

## YDT Series Pole-changing Three Phase Induction Motors for Pumps and Fans



- Frame sizes: 80 to 315 Rated output: 0.17 to 160kW
- Voltage: 380V Frequency: 50Hz
- Speed regulation: Step speed regulation
- Speed-changing mode: two-speed, three-speed
- Pole-changing mode: 2/4, 4/6, 4/8, 6/8, 4/6/8

**Applications:** Special motor for such instrument as blower and pump by which speed regulation and changing output power are needed to match load characteristics

**Features:** Step changes of rotational speed, special motor for blower and pump, motor power match driven equipment, improved efficiency.

**Pole-changing mode:** two-speed, three-speed

### Performance Data

**380V 50Hz**

Model	Pole	Output kW	Full Load				$\frac{T_{st}}{T_N}$	$\frac{I_{st}}{I_N}$	$\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 1500/3000 r/min									
YDT80M1-4/2	4	0.17	0.7	1420	58	0.62	1.4	5.5	1.8
	2	0.75	2.0	2860	68	0.82	2.0	7.5	
YDT80M2-4/2	4	0.25	0.9	1420	64	0.65	1.4	5.5	1.8
	2	0.95	2.5	2860	70	0.81	2.0	7.5	
YDT90S-4/2	4	0.3	0.9	1430	70	0.72	1.4	5.5	1.8
	2	1.4	3.7	2850	71	0.82	2.0	7.5	
YDT90L-4/2	4	0.4	1.2	1430	72	0.73	1.4	5.5	1.8
	2	1.9	4.5	2850	75	0.86	2.0	7.5	
YDT100L1-4/2	4	0.65	1.9	1430	74	0.72	1.4	5.5	1.8
	2	2.5	5.3	2850	82	0.87	2.0	7.5	
YDT100L2-4/2	4	0.8	2.2	1430	76	0.72	1.4	5.5	1.8
	2	3.1	6.6	2850	82	0.87	2.0	7.5	
YDT112M-4/2	4	1.1	2.8	1450	80	0.74	1.4	5.5	1.8
	2	4.4	9.3	2890	82	0.88	2.0	7.5	
YDT132S-4/2	4	1.4	3.6	1450	80	0.74	1.3	5.5	1.8
	2	5.9	11.9	2860	83	0.91	1.9	7.5	
YDT132M-4/2	4	2.0	4.8	1450	83	0.77	1.3	5.5	1.8
	2	8.0	15.7	2880	85	0.91	1.9	7.5	

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{T_{st}}{T_N}$	$\frac{I_{st}}{I_N}$	$\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 1500/3000 r/min									
YDT160M-4/2	4	2.8	6.7	1460	85	0.75	1.3	5.5	1.8
	2	12.5	24.3	2920	86	0.91	1.9	7.5	
YDT160L-4/2	4	3.8	8.8	1460	86	0.76	1.3	5.5	1.8
	2	16	30.7	2920	87	0.91	1.9	7.5	
Synchronous speed 1000/1500 r/min									
YDT90S-6/4	6	0.32	1.2	920	63	0.66	1.6	6.0	1.8
	4	1.1	3.1	1420	70	0.78	1.8	7.0	
YDT90L-6/4	6	0.45	1.5	930	68	0.66	1.6	6.0	1.8
	4	1.4	3.6	1400	72	0.81	1.8	7.0	
YDT100L1-6/4	6	0.7	2.2	940	73	0.66	1.6	6.0	1.8
	4	2.2	5.3	1440	80	0.79	1.8	7.0	
YDT100L2-6/4	6	0.9	2.8	940	74	0.67	1.6	6.0	1.8
	4	2.5	6.0	1440	81	0.78	1.8	7.0	
YDT112M-6/4	6	1.1	3.2	960	78	0.68	1.6	6.0	1.8
	4	3.2	7.2	1440	82	0.82	1.8	7.0	
YDT132S-6/4	6	1.5	4.1	970	81	0.68	1.6	6.0	1.8
	4	4.7	10.2	1440	84	0.83	1.8	7.0	
YDT132M-6/4	6	2.2	5.8	970	83	0.69	1.6	6.0	1.8
	4	6.7	14.1	1440	85	0.85	1.8	7.0	
YDT160M-6/4	6	3.1	8.2	970	83	0.69	1.6	7.0	1.8
	4	9.5	19.8	1460	87	0.84	1.8	7.5	
YDT160L-6/4	6	4.0	10.6	970	83	0.69	1.6	7.0	1.8
	4	12	24.7	1460	88	0.84	1.8	7.5	
YDT180M-6/4	6	5.1	13.3	980	81	0.72	1.5	7.0	1.8
	4	15.5	32.2	1470	87	0.84	1.5	7.5	
YDT180L-6/4	6	6.2	15.7	980	81	0.74	1.5	7.0	1.8
	4	18	37.0	1470	87	0.85	1.5	7.5	
YDT200L-6/4	6	8.5	20.2	980	83	0.77	1.5	7.0	1.8
	4	24	48.8	1470	88	0.85	1.5	7.5	
YDT225S-6/4	6	11	23.7	980	84	0.84	1.5	7.0	1.8
	4	33	65.5	1470	89	0.86	1.5	7.5	
YDT225M-6/4	6	13	27.3	980	85	0.85	1.5	7.0	1.8
	4	38	74.6	1470	90	0.86	1.5	7.5	
YDT250M-6/4	6	16	32.9	980	85	0.87	1.5	7.0	1.8
	4	47	89.2	1475	90	0.89	1.5	7.5	
YDT280S-6/4	6	18.5	38.5	980	85	0.86	1.5	7.0	1.8
	4	55	106	1480	90	0.88	1.5	7.5	

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{T_{st}}{T_N}$	$\frac{I_{st}}{I_N}$	$\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 1000/1500 r/min									
YDT280M1-6/4	6	25	50.2	980	87	0.87	1.5	7.0	1.8
	4	70	133	1480	91	0.88	1.5	7.5	
YDT280M2-6/4	6	28	56.2	980	87	0.87	1.5	7.0	1.8
	4	84	159	1480	91	0.88	1.5	7.5	
YDT315S-6/4	6	32	69.2	950	89	0.79	1.5	7.0	1.8
	4	95	184	1425	91	0.86	1.5	7.5	
YDT315M-6/4	6	38	82.2	950	90	0.78	1.5	7.0	1.8
	4	115	221	1425	92	0.86	1.5	7.5	
YDT315L1-6/4	6	45	95.0	950	90	0.80	1.5	7.0	1.8
	4	135	259	1425	92	0.86	1.5	7.5	
YDT315L2-6/4	6	55	115	950	91	0.80	1.5	7.0	1.8
	4	160	304	1425	93	0.86	1.5	7.5	
Synchronous speed 750/1500 r/min									
YDT90S-8/4	8	0.22	1.0	700	55	0.62	1.5	5.0	1.8
	4	1.0	2.6	1420	70	0.82	1.9	7.5	
YDT90L-8/4	8	0.3	1.2	700	58	0.63	1.5	5.0	1.8
	4	1.3	3.3	1420	72	0.82	1.9	7.5	
YDT100L1-8/4	8	0.55	2.1	700	65	0.61	1.5	5.0	1.8
	4	2.0	4.7	1410	80	0.80	1.9	7.5	
YDT100L2-8/4	8	0.65	2.5	700	66	0.61	1.5	5.0	1.8
	4	2.4	5.6	1410	80	0.81	1.9	7.5	
YDT112M-8/4	8	0.9	3.3	700	71	0.59	1.5	5.0	1.8
	4	3.2	7.5	1410	83	0.78	1.9	7.5	
YDT132S-8/4	8	1.1	3.8	720	75	0.59	1.2	5.0	1.8
	4	4.5	9.9	1440	84	0.82	2.0	7.5	
YDT132M-8/4	8	1.5	5.0	720	78	0.59	1.2	5.0	1.8
	4	6.3	13.6	1440	85	0.83	2.0	7.5	
YDT160M-8/4	8	2.0	5.5	730	82	0.67	1.2	5.0	1.8
	4	8.9	18.7	1450	85	0.85	2.0	7.5	
YDT160L-8/4	8	2.7	7.3	730	84	0.67	1.2	5.0	1.8
	4	12	24.7	1450	86	0.86	2.0	7.5	
YDT180M-8/4	8	4.0	11.1	730	84	0.65	1.2	5.0	1.8
	4	16	32.5	1470	88	0.85	2.0	7.5	
YDT180L-8/4	8	5.0	13.5	730	85	0.66	1.2	5.0	1.8
	4	19.5	39.2	1470	89	0.85	2.0	7.5	
YDT200L-8/4	8	7.5	19.8	730	87	0.66	1.2	5.0	1.8
	4	29	57.6	1470	90	0.85	2.0	7.5	

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{T_{st}}{T_N}$	$\frac{I_{st}}{I_N}$	$\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 750/1500 r/min									
YDT225M-8/4	8	9.5	25.6	730	88	0.64	1.3	5.0	1.8
	4	40	75.9	1470	91	0.88	2.0	7.5	
YDT250M-8/4	8	14.5	37.9	730	88	0.66	1.3	5.0	1.8
	4	52	99.8	1470	91	0.87	2.0	7.5	
YDT280S-8/4	8	17	42.7	735	89	0.68	1.3	5.0	1.8
	4	65	125	1475	91	0.87	2.0	7.5	
YDT280M-8/4	8	18.5	44.6	735	90	0.70	1.3	5.0	1.8
	4	75	142	1475	91	0.88	2.0	7.5	
YDT315S-8/4	8	25	60.3	715	90	0.70	1.3	5.0	1.8
	4	92	179	1425	91	0.86	2.0	7.5	
YDT315M-8/4	8	30	71.6	715	91	0.70	1.3	5.0	1.8
	4	110	211	1425	92	0.86	2.0	7.5	
YDT315L1-8/4	8	36	85.9	715	91	0.70	1.3	5.0	1.8
	4	135	256	1425	92	0.87	2.0	7.5	
YDT315L2-8/4	8	41	96.4	715	91	0.71	1.3	5.0	1.8
	4	155	294	1425	92	0.87	2.0	7.5	
Synchronous speed 750/1000 r/min									
YDT90S-8/6	8	0.25	1.3	700	52	0.58	1.6	6.0	1.8
	6	0.65	2.4	930	65	0.63	1.8	7.0	
YDT90L-8/6	8	0.35	1.6	700	56	0.58	1.6	6.0	1.8
	6	0.8	2.9	920	67	0.62	1.8	7.0	
YDT100L1-8/6	8	0.55	2.3	710	62	0.58	1.6	6.0	1.8
	6	1.3	4.2	950	71	0.66	1.8	7.0	
YDT100L2-8/6	8	0.75	2.9	710	66	0.59	1.6	6.0	1.8
	6	1.6	4.9	950	74	0.67	1.8	7.0	
YDT112M-8/6	8	0.85	2.8	710	67	0.69	1.6	6.0	1.8
	6	2.0	6.0	950	74	0.68	1.8	7.0	
YDT132S-8/6	8	1.2	4.2	710	73	0.60	1.6	6.0	1.8
	6	2.6	7.0	950	79	0.71	1.8	7.0	
YDT132M1-8/6	8	1.6	5.3	730	76	0.60	1.6	6.0	1.8
	6	3.3	7.0	970	80	0.76	1.8	7.0	
YDT132M2-8/6	8	2.2	7.2	730	77	0.60	1.6	6.0	1.8
	6	4.5	11.1	970	82	0.75	1.8	7.0	
YDT160M-8/6	8	3.2	10.0	730	80	0.61	1.6	6.0	1.8
	6	6.5	15.5	970	84	0.76	1.8	7.0	
YDT160L-8/6	8	4.5	13.4	730	82	0.62	1.6	6.0	1.8
	6	9.0	20.7	980	86	0.77	1.8	7.0	

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{T_{st}}{T_N}$	$\frac{I_{st}}{I_N}$	$\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 750/1000 r/min									
YDT180L-8/6	8	6.5	18.8	730	81	0.65	1.5	6.0	1.8
	6	13	29.8	980	86	0.77	1.5	7.0	
YDT200L1-8/6	8	8.5	23.9	730	82	0.66	1.5	6.0	1.8
	6	17	37.1	980	87	0.80	1.5	7.0	
YDT200L2-8/6	8	11	29.6	730	83	0.68	1.5	6.0	1.8
	6	21	45.3	980	88	0.80	1.5	7.0	
YDT225M-8/6	8	15	33.6	735	87	0.78	1.5	6.0	1.8
	6	30	61.7	980	89	0.83	1.5	7.0	
YDT250M-8/6	8	18	39.3	740	87	0.80	1.5	6.0	1.8
	6	37	72.6	985	90	0.86	1.5	7.0	
YDT280S-8/6	8	22	46.9	742	88	0.81	1.5	6.0	1.8
	6	45	88.3	985	90	0.86	1.5	7.0	
YDT280M1-8/6	8	28	59.0	742	89	0.81	1.5	6.0	1.8
	6	55	112	985	91	0.82	1.5	7.0	
YDT280M2-8/6	8	32	67.4	742	89	0.81	1.5	6.0	1.8
	6	65	132	985	91	0.82	1.5	7.0	
YDT315S-8/6	8	37	80.1	715	90	0.78	1.5	6.0	1.8
	6	75	149	950	91	0.84	1.5	7.0	
YDT315M-8/6	8	45	93.9	715	91	0.80	1.5	6.0	1.8
	6	90	175	950	92	0.85	1.5	7.0	
YDT315L1-8/6	8	55	118	715	91	0.78	1.5	6.0	1.8
	6	110	214	950	92	0.85	1.5	7.0	
YDT315L2-8/6	8	66	141	715	91	0.78	1.5	6.0	1.8
	6	132	256	950	92	0.85	1.5	7.0	
Synchronous speed 750/1000/1500 r/min									
YDT112M-8/6/4	8	0.6	2.8	710	61	0.53	1.3	4.0	1.8
	6	0.8	3.3	950	65	0.57	1.4	6.5	
	4	2.3	6.1	1440	79	0.73	2.0	7.5	
YDT132S-8/6/4	8	0.8	3.1	730	68	0.57	1.3	4.0	1.8
	6	1.1	3.9	970	71	0.60	1.4	6.5	
	4	3.1	7.4	1460	81	0.79	2.0	7.5	
YDT132M-8/6/4	8	1.1	4.1	730	72	0.57	1.3	4.0	1.8
	6	1.5	4.7	970	74	0.65	1.4	6.5	
	4	4.5	10.0	1460	83	0.82	2.0	7.5	

Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{T_{st}}{T_N}$	$\frac{I_{st}}{I_N}$	$\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 750/1000/1500 r/min									
YDT160M-8/6/4	8	1.5	5.0	720	79	0.58	0.95	4.0	1.8
	6	2.6	7.5	960	79	0.67	1.4	6.5	
	4	7.5	16.5	1440	84	0.82	1.8	7.5	
YDT160L-8/6/4	8	2.0	6.3	720	81	0.60	0.95	4.0	1.8
	6	3.5	9.7	960	81	0.68	1.4	6.5	
	4	10.2	21.2	1440	86	0.85	1.8	7.5	
YDT180M-8/6/4	8	2.6	7.8	740	80	0.63	0.95	5.5	1.8
	6	4.5	10.7	980	80	0.80	1.4	7.5	
	4	13	25.5	1470	86	0.90	1.8	8.0	
YDT180L-8/6/4	8	3.3	9.8	740	81	0.63	0.95	5.5	1.8
	6	6.0	13.9	980	81	0.81	1.4	7.5	
	4	16	31.0	1470	87	0.90	1.8	8.0	
YDT200L-8/6/4	8	4.5	13.4	730	82	0.62	0.95	5.5	1.8
	6	8	18.1	975	82	0.82	1.4	7.5	
	4	22	42.7	1465	87	0.90	1.8	8.0	
YDT225S-8/6/4	8	5.5	14.0	735	85	0.70	1.1	5.5	1.8
	6	10	21.5	980	83	0.85	1.4	7.5	
	4	28	54.3	1470	89	0.88	1.8	8.0	
YDT225M-8/6/4	8	7.5	17.7	735	87	0.74	1.1	5.5	1.8
	6	12	25.5	980	83	0.86	1.4	7.5	
	4	34	65.2	1470	89	0.89	1.8	8.0	
YDT250M-8/6/4	8	10	23.0	740	88	0.75	1.1	5.5	1.8
	6	15.5	32.6	985	85	0.85	1.4	7.5	
	4	44	80.7	1470	90	0.92	1.8	8.0	
YDT280S-8/6/4	8	12	28.0	742	88	0.74	1.1	5.5	1.8
	6	18	37.9	985	85	0.85	1.4	7.5	
	4	55	101	1475	90	0.92	1.8	8.0	
YDT280M-8/6/4	8	15	33.7	742	89	0.76	1.1	5.5	1.8
	6	21	43.1	985	86	0.86	1.4	7.5	
	4	66	120	1475	91	0.92	1.8	8.0	
YDT315S-8/6/4	8	19	44.4	715	89	0.73	1.3	5.5	1.8
	6	27	56.1	950	87	0.84	1.4	7.5	
	4	75	139	1425	90	0.91	1.8	8.0	
YDT315M-8/6/4	8	22	51.6	715	90	0.72	1.3	5.5	1.8
	6	32	65.8	950	88	0.84	1.4	7.5	
	4	90	165	1425	91	0.91	1.8	8.0	



Performance Data

380V 50Hz

Model	Pole	Output kW	Full Load				$\frac{T_{st}}{T_N}$	$\frac{I_{st}}{I_N}$	$\frac{T_{max}}{T_N}$
			FLA	RPM	Eff. $\eta\%$	Power Factor $\cos\Phi$			
Synchronous speed 750/1000/1500 r/min									
YDT315L1-8/6/4	8	28	63.9	715	90	0.74	1.3	5.5	1.8
	6	40	81.3	950	88	0.85	1.4	7.5	
	4	115	211	1425	91	0.91	1.8	8.0	
YDT315L2-8/6/4	8	35	81.2	715	91	0.72	1.3	5.5	1.8
	6	51	104	950	89	0.84	1.4	7.5	
	4	140	257	1425	92	0.90	1.8	8.0	

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	V36
80~160	√	√	√	√	√	√	√	√	√	√	√	√
180~225	√	√	√	√	-	-	-	-	-	-	-	-
250~315	√	-	√	√	-	-	-	-	-	-	-	-

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