

YD Series Pole-changing Three Phase Induction Motors



- Frame sizes: 80 to 280 Rated output: 0.35 to 82kW
- Voltage: 380V Frequency: 50Hz
- Enclosure: IC411 – TEFC
- Degree of protection: IP55 / IP54
- Speed regulation: Step speed regulation
- Speed-changing mode: two-speed, three-speed, four-speed

Applications: Widely applied in the transmission machinery of machinery and mining, metallurgy, textile, printing and dyeing, chemical industry by which step change of rotational speed is needed to meet the requirements of load character.

Features: Simplify speed-changing systems by changing the connection to match different output and speed.

Speed-changing mode: two-speed, three-speed, four-speed

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{LRT}{FLT} \frac{Tst}{TN}$	$\frac{LRA}{FLA} \frac{Ist}{IN}$	$\frac{BDT}{FLT} \frac{Tmax}{TN}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 1500/3000 r/min									
YD -80M1-4/2	4	0.45	1.4	1420	66	0.74	1.5	6.5	1.8
	2	0.55	1.5	2860	65	0.85	1.7	7	
YD -80M2-4/2	4	0.55	1.7	1420	68	0.74	1.6	6.5	1.8
	2	0.75	2.0	2860	66	0.85	1.8	7	
YD -90S-4/2	4	0.85	2.3	1430	74	0.77	1.8	6.5	1.8
	2	1.1	2.8	2850	71	0.85	1.9	7	
YD -90L-4/2	4	1.3	3.3	1430	76	0.78	1.8	6.5	1.8
	2	1.8	4.4	2850	73	0.85	2.0	7	
YD -100L1-4/2	4	2	4.8	1430	78	0.81	1.7	6.5	1.8
	2	2.4	5.6	2850	76	0.86	1.9	7	
YD -100L2-4/2	4	2.4	5.6	1430	79	0.83	1.6	6.5	1.8
	2	3	6.7	2850	77	0.89	1.7	7	
YD -112M-4/2	4	3.3	7.4	1450	82	0.83	1.9	6.5	1.8
	2	4	8.6	2890	79	0.89	2.0	7	
YD -132S-4/2	4	4.5	9.8	1450	83	0.84	1.7	6.5	1.8
	2	5.5	11.9	2860	79	0.89	1.8	7	
YD -132M-4/2	4	6.5	13.8	1450	84	0.85	1.7	6.5	1.8
	2	8	17.1	2880	80	0.89	1.8	7	

GUANGZHOU HAOQING MOTOR CO.,LTD

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{LRT}{FLT}$ $\frac{Tst}{T_N}$	$\frac{LRA}{FLA}$ $\frac{Ist}{I_N}$	$\frac{BDT}{FLT}$ $\frac{Tmax}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 1500/3000 r/min									
YD -160M-4/2	4	9	18.5	1460	87	0.85	1.6	6.5	1.8
	2	11	22.9	2920	82	0.89	1.8	7	
YD -160L-4/2	4	11	22.3	1460	87	0.86	1.7	6.5	1.8
	2	14	28.8	2920	82	0.90	1.8	7	
YD -180M-4/2	4	15	29.4	1470	89	0.87	1.8	6.5	1.8
	2	18.5	36.7	2940	85	0.90	1.9	7	
YD -180L-4/2	4	18.5	35.9	1470	89	0.88	1.6	6.5	1.8
	2	22	42.7	2940	86	0.91	1.8	7	
YD -200L-4/2	4	26	49.9	1470	89	0.89	1.4	6.5	1.8
	2	30	58.3	2950	85	0.92	1.6	7	
YD -225S-4/2	4	32	60.7	1475	90	0.89	1.4	6.5	1.8
	2	37	71.1	2955	86	0.92	1.6	7	
YD -225M-4/2	4	37	69.4	1475	91	0.89	1.6	6.5	1.8
	2	45	86.4	2955	86	0.92	1.6	7	
YD -250M-4/2	4	45	84.4	1475	91	0.89	1.6	6.5	1.8
	2	52	98.7	2955	87	0.92	1.6	7	
YD -280S-4/2	4	60	111	1480	91	0.90	1.4	6.5	1.8
	2	72	135	2960	88	0.92	1.5	7	
YD -280M-4/2	4	72	134	1480	91	0.90	1.4	6.5	1.8
	2	82	152	2960	88	0.93	1.5	7	
Synchronous speed 1000/1500r/min									
YD -90S-6/4	6	0.65	2.2	920	64	0.68	1.6	6	1.8
	4	0.85	2.3	1420	70	0.79	1.4	6.5	
YD -90L-6/4	6	0.85	2.8	930	66	0.70	1.6	6	1.8
	4	1.1	3	1420	71	0.79	1.5	6.5	
YD -100L1-6/4	6	1.3	3.8	940	74	0.70	1.7	6	1.8
	4	1.8	4.4	1440	77	0.80	1.4	6.5	
YD -100L2-6/4	6	1.5	4.3	940	75	0.70	1.6	6	1.8
	4	2.2	5.4	1440	77	0.80	1.4	6.5	
YD -112M-6/4	6	2.2	5.7	960	78	0.75	1.8	6	1.8
	4	2.8	6.7	1440	77	0.82	1.5	6.5	
YD -132S-6/4	6	3	7.7	970	79	0.75	1.8	6	1.8
	4	4	9.5	1440	78	0.82	1.7	6.5	
YD -132M-6/4	6	4	9.8	970	82	0.76	1.6	6	1.8
	4	5.5	12.3	1440	80	0.85	1.4	6.5	
YD -160M-6/4	6	6.5	15.1	970	84	0.78	1.5	6	1.8
	4	8	17.6	1460	82	0.84	1.5	6.5	

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Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{LRT}{FLT}$ $\frac{Tst}{T_N}$	$\frac{LRA}{FLA}$ $\frac{Ist}{I_N}$	$\frac{BDT}{FLT}$ $\frac{Tmax}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 1000/1500r/min									
YD-160L-6/4	6	9	20.6	970	85	0.78	1.6	6	1.8
	4	11	23.7	1460	83	0.85	1.7	6.5	
YD-180M-6/4	6	11	25.9	980	85	0.76	1.6	6	1.8
	4	14	29.8	1470	84	0.85	1.7	6.5	
YD-180L-6/4	6	13	29.4	980	86	0.78	1.7	6	1.8
	4	16	33.6	1470	85	0.85	1.7	6.5	
YD-200L-6/4	6	18.5	41.4	980	87	0.78	1.6	6.5	1.8
	4	22	44.9	1470	86.5	0.86	1.5	7	
YD-225S-6/4	6	22	44.2	980	88	0.86	1.8	6.5	1.8
	4	28	56.5	1470	86.5	0.87	1.8	7	
YD-225M-6/4	6	26	52.2	980	88	0.86	1.8	6.5	1.8
	4	32	63.2	1470	85.5	0.90	1.8	7	
YD-250M-6/4	6	32	62.1	980	90	0.87	1.5	6.5	1.8
	4	42	81.1	1475	86.5	0.91	1.3	7	
YD-280S-6/4	6	42	81.5	980	90	0.87	1.5	6.5	1.8
	4	55	107	1480	87	0.90	1.3	7	
YD-280M-6/4	6	55	107	980	90	0.87	1.6	6.5	1.8
	4	67	132	1480	87	0.89	1.3	7	
Synchronous speed 750/1500r/min									
YD-90L-8/4	8	0.45	1.9	700	58	0.63	1.6	5.5	1.8
	4	0.75	1.8	1420	72	0.87	1.4	6.5	
YD-100L-8/4	8	0.85	3.1	700	67	0.63	1.6	5.5	1.8
	4	1.5	3.5	1410	74	0.88	1.4	6.5	
YD-112M-8/4	8	1.5	5	700	72	0.63	1.7	5.5	1.8
	4	2.4	5.3	1410	78	0.88	1.7	6.5	
YD-132S-8/4	8	2.2	7	720	75	0.64	1.5	5.5	1.8
	4	3.3	7.1	1440	80	0.88	1.7	6.5	
YD-132M-8/4	8	3	9	720	78	0.65	1.5	5.5	1.8
	4	4.5	9.4	1440	82	0.89	1.6	6.5	
YD-160M-8/4	8	5	13.9	730	83	0.66	1.5	5.5	1.8
	4	7.5	15.2	1450	84	0.89	1.6	6.5	
YD-160L-8/4	8	7	19	730	85	0.66	1.5	5.5	1.8
	4	11	21.8	1450	86	0.89	1.6	6.5	
YD-180L-8/4	8	11	26.7	730	87	0.72	1.5	6	1.8
	4	17	32.6	1470	88	0.91	1.5	7	
YD-200L1-8/4	8	14	33	730	87	0.74	1.8	6	1.8
	4	22	41.3	1470	88	0.92	1.7	7	

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{LRT}{FLT}$ $\frac{Tst}{T_N}$	$\frac{LRA}{FLA}$ $\frac{Ist}{I_N}$	$\frac{BDT}{FLT}$ $\frac{Tmax}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 750/1500r/min									
YD-200L2-8/4	8	17	40.1	730	87	0.74	1.5	6	1.8
	4	26	48.8	1470	88	0.92	1.7	7	
YD-225M-8/4	8	24	53.2	730	89	0.77	1.5	6	1.8
	4	34	66.7	1470	88	0.88	1.5	7	
YD-250M-8/4	8	30	65	730	90	0.78	1.6	6	1.8
	4	42	78.8	1470	89	0.91	1.7	7	
YD-280S-8/4	8	40	83.5	735	91	0.80	1.6	6	1.8
	4	55	102	1475	90	0.91	1.7	7	
YD-280M-8/4	8	47	96.9	735	91	0.81	1.6	6	1.8
	4	67	123	1475	90	0.92	1.7	7	
Synchronous speed 750/1000r/min									
YD-90S-8/6	8	0.35	1.6	700	56	0.60	1.8	5	1.8
	6	0.45	1.4	930	70	0.72	2.0	6	
YD-90L-8/6	8	0.45	1.9	700	59	0.60	1.7	5	1.8
	6	0.65	1.9	920	71	0.73	1.8	6	
YD-100L-8/6	8	0.75	2.9	710	65	0.60	1.8	5	1.8
	6	1.1	3.1	950	75	0.73	1.9	6	
YD-112M-8/6	8	1.3	4.5	710	72	0.61	1.7	5	1.8
	6	1.8	4.8	950	78	0.73	1.9	6	
YD-132S-8/6	8	1.8	5.8	710	76	0.62	1.6	5	1.8
	6	2.4	6.2	950	80	0.73	1.9	6	
YD-132M-8/6	8	2.6	8.2	730	78	0.62	1.9	5	1.8
	6	3.7	9.4	970	82	0.73	1.9	6	
YD-160M-8/6	8	4.5	13.3	730	83	0.62	1.6	5	1.8
	6	6	14.7	970	85	0.73	1.9	6	
YD-160L-8/6	8	6	17.5	730	84	0.62	1.6	5	1.8
	6	8	19.7	980	86	0.73	1.9	6	
YD-180M-8/6	8	7.5	21.9	730	84	0.62	1.9	5	1.8
	6	10	24.2	980	86	0.73	1.9	6	
YD-180L-8/6	8	9	24.8	730	85	0.65	1.8	5	1.8
	6	12	28.3	980	86	0.75	1.8	6	
YD-200L1-8/6	8	12	32.6	730	86	0.65	1.8	5	1.8
	6	17	39.1	980	87	0.76	2.0	6	
YD-200L2-8/6	8	15	40.3	730	87	0.65	1.8	5	1.8
	6	20	45.4	980	88	0.76	2.0	6	

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				LRT FLT $\frac{T_{st}}{T_N}$	LRA FLA $\frac{I_{st}}{I_N}$	BDT FLT $\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 500/1000r/min									
YD -160M-12/6	12	2.6	11.6	480	74	0.46	1.2	4	1.8
	6	5	11.9	970	84	0.76	1.4	6	
YD -160L-12/6	12	3.7	16.1	480	76	0.46	1.2	4	1.8
	6	7	15.8	970	85	0.79	1.4	6	
YD -180L-12/6	12	5.5	19.6	490	79	0.54	1.3	4	1.8
	6	10	20.5	980	86	0.86	1.3	6	
YD -200L1-12/6	12	7.5	24.5	485	83	0.56	1.5	4	1.8
	6	13	26.4	980	87	0.86	1.5	6	
YD -200L2-12/6	12	9	28.9	485	83	0.57	1.5	4	1.8
	6	15	30.1	980	87	0.87	1.5	6	
YD -225M-12/6	12	12	35.2	485	85	0.61	1.5	4	1.8
	6	20	39.7	980	88	0.87	1.5	6	
YD -250M-12/6	12	15	42.1	490	86	0.63	1.5	4	1.8
	6	24	47.1	985	89	0.87	1.5	6	
YD -280S-12/6	12	20	54.8	490	88	0.63	1.5	4	1.8
	6	30	58.9	985	89	0.87	1.5	6	
YD -280M-12/6	12	24	63.8	490	88	0.65	1.5	4	1.8
	6	37	72.6	985	89	0.87	1.5	6	
Synchronous speed 1000/1500/3000r/min									
YD -100L-6/4/2	6	0.75	2.6	950	67	0.65	1.8	5.5	1.8
	4	1.3	3.7	1450	72	0.75	1.6	6	
	2	1.8	4.5	2900	71	0.85	1.6	7	
YD -112M-6/4/2	6	1.1	3.5	960	73	0.65	1.7	5.5	1.8
	4	2	5.1	1450	74	0.81	1.4	6	
	2	2.4	5.8	2920	74	0.85	1.6	7	
YD -132S-6/4/2	6	1.8	5.1	970	75	0.71	1.4	5.5	1.8
	4	2.6	6.1	1460	78	0.83	1.3	6	
	2	3	7.4	2910	71	0.87	1.7	7	
YD -132M1-6/4/2	6	2.2	6	970	77	0.72	1.3	5.5	1.8
	4	3.3	7.5	1460	80	0.84	1.3	6	
	2	4	8.8	2910	76	0.91	1.7	7	
YD -132M2-6/4/2	6	2.6	6.9	970	80	0.72	1.5	5.5	1.8
	4	4	9	1460	80	0.84	1.4	6	
	2	5	10.8	2910	77	0.91	1.7	7	
YD -160M-6/4/2	6	3.7	9.5	980	82	0.72	1.5	5.5	1.8
	4	5	11.2	1470	81	0.84	1.3	6	
	2	6	13.5	2930	76	0.91	1.4	7	

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Model	Pole	Output kW	Full Load				$\frac{LRT}{FLT}$ $\frac{I_{st}}{I_N}$	$\frac{LRA}{FLA}$ $\frac{I_{st}}{I_N}$	$\frac{BDT}{FLT}$ $\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 1000/1500/3000 r/min									
YD -160L-6/4/2	6	4.5	11.4	980	83	0.72	1.5	5.5	1.8
	4	7	15.1	1470	83	0.85	1.2	6	
	2	9	18.8	2930	79	0.92	1.3	7	
Synchronous speed 750/1500/3000 r/min									
YD -112M-8/4/2	8	0.65	2.7	700	59	0.63	1.4	4.5	1.8
	4	2	5.1	1450	74	0.81	1.3	6	
	2	2.4	5.8	2920	74	0.85	1.2	7	
YD -132S-8/4/2	8	1	3.6	720	69	0.61	1.4	4.5	1.8
	4	2.6	6.1	1460	78	0.83	1.2	6	
	2	3	7.1	2910	74	0.87	1.4	7	
YD -132M-8/4/2	8	1.3	4.6	720	71	0.61	1.5	4.5	1.8
	4	3.7	8.4	1460	80	0.84	1.3	6	
	2	4.5	10	2910	75	0.91	1.4	7	
YD-160M-8/4/2	8	2.2	7.6	720	75	0.59	1.4	4.5	1.8
	4	5	11.2	1440	81	0.84	1.3	6	
	2	6	13.2	2910	76	0.91	1.4	7	
YD -160L-8/4/2	8	2.8	9.2	720	77	0.60	1.3	4.5	1.8
	4	7	15.1	1440	83	0.85	1.2	6	
	2	9	18.8	2910	79	0.92	1.3	7	
Synchronous speed 750/1000/1500 r/min									
YD -112M-8/6/4	8	0.85	3.7	710	62	0.56	1.7	5.5	1.8
	6	1	3.1	950	68	0.73	1.3	6.5	
	4	1.5	3.5	1440	75	0.86	1.5	7	
YD -132S-8/6/4	8	1.1	4.1	730	68	0.60	1.4	5.5	1.8
	6	1.5	4.2	970	74	0.73	1.3	6.5	
	4	1.8	4	1460	78	0.87	1.3	7	
YD -132M1-8/6/4	8	1.5	5.2	730	71	0.62	1.3	5.5	1.8
	6	2	5.4	970	77	0.73	1.5	6.5	
	4	2.2	4.9	1460	79	0.87	1.4	7	
YD -132M2-8/6/4	8	1.8	6.1	730	72	0.62	1.5	5.5	1.8
	6	2.6	6.8	970	78	0.74	1.5	6.5	
	4	3	6.5	1460	80	0.87	1.5	7	
YD -160M-8/6/4	8	3.3	10.2	720	79	0.62	1.7	5.5	1.8
	6	4	9.9	960	81	0.76	1.4	6.5	
	4	5.5	11.6	1440	83	0.87	1.5	7	

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Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{LRT}{FLT}$ $\frac{I_{st}}{I_N}$	$\frac{LRA}{FLA}$ $\frac{I_{st}}{I_N}$	$\frac{BDT}{FLT}$ $\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 750/1000/1500 r/min									
YD -160L-8/6/4	8	4.5	13.8	720	80	0.62	1.6	5.5	1.8
	6	6	14.5	960	83	0.76	1.6	6.5	
	4	7.5	15.6	1440	84	0.87	1.5	7	
YD -180L-8/6/4	8	7	20.2	740	81	0.65	1.6	6.5	1.8
	6	9	20.6	980	83	0.80	1.5	7	
	4	12	24.1	1470	84	0.90	1.4	7	
YD -200L-8/6/4	8	10	24.8	730	85	0.72	1.6	6.5	1.8
	6	13	28.4	975	86	0.81	1.5	7	
	4	17	33.4	1465	86	0.90	1.4	7	
YD -225S-8/6/4	8	14	35.3	735	86	0.70	1.6	6.5	1.8
	6	18.5	39.9	980	87	0.81	1.6	7	
	4	24	46.6	1470	87	0.90	1.4	7	
YD -225M-8/6/4	8	17	42.4	735	87	0.70	1.6	6.7	1.8
	6	22	45.2	980	87	0.85	1.6	7	
	4	28	54.3	1470	87	0.90	1.4	7	
YD -250M-8/6/4	8	24	55.3	740	88	0.75	1.5	6.5	1.8
	6	26	52.8	985	88	0.85	1.6	7	
	4	34	63.8	1470	88	0.92	1.4	7	
YD -280S-8/6/4	8	30	68.3	740	89	0.75	1.5	6.5	1.8
	6	34	67.5	985	89	0.86	1.6	7	
	4	42	77.9	1475	89	0.92	1.4	7	
YD -280M-8/6/4	8	34	77.4	740	89	0.75	1.4	6.5	1.8
	6	37	73.4	985	89	0.86	1.5	7	
	4	50	92.8	1475	89	0.92	1.4	7	
Synchronous speed 500/750/1000/1500 r/min									
YD -180L-12/8/6/4	12	3.3	12.7	480	72	0.55	1.6	5	1.8
	8	5	15.5	735	79	0.62	1.5	6.5	
	6	6.5	13.7	970	82	0.88	1.3	6.5	
	4	9	18.5	1480	83	0.89	1.3	7	
YD -200L1-12/8/6/4	12	4.5	16.5	480	74	0.56	1.3	5	1.8
	8	7	19.6	735	81	0.67	1.3	6.5	
	6	8	16.6	975	83	0.88	1.3	6.5	
	4	11	23	1480	84	0.88	1.3	7	
YD -200L2-12/8/6/4	12	5.5	19.9	480	75	0.56	1.3	5	1.8
	8	8	22	735	81	0.67	1.3	6.5	
	6	10	21	975	83	0.88	1.3	6.5	
	4	13	27	1480	84	0.88	1.3	7	

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				LRT FLT $\frac{Tst}{T_N}$	LRA FLA $\frac{Ist}{I_N}$	BDT FLT $\frac{Tmax}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 500/750/1000/1500 r/min									
YD -225M-12/8/6/4	12	7	21	485	81	0.63	1.6	5	1.8
	8	11	28	740	84	0.72	1.6	6.5	
	6	13	26	980	85	0.88	1.5	6.5	
	4	20	39	1480	86	0.90	1.3	7	
YD -250M-12/8/6/4	12	9	27	485	82	0.63	1.6	5	1.8
	8	14	34	740	85	0.73	1.6	6.5	
	6	16	33	980	85	0.88	1.5	6.5	
	4	26	49	1480	87	0.92	1.3	7	
YD -280S-12/8/6/4	12	11	32	490	83	0.63	1.6	5	1.8
	8	18.5	43	740	87	0.75	1.6	6.5	
	6	20	41	985	85	0.88	1.5	6.5	
	4	34	65	1485	87	0.92	1.3	7	
YD -280M-12/8/6/4	12	13	37	490	84	0.63	1.7	5	1.8
	8	22	51	740	87	0.75	1.7	6.5	
	6	24	49	985	85	0.88	1.6	6.5	
	4	40	75	1485	88	0.92	1.5	7	

Conventional mounting type and suitable frame size are given in following table (with “√”)

frame	Basic Type			Derived Type								
	B3	B5	B35	V1	V3	V5	V6	B6	B7	B8	V15	V35
80~160	√	√	√	√	√	√	√	√	√	√	√	√
180~225	√	√	√	√	-	-	-	-	-	-	-	-
250~280	√	-	√	√	-	-	-	-	-	-	-	-

Note:

1. The mounting and overall dimensions are almost the same with those of YX3 series motors.
2. Data above may be changed without prior notice.