



Genuine Ultralights

Sales Training and Construction

Guide

Behind the Scenes

- **AZDEL COMPOSITE – BOTH INTERIOR & EXTERIOR PANELS**
 - 50% LIGHTER THAN WOOD/LAUAN
 - NO CHEMICAL TREATMENT
 - WILL NOT SOAK UP WATER
 - NO WOOD = NO DELAMINATION
- **ALUMINUM FRAMED WALLS W/DOUBLE LAMINATION**
 - PINCH ROLLED AND VACUUM-BONDED = DOUBLE LAMINATION
 - ONLY MFG USING DOUBLE-LAMINATION PROCESS
 - CREATES A SOLID PERMANENT WALL
- **ALUMINUM FRAMED VACUUM BONDED RADIUS ROOF**
 - LIGHTWEIGHT, RIGID, AND FULLY WALKABLE
 - HUNDREDS OF POUNDS LIGHTER THAN WOOD FRAMED
 - CHANNELS WEIGHT TO CHASSIS
 - MOTORHOME-METHOD CONSTRUCTION
- **DICOR CROSSFLEX SYNTHETIC THERMOPLASTIC ROOFING**
 - STRONGEST & LIGHTEST ROOF MATERIAL IN THE INDUSTRY
 - 10X MORE TEAR RESISTANT THAN COMPETITION
 - 30X MORE PUNCTURE RESISTANT THAN COMPETITION

Behind the Scenes

- **VACUUM BONDED REAR WALL**
 - AZDEL SUBSTRATE
 - BACKED AND READY FOR A LADDER
- **CARRYING CAPACITY – AXLE SIZE**
 - LARGER AXLES = MORE CARRYING CAPACITY
 - ALLOWS UNITS TO HAVE A 50-GAL FRESH WATER TANK
- **UNIT WEIGHT**
 - LAMINATED ROOF, AZDEL & THE **APEX** PROCESS = LIGHTER UNIT & EASIER TO TOW
 - TOWED BY TODAY'S HALF-TON, SUV, & MINI VANS
 - BETTER FUEL EFFICIENCY, LESS WEAR & TEAR
 - LEADER IN USEABLE SPACE PER POUND
- **SOLAR PANEL/DOUBLE LP TANKS = OFF GRID READY**
 - CAMP WHERE AND WHEN YOU WANT

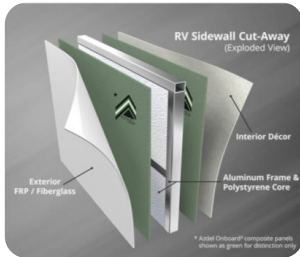
Behind the Scenes

- **HEATED & ENCLOSED UNDERBELLY** (DOUBLE AXLE only)
 - DIRECT VENT FROM FURNACE TO UNDERBELLY
 - REDUCES DRAG FOR BETTER TOWING
 - KEEPS PESTS OUT & STOPS ROAD DEBRIS
- **EMERALD CERTIFIED GREEN MANUFACTURING**
 - LESS WOOD, RECYCLING PROGRAM & CERTIFIED GREEN PROCESS
 - INDOOR AIR QUALITY!!!
 - LOW VOCs (volatile organic compounds) = PARTICLES IN THE AIR
 - ONLY (3) MFG IN CATEGORY – **APEX**, LANCE & AIRSTREAM

Apex: 'Highlight' Features

Double AZDEL

- AZDEL on Exterior AND Interior
- Saves Weight
- Added protection against Water



Lithium Ready

- WFCO Auto-Detect Converters
- Automatically determines battery type (Lead Acid/Lithium)
- Optimizes Battery Charge Profile
- <https://www.youtube.com/watch?v=pVrD8crMqhs>



1/1/2023

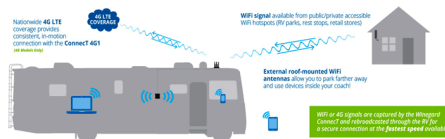
Key Alike

- Convenient Single Key throughout
- No Universal Key on Storage
- More Convenient AND Secure



Wineguard Digital Antenna

- Omnidirectional TV/Radio
- Compatible with Wineguard Connect LTE Hotspots
- <https://www.youtube.com/watch?v=nCoxKEVvlyE>



Due to continuing product development information is subject to change.

Always Off Grid

- Off Grid Package Mandatory on Nano
- **All** Apex have Solar
- Ready for Dry Camping



Topper Awning Prep (Ultralite Only)

- All Ultralite slides have mounts for Solera
- Great for keeping debris off roof
- Simplified dealer install
- <https://www.lci1.com/solera-slide-toppers>





All Terrain Option:

- 15"(or 16") Aluminum Wheels
- All Terrain Tires
- 2" Suspension lift (most Models)



Off Grid Option (Mandatory on Nano)

- 200W Roof Mounted Solar Panel
 - 10ga solar wiring: supports up to 400W in parallel.
- 30A Battery Charge Controller
 - 10ga wiring to battery to support charge control upgrade
- Dual 20lbs Propane Tanks
- Propane Tank Cover
- 12V/USB Accessory Outlets at Pass-Thru Storage and Interior
- 12V Power Vent with 900CFM Airflow
 - 100% interior air exchange, every minute.



Fully Aluminum Framed Walls

- All welded aluminum framed walls.
- All windows/baggage doors/openings fully framed (most manufacturers just cut the windows into the foam – no framing).
- Framing ensures windows are installed square and with solid support.
- Perimeter Tubing is wood-filled for enhanced fastener retention.
- <https://www.youtube.com/watch?v=FxKXIbf6Ncw>



Block Foam and Steel Backing

- Block foam insulation effectively insulates Apex while providing structural integrity.
- Just 1/8” of Polystyrene Foam protects your hand from boiling liquid – Imagine what the 1 ½ “ thick Apex wall provides.
- Electro-galvanized steel backing plates installed in wall everywhere interior cabinets and fixtures are to be attached.





Double Lamination

- Coachmen is the only manufacturer using a double-lamination process
- Combining the best of both processes: Apex walls are both pinch rolled and vacuum-bonded.
- Interior panels are pinch rolled and immediately trimmed
- Pinch rolling leaves interior panels clean from any glue residue



Vacuum Bonded Exterior

- Vacuum bonding process creates strongest bond
- Vacuum bonding does not use a heat-reactive glue, so it never softens in hot sun
- Vacuum bonding eliminates opportunities for air bubbles to be trapped in sidewall
- Vacuum bonded wall cures under pressure, not just momentary contact





Aluminum Framed Vacuum Bonded Radius Roof

- Lightweight, rigid, and fully walkable.
- Radius exterior ensures runoff and avoid standing water
- Solid block foam for superior insulation
- Clean interior ceiling: No putty, staples, nails, etc...
- Snap-Batten moldings: no vinyl wrap to shrink, no nails, no falling down moldings
- Hundreds of pounds lighter than conventional wood-trussed roof.



Dicor Crossflex Roofing

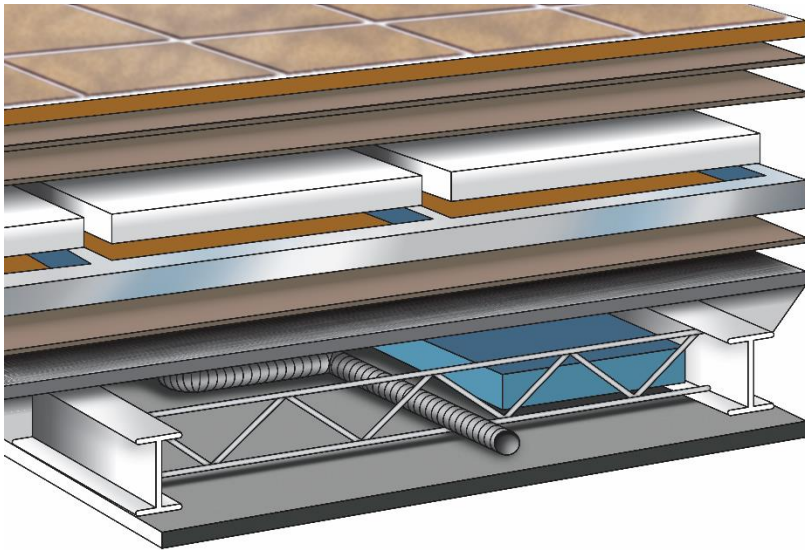
- 12-year warranty
- Top Rated Puncture Resistance: 100+ lbs on screwdriver tip)
- Superior Tear Resistance: 1" wide strip will hold 200+ lbs
- Excellent flexibility
- High Solar Reflectance & Thermal Emissivity
- **Strongest & Lightest Roofing Membrane Available**
- <https://seamancorp.wistia.com/medias/x78bo8g24f>





6 Layer Laminated Floor

1. Residential durable floor covering
2. Double layer lauan plywood top decking
3. Aluminum framed core
4. Block foam structural insulation
5. Lauan plywood bottom decking
6. Darco waterproof floor wrap



1/5/2023

Fully Glued Flooring

- Most RV flooring is loose-laid on floor
- Apex flooring is fully glued = residential installation
- Will not cold-crack (Guaranteed – 3 years)
- Will not ripple on warm days
- More durable – glued down flooring resists tearing and stretching
- More repairable if needed



Due to continuing product development information is subject to change.



EZ-Lube/Superlube Axles (Nano Only)

- Self adjusting brakes
- Easy, wheels-on lube process
- Simple process makes it more likely customers keep axles properly lubricated
- 5 Year (EZ Lube) & 6 Year (Superlube) Warranty
- <https://www.youtube.com/watch?v=XT0RKDGgDm8>



Lippert Spring Axles (Ultralite Only)

- Powder-coated tube assemblies
- Self adjusting brakes
- Super lube hubs
- Water-proof connectors
- 6-year Warranty





Heated/Enclosed Underbelly*

- Heat from furnace supplied to tank enclosure
- Added protection for plumbing and electrical systems from elements
- Reduces air-drag on bottom of trailer for better towing.
- Helps keep pests out of trailer by sealing bottom.
- *All Tandem Axle Models. Heat Pads for Tanks available on Nano models.



Lionshead Tire & Wheel

- 5-Year warranty against manufacturing defects
- [Absolute no-excuses replacement for first year.](#)
- Nitrogen filled
- Aluminum wheels (Std on Ultralite, & All Terrain Package on Nano – Opt on Nano)





AZDEL Onboard

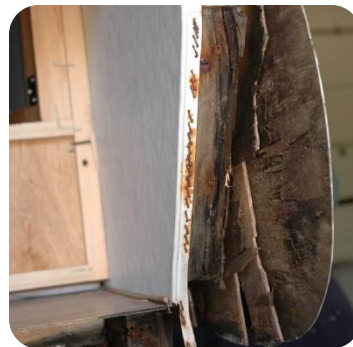
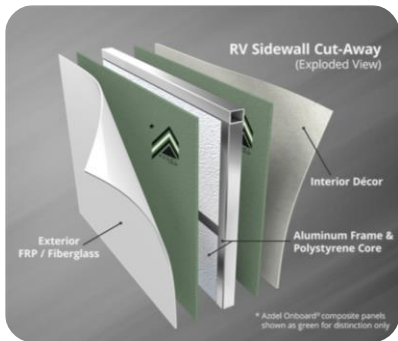
- 50% lighter weight than Luan
- No internal layers to delaminate like luan
- Better adhesion than luan
- Provides additional R-2 insulation
- More consistent thickness for improved exterior appearance
- Made in USA.
- **Double AZDEL (interior and exterior layers)**
- <https://azdelonboard.com/mold-and-mold-testing/>



Azdel Composite Panels - Key Features		
<p>Weight Matters™ 50% Lighter Than Wood for Lighter RVs</p>	<p>Let It Rain™ Impervious to Water: No Rot, Mold or Water Damage</p>	<p>from Sweats to Chills™ 3X the Insulation Value of Wood</p>
<p>TOXIC CHEMICAL CO₂ Odorless, Formaldehyde Free</p>	<p>Sound & Energy Absorbing for Quieter RVs</p>	<p>Impact & Puncture Resistant: Stronger Sidewalls Help Prevent Damage</p>

Why not Luan Sidewalls?

- Absorbs moisture like sponge
- Luan is imported from Asia
- Very prone to water damage: small leaks become MAJOR repairs
- Internal luan failures a common cause of sidewall delamination industry-wide
- HINT: Look inside entry door strike-plate to see lamination substrate



All New Star-Gazer

(Available in Apex Nanos)



- Brings in More Natural Light
- Allows for Greater Airflow
- Screen to Keep Insects Out
- Block Out Shade



Updated Solar



MEGA200 200 WATT SOLAR PANEL



200 WATT
MAXIMUM POWER OUTPUT

36 CELL
MONOCRYSTALLINE MODULE

0~+5W
POSITIVE POWER TOLERANCE

19.9%
MAXIMUM EFFICIENCY

RICH SOLAR is the leading supplier of off-grid solar equipment for RV, agriculture, off-grid housing, marine, light industrial and heavy equipment, provides solar panels and other equipment, including solar charge controllers, inverters, batteries and complete do-it-yourself solar kits.

We'd love to work with you to create the perfect solar solution for your product or industry. Lead your industry and increase product value by adding solar or making it solar-ready.

☎ 1-800-821-9889
✉ sales@richsolar.com
🌐 www.richsolar.com
📍 5550 Juniper St
Ontario, CA 91761

FEATURES

- 9 buss bar solar cell configuration
- Lightweight anodized aluminum frame
- High transmission, AR (anti-reflective) coated tempered glass
- Plug and play junction box
- Industry standard quick connect cables (MC4) work in series or in parallel
- Highly reliable due to stringent quality control (Over 30 in-house tests (UV, TC, HF, and many more), PID resistant, 100% EL double inspection)
- Certified to withstand challenging environmental conditions (2400 Pa wind load, 5400 Pa snow load, 35 mm hail stones at 97 km/h)
- Excellent low light performance on cloudy days, mornings and evenings

INSTALLATION

- Easy installation and handling for various applications (high-end off-grid and mobile applications)
- Pre-drilled holes compatible with ground mounts, Z brackets, pole mounts and tilt mounts
- Compatible with on-grid and off-grid inverters

WARRANTY

- 25 year limited power output

- 200W Panel on Roof
- 30Amp Charge Controller
- 10ga Wire allows for Expansion



CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.
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www.richsolar.com



Quality Audit/PDI

- Units are randomly selected from production line to undergo complete QC Audit, Code Audit, and PDI testing.
- Units are sent to an independent facility on the Coachmen Campus.
- Apex records best-in-company performance at audits, earning the Coachmen Quality Award.
- This process helps us to refine and improve our manufacturing processes over time.
- A Coachmen Exclusive: No other manufacturer has such a program.

Green Certified – Emerald!

- Green is the result of a process using effective production techniques in combination with resource efficient and healthy materials
- Creates products that satisfy consumer needs with minimal environmental impact.
- A professional third-party certification agency, TRA Certification, certifies RVs as being Green.
- **APEX, Lance & Airstream are the only (3) mfg. in industry in this category!!**

Apex Meets Emerald-Level in ALL of the Following Categories:



- Indoor Air Quality
- Resource Efficiency
- Energy Efficiency
- Operation and Maintenance
- Innovative Practices
- Water Efficiency
- <https://www.certifiedgreenrvs.com/coachmen-apex>



Emerald Rated- Checklist



v2020

Resource Efficiency

Points Available	Points Claimed
10 Construction materials recycled offsite. (1 pt ea max 10) list: cdbd, aluminum, copper wire, styrofoam, plastic	5
5 CNC Machines to maximize cuts (1 pt per material, max 5) list: cabs, c-tops, tables	3
5 Jigs are used (1 pt each, max 5 pts) list: cabs, door openings, cab hinges/handles, sidewalls	4
5 Material scraps are reused. (1 pt each, max 5 points) list: wood for backers	1
5 Reusable shipping containers for materials (1 pt ea, max 5) list: refrigerators, windows, doors, awnings, storage doors	5
5 Major materials are cut to size at supplier (1 pt ea, max 5) list: flooring, wood, rubber roofing	3
10 Materials with recycled content are used. (2 pts ea, max 10) list: mattress, insulation, wallboard	6
2 Rain drainage system installed	2
10 Regional materials used for major components (500 miles) (2 pts ea, max 10):	
3 RV component manufacturer facility is ISO 9001/14001 or equal (1 pt ea, max 3):	
3 Certified wood (1 point per product type, max 3) (product and certification):	
5 Minimal use of wood	5
Additional:	
68 Points available	34 50%

Energy Efficiency

Points Available	Points Claimed											
<table border="1"> <thead> <tr> <th colspan="2">Insulation</th> <th rowspan="3">(wall x 4 + floor + ceiling)/4</th> </tr> <tr> <th>Type</th> <th>R-value</th> </tr> </thead> <tbody> <tr> <td>Walls batt</td> <td>7</td> </tr> <tr> <td>Floor batt</td> <td>7</td> </tr> <tr> <td>Ceiling poly</td> <td>10</td> </tr> </tbody> </table>	Insulation		(wall x 4 + floor + ceiling)/4	Type	R-value	Walls batt	7	Floor batt	7	Ceiling poly	10	11.3
Insulation		(wall x 4 + floor + ceiling)/4										
Type	R-value											
Walls batt	7											
Floor batt	7											
Ceiling poly	10											
5 LED lighting (>90% interior & exterior)	5											
2 Awnings are standard - 1 pts each, max 2	2											
3 Soap pressurization or rain booth test to check for leaks	3											
10 Energy efficient appliances (2 points each, max 10) list: tv	2											
10 Energy efficient furnace & A/C (5 pts each, 10 pts max) list:												
3 Skylights to provide natural lighting (1 pt each, max 3)	1											
2 Heating system with NO ducts												
2 Cooling system with NO ducts	2											
15 Solar panels (prewired - 10 pts; factory installed - 15 pts)	15											
2 Nitrogen-filled tires												
5 Lightweight (less than 5k lbs - 1 pts, 4k lbs - 2 pts, 3k lbs - 3 pts, 2k lbs - 4 pts, 1k lbs - 5 pts) Additional:												
79 Points Available	41 52%											

Water Efficiency

Indoor Air Quality

Emerald Rated- Checklist (cont.)

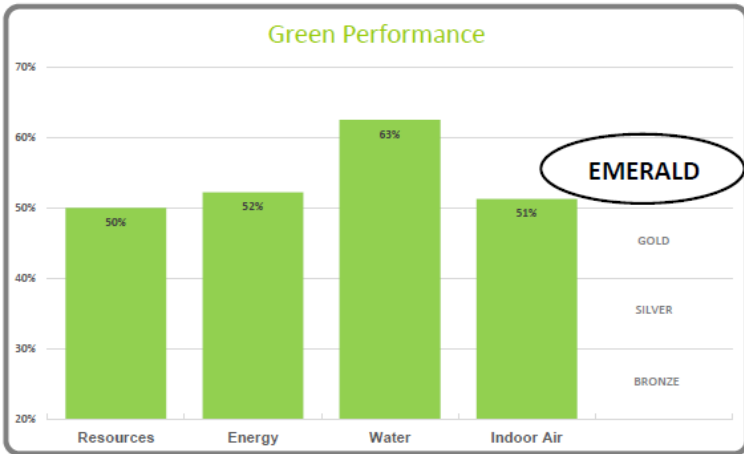
Water Efficiency

30	Low flow fixtures		20
	5	kitchen (≤ 2.2 gpm - 5 pts)	
	5	bath (≤ 1.5 gpm - 5 pts)	
	5	showerhead (2.5 gpm - 5 pts)	
	5	toilet is low-flow or pedal flush - 5 pts	
		toilet is composting - 15 points	
5	Instant hot water heater is standard		
2	Water line test water recycled/reused or air tested		2
3	Rain booth water is recycled and reused		3
40 Points available		Water Efficiency Total:	25 63%

Indoor Air Quality

MANDATORY: All wood materials are CARB 2 compliant

16	Low VOC materials are used (2 pts each)		4
	2	caulks/sealants List: ikaflex, bondaflex	
		carpet List:	
		carpet pad List:	
		furniture List:	
		soft goods List:	
		cabinets List:	
	2	hard flooring List: Congoleum	
		walls/ceiling List:	
		insulation List:	
		other List:	
10	Zero or minimal carpet is installed (slide outs/cab allowed)		10
40	Non-emitting materials (5 pts ea - walls/floor, 10 pts - ceiling)		20
		caulks/sealants List:	
		carpet List:	
		carpet pad List:	
		furniture List:	
	5	soft goods List: mattress	
		cabinets List:	
		hard flooring List:	
	10	walls/ceiling List: Azdel	
	5	insulation List: Knauf	
		other List:	
9	Ventilation/exhaust devices (3 pts each)		3
3	Ductwork is off the floor		3
78 Points available		Indoor Air Total:	40 51%



RVs must achieve a minimum percentage of points in each category to achieve certification. (20% - Bronze, 30% - Silver, 40% - Gold, 50% - Emerald)

APEX

These Ultralite Travel Trailers are designed for towing by today's half-ton trucks, minivans and SUVs. From 18' to 34'. All units are available under 6,500 lbs.

Construction Features

1. 3M Breathable graphics
2. Tinted, safety glass windows
3. Welded aluminum structure, vacuum-bonded sidewalls and rear wall, laminated floor
4. Aluminum reinforced vacuum-bonded roof
5. Dicor Crossflex roofing membrane
6. Azdel composite exterior/interior sidewall and rear wall panels
7. Aerodynamic front profile with fiberglass front cap and integrated window
8. (2) 20 lb. LP tanks
9. Insulated slam latch doors with magnetic hold-ups (N/A Nanos)
10. Smooth exterior fiberglass skin
11. Aluminum framed openings
12. Fully enclosed, heated underbelly (Double axle models)
13. Fully welded tubular aluminum floor structure
14. Schwintek™ and rack and pinion slide systems (Deep slides)
15. Congoleum® DiamondFlor flooring
16. Powder E-coated, welded I-beam frame with full-depth crossmembers
17. Dexter® E-Z Lube® axle hubs (Nano) Lippert axles (Ultralite)
18. Nitrogen filled radial tires

LIGHTWEIGHT DURABILITY

Dicor Crossflex Synthetic Thermoplastic Roofing System

- Extreme tear and puncture resistance
- Flexible
- Lightweight
- High solar reflectance
- High thermal emissivity



EXTENDED CAMPING
HEATED & ENCLOSED UNDERBELLY

Double axle floor plans only.

EASY TO TOW

Lower Center of Gravity for Better Towability

ALUMICAGE™
CONSTRUCTION



Since 1964

- Coachmen's first year of production included 12 travel trailers, a single truck camper and 80 truck caps.
- Since that time, over 600,000 Coachmen recreational vehicles have been produced.
- In December of 2008, Coachmen RV became a proud brand of Forest River Inc., a **Berkshire Hathaway Company**.
- Headquartered in Middlebury, Indiana, with nearly 120 acres.
- Massive campus with nearly 500,000 SQ Ft under roof.

Principles

- Providing customers with long term value through all that we do. Our focus is on producing a product with superior value and backing it through superior service and support.
- Once you become a Coachmen owner, we are committed to enhancing your Coachmen RV ownership and lifestyle experience...creating friends for life and memories that will last a lifetime.
- <https://coachmenrv.com/our-story>



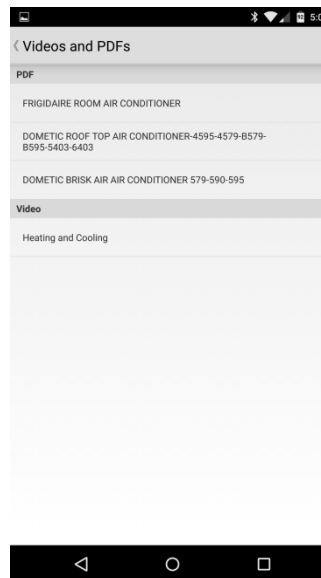


Customer Satisfaction is our #1 Priority

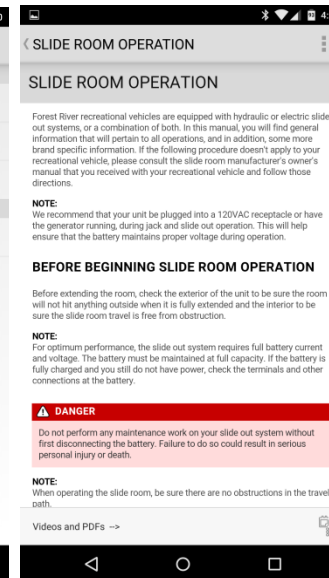
- New internal hardware and software systems for more responsive Service and Warranty – Dealers spend less time navigating the warranty process, so customers can spend more time navigating the great outdoors.
 - Faster warranty approvals
 - Improved parts search ability
 - Online parts ordering
- All owner’s manuals online at <https://coachmenrv.com/owners#manuals>
- All-new customer owner’s manual app!



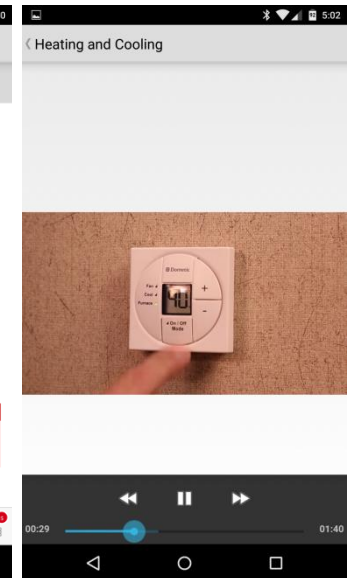
SCAN ME



Component manuals and instructional videos



System overview for each category



Instructional/How-To video for many items

