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CHAMPION RN50W Owner's Manual

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RN50W](#)



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----- Manual continues below part list -----

Available Replacement Parts for CHAMPION RN50W

110425	SWITCH FOR: ALL WINDOW MODELS & WN30,HB3
220901-003	TOP FOR: WC46/50 & RWC46/50
281001-001	PUMP BASKET FOR: ALL MODELS - RESIDENTIA
226003-002	WATER TROUGH, NO CLIPS
110098	PAD (ASPEN) FOR: 14/21 SD/DD (REQUIRES 4
222013-001	PAD RETAINER SOLD INDIVIDUALLY
324003-057	CORNER POST - WITH 1/2" DOME PLUG INSTAL
224105-004	FRONT PANEL FOR: WC46/50
322120-001	TUNNEL FOR: WC/WM35/37/43/44/45/49/50, N
324105-006	BLOWER HOUSING FOR: WC/RWC46/50 - BUILT
16BW	BLOWER WHEEL FOR: 4000 SD/DD/RLD, 4001 S
110183	SHAFT - NO KEYWAY (HOLLOW) FOR USE W/ALL
110351	BEARING - 1" PILLOW BLOCK (BLOWER SHAFT)
110275	BLOWER PULLEY (10 x 1) FOR: 4000/4001DD/
110215	DRIVE BELT
314003-024	MOTOR MOUNT (TOP MOUNT) FOR: WC/RWC46/50
314005-001	MOTOR MOUNT STRAPS (MOUNTS ONE MOTOR)
FL-C	FLOAT VALVE ASSEMBLY FOR: ALL STANDARD R
110429	DIAL UL7500 PUMP W/STRAINER FOR: WC50, N
110714	PUMP MOUNT RETAINER FOR: ALL RESIDENTIAL
310716	1/2" WATER DELIVERY TUBE (5 FT.) + CLAMP
3D-10	WATER DISTRIBUTOR ASSEMBLY FOR: 4000/400
110574	WATER DISTRIBUTOR CLIP/TUBE RETAINER FOR
110610	OVERFLOW KIT FOR: ALL RESIDENTIAL DUCTED
3HL-1	HOUSE LEG SUPPORT ASSY FOR: ALL WINDOW C
310811	HOUSE LEG W/ RUBBER TIP FOR: ALL WINDOW
110603	SIDE SEALER FOR: N35W/37W/45W/46W/49W/50
110839-006	SWITCH KNOB (TAN)
222007-001	LOCK PLATE FOR: WC37 & WCM28 WITH A SERI
110839-1	GRILLE ASSEMBLY FOR: WC35, WC37/N37W, WC

110839-2	GRILLE ASSEMBLY FOR: RWC35/46/50, RN35W/
322007-004	27-131, CORD ADAPTER PLATE W/GROMMET
110403	DRESS RING, ECS ASSY.
110829	WINTER GRILLE COVER FOR: ALL WINDOW UNIT
310586	BLEED OFF KIT - (1/2" W/ 25 FT HOSE) FOR
322008-001	CONVERSION KIT FOR VERTICAL TUNNEL FOR:
110599	WINDOW PANEL RETAINERS (SIDE SEALERS) FO
324007-205	LOUVER ASSEMBLY (ASPEN PAD W/ EXTRA FIBE
110273	MOTOR PULLEY - FIXED (3 x 1/2) FOR: N49W
110447	S 50310SR 1/2HP 2SP 115V MOTOR 175-35
110372	MOTOR CORD FOR: WINDOW COOLERS (WC33 - W



Essick Excel

Residential Evaporative Coolers

The Environmentally Friendly
Alternative To Traditional
Air Conditioning

**N- Series
Coolers Provide
A Wide Variety of
Home Cooling Options:**

- **Window Units**
- **Remote Controlled Units**
- **Down Discharge Units**
- **Side Discharge Units**

ALL UNITS MADE IN USA

ADVANTAGES of Essick Air Evaporative Coolers

In this day of escalating energy costs and environmental concerns, the advantages of installing Evaporative Coolers grow every year.

Our innovative engineering and quality workmanship ensures high efficiency performance, low maintenance, cost effectiveness and environmental responsibility.

Essick Air coolers offer: Low Maintenance Features

- One piece bottom pan for rust resistance
 - Tough polyester finish inside & out to resist rust & impact
 - Bolted construction for easy access and maintenance
- Low Operating Costs
- Uses less energy than air conditioning
 - Uses water instead of chemicals for cooling



WINDOW UNIT DIMENSION IDENTIFIER VIEWS
 SIDE DISCHARGE
 FRONT
 SIDE
 REAR
 DOWN DISCHARGE
 BOTTOM
 FRONT
 SIDE

WINDOW UNIT DIMENSIONS (in Inches)													
MODEL NO.	WEIGHT LBS.		CABINET DIMENSIONS			DUCT OPENING (TUNNEL)			GRILLE DIMENSIONS		DRAIN OUTLET		WATER INLET
	SHP.	OPER.	A	B	C	D	E	F	G	H	I	J	K
N28W	75	105	27	24	17	11 ²⁹ / ₃₂	22 ¹ / ₈	13 ⁹ / ₁₆	21 ³ / ₄	14 ⁷ / ₈	5 ¹ / ₂	5 ⁷ / ₈	4 ¹ / ₂
N30W	90	135	29 1/4	31 1/2	15	13 ¹¹ / ₁₆	21 ³ / ₈	13	21 ³ / ₄	14 ⁷ / ₈	7 ¹ / ₄	15 ³ / ₄	5
RN35W	126	190	30 1/2	31 1/2	21	13 ¹¹ / ₁₆	21 ³ / ₈	14 1/2	21 ³ / ₄	14 ⁷ / ₈	4	15 ³ / ₄	5
N37W	139	202	33 ⁷ / ₁₆	28 ¹ / ₈	28 ¹ / ₈	13 ¹¹ / ₁₆	21 ³ / ₈	16 1/4	21 ³ / ₄	14 ⁷ / ₈	5	8 ⁵ / ₈	5 ³ / ₁₆
(R)N46W	168	246	34 1/2	34 ¹ / ₈	34 ¹ / ₈	13 ¹¹ / ₁₆	21 ³ / ₈	16 1/4	21 ³ / ₄	14 ⁷ / ₈	25 ³ / ₈	23 ¹ / ₂	5 ³ / ₁₆
(R)N50W	171	249	34 1/2	34 ¹ / ₈	34 ¹ / ₈	13 ¹¹ / ₁₆	21 ³ / ₈	16 1/4	21 ³ / ₄	14 ⁷ / ₈	25 ³ / ₈	23 ¹ / ₂	5 ³ / ₁₆

Match letters on the Window Unit illustration at far right to dimensions in table above.

SIDE DISCHARGE DIMENSIONS (in Inches)												
MODEL NO.	WEIGHT LBS.		CABINET DIMENSIONS			DUCT OPENING			DRAIN OUTLET		WATER INLET	POWER INLET
	SHP.	OPER.	A	B	C	5	E	F	G	H	I	J
N30S	109	193	33 ⁷ / ₁₆	28 ¹ / ₈	28 ¹ / ₈	13 ⁵ / ₈	13 ⁵ / ₈	7 ¹ / ₄	12 ³ / ₃₂	12 3/4	8 ³ / ₄	4 ⁵ / ₈
N40/N45S	150	269	34 1/2	34 ¹ / ₈	34 ¹ / ₈	17 3/4	17 3/4	8 3/16	12 ¹ / ₁₆	10 ²¹ / ₃₂	8 ³ / ₄	4 ⁵ / ₈
N55/65S	202	357	42 ⁷ / ₁₆	39	39	19 3/4	19 3/4	9 ⁵ / ₈	16 ²¹ / ₃₂	15 ²¹ / ₃₂	8 ³ / ₄	4 ⁵ / ₈

Match letters on the Side Discharge illustration at top left to dimensions in table above.

DOWN DISCHARGE DIMENSIONS (in Inches)												
MODEL NO.	WEIGHT LBS.		CABINET DIMENSIONS			DUCT OPENING			DRAIN OUTLET		WATER INLET	POWER INLET
	SHP.	OPER.	A	B	C	D	E	F	G	H	I	J
N31D	118	175	33 ⁷ / ₁₆	28 ¹ / ₈	28 ¹ / ₈	13 ⁵ / ₈	13 ⁵ / ₈	7 ¹ / ₄	4 ⁵ / ₈	17 ¹¹ / ₁₆	5 ³ / ₁₆	4 ⁵ / ₈
N43/48D	161	233	34 1/2	34	34	17 3/4	17 3/4	8 ³ / ₁₆	4 ¹ / ₄	16 ³ / ₈	5	4 ⁵ / ₈
N56/66D	220	309	42 ⁷ / ₁₆	39	39	19 3/4	19 3/4	9 ⁵ / ₈	4 ¹ / ₄	25 ³ / ₈	5 ¹ / ₂	4 ⁵ / ₈

Match letters on the Down Discharge illustration at left to dimensions in table above.

WINDOW UNIT SPECIFICATIONS													
MODEL NO.	IND. STD. RATING	PAD DIMENSIONS			H.P.	PHASE	VOLTS	SPEED	BLOWER WHEEL	BLOWER PULLEY DIA. X BORE	MOTOR PULLEY DIA. X BORE	BELT LENGTH	
		NO. RQD.	HEIGHT	WIDTH									
N28W	2800	2	21	13	Direct Drive	1	115	2	8x5(2)	N/A	N/A	N/A	
		1	21	20									
N30W	3000	2	25	17	1/3	1	115	2	9 ¹ / ₈ X 6 ¹ / ₈	N/A	N/A	N/A	
		1	25	26 1/2									
RN35W	3300	2	26	17	1/3	1	115	2	12 x 11	9 x 3/4	2 1/2 x 1/2	50	
		1	26	28									
N37W	3300	3	27	22	1/3	1	115	2	12 x 12	7 x 1	2 1/2 x 1/2	45	
(R)N46W	4500	3	28	27									
(R)N50W	5000	3	28	27	1/2	1	115	2	16 x 16	10 x 1	3 x 1/2	56	

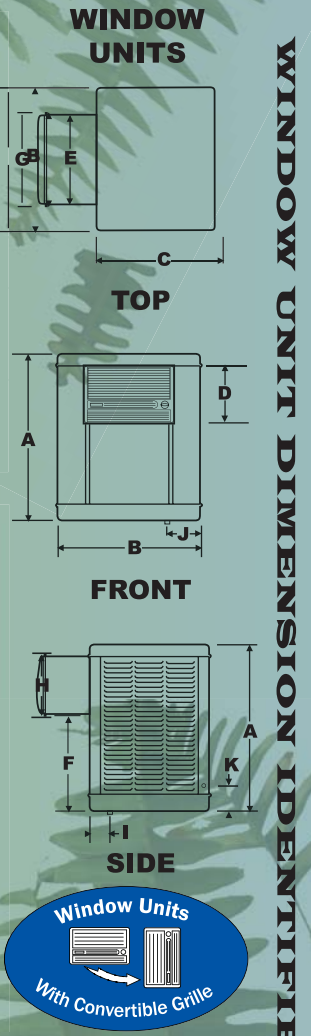
Units with (R) indicate this model is available with remote control.

SIDE DISCHARGE CFM* & MOTOR SPECIFICATIONS																			
MODEL NO.	IND. STD. RATING	HP	INCHES OF STATIC PRESSURE					AREA: Sq.Ft.	PAD DIMENSIONS			HP	SPEED	VOLTS	BLOWER WHEEL	BLOWER PULLEY DIA. X BORE	MOTOR PULLEY DIA. X BORE	BELT LENGTH	
			0	.1	.2	.3	.4		.5	NO. RQD.	HGT.								WIDTH
N30S	3000	1/3	2077	1950	1760	1700	1550	NR	600 to 800	3	27	22	1/3	1or 2	115	12x12	7x1	3 1/4 x 1/2	45
N40/45S	4000	1/3	2973	2726	2550	2230	NR	NR	700 to 1200	3	28	27	1/3	1or 2	115	16x16	10x1	3 1/2 x 1/2	56
N40/45S	4500	1/2	3432	3230	3000	2775	2140	1475	700 to 1200	3	28	27	1/2	1or 2	115	16x16	10x1	3 1/2 x 1/2	56
N55/65S	5500	1/2	4190	3910	3650	3330	2900	NR	1200 to 1600	3	36	33	1/2	1or 2	115	20x16	12x1	3 1/2 x 1/2	67
N55/65S	6500	3/4	4734	4600	4320	4060	3810	3630	1200 to 1600	3	36	33	3/4	1or 2	115	20x16	12x1	3 1/2 x 1/2	67

DOWN DISCHARGE CFM* & MOTOR SPECIFICATIONS																			
MODEL NO.	IND. STD. RATING	HP	INCHES OF STATIC PRESSURE					AREA: Sq.Ft.	PAD DIMENSIONS			HP	SPEED	VOLTS	BLOWER WHEEL	BLOWER PULLEY DIA. X BORE	MOTOR PULLEY DIA. X BORE	BELT LENGTH	
			0	.1	.2	.3	.4		.5	NO. RQD.	HGT.								WIDTH
N31D	3100	1/3	2175	2060	1970	1810	1650	1520	600 to 800	4	27	22	1/3	1or 2	115	12x12	7x1	3 1/4 x 1/2	45
N43/48D	4100	1/3	3077	2880	2565	2240	NR	NR	800 to 1400	4	28	27	1/3	1or 2	115	16x16	10x1	3 1/2 x 1/2	56
N43/48D	4800	1/2	3654	3430	3230	3064	2998	2010	800 to 1400	4	28	27	1/2	1or 2	115	16x16	10x1	3 1/2 x 1/2	56
N56/66D	5600	1/2	4334	4000	3620	3300	2610	2170	1400 to 1800	4	36	33	1/2	1or 2	115	20x16	12x1	3 1/2 x 1/2	69
N56/66D	6600	3/4	4983	4780	4530	4280	4020	3780	1400 to 1800	4	36	33	3/4	1or 2	115	20x16	12x1	3 1/2 x 1/2	69

All motors have automatic overload. Motors shipped separately on Side and Down Discharge units.

* CFM = Cubic Feet per minute



Most of our window units can be installed horizontally in standard windows or vertically between wall studs.

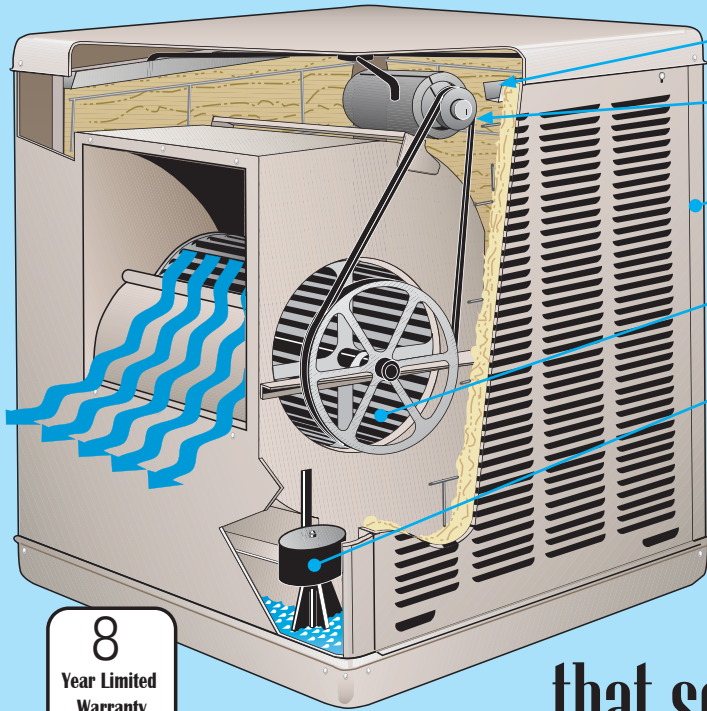


A handy remote control comes with the RN35W, RN46W, and RN50W models.

Window units are shipped fully assembled. Motors on window units are mounted and tested before shipment.

WINDOW UNIT DIMENSION IDENTIFIER VIEWS

It's our **FEATURES**



Water Trough - Adjustable for even water distribution

Motor - Water Resistant with thermal overload protection and permanently lubricated bearings*

Cabinet - Heavy gauge galvanized steel. Bolts together for easy access and rust/corrosion resistance

Blower - Machine balanced for smooth, quiet operation and maximum air delivery

Pump - Permanently lubricated bearings can run with or without water

Built-in leveling leg - Window units include house legs for leveling and extra support

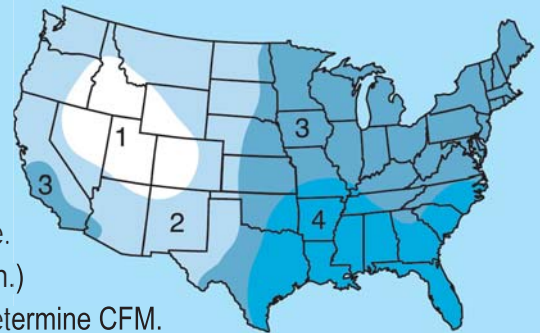
* Except for N28W unit

8
Year Limited
Warranty
on bottom pan
against leakage
due to rust-out.

that set our coolers above the rest

Selecting the right Essick cooler is **EASY**

1. Consult zone map to find correct size.
2. Consult table below to find correct "minutes per air change" for your zone.
3. Determine area to be cooled in cubic feet (building height x length x width.)
4. Divide cubic feet from step three by minutes per air change (step 2) to determine CFM.
5. Select correct Essick Cooler model in the specifications table according to CFM and expected static pressure.



Minutes Per Air Change

INTERIOR HEAT LOAD	EXTERIOR HEAT LOAD	ZONE			
		1	2	3	4
HIGH	EXPOSED	2	1.5	1.3	.7
HIGH	INSULATED	3	2	1.5	1
NORMAL	EXPOSED	3	2	1.5	1
NORMAL	INSULATED	4	3	2	1.3

IF CFM falls between models, choose the larger model.

Interior Heat Load: *High* means places with unusual heat sources from hot equipment or processes, crowded conditions, etc. *Normal* means no unusual heat sources - typical home or office.

Exterior Heat Load: *Exposed* means walls and/or roof exposed to sun, poor insulation, etc.

Insulated means walls and roof well insulated and/or shaded.

For Example:

A house in Phoenix AZ. is 40' long by 30' wide with 8' ceilings and has standard insulation with no unusual heat sources.

1. Establish cubic feet: $30 \times 40 \times 8 = 9,600$ cu. ft.
2. Determine Zone: Phoenix is in Zone 2
3. Use chart to discover Minutes Per Air Change: 3
4. Compute Cubic Feet per Minute (CFM): $9,600 \div 3 = 3,200$ CFM
5. Review Specification Charts inside brochure to determine which unit meets the needs.
In this example, the N43/48D with 1/2 h.p. motor is indicated (assuming a typical static pressure of 0.2).

