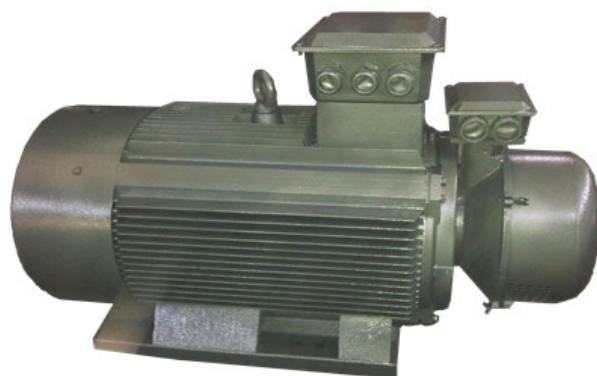


**YR3 SERIES
SLIP RING MOTOR**

GUANGZHOU HAOQING MOTOR CO.,LTD

YR3 SERIES SLIP RING MOTOR



General Description

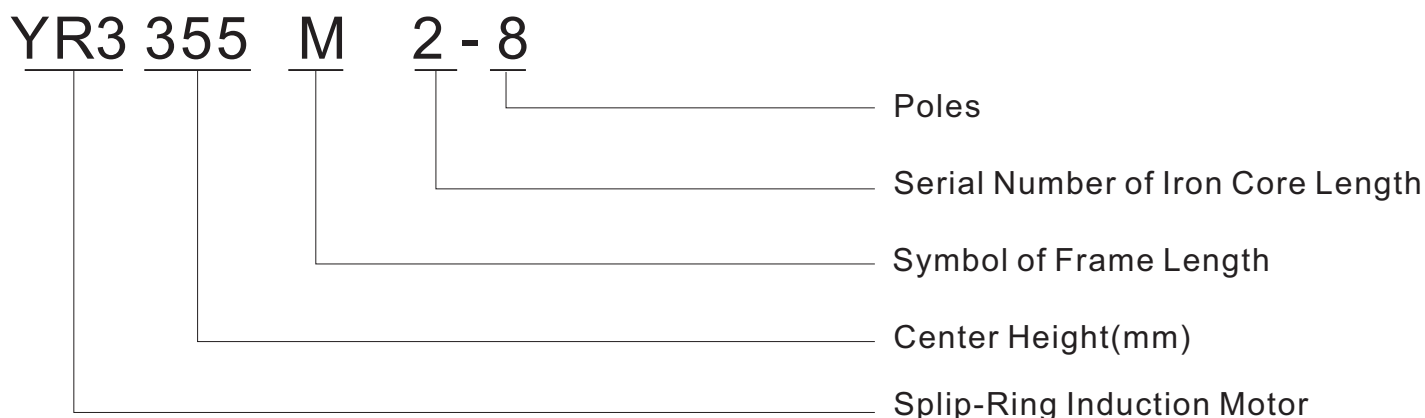
YR3 series(IP55) motor is closed wound rotor three-phase asynchronous motor, is the new generation product with updatest design in China. The power class and mounting size of this series motor is applied to the international standard IEC72.

The motor can gain good start performance (When smaller start current, bigger start torque) and small range speed control through rotor loop external connection to resistance. It's widely used when required bigger start torque than squirrel-cage rotor motor; or when electric fence capacity not enough to start squirrel-cage rotor motor, frequent start, start time longer or connected electrical shaft as synchronous transmission. For example, metal cutting machine, crusher, globe mill, compressor, sugar mill, windlass, drive belt and other required heavy-load start and short-time overload mechanical equipments. The motor has advantages as high efficiency, overload capacity, low noise, small vibration, reliable structure, beautiful shape and so on, especially fit for separate or assorted exportation, or assorted with import equipment, has become our main export product.

Electric Specification

- 1). Rated voltage 380V, rated frequency 50HZ. Can be made into 415V,420V,440V,660V and 60HZ according to customers' requirements.
- 2). Stator is Δ connection(3KW is Y connection), rotor is Y connection.
- 3). Motor apply F Class insulation (winding exotherm examined by B Class); cooling method as IC411; Keep-on working system(S1).
- 4). Motor shelled protection class as IP54. Among,H400~450 collecting ring protection class IP23.Stator and rotor has its separate top offtrack junction box, making motor's connection safer, more reliable and convenient. If need to make with other offtrack pls advise when order.

Nomenclature



YR3 SERIES SLIP RING MOTOR Selection Parameters

Technical data(4Pole)

Frame	Power	Current	speed	Efficiency	Power factor	Max torque	Rotor		Noise	Vibration	Rotating inertia	Weight
	kW	A	r/min	%	cosφ	Rated torque	Voltage (V)	Current (A)	Db (A)	mm/s	kg • m ²	kg
YR3-132M1-4	4	9.4	1421	84.5	0.77	3.0	230	11.5	86	1.8	0.15	88
YR3-132M2-4	5.5	12.5	1434	86.0	0.77	3.0	272	13.0	86	1.8	0.17	96
YR3-160M-4	7.5	15.8	1444	87.5	0.83	3.0	250	19.5	90	2.8	0.23	108
YR3-160L-4	11	22.8	1426	89.5	0.83	3.0	276	25.0	90	2.8	0.27	115
YR3-180L-4	15	30.1	1434	89.5	0.85	3.0	278	34.0	94	2.8	0.39	205
YR3-200L1-4	18.5	36.7	1439	89.0	0.86	3.0	247	47.5	94	2.8	0.51	277
YR3-225M1-4	22	43.1	1448	90.0	0.86	3.0	293	47.0	94	2.8	0.54	290
YR3-225M2-4	30	57.6	1442	91.0	0.87	3.0	360	51.5	98	2.8	0.93	350
YR3-250M1-4	37	70.6	1448	91.5	0.86	3.0	289	79.0	98	3.5	1.29	480
YR3-250M2-4	45	85.9	1453	91.5	0.87	3.0	340	81.0	100	3.5	1.43	500
YR3-280S-4	55	103.8	1457	91.5	0.88	3.0	485	70.0	100	3.5	2.27	620
YR3-280M-4	75	140	1485	92.5	0.88	3.0	354	128.0	103	3.5	2.89	720
YR3-315S-4	90	162	1485	92.5	0.86	3.0	525	104.0	103	3.5	4.65	1060
YR3-315M1-4	110	201	1485	93.0	0.86	3.0	525	127.0	103	3.5	5.22	1080
YR3-315M2-4	132	240	1485	93.2	0.86	3.0	601	133.0	106	3.5	5.68	1125
YR3-315L1-4	160	284	1486	93.2	0.86	3.0	722	134.0	106	3.5	6.47	1131
YR3-355M1-4	160	286	1483	93.3	0.87	3.0	352	277.0	106	3.5	11.54	1650
YR3-355M2-4	185	326	1483	93.5	0.87	3.0	348	294.0	106	3.5	12.58	1723
YR3-355L1-4	200	355	1486	94.0	0.87	3.5	422	288.0	106	3.5	13.04	1740
YR3-355L2-4	220	389	1486	94.0	0.87	3.5	470	285.0	106	3.5	14.20	1825
YR3-355L3-4	250	444	1487	94.0	0.87	3.5	528	287.0	108	3.5	15.13	1900
YR3-355L4-4	280	495	1488	94.0	0.87	3.5	604	281.0	108	3.5	16.98	2115
YR3-400M1-4	280	521	1488	94.2	0.86	3.5	545	311.0	108	3.5	21.51	2721
YR3-400M2-4	315	566	1489	94.2	0.86	3.5	595	320.0	108	3.5	23.54	2823
YR3-400M3-4	355	631	1489	94.5	0.87	3.5	674	318.0	108	3.5	26.07	2960
YR3-400M4-4	400	716	1489	94.5	0.87	3.5	776	311.0	108	3.5	28.35	3082
YR3-400L1-4	450	795	1490	94.8	0.89	2.5	847	320.0	108	3.5	33.01	3295
YR3-450M1-4	500	858	1492	95.2	0.89	2.8	722	412.0	108	3.5		
YR3-450M2-4	560	962	1493	95.3	0.89	2.8	867	384.0	111	3.5		
YR3-450M3-4	630	1076	1493	95.4	0.90	2.8	878	427.0	111	3.5		
YR3-450M4-4	710	1219	1494	95.5	0.90	2.8	1085	389.0	111	3.5		
YR3-450M5-4	800	1361	1493	95.6	0.90	2.8	1121	424.0	111	3.5		

YR3 SERIES SLIP RING MOTOR Selection Parameters

Technical data(6Pole)

Frame	Power	Current	speed	Efficiency	Power factor	Max torque	Rotor		Noise	Vibration	Rotating inertia	Weight
	kW	A	r/min	%	cosφ	Rated torque	Voltage (V)	Current (A)	Db (A)	mm/s	kg · m ²	kg
YR3-132M1-6	3	8	949	80.5	0.69	2.8	206	9.5	82	1.8	0.20	89
YR3-132M2-6	4	10.7	949	82.0	0.69	2.8	230	11.0	82	1.8	0.21	97
YR3-160M-6	5.5	13.2	940	84.5	0.74	2.8	244	14.5	82	2.8	0.28	145
YR3-160L-6	7.5	17.8	947	86.0	0.74	2.8	266	18.0	85	2.8	0.32	153
YR3-180L-6	11	23.6	949	87.5	0.81	2.8	310	22.5	85	2.8	0.46	203
YR3-200L1-6	15	31.8	955	88.5	0.81	2.8	198	48.0	88	2.8	0.67	280
YR3-225M1-6	18.5	38.3	955	88.5	0.83	2.8	187	62.5	88	2.8	0.92	330
YR3-225M2-6	22	45	964	89.5	0.83	2.8	224	61.0	88	2.8	1.03	350
YR3-250M1-6	30	60.3	966	90.0	0.84	2.8	282	66.0	91	3.5	1.80	480
YR3-250M2-6	37	73.9	967	90.5	0.84	2.8	331	69.0	91	3.5	1.95	510
YR3-280S-6	45	87.9	969	91.5	0.85	2.8	362	76.0	94	3.5	3.06	620
YR3-280M-6	55	106.9	972	92.0	0.85	2.8	423	80.0	94	3.5	3.40	670
YR3-315S-6	75	142	989	93.0	0.85	2.8	419	108.0	98	3.5	7.47	930
YR3-315M1-6	90	171	991	93.5	0.85	2.8	516	105.0	98	3.5	8.70	1050
YR3-315M2-6	110	207	991	93.5	0.85	2.8	611	108.0	98	3.5	9.86	1205
YR3-315L1-6	132	246	993	93.5	0.85	2.8	604	131.0	102	3.5	10.80	1414
YR3-355M1-6	132	246	988	92.8	0.86	2.5	301	269.0	102	3.5	14.54	1630
YR3-355M2-6	160	294	988	93.0	0.86	2.5	331	296.0	102	3.5	15.73	1703
YR3-355L1-6	185	341	990	93.3	0.86	2.5	390	290.0	102	3.5	17.52	1825
YR3-355L2-6	200	370	990	93.5	0.86	2.8	442	276.0	102	3.5	19.31	1923
YR3-355L3-6	220	404	991	93.6	0.86	2.8	474	283.0	102	3.5	20.50	1990
YR3-355L4-6	250	459	991	93.8	0.86	3.0	553	273.0	105	3.5	22.89	2110
YR3-400M1-6	250	447	991	94.8	0.85	3.0	545	274.0	105	3.5	30.76	2698
YR3-400M2-6	280	495	991	94.8	0.86	3.0	578	290.0	105	3.5	32.75	2775
YR3-400M3-6	315	557	992	95.0	0.86	3.0	655	287.0	105	3.5	36.07	2889
YR3-400M4-6	355	629	992	95.0	0.86	3.0	736	288.0	105	3.5	39.38	3012
YR3-400L1-6	400	707	993	95.2	0.86	2.8	870	274.0	105	3.5	46.18	3261
YR3-400L2-6	450	788	993	95.2	0.86	2.8	958	280.0	105	3.5	51.49	3429
YR3-400L3-6	500	880	993	95.2	0.87	2.8	1064	279.0	105	3.5	51.49	3461
YR3-450M1-6	500	879	994	95.3	0.87	2.8	972	306.0	105	3.5		
YR3-450M2-6	560	982	994	95.4	0.87	2.8	1080	308.0	108	3.5		
YR3-450M3-6	630	1101	994	95.5	0.87	2.8	1216	308.0	108	3.5		
YR3-450M4-6	710	1243	994	95.6	0.87	2.8	1390	303.0	108	3.5		

YR3 SERIES SLIP RING MOTOR Selection Parameters

Technical data(8Pole)

Frame	Power	Current	speed	Efficiency	Power factor	Max torque	Rotor		Noise	Vibration	Rotating inertia	Weight
	kW	A	r/min	%	cosφ	Rated torque	Voltage (V)	Current (A)	Db (A)	mm/s	kg · m ²	Kg
YR3-160M-8	4	10.5	703	82.5	0.69	2.4	216	12.0	78	2.8	0.27	140
YR3-160L-8	5.5	14.1	705	83.0	0.71	2.4	230	15.5	78	2.8	0.31	155
YR3-180L-8	7.5	18.5	692	85.0	0.73	2.4	255	19.0	82	2.8	0.44	195
YR3-200L1-8	11	26.6	699	86.0	0.73	2.4	152	46.0	82	2.8	0.66	279
YR3-225M1-8	15	34.5	706	88.0	0.75	2.4	169	56.0	86	2.8	1.01	330
YR3-225M2-8	18.5	42.1	712	89.0	0.75	2.4	211	54.0	86	2.8	1.17	360
YR3-250M1-8	22	48.1	710	89.0	0.78	2.4	210	65.5	86	3.5	1.77	480
YR3-250M2-8	30	65.3	713	89.5	0.77	2.4	270	69.0	90	3.5	2.02	510
YR3-280S-8	37	79	715	91.0	0.79	2.4	271	81.5	90	3.5	2.97	640
YR3-280M-8	45	92.9	725	92.0	0.80	2.4	359	76.0	93	3.5	3.73	720
YR3-315S-8	55	113	740	92.2	0.79	2.4	339	98.0	93	3.5	7.47	970
YR3-315M1-8	75	150	741	92.5	0.79	2.4	432	105.0	96	3.5	9.06	1010
YR3-315M2-8	90	182	742	92.6	0.79	2.4	528	102.0	96	3.5	10.39	1060
YR3-315L1-8	110	220	743	92.6	0.79	2.4	635	104.0	96	3.5	10.10	1352
YR3-355M1-8	110	221	740	92.0	0.79	2.4	271	250.0	96	3.5	15.01	1485
YR3-355M2-8	132	265	741	92.4	0.79	2.5	316	256.0	99	3.5	16.72	1565
YR3-355L1-8	160	318	742	92.5	0.79	2.5	379	258.0	99	3.5	19.53	1640
YR3-355L2-2	185	368	742	92.6	0.79	2.6	447	253.0	99	3.5	22.34	1703
YR3-355L3-8	200	392	743	93.0	0.79	2.6	475	256.0	99	3.5	23.59	1731
YR3-355L4-8	220	436	743	93.0	0.79	2.6	543	246.0	99	3.5	26.40	1792
YR3-400M1-8	220	428	742	94.2	0.77	2.8	422	313.0	99	3.5	33.92	2785
YR3-400M2-8	250	485	743	94.2	0.77	2.8	475	315.0	102	3.5	37.91	2929
YR3-400M3-8	280	548	743	94.2	0.77	2.8	542	308.0	102	3.5	41.92	3061

YR3-400L1-8	315	623	744	94.5	0.77	2.8	633	297.0	102	3.5	45.24	3194
YR3-400L2-8	355	694	744	94.5	0.78	2.8	691	306.0	102	3.5	49.23	3343
YR3-400L3-8	400	775	744	94.5	0.78	2.8	760	313.0	102	3.5	53.88	3513
YR3-450M1-8	400	776	745	94.6	0.79	2.8	704	337.0	102	3.5		
YR3-450M2-8	450	863	745	94.7	0.79	2.8	775	345.0	102	3.5		
YR3-450M3-8	500	958	745	94.8	0.79	2.8	861	344.0	102	3.5		
YR3-450M4-8	560	1072	745	95.0	0.79	2.8	969	342.0	105	3.5		

YR3 SERIES SLIP RING MOTOR Selection Parameters

Technical data(10Pole)

Frame	Power	Current	speed	Efficiency	Power factor	Max torque	Rotor		Noise	Vibration	Rotating inertia	Weight
	kW	A	r/min	%	cosφ	Rated torque	Voltage (V)	Current (A)	Db (A)	mm/s	kg·m ²	Kg
YR3-315S-10	45	97	593	92.0	0.73	2.4	334	91.0	93	3.5	6.42	1025
YR3-315M1-10	55	119	593	92.3	0.73	2.4	409	91.0	93	3.5	7.13	1086
YR3-315M2-10	75	137	594	92.5	0.73	2.4	566	79.0	96	3.5	9.09	1222
YR3-315L1-10	90	193	594	92.5	0.73	2.4	672	80.0	96	3.5	9.98	1304
YR3-355M1-10	90	192	592	92.5	0.73	2.5	248	221.0	96	3.5	15.22	1389
YR3-355M2-10	110	235	593	92.6	0.73	2.5	306	217.0	96	3.5	18.03	1545
YR3-355L1-10	132	282	593	92.8	0.73	2.6	372	214.0	99	3.5	21.15	1711
YR3-355L2-10	160	339	594	93.0	0.73	2.6	434	222.0	99	3.5	23.96	1873
YR3-400M1-10	185	382	594	93.5	0.75	2.8	401	276.0	99	3.5	38.58	2829
YR3-400M2-10	200	412	594	93.5	0.75	2.8	435	275.0	99	3.5	41.56	2924
YR3-400M3-10	220	450	594	93.5	0.75	2.8	474	277.0	99	3.5	45.28	3044
YR3-400L1-10	250	513	595	94.0	0.75	2.8	547	273.0	102	3.5	51.24	3230
YR3-400L2-10	280	573	595	94.0	0.75	2.8	608	275.0	102	3.5	56.44	3402
YR3-400L3-10	315	647	595	94.0	0.75	2.8	684	274.0	102	3.5	62.40	3594
YR3-450M1-10	355	712	596	94.5	0.76	2.6	670	314.0	102	3.5		
YR3-450M2-10	400	796	596	94.6	0.77	2.6	766	310.0	102	3.5		
YR3-450M3-10	450	882	596	94.7	0.77	2.6	803	333.0	102	3.5		
YR3-450M4-10	500	500	596	94.8	0.78	2.6	894	332.0	102	3.5		
YR3-400M1-12	132	284	494	93.2	0.72	2.5	407	193.0	99	3.5	35.95	2716
YR3-400M2-12	160	345	494	93.2	0.72	2.5	498	191.0	99	3.5	42.65	2917
YR3-400M3-12	185	396	495	93.5	0.72	2.5	561	196.0	99	3.5	47.11	3055
YR3-400L1-12	200	414	494	93.5	0.73	2.5	587	203.0	99	3.5	51.58	3201
YR3-400L2-12	220	467	495	93.5	0.73	2.5	670	195.0	99	3.5	56.05	3340
YR3-400L3-12	250	528	495	93.5	0.73	2.5	749	198.0	102	3.5	62.00	3533
YR3-450M1-12	250	519	496	93.6	0.74	2.0	594	249.0	102	3.5		
YR3-450M2-12	280	582	496	93.7	0.74	2.0	679	244.0	102	3.5		

YR3-450M3-12	315	653	496	93.8	0.74	2.2	794	235.0	102	3.5		
YR3-450M4-12	355	738	496	94.0	0.74	2.2	912	230.0	102	3.5		
YR3-450M5-12	400	819	496	94.2	0.75	2.1	953	248.0	102	3.5		

YR3 SERIES SLIP RING MOTOR

Outline Dimension

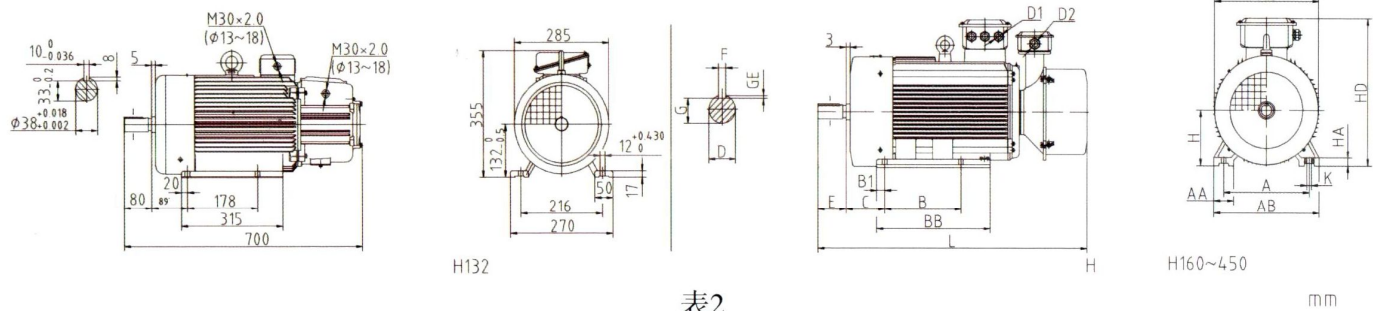


表2

机座号	安装尺寸及公差														接线盒				外形尺寸(限值)											
	A		B		C		D		E		F		G		H		K		D1注3)		D1注4)		BI	AA	AB	AC	HA	HD	BB	L
	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	基本尺寸	极限偏差	位置度公差	基本尺寸	数量	基本尺寸	数量									
160M	254	210	108	±3.0	42	+0.018	110	±0.43	12	0	37	160	15	+0.430	0	Φ1.50	M30×2.0 (Φ13-18)	1	M30×2.0 (Φ13-18)	1	25	65	314	330	20	410	216	776		
160L		254			42	+0.002			12		37										160	15	0	358	820					
180L	279	279	121	±4.0	48	+0.030	140	±0.43	14	0	42.5	180	0	-0.50	19	Φ2.00	M42×2.0 (Φ22-32)	M36×2.0 (Φ18-25)	1	29	70	349	380	22	455	396	900			
200L	318	305	133		48				14	-0.043	42.5	180	0							49	200	-0.50	19	31	70	388	397	25	495	420
225M	356	311	149	±4.0	60	+0.030	140	±0.43	16	0	53	200	-0.50	19	Φ2.00	M42×2.0 (Φ22-32)	M36×2.0 (Φ18-25)	1	36	75	431	460	28	520	430	1045				
250M	406	349	168		60				16		53	200							-0.50	19	58	250	-0.50	24	40	80	490	495	30	625
280S	457	368	190	±4.0	75	+0.030	140	±0.43	20	0	67.5	280	+0.520	0	Φ2.00	M42×2.0 (Φ22-32)	M36×2.0 (Φ18-25)	1	38	85	550	550	35	670	519	1264				
280M		419			75	+0.011			20		67.5	280							+0.520	0	570	1315								
315S	508	406	216	±4.0	80	+0.035	170	±0.43	22	0	71	315	-0.10	28	Φ2.00	M30×2.0 (Φ13-18)	M50×1.5 (Φ32-38)	3	1	120	628	620	45	837	680	570	1490			
315M		457			80				22	-0.052	71	315														-0.10	28	570	1490	
315L	508	508	216	±4.0	80	+0.035	170	±0.43	22	0	71	315	-0.10	28	Φ2.00	M30×2.0 (Φ13-18)	M50×1.5 (Φ32-38)	3	1	120	628	620	45	837	680	570	1490			
355M	610	560	254		80				22	-0.052	71	315														-0.10	28	570	-0.10	28
355L	610	630	254	±4.0	95	+0.035	170	±0.43	25	0	86	355	-0.10	28	Φ2.00	M64×2.0 (Φ37-44)	M64×2.0 (Φ37-44)	3	1	116	730	710	52	920	913	1820	注5)			
400M	686	630	280		95	+0.013			28		100	400														35	+0.620	109	400	+0.620
400L	686	710	280	±4.0	110	+0.040	210	±0.43	28	0	109	400	+0.620	0	Φ2.00	M72×2.0 (Φ45-52)	M64×2.0 (Φ37-44)	3	3	120	806	856	45	1078	1162	2300				
450	800	1000	110		+0.015				32		-0.062	119															450	42	0	119

注: 1) GE=D-G, GE的极限偏差为 (+0.20/0); 2) K孔的位置以轴伸的轴线为基准; 3) D1为定子接线口尺寸, 括号内为卡口直径; 4) D2为转子接线口尺寸, 括号内为卡口直径; 5) 355L4-4, L4-8, L4-12电机总长L为1940, 其余355L机座号电机总长为1820.

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