

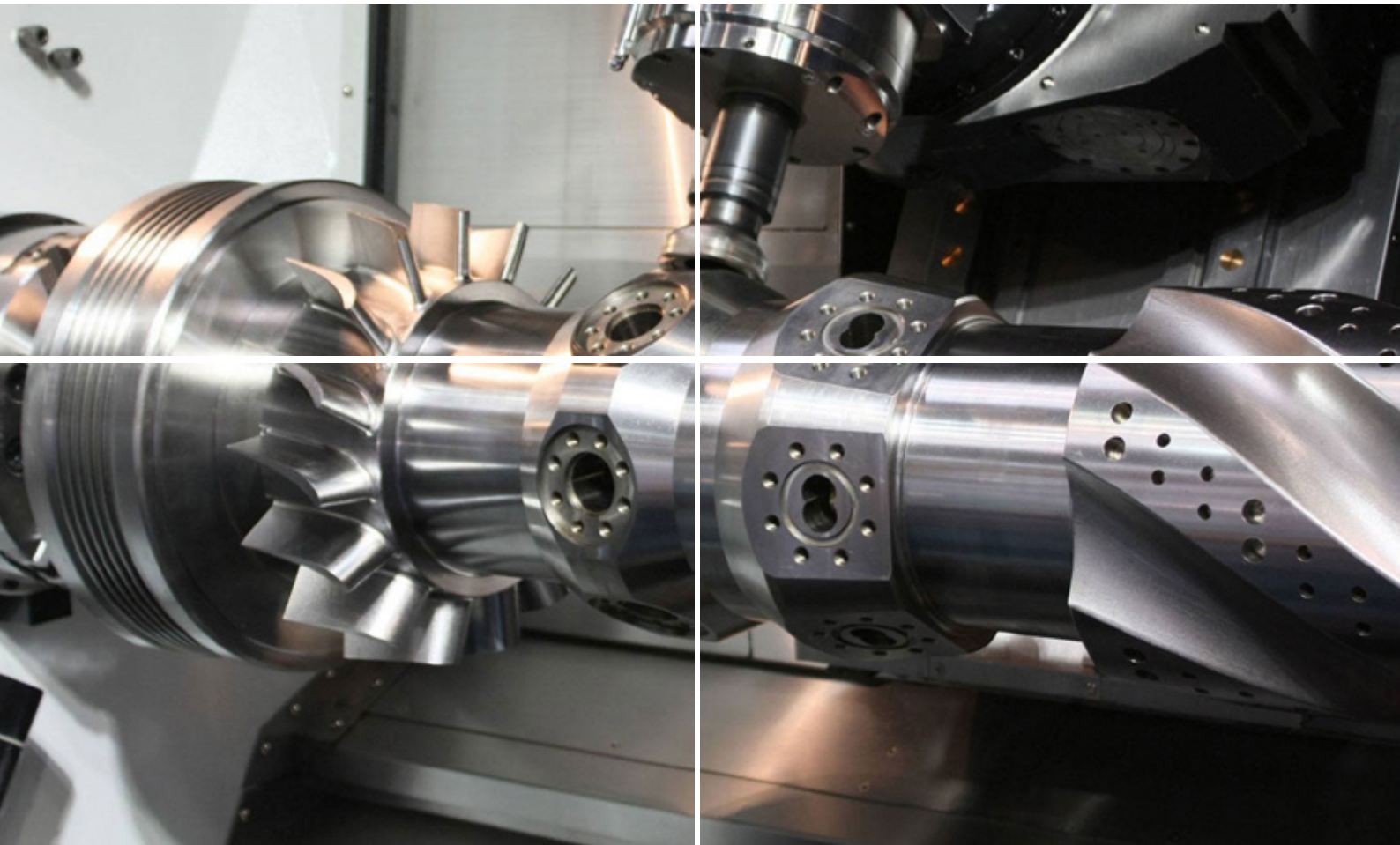
More Value for Your Motor



AMD Series

Spindle Servo Drives & Motors

Since
2005



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DISTRIBUTORS

AMD

AC Spindle Servo Drives / 380V, 0.4-160 kW

- V/F Control, SFVC, FVC Control Mode
- Controls AC Induction, Spindle Asynchronous Motor
- Support Various Optional Encoder
- Easy and flexible control; MODBUS RS485
- Incredible Performance of Speed, torque and position control; All protection



AMD series spindle servo drives is designed for numerical control machine of new type and high precision and it has new functions like positioning control, pulse synchronous control and so on. It supports FEEDBACK vector control towards the spindle motor with encoder. This drive has high responding ability towards speed as well as smooth speed. It can achieve various functions like warrant stop of spindle; Rigid tapping; indexing positioning and so on by cooperating with different numerical control system.

Features

Multi encoder support; it can support differential encoder; ABZ encoder and so on.

Power dip ride-through, load feedback energy compensates for any voltage reduction, allowing the drive to continue to operate for a short time during power dips.

Overvoltage and overcurrent stall control; the system limits the output current and voltage automatically during operation to prevent frequent or excessive trips.

Torque limit and control: the system limits the torque automatically to prevent frequent over-current tripping during operation. Torque control is applied in vector control.

Onboard multiple preset position: the system implements up to 16 position by using simple PLC function or by using digital input signals.

Item		Specifications		
Basic Function	Control Mode	V/F Control, Sensorless Vector Control, Closed-Loop Vector Control		
	Motor Types	3 Phase Induction Motor	Spindle Asynchronous Motor	
	Max. Frequency	V/F control mode	0-1500 Hz	
		Vector control mode	0-1000 Hz	
	Carrier Frequency	0.8-16.0 kHz Adjust the frequency automatically according to loading characteristics.		
	Input Frequency Resolution	Digital Setting	0.01 Hz	
		Analog Setting	Max. Frequency x 0.025%	
	Start Torque	G Type -0.5 Hz / 150% (SFVC) / 0.0 Hz / 180% (FVC)		
	Speed setting Range	1:100 SFVC	1:1000 FVC	
	Speed Stability Accuracy	±0.5%, SFVC	±0.2%, FVC	
	Overload Capacity	G Type	60s for 150%; 3s for 180% of rated current	
		P Type	60s for 120%; 3s for 150% of rated current	
	Torque Boost	Auto-boost; Manual adjust range	0.1%~30.0%	
	V/F Curve	Linear/ Multi-Point and N-th Power V/F Curve		
	Ramp Mode	Straight Line Ramp; 4 Groups of Acceleration/Deceleration time 0.0-6500.0s		
	DC Braking	DC Braking Frequency	0.0Hz to Max. frequency	
		Braking Time	0.0s~36.0s	
		Braking Action Current Value	0.0%~100.0%	
	Simple PLC, Multiple Preset Speed	It Implements up to 16 Speeds via the Simple PLC Function or Combination of Terminal States		
	Auto voltage regulation (AVR)	It Can Keep Constant Output Voltage Automatically when the Mains Voltage Changes		
	Overvoltage/ Overcurrent Stall Control	The current and voltage are limited automatically during the running process so as to avoid Frequent Tripping Due to Overvoltage/Over Current.		
	Rapid Current Limit	It can decrease the over-current fault on a maximum extent, thus protecting the normal operation of the spindle servo driver.		
	Torque Limit and Control	It can Limit the Torque Automatically and Prevent Frequent Over Current Tripping During the Running Process. Can be adjusted through FVC control mode.		
Optional support PG cards	Differential input PG card	Open collector		
	Rotating transformer PG card			
Running Command Channel	Given by the Panel, Control Terminals, Serial Communication Port, can be Switched by Many Ways.			
Auxiliary Frequency Source	Multiple Auxiliary frequency source. Flexible realization of auxiliary frequency fine-tuning and frequency synthesis			
Timing set	0.0-6500.0 min.			
Communication	ModBus RS485			
Input & Output	Input Terminal	6 Digital Input terminal 2 Analog Input Terminals, 1 of Which Only Supports 0-10V and the Other Supports 0-10V or 4-20mA		
	Output Terminal	1 Digital Output Terminal	MO1	
		2 Relay Output Terminal	RA, RB, RC, YA, YB, YC	
		1 Analog Output Terminal, That Supports 0-20mA Current Output or 0-10V Voltage Output		
Protection Function	Output phase loss, overcurrent, overvoltage, undervoltage, overheat, overload protections, etc.			

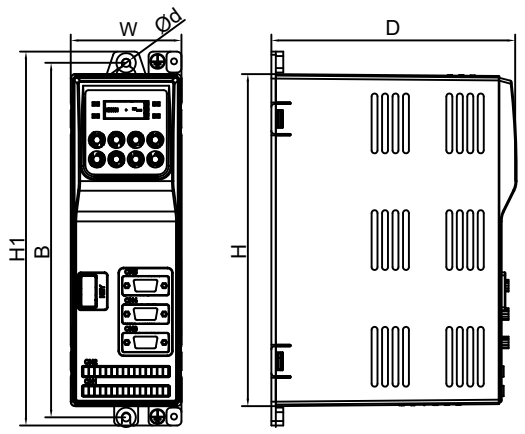
TYPICAL APPLICATION

CNC lathe, turn-milling machine tool, vertical lathe, Heavy duty horizontal lathe
Drilling and tapping center, engraving and milling machine, gear hobbing machine, gear shaping machine, gear milling machine

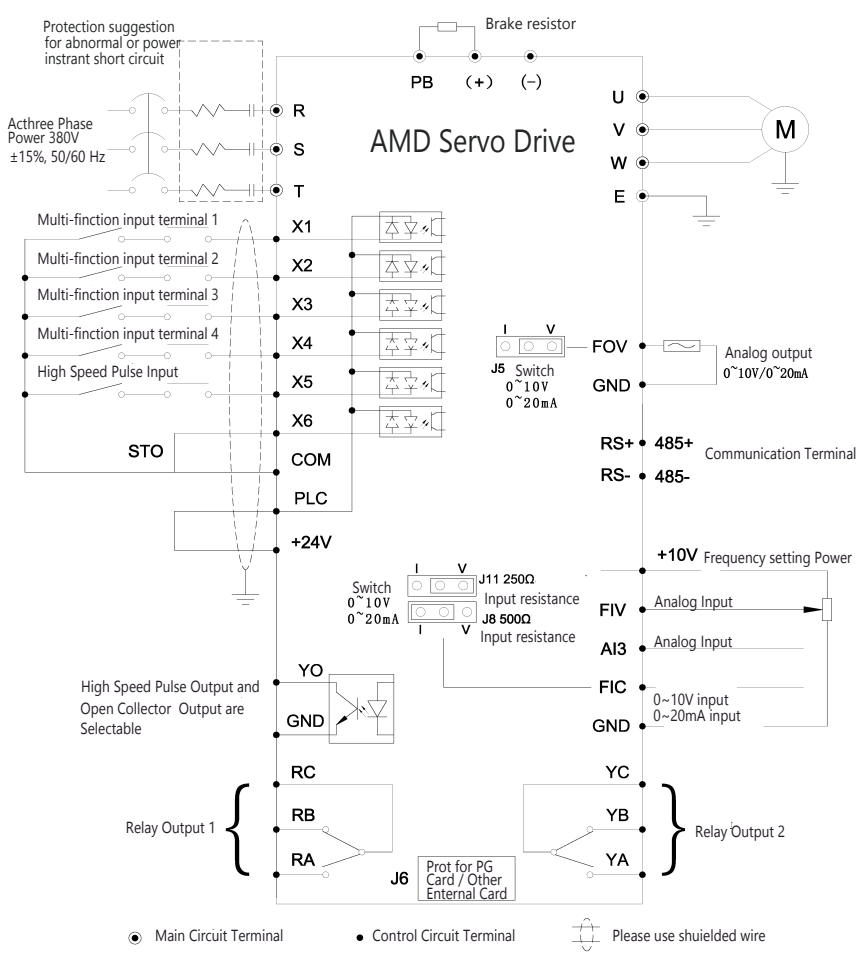
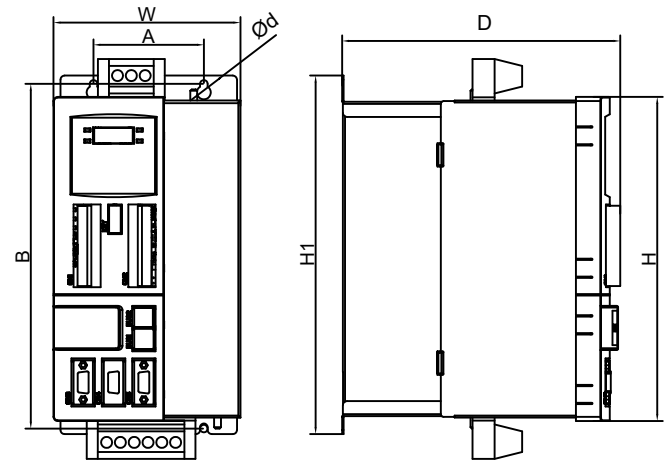


Dimension, mm

380V ±15% 3 Phase	Power Range, kW	W	H	H1	D	A	B	Ød
	0.4							
	0.75							
	1.5	74	222	250	163	/	237	5.5
	2.2							



380V ±15% 3 Phase	Power Range, kW	W	H	H1	D	A	B	Ød
	5.5	89	235	260	200	/	250	5.5
	7.5							
	11	136	235	260	202	80	250	5.5
	15							
	18.5	193	235	260	222	132	250	5.5
	22							
	30	177	439	475	256	120	460	7.0
	37							
	45	239	579	615	308	160	600	9.0
	55							
	75							
	90	279	600	630	340	200	612	9.0
	110							
	132	305	845	880	450	200	838	11



380V 3 Phase	Power Range, kW	Rated Input Current, A	Rated Output Current, A
	0.4	89	89
	0.75	89	89
	1.5	89	89
	2.2	89	89
	3.7	10.0	9.0
	5.5	15.0	13.0
	7.5	20.0	17.0
	11	26.0	25.0
	15	35.0	32.0
	18.5	38.0	37.0
	22	46.0	45.0
	30	26.0	89
	37	26.0	89
	45	26.0	89

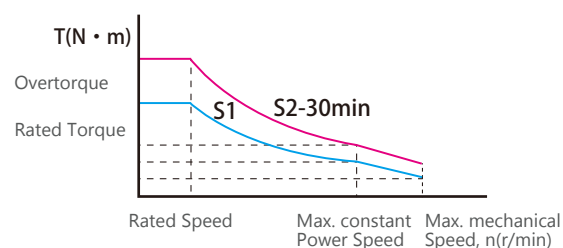
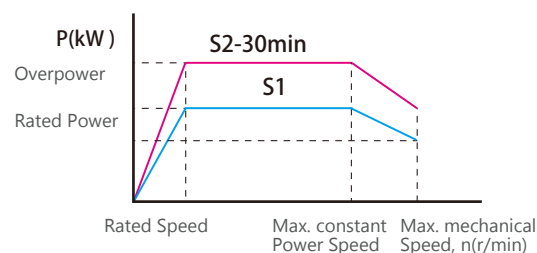
NY series AC spindle induction servo motor has a compact structure, superior function, good shape and high efficiency, widely used in various fields of machinery manufacturing with very good cost performance.

AC Spindle Induction Servo Motor

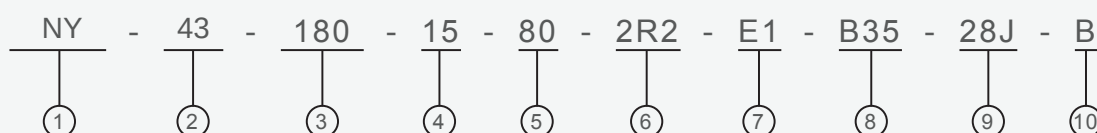
NY series is high power density of ac induction servo motor makes them perfect for industrial tools equipments, such as in machine tools, printing presses, or metal forming, flux vector type controllers in variable speed applications. The distinctive electromagnetic and mechanical design permits operation in constant power mode at maximum speeds of up to 24000 RPM. The efficient stator cooling system uses an auxiliary electrofan to combine the benefits of reduced dimensions and high, continuous, low-speed torque capability.

Advantage and Features

- Three-phase, 4 pole star winding with no access to neutral squirrel-cage rotor
- Power range 0.75 315 kW
- Max. speed 3,000 ... 24,000 rpm
- Encoder systems for a wide and diverse range of applications
- Construction with low losses laminated sheet
- Square form, compact, high, top speed capability
- Thermal protection by thermostat embedded in stator winding
- High overload capability
- Protection class IP55
- Insulation class F
- Works environment, degree : -15 ~ +45



NAMING RULES



1 Products Series

Motors Series

2 Power Supply

43 - 380V, 3 phase
23 - 220V, 3 phase

3 Flange size

180 - 180 mm

4 Rated Speed

07 - 750 r/min
15 - 1500 r/min

5 Max. Speed

40 - 4000 r/min
120 - 12 000 r/min

6 Power

2R2 - 2.2 kW
004 - 4.0 kW

7 Type of Encoder

E1 - Incremental 1024, 5V
E2 - Incremental 2500, 5V
R1 - Resolver 1024, 7V
N - Non Encoder
NY - Hollow Shaft Encoder

8 Type of Mount

B3 - Horizontal B35 - Horizontal and Vertical
B5 - Vertical

9 Type of Output Shaft

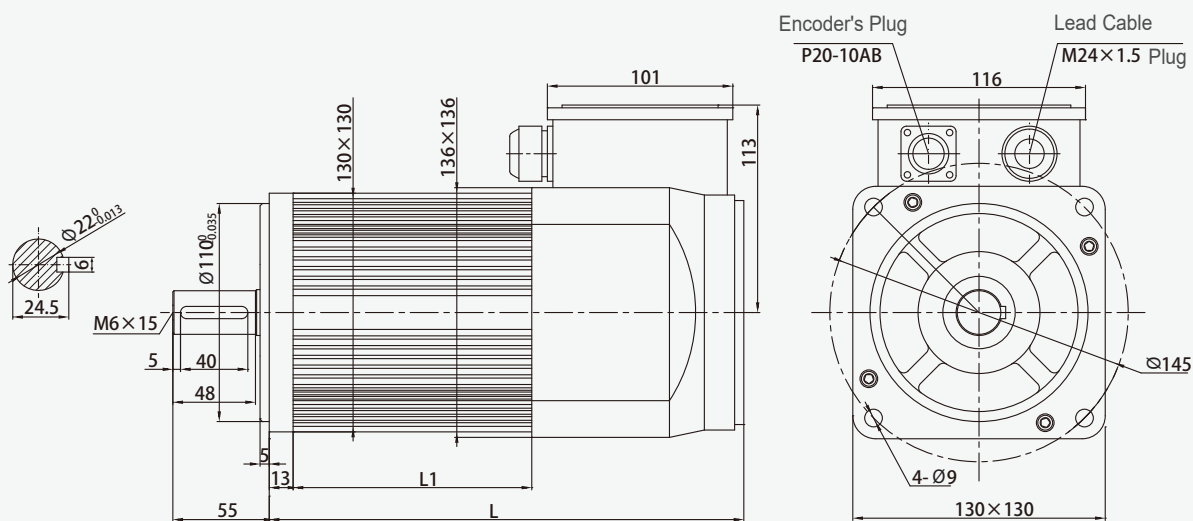
28 - Shaft's Diameter
J - with Keys G - Flat

10 Special Item

B - with Brake YQ - Terminal Box on the Right
Blank - Non Brake F2 - 220V, 1 phase Ventilator
DQ - Terminal Box on the Top F4 - 415V, 3 phase Ventilator

Model	Power, kW		Speed r/min			Voltage	Current, A		Torquet, N.m		Rotational Inertia kgm ²	Frame
	Continuous Rating	Overload in 30 min.	Rated Speed	Max. Constant Power speed	Max. Mechanical Power speed	Rated Voltage	Rated	Overcurrent in 30 min.	Rated	Overtorque in 30 min.		
NY-43-130S-15-60-R75-*-**	0.75	1.1	1500	6000	10000	380	1.9	2.7	4.8	7	0.0019	130S
NY-43-130M-15-60-1R1-*-**	1.1	1.5					2.7	3.7	7	9.6	0.0027	130M
NY-43-130L-15-60-1R5-*-**	1.5	2.2					3.7	5.4	9.6	14	0.0035	130L
NY-43-130H-15-60-2R2-*-**	2.2	3					5.4	7.4	14	19.1	0.0050	130H

Dimension, mm

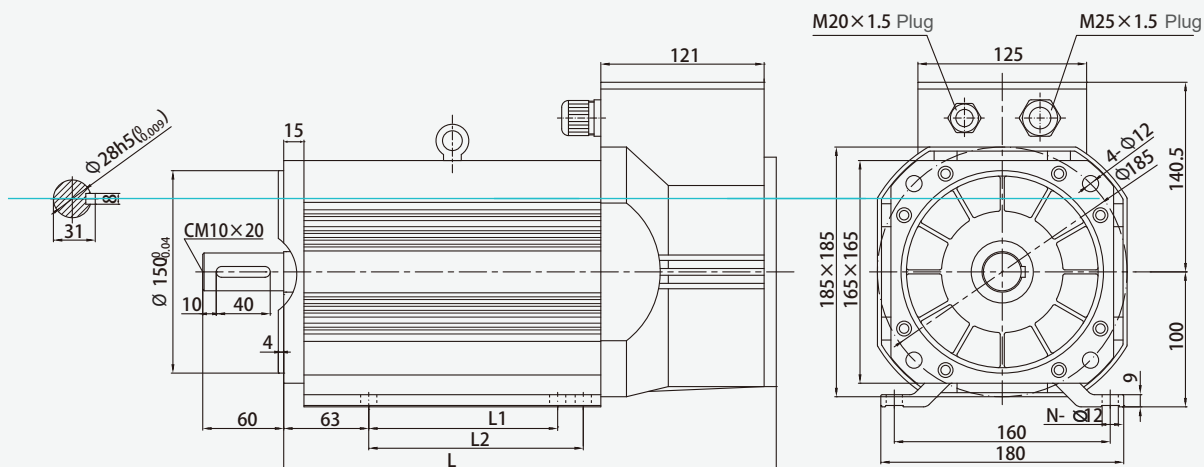


FLAME	L	L1
130S	263.5	135
130M	293.5	165
130L	323.5	195
130H	383.5	255

165 series NY

Model	Power, kW		Speed r/min			Voltage	Current, A		Torque, N.m		Rotational Inertia kgm ²	Frame
	Continuous Rating	Overload in 30 min.	Rated Speed	Max. Constant Power speed	Max. Mechanical Power speed	Rated Voltage	Rated	Overcurrent in 30 min.	Rated	Overtorque in 30 min.		
NY-43-165S-7.5-40-R75—*.*.*	0.75	1.1	750	3000	4000	380	1.83	2.64	9.6	14	0.0058	165S
NY-43-165M-7.5-40-1R1—*.*.*	1.1	1.5					2.64	3.53	14	19.1	0.0077	165M
NY-43-165N-7.5-40-1R5—*.*.*	1.5	1.8					3.53	4.28	19.1	22.9	0.0101	165N
NY-43-165L-7.5-40-1R8—*.*.*	1.8	2.2					4.28	5.2	22.9	28	0.0116	165L
NY-43-165H-7.5-40-2R2—*.*.*	2.2	3.7					5.2	8.6	28	48	0.0162	165H
NY-43-165S-10-60-R75—*.*.*	0.75	1.1	1000	4000	6000	380	1.9	2.7	7.2	10.5	0.0058	165S
NY-43-165M-10-60-1R1—*.*.*	1.1	1.5					2.7	3.5	10.5	14.3	0.0077	165M
NY-43-165N-10-60-1R5—*.*.*	1.5	2.2					3.5	5.1	14.3	21	0.0101	165N
NY-43-165L-10-60-2R2—*.*.*	2.2	3.7					5.1	8.5	21	35.3	0.0116	165L
NY-43-165H-10-60-3R7—*.*.*	3.7	5.5					8.5	12	35.3	52.5	0.0162	165H
NY-43-165S-15-80-1R5—*.*.*	1.5	2.2	1500	6000	8000	380	3.8	5.1	9.6	14	0.0058	165S
NY-43-165M-15-80-2R2—*.*.*	2.2	3.7					5.1	8.2	14	23.6	0.0077	165M
NY-43-165N-15-80-003—*.*.*	3	4					6.6	8.8	19.1	35	0.0101	165N
NY-43-165L-15-80-004—*.*.*	4	5.5					8.8	12.2	25.5	35	0.0116	165L
NY-43-165H-15-80-5R5—*.*.*	5.5	7.5					12.2	15.4	35	48	0.0162	165H

Dimension, mm

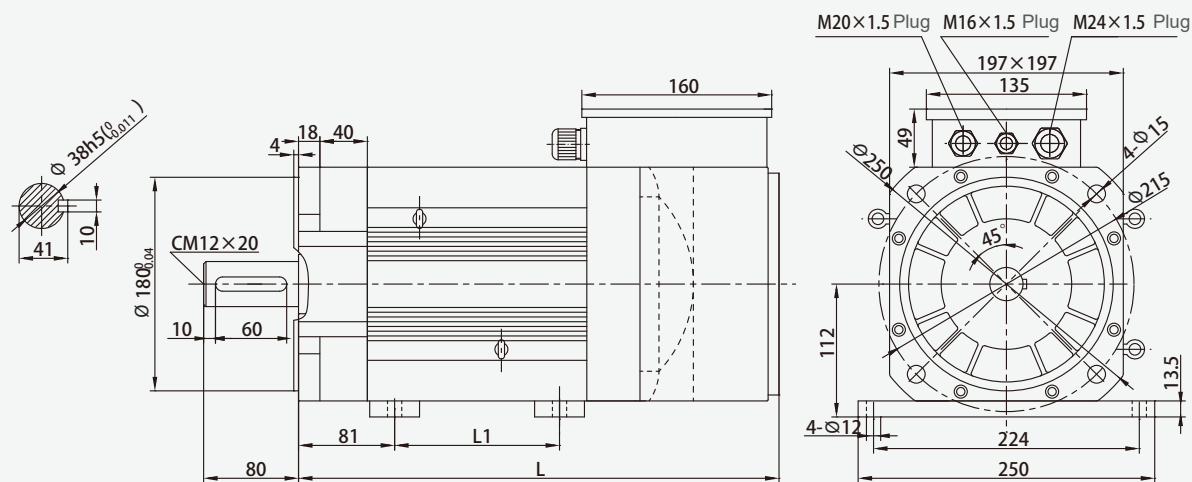


FLAME	L	L1	L2	N
165S	310	70	/	4
165M	335	95	112	6
165N	365	140	159	6
165L	385	140	159	6
165H	445	200	219	6

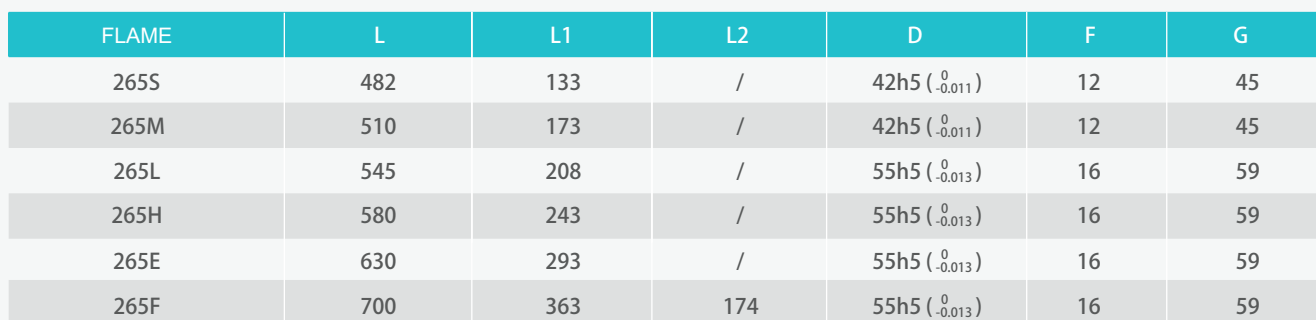
Dimension, mm

Model	Power, kW		Speed r/min			Voltage	Current, A		Torquet, N.m		Rotational Inertia kgm ²	Frame
	Continuous Rating	Overload in 30 min.	Rated Speed	Max. Constant Power speed	Max. Mechanical Power speed	Rated Voltage	Rated	Overcurrent in 30 min.	Rated	Overtorque in 30 min.		
NY-43-200M-7.5-40-2R2—*.*.*	2.2	4	750	3000	4000	380	5	9	28	51	0.0169	200M
NY-43-200L-7.5-40-004—*.*.*	4	5.5					9	12.3	51	70	0.0236	200L
NY-43-200H-7.5-40-5R5—*.*.*	5.5	7.5					12.3	15.3	70	95.5	0.0303	200H
NY-43-200M-10-60-004—*.*.*	4	5.5	1000	4000	6000	380	8.2	12	38	52.5	0.0169	200M
NY-43-200L-10-60-5R5—*.*.*	5.5	7.5					12	16.1	52.5	71.6	0.0236	200L
NY-43-200H-10-60-7R5—*.*.*	7.5	11					16.1	22.1	71.6	105	0.0303	200H
NY-43-200S-15-80-004—*.*.*	4	5.5	1500	6000	8000	380	8.4	11.7	25.5	35	0.0128	200S
NY-43-200M-15-80-5R5—*.*.*	5.5	7.5					11.7	15.4	35	48	0.0169	200M
NY-43-200L-15-80-7R5—*.*.*	7.5	11					15.4	22.7	48	70	0.0236	200L
NY-43-200H-15-80-011—*.*.*	11	15					22.7	29.1	70	95.5	0.0303	200H

Dimension, mm



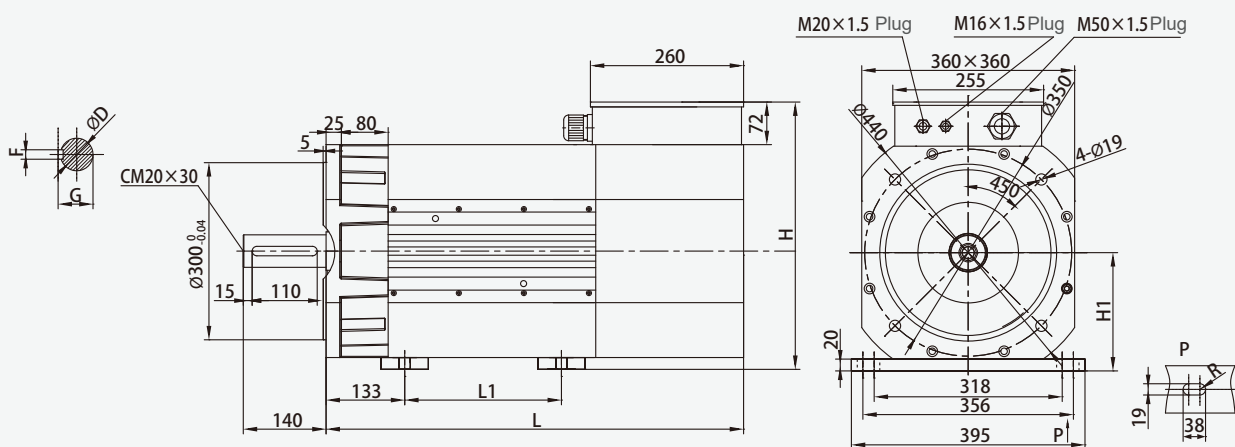
FLAME	L	L1
200S	375	109
200M	405	139
200L	455	189
200H	505	239

Dimension, mm

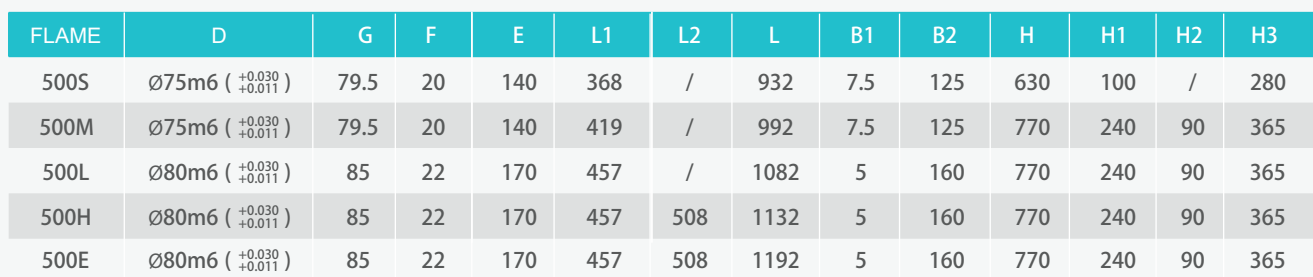
360 series NY

Model	Power, kW		Speed r/min			Voltage	Current, A		Torque, N.m		Rotational Inertia kgm ²	Frame
	Continuous Rating	Overload in 30 min.	Rated Speed	Max. Constant Power speed	Max. Mechanical Power speed		Rated	Overcurrent in 30 min.	Rated	Overtorque in 30 min.		
NY-43-360S-7.5-30-015-*.~.*	15	18.5	750	1800	3000	380	29.4	35.9	191	236	0.2979	360S
NY-43-360M-7.5-30-018-*.~.*	18.5	22					35.9	43.7	236	280	0.3724	360M
NY-43-360L-7.5-30-022-*.~.*	22	26					43.7	53	280	331	0.4469	360L
NY-43-360H-7.5-30-030-*.~.*	30	37					61	72.5	382	471	0.5362	360H
NY-43-360E-7.5-30-037-*.~.*	37	45					72.5	88.2	471	573	0.6405	360E
NY-43-360S-10-40-022-*.~.*	22	26	1000	2500	4000	380	41.9	50.4	210	248	0.2979	360S
NY-43-360M-10-40-026-*.~.*	26	30					50.4	57.9	248	287	0.3724	360M
NY-43-360L-10-40-030-*.~.*	30	37					57.9	70.3	287	353	0.4469	360L
NY-43-360H-10-40-037-*.~.*	37	45					70.3	87.2	353	430	0.5362	360H
NY-43-360E-10-40-045-*.~.*	45	55					87.2	105	430	525	0.6405	360E
NY-43-360S-15-45-030-*.~.*	30	37	1500	3600	4500	380	56	68.5	191	236	0.2979	360S
NY-43-360M-15-45-037-*.~.*	37	45					68.5	84.1	236	287	0.3724	360M
NY-43-360L-15-45-045-*.~.*	45	55					84.1	103.6	287	350	0.4469	360L
NY-43-360H-15-45-055-*.~.*	55	75					103.6	139.8	350	478	0.5362	360H
NY-43-360E-15-45-075-*.~.*	75	90					139.8	167	478	573	0.6405	360E

Dimension, mm



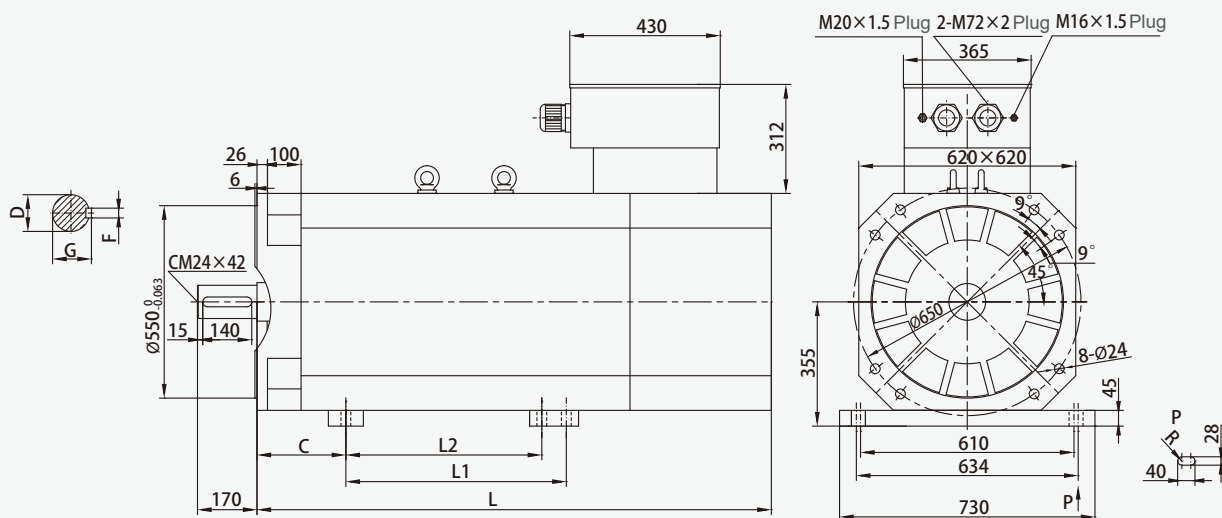
FLAME	L	L1	H	H1	D	F	G
360S	713	265	452	200	55h5 ($^{0}_{-0.013}$)	16	59
360M	763	315	477	225	55h5 ($^{0}_{-0.013}$)	16	59
360L	813	365	477	225	60h5 ($^{0}_{-0.013}$)	18	64
360H	873	425	477	225	60h5 ($^{0}_{-0.013}$)	18	64
360E	943	495	477	225	60h5 ($^{0}_{-0.013}$)	18	64

Dimension, mm

620 series NY

Model	Power, kW		Speed r/min			Voltage	Current, A		Torquet, N.m		Rotational Inertia kgm ²	Frame
	Continuous Rating	Overload in 30 min.	Rated Speed	Max. Constant Power speed	Max. Mechanical Power speed	Rated Voltage	Rated	Overcurrent in 30 min.	Rated	Overtorque in 30 min.		
NY-43-620S-7.5-30-090—*.*.*	90	110	750	1500	2500	380	165	200	1146	1401	5.0886	620S
NY-43-620M-7.5-30-110—*.*.*	110	132					200	240	1401	1681	6.0138	620M
NY-43620L-7.5-30-132—*.*.*	132	160					240	285	1681	2037	6.8234	620L
NY-43-620H-7.5-30-160—*.*.*	160	185					285	327	2037	2356	7.8642	620H
NY-43-620S-10-30-132—*.*.*	132	160	1000	2000	3000	380	236	285	1261	1528	5.0886	620S
NY-43-620M-10-30-160—*.*.*	160	185					285	328	1528	1767	6.0138	620M
NY-43-620L-10-30-185—*.*.*	185	200					328	355	1767	1910	6.8234	620L
NY-43-620H-10-30-200—*.*.*	200	250					355	438	1910	2388	7.8642	620H
NY-43-620S-15-30-200—*.*.*	200	250	1500	3000	3000	380	348	434	1273	1592	5.0886	620S
NY-43-620M-15-30-250—*.*.*	250	280					434	488	1592	1783	6.0138	620M
NY-43-620L-15-30-280—*.*.*	280	315					488	545	1783	2006	6.8234	620L
NY-43-620H-15-30-315—*.*.*	315	355					545	615	2006	2260	7.8642	620H

Dimension, mm



FLAME	D	G	F	C	L2	L1	L
620S	Ø80m6(^{+0.030} _{+0.011})	85	22	216	457	508	1230
620M	Ø80m6(^{+0.030} _{+0.011})	85	22	216	457	508	1310
620L	Ø95m6(^{+0.035} _{+0.013})	100	25	254	500	560	1380
620H	Ø95m6(^{+0.035} _{+0.013})	100	25	254	560	630	1470