.54	19.3	87	850	4000	2560	350
	1000	57.60	550.0	1166	110.20	33.3	92	1400	4000	2560	350
	1500	83.25	530.0	1166	152.02	50	93	2100	4000	2560	350
	2000	98.44	470.0	1166	169.96	66.7	95	2700	4000	2560	350
	3000	138.23	440.0	1166	228.55	100	97	4000	4000	2560	350
180S	580	42.52	700.0	1260	85.23	19.3	90	850	4000	5030	378
	1000	64.40	615.0	1260	124.75	33.3	92	1400	4000	5030	378
	1500	81.68	520.0	1260	152.74	50	93	2100	4000	5030	378
	2000	104.72	500.0	1260	184.83	66.7	94	2700	4000	5030	378
	3000	141.37	450.0	1260	241.35	100	95	4000	4000	5030	378
180M	580	52.11	858.0	1560	103.18	19.3	90	850	4000	6900	450
	1000	89.01	850.0	1560	170.31	33.3	92	1400	4000	6900	450
	1500	122.52	780.0	1560	223.72	50	93	2100	4000	6900	450
	2000	146.61	700.0	1560	255.82	66.7	94	2700	4000	6900	450
	3000	208.92	665.0	1560	356.45	100	94	4000	4000	6900	450
180L	580	55.27	910.0	1656	108.23	19.3	91	850	4000	7770	510
	1000	94.98	907.0	1656	179.78	33.3	93	1400	4000	7770	510
	1500	130.06	828.0	1656	234.73	50	93	2100	4000	7770	510
	2000	170.07	812.0	1656	296.75	66.7	94	2700	4000	7770	510
	3000	242.22	771.0	1656	413.26	100	94	4000	4000	7770	510
225S	580	63.77	1050.0	1530	127.69	19.3	89	850	4000	14790	726
	1000	130.90	1250.0	1530	247.44	33.3	92	1400	4000	14790	726
	1500	172.79	1100.0	1530	322.73	50	92	2100	4000	14790	726
	2000	219.91	1050.0	1530	392.66	66.7	94	2700	4000	14790	726
	3000	292.17	930.0	1530	498.49	100	94	4000	4000	14790	726
225M	580	85.03	1400.0	2159	170.26	19.3	89	850	4000	19380	840
	1000	143.47	1370.0	2159	271.19	33.3	92	1400	4000	19380	840
	1500	199.49	1270.0	2159	364.26	50	93	2100	4000	19380	840
	2000	238.76	1140.0	2159	417.43	66.7	96	2700	4000	19380	840
	3000	340.24	1083.0	2159	587.02	100	94	4000	4000	19380	840
225L	580	109.02	1795.0	3230	218.57	19.3	90	850	4000	23260	960
	1000	178.02	1700.0	3230	344.82	33.3	92	1400	4000	23260	960
	1500	259.18	1650.0	3230	474.46	50	95	2100	4000	23260	960
	2000	335.10	1600.0	3230	579.14	66.7	96	2700	4000	23260	960
	3000	455.53	1450.0	3230	786.51	100	95	4000	4000	23260	960

VM-80 & VM-90 IP54



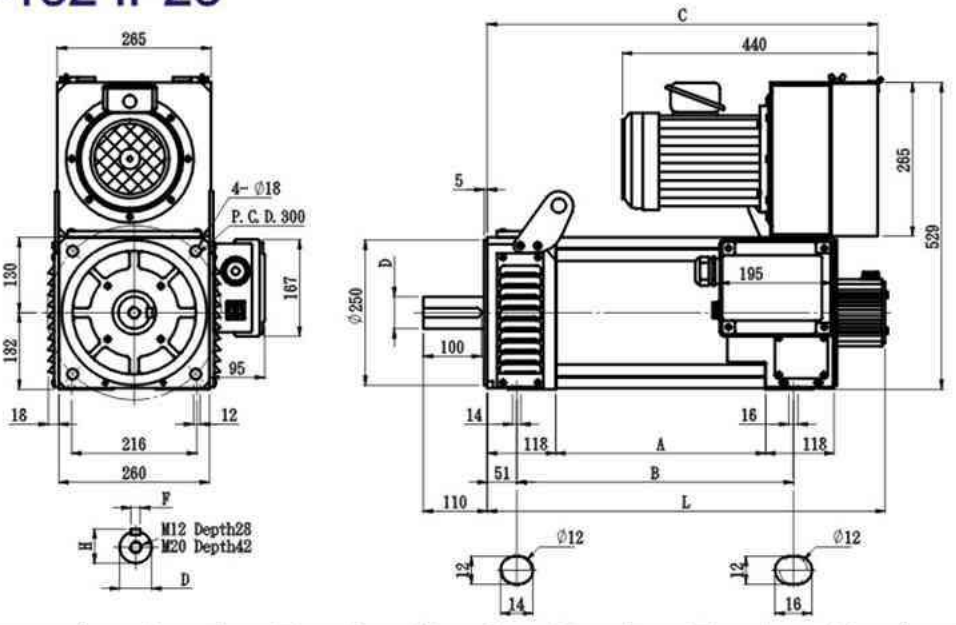
	A	B	C	D	E	H	L
80S	60	132	111.5	Ø24	50	27	337
90S	80	152	131.5	Ø24	50	27	357
90M	100	172	151.5	Ø28	60	31	377
90L	140	212	191.5	Ø28	60	31	417

VM-100 IP54



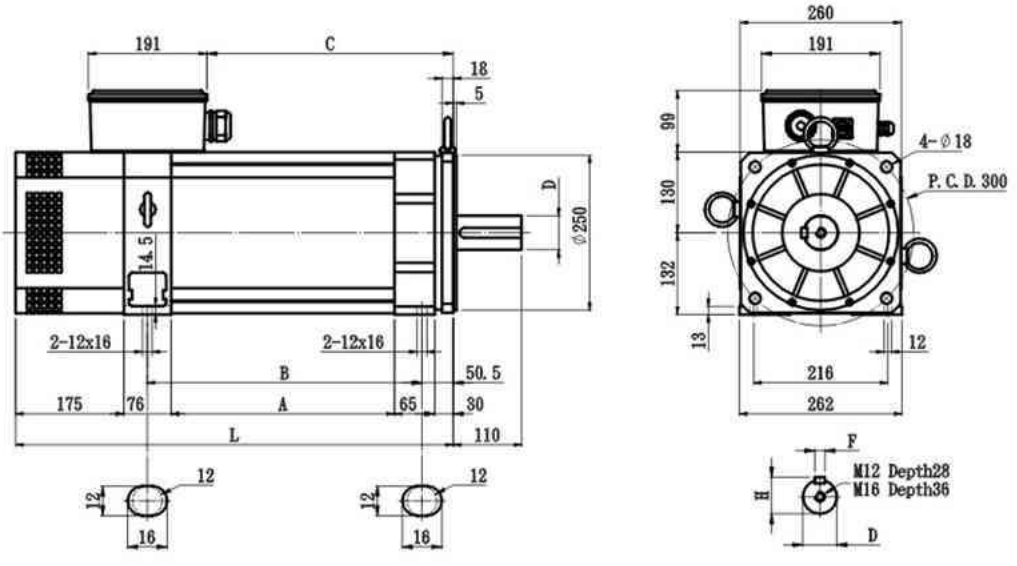
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100S	140	212	182.5	Ø32	35	438
100M	215	287	257.5	Ø32	35	513
100L	285	357	327.5	Ø38	41	583

VM-132 IP23



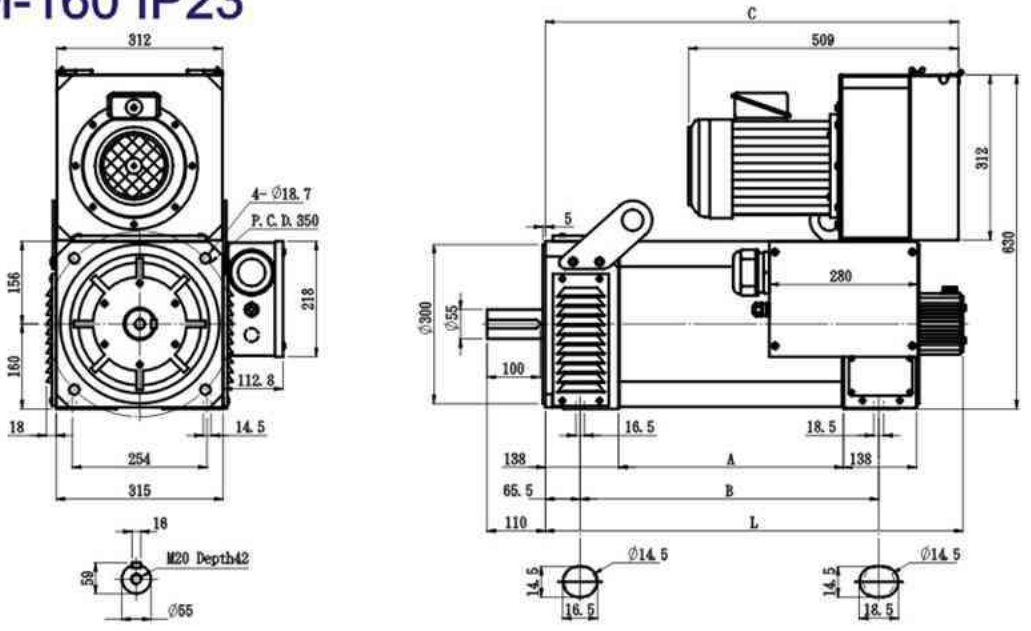
	A	B	C	D	F	H	L
132S	182	297	493	Ø42	12	45	506
132M	222	337	533	Ø42	12	45	546
132L	292	407	603	Ø42	12	45	616
132X	362	477	673	Ø55	16	59	686

VM-132 IP54



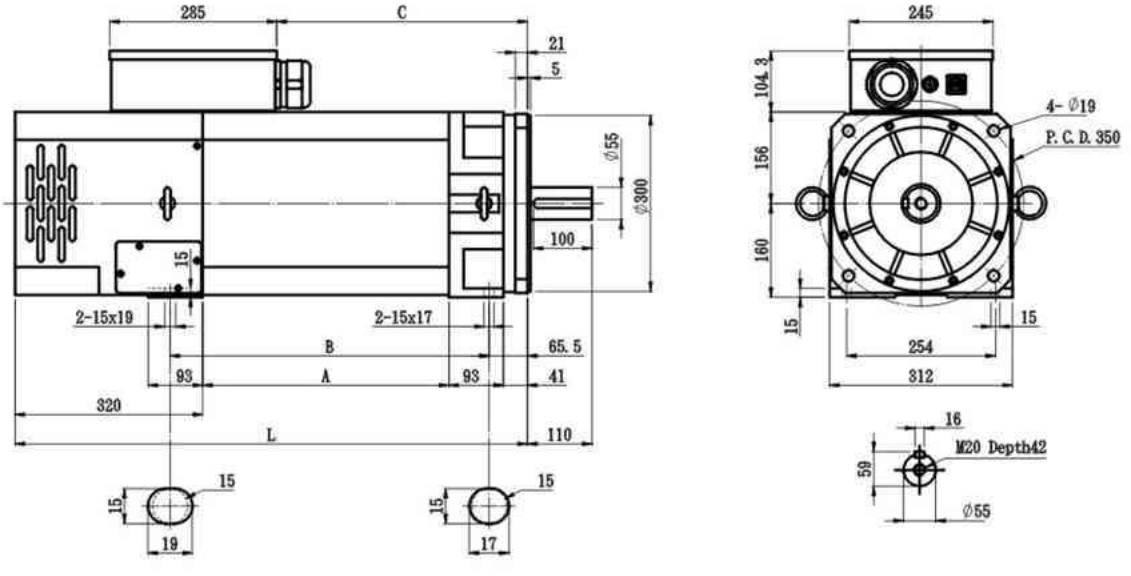
	A	B	C	D	F	H	L
132S	180	263	217.5	Ø42	12	45	526
132M	220	303	257.5	Ø42	12	45	566
132L	290	373	327.5	Ø42	12	45	636
132X	360	443	397.5	Ø55	16	59	706

VM-160 IP23



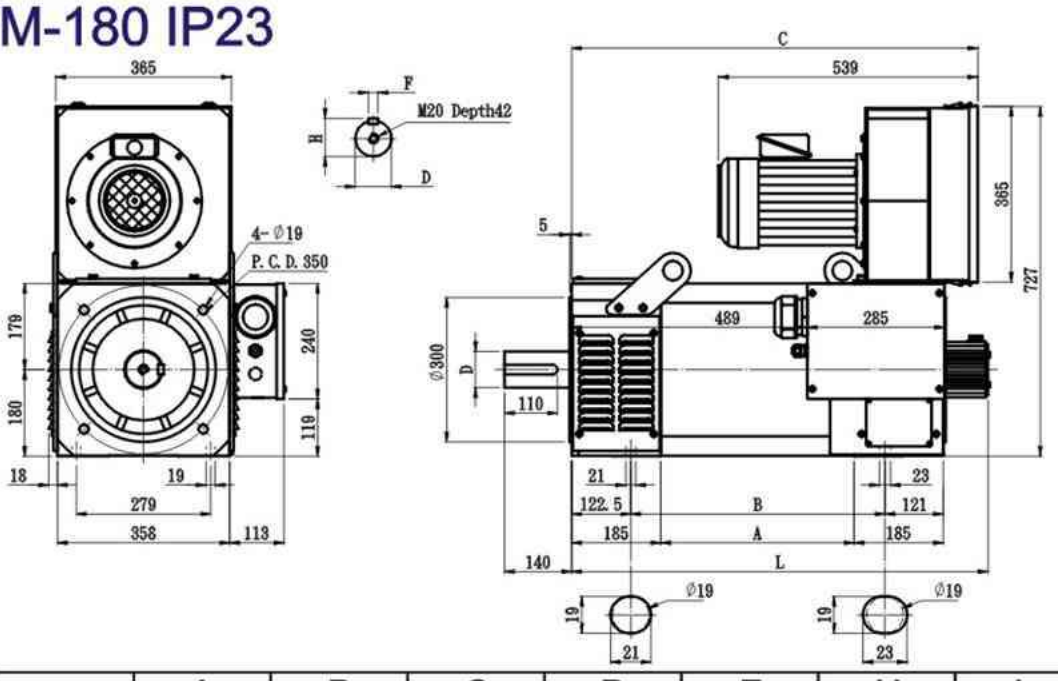
	A	B	C	L
160S	324	463.5	679	688
160M	384	523.5	739	748
160L	424	563.5	779	788

VM-160 IP54



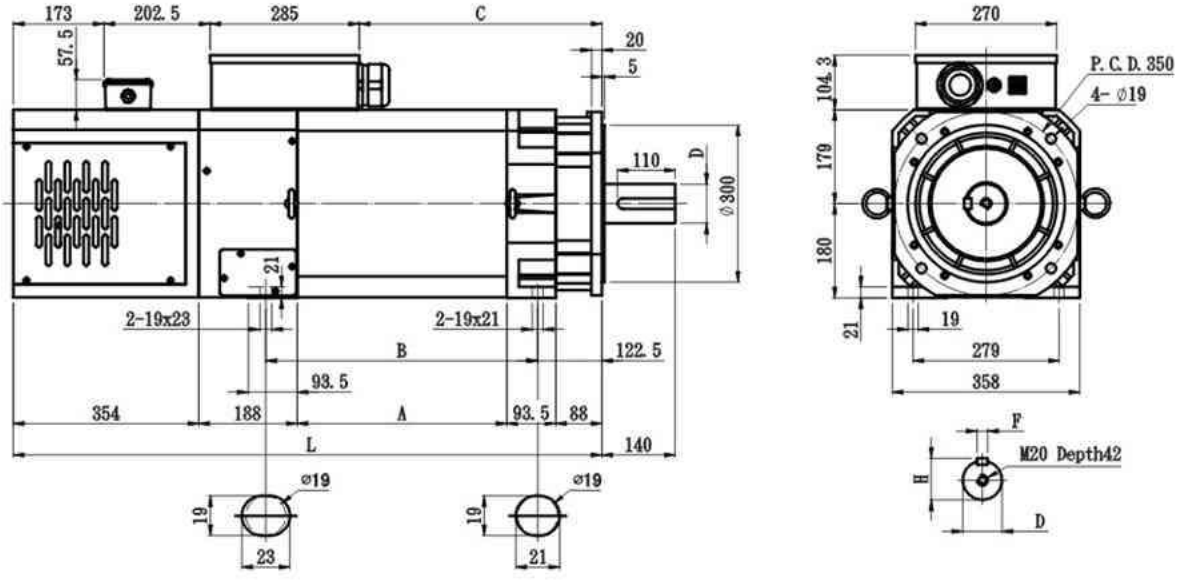
	A	B	C	L
160S	320	444	327.5	774
160M	380	504	387.5	834
160L	420	544	427.5	874

VM-180 IP23



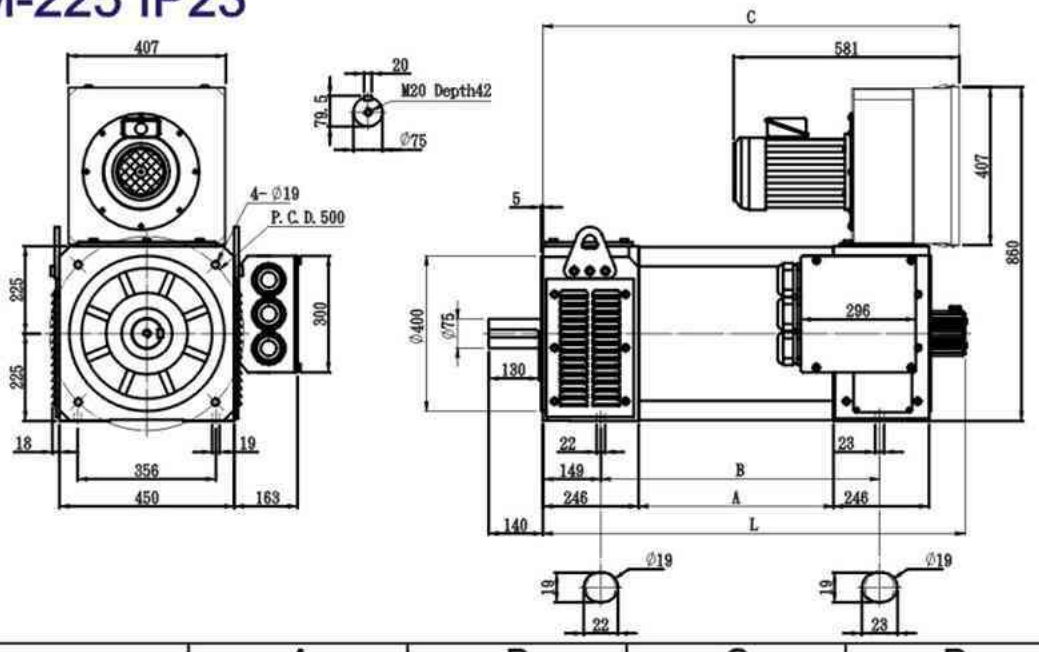
	A	B	C	D	F	H	L
180S	267	393.5	709	Ø60	18	64	730
180M	357	483.5	799	Ø75	20	79.5	820
180L	402	528.5	844	Ø75	20	79.5	865

VM-180 IP54



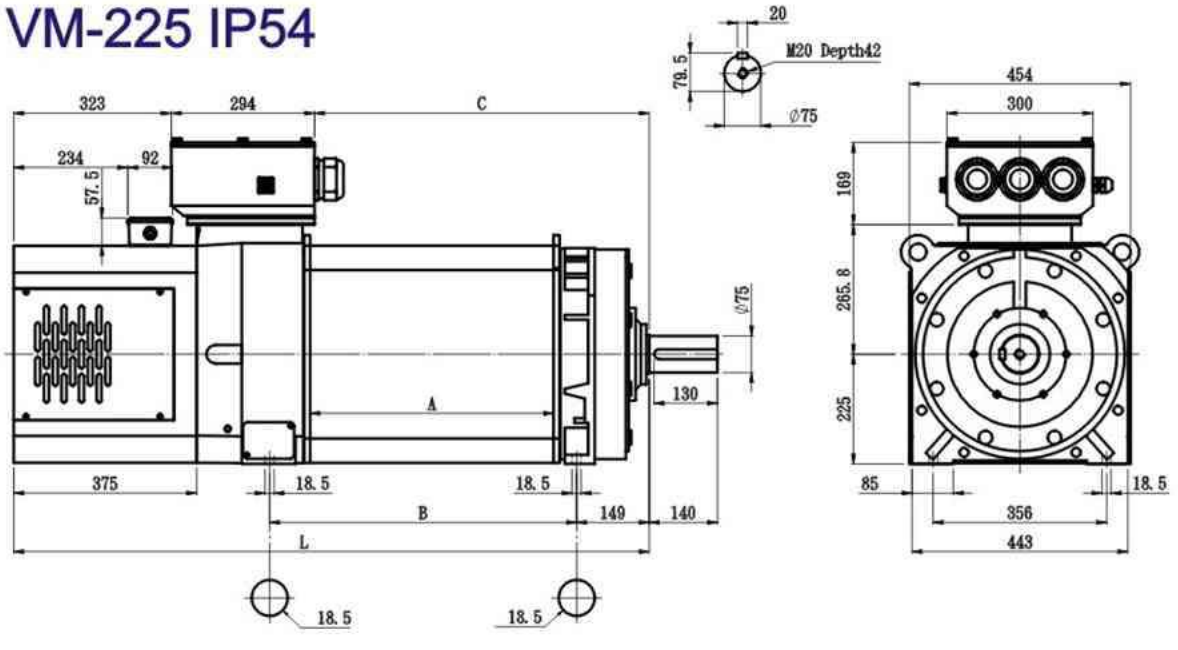
	A	B	C	D	F	H	L
180S	265	384	328	Ø60	18	64	988.5
180M	355	474	418	Ø75	20	79.5	1078.5
180L	400	519	463	Ø75	20	79.5	1123.5

VM-225 IP23



	A	B	C	D
225S	317	533	887	902
225M	412	628	982	997
225L	502	718	1072	1087

VM-225 IP54

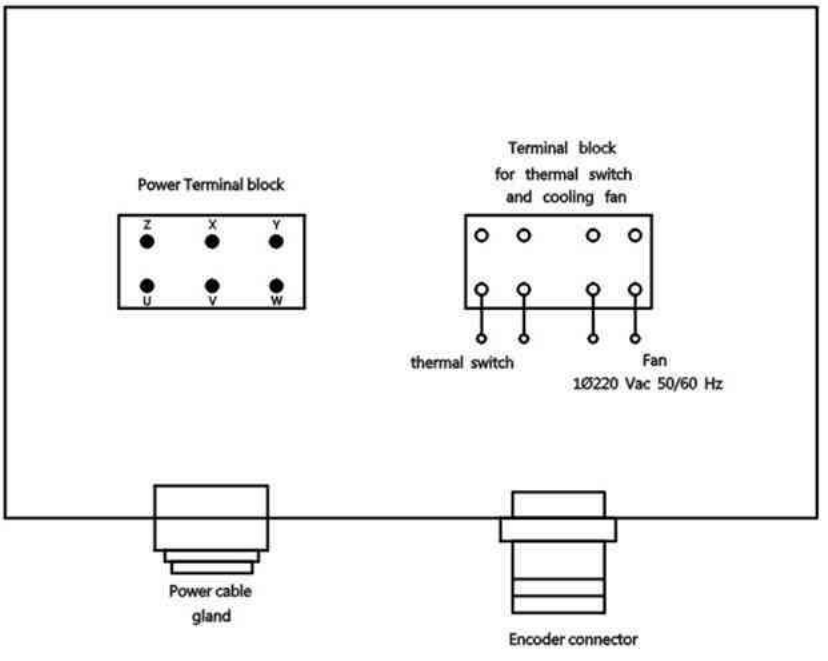


	A	B	C	L
225S	315	445	502	1119
225M	410	540	597	1214
225L	500	630	687	1304

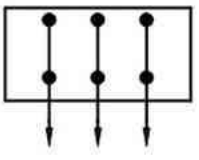
VM MOTOR INQUIRY FORM

INQUIRY NO.:	**FRAME SIZE:**	**QUANTITY:**
RATED OUTPUT.:	**RATED TORQUE:** NM (CONSTANT TORQUE ZONE)	**RATED SPEED:** RPM (CONSTANT TORQUE ZONE)
SPEED OF CONSTANT POWER ZONE:	**RPM** **TO** **RPM**	
MAX. SPEED: RPM	**DRIVE(SUPPLY) VOLTAGE:** VAC	
MOUNTING:	☐ B3 ☐ B5 ☐ B35	
PROTECTION:	☐ IP54 ☐ IP23 ☐ OTHERS _____	
ENCODER PPR:	☐ 1024PPR ☐ 2048PPR ☐ OTHERS _____	
ENCODER TYPE:	☐ +5V TTL ☐ PUSH PULL	
	☐ NPN OPEN COLLECTOR ☐ PNP NPN OPEN COLLECTOR	
	☐ OTHER _____	
VOLTAGE OF FAN:	☐ 1Φ230VAC ☐ 3Φ380VAC ☐ 3Φ400VAC ☐ OTHERS _____	
BRAKE:	☐ WITH ☐ WITHOUT ☐ SAFE BRAKE ☐ POWER ON BRAKE	
VOLTAGE OF BRAKE:	_____	
COLOR OF THE MOTOR:	☐ HPB STANDARD ☐ OTHERS _____	
POSITION OF TERMINAL BOX VIEM FROM DRIVE END	☐ RIGHT ☐ LEFT ☐ TOP	
POSITION OF FAN UNIT VIEM FROM DRIVE END (IP23 MOTOR)	☐ RIGHT ☐ LEFT ☐ TOP	

TERMINAL BOX

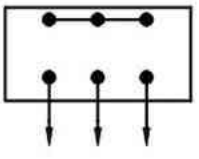


Connection of power block



△

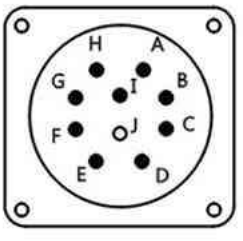
Low Voltage



Y

High Voltage

Description of encoder connector



	Line Driver	push-pull
H	+5V	+Vcc
I	0V	0V
A	A	A
B	/A	0V
C	B	B
D	/B	0V
E	Z	Z
F	/Z	0V
G	Shield	Shield

PS:IP23,IC06 MOTOR:TERMINAL BOX OF FAN MOTOR IS ON THE FAN MOTOR

HPB MOTION CONTROL CO.,LTD.

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E-MAIL：hpb.motion@msa.hinet.net / hpb.motion2@gmail.com
Web-site：www.hpb-industry.com