

Y2 SERIES

H355-560 medium size three-phase asynchronous motors



1. General description

Y2 Series medium size high voltage three-phase asynchronous motors (Frame No.355-560) mounting demensions and tolerance are coincident with China standard GB755 《Rotating Electrical Machines-Rating and Performance》, International Electrical committee standard IEC34-1 《Rotating Electrical Machines-Rating and Performance》 and machinery-profession standards JB/T/7593 JB/T10315.1 etc.

The ingress protection grade for motor shell is IP54 according to GB4942 and IEC34-5 《Rotating electrical machines- enclosure ingress protection》 standard. Also we can provide other ingress protection grades according customer's requirement.

The cooling method is is IC411 according to GB/T1993 and IEC34-6 《Cooling method of Rotating Electrical Machines》 standard. For the other cooling method, also can provide according reuirement.

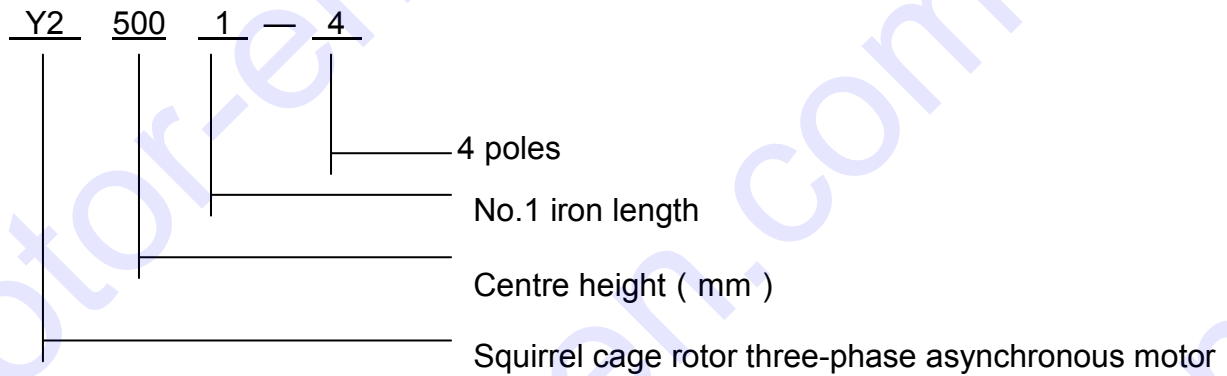
The structure and mounting model is IMB3 (horizontal foot mounted). This is in accordance with GB997 and IEC34-7 standard 《Classification of types of construction and mounting arrangements for rotating electrical machines》.

2. Structure specification

The stator with outer-press-assembly structure is adopted. Stator is made of F-grade insulation and corona proof material. A special banding technology is used for winding end part fastening. The whole stator is treated by VPI with F grade insulation technology. By this means motor will possess good and reliable insulation property and moisture proof, anti-impact capability.

The rotor can be developed into two modes casting aluminum and copper bar rotor. Casting aluminum rotor is casted with pure aluminum which is reliable in operation and will don't have the phenomenon of rotor conductor to be broken up. The motor's rotor copper conductors and end rings adopt intermediate-frequency welding when the rotor is copper-cage rotor. The rotor copper conductors are featured by high reliability via dealing with tightening craft in trough.

3.The Implication of the symbol



4. Details

- Frame sizes: 355-560
- Insulation class: F
- Enclosure: IC411
- Voltage: 6Kv, 10Kv
- Rated output: 185-1600kW
- Degree of protection: IP54
- Rotor: Squirrel cage
- Mounting: Horizontal

Features: The stator with outer-press-assembly structure is adopted stator is made of F-grade insulation and corona proof material, a special banding techniques is used for winding end part fastening. The whole stator is treated by VPI with F grade solution technology, by this means motor will posses good and reliable insulation property and moisture proof, anti-impact capability.

Applications: Ideal for driving all kinds of general machinery, such as water pump, fan, compressor and etc.

Y2 series motor model composition (6kV)

Frame		Synchronous rotation speed r/min			
		3000	1500	1000	750
		Output kW			
355	1	185	185	—	—
	2	200	200		
	3	220	220	160	
	4	250	250	185	
	5	280	280	200	
400	1	315	315	220	160
	2	355	355	250	185
	3	400	400	280	200
	4	450	450	315	220
450	1	500	500	355	250
	2	560	560	400	280
	3	630	630	450	315
	4	710	710	500	355
500	1	800	800	560	400
	2	900	900	630	450
	3	1000	1000	710	500
	4	1120	1120	800	560
560	1	1250	1250	900	630
	2	1400	1400	1000	710
	3	1600	1600	1120	800
	4	—	—	1250	900

Y2 series technical data (6kV)

Type	Output (kW)	Stator current (A)	RPM (r/min)	Eff. (%)	P.F CosΦ	$\frac{T_m}{T_n}$	$\frac{T_{st}}{T_n}$	$\frac{I_{st}}{I_n}$	Flywheel torque (kg.m ²)	Weight (kg)
Y2-3551-2	185	22.6	2990	93.9	0.84	2.0	0.7	7.0	8	2035
Y2-3552-2	200	24.4	2990	94.0	0.84	2.0	0.7	7.0	8.5	2075
Y2-3553-2	220	26.8	2990	94.2	0.84	2.0	0.7	7.0	9.5	2160
Y2-3554-2	250	30.3	2990	94.4	0.84	2.0	0.7	7.0	10	2215
Y2-3555-2	280	33.1	2990	94.6	0.86	2.0	0.7	7.0	11	2280
Y2-4001-2	315	37.2	2990	94.8	0.86	2.0	0.7	7.0	17	2630
Y2-4002-2	355	41.9	2990	94.9	0.86	2.0	0.7	7.0	18	2700
Y2-4003-2	400	47.1	2990	95.1	0.86	2.0	0.7	7.0	19.5	2830
Y2-4004-2	450	52.9	2990	95.2	0.86	2.0	0.7	7.0	21	2920
Y2-4501-2	500	58.0	2990	95.3	0.87	2.0	0.7	7.0	22	3200
Y2-4502-2	560	64.9	2990	95.4	0.87	2.0	0.7	7.0	24	3300
Y2-4503-2	630	73.0	2990	95.5	0.87	2.0	0.7	7.0	27	3500
Y2-4504-2	710	82.1	2990	95.7	0.87	2.0	0.7	7.0	30	3600
Y2-5001-2	800	91.5	2990	95.6	0.88	2.0	0.7	7.0	61	5360
Y2-5002-2	900	102.8	2990	95.7	0.88	2.0	0.7	7.0	65	5500
Y2-5003-2	1000	114.0	2990	95.9	0.88	2.0	0.7	7.0	69	5640
Y2-5004-2	1120	127.6	2990	96.0	0.88	2.0	0.7	7.0	75	5900
Y2-5601-2	1250	140.6	2990	96.1	0.89	2.0	0.7	7.0	111	5800
Y2-5602-2	1400	157.2	2990	96.3	0.89	2.0	0.7	7.0	119	5860
Y2-5603-2	1600	179.3	2990	96.5	0.89	2.0	0.7	7.0	127	5930
Y2-3551-4	185	22.6	1490	93.7	0.84	2.0	0.8	6.5	19	2120
Y2-3552-4	200	24.4	1490	93.9	0.84	2.0	0.8	6.5	21.5	2220
Y2-3553-4	220	26.8	1490	94.1	0.84	2.0	0.8	6.5	23	2290
Y2-3554-4	250	30.4	1490	94.3	0.84	2.0	0.8	6.5	24.5	2340
Y2-3555-4	280	33.9	1490	94.5	0.84	2.0	0.8	6.5	25.5	2400
Y2-4001-4	315	37.7	1490	94.6	0.85	2.0	0.8	6.5	32	2970
Y2-4002-4	355	42.4	1490	94.8	0.85	2.0	0.8	6.5	34	3080
Y2-4003-4	400	47.7	1490	95.0	0.85	2.0	0.8	6.5	37	3170
Y2-4004-4	450	53.5	1490	95.2	0.85	2.0	0.8	6.5	39	3250
Y2-4501-4	500	58.7	1490	95.3	0.86	2.0	0.8	6.5	52	3500
Y2-4502-4	560	65.7	1490	95.4	0.86	2.0	0.8	6.5	58	3700
Y2-4503-4	630	73.8	1490	95.5	0.86	2.0	0.8	6.5	65	3950
Y2-4504-4	710	83.1	1490	95.6	0.86	2.0	0.8	6.5	73	4200
Y2-5001-4	800	93.5	1490	95.7	0.86	2.0	0.8	6.5	130	5350
Y2-5002-4	900	105.1	1490	95.8	0.86	2.0	0.8	6.5	141	5540
Y2-5003-4	1000	116.7	1490	95.9	0.86	2.0	0.8	6.5	148	5700
Y2-5004-4	1120	130.5	1490	96.0	0.86	2.0	0.8	6.5	156	5800
Y2-5601-4	1250	143.9	1490	96.1	0.87	2.0	0.7	6.5	252	5900
Y2-5602-4	1400	161.0	1490	96.2	0.87	2.0	0.7	6.5	272	5950
Y2-5603-4	1600	183.6	1490	96.4	0.87	2.0	0.7	6.5	305	6020

Y2 series technical data (6kV)

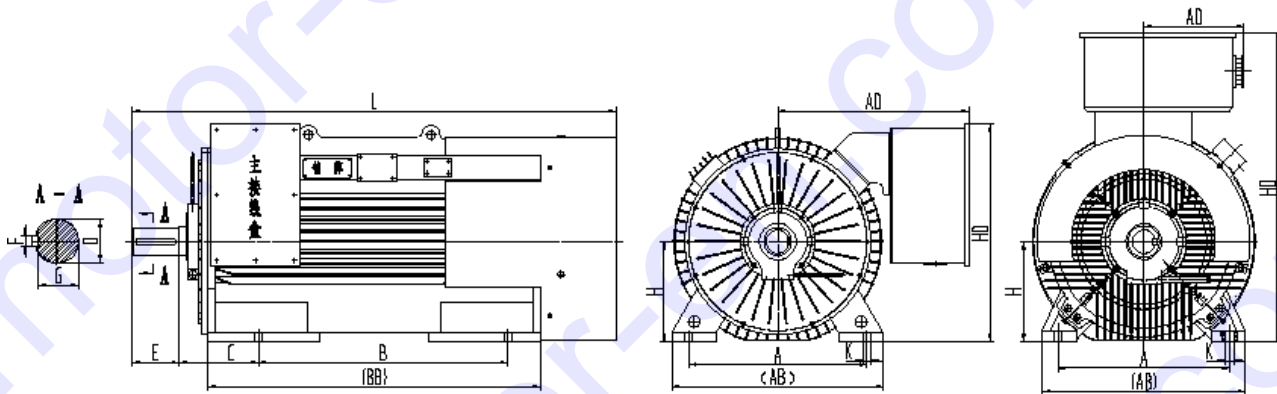
Type	Output (kW)	Stator current (A)	RPM (r/min)	Eff. (%)	P.F CosΦ	$\frac{T_m}{T_n}$	$\frac{T_{st}}{T_n}$	$\frac{I_{st}}{I_n}$	Flywheel torque (kg.m ²)	Weight (kg)
Y2-3553-6	160	20.6	990	93.4	0.8	2.0	0.8	6.0	26	2255
Y2-3554-6	185	23.8	990	93.5	0.8	2.0	0.8	6.0	28	2345
Y2-3555-6	200	25.7	990	93.6	0.8	2.0	0.8	6.0	31	2440
Y2-4001-6	220	27.5	990	93.8	0.82	2.0	0.8	6.0	47	3010
Y2-4002-6	250	31.2	990	93.9	0.82	2.0	0.8	6.0	50	3110
Y2-4003-6	280	34.9	990	94.1	0.82	2.0	0.8	6.0	53	3200
Y2-4004-6	315	39.2	990	94.3	0.82	2.0	0.8	6.0	57	3250
Y2-4501-6	355	43.6	990	94.5	0.83	2.0	0.8	6.0	64	3600
Y2-4502-6	400	49.0	990	94.6	0.83	2.0	0.8	6.0	73	3800
Y2-4503-6	450	55.1	990	94.7	0.83	2.0	0.8	6.0	81	4000
Y2-4504-6	500	61.1	990	94.9	0.83	2.0	0.8	6.0	90	4200
Y2-5001-6	560	68.3	990	95.1	0.83	2.0	0.8	6.0	177	5370
Y2-5002-6	630	76.7	990	95.2	0.83	2.0	0.8	6.0	184	5500
Y2-5003-6	710	86.4	990	95.3	0.83	2.0	0.8	6.0	191	5630
Y2-5004-6	800	97.2	990	95.4	0.83	2.0	0.8	6.0	202	5830
Y2-5601-6	900	107.8	990	95.6	0.84	2.0	0.7	6.0	388	5930
Y2-5602-6	1000	119.7	990	95.7	0.84	2.0	0.7	6.0	402	6020
Y2-5603-6	1120	133.9	990	95.8	0.84	2.0	0.7	6.0	423	6100
Y2-5604-6	1250	149.3	990	95.9	0.84	2.0	0.7	6.0	450	6150
Y2-4001-8	160	21.7	740	93.2	0.76	2.0	0.8	5.5	50	3020
Y2-4002-8	185	25.1	740	93.3	0.76	2.0	0.8	5.5	52	3090
Y2-4003-8	200	26.7	740	93.5	0.77	2.0	0.8	5.5	56	3150
Y2-4004-8	220	29.3	740	93.7	0.77	2.0	0.8	5.5	61	3260
Y2-4501-8	250	32.8	740	93.9	0.78	2.0	0.8	5.5	65	3600
Y2-4502-8	280	36.7	740	94.1	0.78	2.0	0.8	5.5	73	3800
Y2-4503-8	315	41.3	740	94.2	0.78	2.0	0.8	5.5	82	4000
Y2-4504-8	355	46.4	740	94.4	0.78	2.0	0.8	5.5	91	4200
Y2-5001-8	400	51.6	740	94.5	0.79	2.0	0.8	5.5	177	5380
Y2-5002-8	450	57.9	740	94.6	0.79	2.0	0.8	5.5	184	5510
Y2-5003-8	500	63.4	740	94.8	0.80	2.0	0.8	5.5	191	5640
Y2-5004-8	560	71.0	740	94.9	0.80	2.0	0.8	5.5	202	5850
Y2-5601-8	630	78.7	740	95.1	0.81	2.0	0.7	5.5	480	6200
Y2-5602-8	710	88.5	740	95.3	0.81	2.0	0.7	5.5	510	6240
Y2-5603-8	800	99.6	740	95.4	0.81	2.0	0.7	5.5	535	6320
Y2-5604-8	900	111.8	740	95.6	0.81	2.0	0.7	5.5	560	6400

Note: These property data shown in table which in correspondence with these guaranteed values are shown in the additive table.

Dimensions

mm

Y2 series medium size three-phase asynchronous motors 6kV



F R A M E	P O L E	Mounting dimensions and tolerances																		Boundary dimensions					
		mm																		mm					
		A		B		C		D		E		F		G		H		K		AD	HD	L	(BB)	(AB)	
		Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation						
355	2	630	± 1.4	900	± 1.4	254		75		140	± 0.50	20		67.5		355		28	$+0.52$ 0	860	1300	2000	1100	790	
	4~6							100		210	± 0.57	28	-0.052	90											
400	2	710		1000				85	$+0.035$ $+0.013$	170	± 0.50	22		76		400				900	1400	2200	1200	870	
	4~8							110		210	± 0.57	28		100											
450	2					280		95		170	± 0.50	25		86	0 -0.2	450		35							
	4	± 1.75		± 1.75				120		210				109							930	1450	2300	1350	950
	6~8	800		1120				130	$+0.040$ $+0.015$	250	± 0.57	32	-0.062	119											
500	2					C^a	± 4.0	110	$+0.035$ $+0.013$	210		28	-0.052	100		500			$+0.62$ 0						
	4	900	± 2.1	1250	± 2.1			130			± 0.57	32		119					42		970	1550	2500	1490	1100
	6~8					315		140		250		36		128	0 -0.3										
560	2					C^a		130	$+0.040$ $+0.015$			32	-0.062	119	0 -0.2	560									
	4	1000	± 2.1	1400	± 2.1			150		250	± 0.57	36		138	0 -0.3				42		1030	1650	2900	1680	1180
	6~8					355		160		300	± 0.65	40		147											

Note: C^a is the size of C for sleeve bearing motor. Its value and axial string momentum are agreed upon by the manufacturer and the user.

Y2 series technical data (10kV)

Type	Output (kW)	Stator current (A)	RPM (r/min)	Eff. (%)	P.F CosΦ	$\frac{Tm}{Tn}$	$\frac{Tst}{Tn}$	$\frac{Ist}{In}$	Weight (kg)
Y2-4501-2	220	16.3	2990	92.8	0.84	2.0	0.7	7.0	3050
Y2-4502-2	250	18.5	2990	93.0	0.84	2.0	0.7	7.0	3150
Y2-4503-2	280	20.2	2990	93.1	0.86	2.0	0.7	7.0	3300
Y2-4504-2	315	22.7	2990	93.3	0.86	2.0	0.7	7.0	3400
Y2-4505-2	355	25.5	2990	93.5	0.86	2.0	0.7	7.0	3550
Y2-4506-2	400	28.6	2990	93.8	0.86	2.0	0.7	7.0	3700
Y2-4507-2	450	32.2	2990	93.9	0.86	2.0	0.7	7.0	3900
Y2-4508-2	500	35.3	2990	94.0	0.87	2.0	0.7	7.0	4100
Y2-5001-2	560	39.5	2990	94.2	0.87	2.0	0.7	7.0	4700
Y2-5002-2	630	44.3	2990	94.4	0.87	2.0	0.7	7.0	4850
Y2-5003-2	710	49.8	2990	94.6	0.87	2.0	0.7	7.0	5050
Y2-5004-2	800	55.4	2990	94.8	0.88	2.0	0.7	7.0	5250
Y2-5005-2	900	62.2	2990	95.0	0.88	2.0	0.7	7.0	5500
Y2-5601-2	1000	69.0	2990	95.1	0.88	2.0	0.7	7.0	6200
Y2-5602-2	1120	76.2	2990	95.3	0.89	2.0	0.7	7.0	6400
Y2-5603-2	1250	84.9	2990	95.5	0.89	2.0	0.7	7.0	6650
Y2-5604-2	1400	94.9	2990	95.7	0.89	2.0	0.7	7.0	6900
Y2-4501-4	220	16.3	1490	92.7	0.84	2.0	0.8	6.5	3000
Y2-4502-4	250	18.5	1490	92.9	0.84	2.0	0.8	6.5	3150
Y2-4503-4	280	20.7	1490	93.0	0.84	2.0	0.8	6.5	3300
Y2-4504-4	315	22.9	1490	93.3	0.85	2.0	0.8	6.5	3450
Y2-4505-4	355	25.8	1490	93.4	0.85	2.0	0.8	6.5	3600
Y2-4506-4	400	29.0	1490	93.6	0.85	2.0	0.8	6.5	3750
Y2-4507-4	450	32.6	1490	93.8	0.85	2.0	0.8	6.5	3900
Y2-4508-4	500	35.7	1490	94.0	0.86	2.0	0.8	6.5	4150
Y2-5001-4	560	40.0	1490	94.1	0.86	2.0	0.8	6.5	4600
Y2-5002-4	630	44.9	1490	94.3	0.86	2.0	0.8	6.5	4850
Y2-5003-4	710	50.4	1490	94.5	0.86	2.0	0.8	6.5	5050
Y2-5004-4	800	56.0	1490	94.8	0.87	2.0	0.8	6.5	5300
Y2-5005-4	900	62.9	1490	95.0	0.87	2.0	0.8	6.5	5550
Y2-5601-4	1000	69.8	1490	95.1	0.87	2.0	0.8	6.5	6050
Y2-5602-4	1120	77.2	1490	95.2	0.88	2.0	0.8	6.5	6250
Y2-5603-4	1250	86.0	1490	95.4	0.88	2.0	0.8	6.5	6550
Y2-5604-4	1400	96.1	1490	95.6	0.88	2.0	0.8	6.5	6800
Y2-4504-6	220	16.7	990	92.5	0.82	2.0	0.8	6.0	3450
Y2-4505-6	250	19.0	990	92.7	0.82	2.0	0.8	6.0	3600
Y2-4506-6	280	21.2	990	92.9	0.82	2.0	0.8	6.0	3800
Y2-4507-6	315	23.8	990	93.1	0.82	2.0	0.8	6.0	4000
Y2-4508-6	355	26.8	990	93.3	0.82	2.0	0.8	6.0	4200

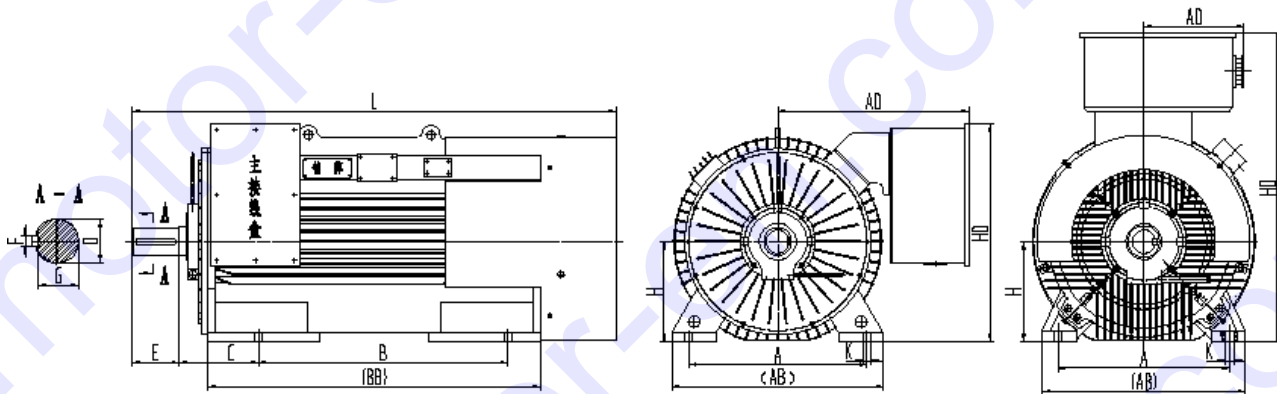
Y2 series technical data (10kV)

Type	Output (kW)	Stator current (A)	RPM (r/min)	Eff. (%)	P.F CosΦ	$\frac{T_m}{T_n}$	$\frac{T_{st}}{T_n}$	$\frac{I_{st}}{I_n}$	Weight (kg)
Y2-5001-6	400	30.1	990	93.5	0.82	2.0	0.8	6.0	4600
Y2-5002-6	450	33.4	990	93.7	0.83	2.0	0.8	6.0	4700
Y2-5003-6	500	37.0	990	93.9	0.83	2.0	0.8	6.0	4850
Y2-5004-6	560	41.4	990	94.1	0.83	2.0	0.8	6.0	5100
Y2-5005-6	630	46.5	990	94.3	0.83	2.0	0.8	6.0	5350
Y2-5601-6	710	52.3	990	94.5	0.83	2.0	0.7	6.0	5950
Y2-5602-6	800	58.8	990	94.7	0.83	2.0	0.7	6.0	6050
Y2-5603-6	900	65.2	990	94.9	0.84	2.0	0.7	6.0	6250
Y2-5604-6	1000	72.3	990	95.1	0.84	2.0	0.7	6.0	6500
Y2-5605-6	1120	80.8	990	95.3	0.84	2.0	0.7	6.0	6750
Y2-4506-8	220	18.3	740	92.4	0.75	2.0	0.8	5.5	3700
Y2-4507-8	250	20.8	740	92.6	0.75	2.0	0.8	5.5	3900
Y2-4508-8	280	22.6	740	92.8	0.77	2.0	0.8	5.5	4150
Y2-5002-8	315	25.4	740	93.0	0.77	2.0	0.8	5.5	4750
Y2-5003-8	355	28.6	740	93.2	0.77	2.0	0.8	5.5	5000
Y2-5004-8	400	31.3	740	93.4	0.79	2.0	0.8	5.5	5250
Y2-5005-8	450	35.2	740	93.5	0.79	2.0	0.8	5.5	5400
Y2-5601-8	500	39.0	740	93.7	0.79	2.0	0.7	5.5	6100
Y2-5602-8	560	43.6	740	93.9	0.79	2.0	0.7	5.5	6300
Y2-5603-8	630	48.3	740	94.1	0.80	2.0	0.7	5.5	6550
Y2-5604-8	710	54.3	740	94.3	0.80	2.0	0.7	5.5	6800
Y2-5605-8	800	61.1	740	94.5	0.80	2.0	0.7	5.5	7050

Dimensions

mm

Y2 series medium size three-phase asynchronous motors 10kV



F R A M E	P O L E	Mounting dimensions and tolerances																		Boundary dimensions				
		mm																		mm				
		A		B		C		D		E		F		G		H		K		AD	HD	L	(BB)	(AB)
		Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation	Basic Size	Limit deviation					
450	2	800	±1.75	1120	±1.75	280	±4.0	95	+0.035 +0.013	170	±0.50	25	0 -0.052	86	450	0	35	930	1450	2310	1340	950		
	120							210	32			0 -0.062	109										0	
	130							+0.040 +0.015	250			36	119										-0.2	
500	2	900	±2.1	1250	±2.1	500	±4.0	110	+0.035 +0.013	210	±0.57	28	0 -0.052	100	500	0	+0.62 0	970	1560	2610	1490	1080		
	130							250	32			119	0											
	140							36	128			0 0.3	42											
560	2	1000	±2.1	1400	±2.1	530	±4.0	130	+0.040 +0.015	250	±0.65	32	0 -0.062	119	560	0	1030	1680	2900	1680	1180			
	150							36	138			0 0.3												
	160							40	147			0												

Note: C^a is the size of C for sleeve bearing motor. Its value and axial string momentum are agreed upon by the manufacturer and the user.