

# PRODUCT INFORMATION PACKET



Model No: R451M2

Catalog No: R451M2

Elevator Duty Motor, 20.0 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, S254T Frame, DP



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**Nameplate Specifications**

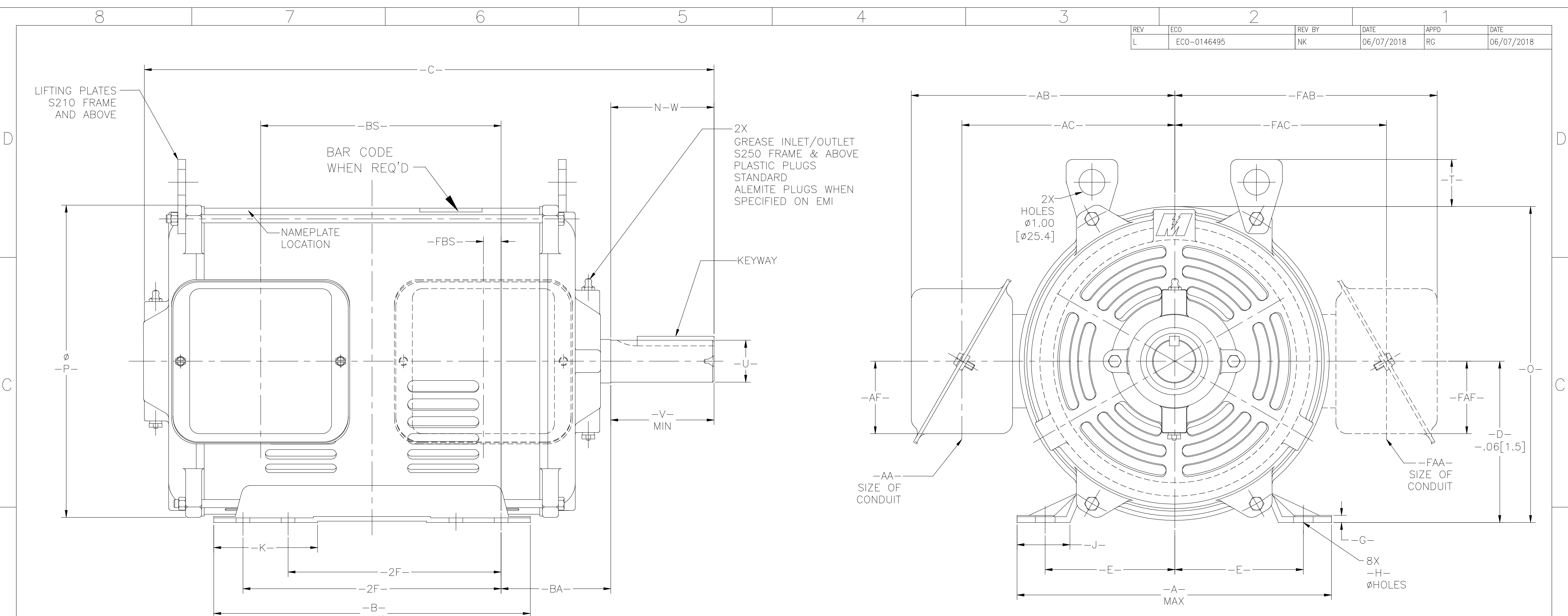
Output HP	20.0 Hp	Output KW	14.9 kW
Frequency	60 Hz	Voltage	230/460 V
Current	54/27 A	Speed	1740 rpm
Service Factor	1.15	Phase	3
Duty	30 Minute	Insulation Class	F
Frame	S254T	Enclosure	Drip Proof
Thermal Protection	No Protection	Ambient Temperature	40 °C
UL	Recognized	CSA	Y
CE	N	Number of Speeds	1

**Technical Specifications**

Electrical Type	Three Phase	Starting Method	Across The Line
Poles	4	Rotation	Counterclockwise
Mounting	Rigid Base	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Rolled Steel
Shaft Type	Keyed	Overall Length	22.10 in
Frame Length	13.00 in	Shaft Diameter	1.625 in
Shaft Extension	4.4 in		
Outline Drawing	80009201-S01	Connection Drawing	80022815.PCX

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REV	ECO	REV BY	DATE	APPD	DATE
L	ECO-0146495	NK	06/07/2018	RG	06/07/2018



FRAME	TERMINAL BOX F1 MTG					TERMINAL BOX F2 MTG					-BA-									
	-AA-	-AB-	-AC-	-AF-	-BS-	-FAA-	-FAB-	-FAC-	-FAF-	-FBS-										
S180	3/4	7.63	193.8	5.94	150.8	2.50	63.5	4.94	125.4	3/4	7.00	177.8	5.63	143.0	2.16	54.8	0.56	14.2	2.75	69.8
S210	1	7.63	193.8	5.94	150.8	2.50	63.5	7.38	187.4	1	7.00	177.8	5.63	143.0	2.16	54.8	0.19	4.8	3.50	88.9
S250	1-1/4	10.19	258.8	8.16	207.3	2.81	71.4	9.32	236.7	1-1/4	10.19	258.8	8.25	209.6	2.85	72.4	0.68	72.3	4.25	107.9
G250	1-1/4	10.19	258.8	8.16	207.3	2.81	71.4	11.07	281.2	1-1/4	10.19	258.8	8.25	209.6	2.85	72.4	0.68	72.3	4.25	107.9
S280	1-1/2	10.19	258.8	8.16	207.3	2.81	71.4	10.32	262.1	1-1/2	10.19	258.8	8.25	209.6	2.85	72.4	0.68	72.3	4.75	120.6

-U- DIM.	TOL. ON -U- DIM.	SHAFT RUNOUT
UP TO 1.500 [38.1]	+0.000 [+0.000] -0.005 [-0.012]	UP TO 1.625 [41.2] .002 [0.05]
OVER 1.500 [38.1]	+0.00 [-0.01] -0.03 [-0.03]	OVER 1.625 [41.2] .003 [0.08]

CERTIFICATION OF A.C. MOTORS  
 CERTIFIED FOR \_\_\_\_\_  
 SPEC. NO. NO. ORDER NO. \_\_\_\_\_ NO.  
 ORDER I.D. I.D. NO. EMI H.P.  
 TYPE TYPE FRAME FRAME H.P. H.P.  
 R.P.M. RPM VOLTS VOLTS PHASE PHASE  
 HERTZ HERTZ AMPS AMPS CODE -  
 REMARKS \_\_\_\_\_  
 REMARKS2 \_\_\_\_\_  
 APPROVED BY \_\_\_\_\_ DATE: \_\_\_\_\_

FRAME	KEYWAY			-A-	-B-	-C-	-D-	-E-	-2F-	-G-	-H-	-J-	-K-	N-W	-O-	-P-	-T-	-U-	-V-																			
	WIDTH	DEPTH	LENGTH																																			
S182T	0.250	6.35	0.125	3.17	2.50	63.5	9.00	228.6	7.75	196.6	13.65	346.7	4.500	114.3	3.750	95.2	4.500	114.3	0.164	4.16	.406	10.31	1.48	37.6	2.93	74.4	2.75	69.9	8.78	223.0	8.53	216.6	-----	1.125	28.57	2.75	69.8	
S184T	0.250	6.35	0.125	3.17	2.50	63.5	9.00	228.6	7.75	196.6	13.65	346.7	4.500	114.3	3.750	95.2	5.500	139.7	0.164	4.16	.406	10.31	1.48	37.6	2.93	74.4	2.75	69.9	8.78	223.0	8.53	216.6	-----	1.125	28.57	2.75	69.8	
S213T	0.312	7.92	0.156	3.96	3.13	79.5	10.00	254	10.75	273.0	17.28	438.9	5.250	133.35	4.250	107.95	5.500	139.7	0.180	4.57	.406	10.31	1.58	40.1	3.43	87.1	3.38	85.8	9.53	242.0	8.57	217.6	1.77	44.9	1.375	34.9	3.25	82.5
S215T	0.312	7.92	0.156	3.96	3.13	79.5	10.00	254	10.75	273.0	17.28	438.9	5.250	133.35	4.250	107.95	7.000	177.8	0.180	4.57	.406	10.31	1.58	40.1	3.43	87.1	3.38	85.8	9.53	242.0	8.57	217.6	1.77	44.9	1.375	34.9	3.25	82.5
S254T	0.375	9.52	0.188	4.77	3.75	95.3	12.18	309.4	12.25	311.6	22.12	561.8	6.250	158.75	5.000	127	8.250	209.55	0.194	4.92	.531	13.48	2.06	52.3	4.06	103.1	4.00	101.6	12.25	311.1	12.00	304.8	1.82	46.2	1.625	41.2	3.88	98.5
G256T	0.375	9.52	0.188	4.77	3.75	95.3	12.18	309.4	12.25	311.6	23.85	605.8	6.250	158.75	5.000	127	8.250	209.55	0.194	4.92	.531	13.48	2.06	52.3	4.06	103.1	4.00	101.6	12.25	311.1	12.00	304.8	1.82	46.2	1.625	41.2	3.88	98.5
S256T	0.375	9.52	0.188	4.77	3.75	95.3	12.18	309.4	12.25	311.6	22.12	561.8	6.250	158.75	5.000	127	10.000	254	0.194	4.92	.531	13.48	2.06	52.3	4.06	103.1	4.00	101.6	12.25	311.1	12.00	304.8	1.82	46.2	1.625	41.2	3.88	98.5
S284T	0.500	12.7	0.250	6.35	4.38	111.2	12.75	323.8	13.25	336.5	24.25	615.9	7.000	177.8	5.500	139.7	9.500	241.3	0.194	4.92	.531	13.48	1.81	45.9	3.81	96.8	4.62	117.3	13.00	330.2	12.00	304.8	1.82	46.2	1.875	47.6	4.50	114.3
S284TS	0.375	9.52	0.188	4.77	3.00	76.2	12.75	323.8	13.25	336.5	22.88	581.2	7.000	177.8	5.500	139.7	9.500	241.3	0.194	4.92	.531	13.48	1.81	45.9	3.81	96.8	3.25	82.5	13.00	330.2	12.00	304.8	1.82	46.2	1.625	41.2	3.12	79.2
S286T	0.500	12.7	0.250	6.35	4.38	111.2	12.75	323.8	13.25	336.5	24.25	615.9	7.000	177.8	5.500	139.7	11.000	279.4	0.194	4.92	.531	13.48	1.81	45.9	3.81	96.8	4.62	117.3	13.00	330.2	12.00	304.8	1.82	46.2	1.875	47.6	4.50	114.3
S286TS	0.375	9.52	0.188	4.77	3.00	76.2	12.75	323.8	13.25	336.5	22.88	581.2	7.000	177.8	5.500	139.7	11.000	279.4	0.194	4.92	.531	13.48	1.81	45.9	3.81	96.8	3.25	82.5	13.00	330.2	12.00	304.8	1.82	46.2	1.625	41.2	3.12	79.2

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 ENG. REF.

GEOMETRIC CHARACTERISTICS & SYMBOLS ▯ FLATNESS - STRAIGHTNESS < ANGULARITY ⊥ PERPENDICULARITY (SQUARENESS) // PARALLELISM ○ ROUNDNESS (CIRCULARITY) ⊘ CYLINDRICITY ▤ PROFILE OF ANY SURFACE ▥ PROFILE OF ANY LINE ↑ RUNOUT ⊕ TRUE POSITION ⊙ CONCENTRICITY = SYMMETRY	UNLESS OTHERWISE SPECIFIED DIM. TOLERANCES ARE AS FOLLOWS: INCH X XX XXX XXXX INCH ±.1 ±.02 ±.005 ±.0005 mm ±0.5 ±0.13 ±0.013 ANG. ±50 DEG REMOVE BURRS & BREAK SHARP EDGES: INCH .003-.015 mm 0.1-0.4 CORNER FILLETS TO: INCH .020 mm 0.5 MACHINE SURFACES: INCH 125/ mm 3.2	DR BY: SBC APPD: MAS THIRD ANGLE PROJECTION	04-25-1995 04-25-1994 EDS DATE 11-11-2011 FORMAT REV H	<b>REGAL</b> REGAL-BELOIT CORPORATION DESCRIPTION MOT-S180/S280 F1/F2 STDT SIZE D DWG NO 80009201 SCALE NONE SHEET 1
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