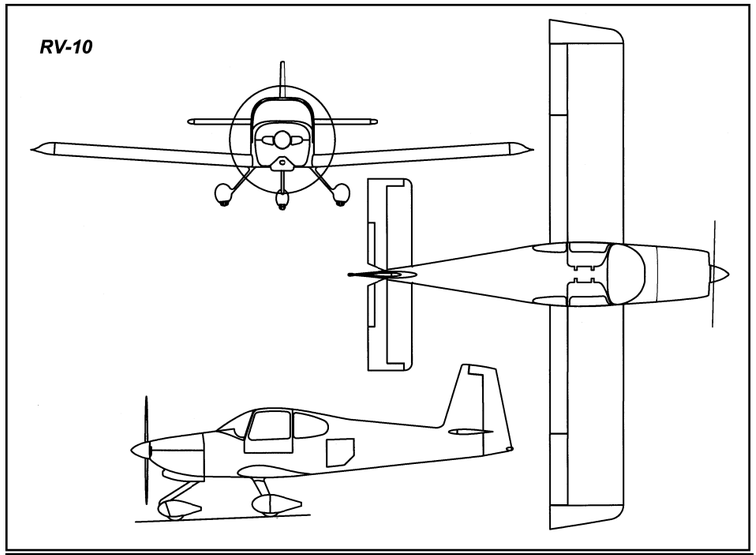
'TOTAL PERFORMANCE' WITH FOUR SEATS

RV-10 SPECIFICATIONS	
Span	31’ 9”
Length	24’ 5”
Height	8’ 8”
Wing Area *(sq.ft.)*	148
Engine *(hp)*	210-260
Gross weight *(lbs)*	2700
Wing Loading *(gross)*	18.6 lbs/sq. ft.
Power Loading (*gross)*	13.5-10.4 lbs/hp
Empty Weight (lbs)	1580 –1630
Propeller	Hartzell c/s
Fuel Capacity	60 USG
Baggage *(lbs)*	100

LIGHT WEIGHT PERFORMANCE		
2200 lbs. Speeds and ranges in statute mph		
Engine (hp)	235	260
Top Speed	204	211
Cruise (75% @ 8000’)	194	201
Cruise (55% @8000’)	174	180
Stall Speed	57	57
Takeoff Distance	415	360
Landing Distance	500	525
Rate of Climb	1669	1950
Ceiling	20,538	24,000

GROSS WEIGHT PERFORMANCE		
2700 lbs. Speeds and ranges in statute mph		
Engine (hp)	235 (est.)	260
Top Speed	201	208
Cruise (75% @ 8000’)	190	197
Cruise (55% @8000’)	170	176
Stall Speed	63	63
Takeoff Distance	583	500
Landing Distance	650	650
Rate of Climb	1221	1450
Ceiling	16,839	20,000
Range (75% @ 8000’)	883	825
Range (55% @8000’)	1070	1000



PRICES		
EMPENNAGE/TAILCONE KIT	$4050	
STANDARD WING KIT (w/QB Option)	$10,485	($16,755)
STANDARD FUSELAGE KIT (w/QB Option)	$16,060	($23,330)
FINISHING KIT	$15,495	
COMPLETE STANDARD KIT	$46,090	
COMPLETE QB KIT (w/QB wing and fuselage.)	$58,575	

On the ‘Other’ Coast? Van’s is located in the Northwest corner of America, so we’ve enlisted an East Coast Representative. ***Mitchell Lock*** offers sales assistance and demo rides in the RV-10 (shown above) and RV-12 from his home base at St. Mary’s Regional Airport (2W6), Hollywood, Maryland, near Baltimore and Washington, D.C. Contact Mitch for an appointment.

E-mail: mitchl@vansaircraft.com Phone: 240-427-8847

TOTAL PERFORMANCE
VAN’S AIRCRAFT

14401 Keil Road NE, Aurora, Oregon, USA 97002
PHONE 503-678-6545 · FAX 503-678-6560 · www.vansaircraft.com · info@vansaircraft.com
Service Letters and Bulletins: www.vansaircraft.com/public/service.htm

10FLY 2-8-16

THE DESIGN

The RV-10 is the first four-place airplane from Van’s Aircraft, Inc., but it joins the most successful family of kit aircraft in history. For over forty years, Van’s has delivered kits for the RV-3, RV-4, RV-6, RV-7, RV-8, RV-9 and RV-12 aircraft. Aircraft builders all over the world have recognized the value of Van’s kits and have completed and flown thousands of them. That’s about one every other day since the company was founded.

RV-10 structure is typical of RVs — and most production aircraft, for that matter. It is a monocoque aluminum airframe held together with rivets. This method has been the standard in aircraft construction for more than sixty years. It is almost impossible to beat the combination of light weight, structural integrity, simplicity and affordability that aluminum provides.

The main landing gear is extremely simple, consisting of tapered steel rods with a wheel on one end and the airplane on the other. There are no oleos, bungee cords or shock absorbers. The nosewheel rides on a robust steel strut, pivoting on the upper end and damped by rubber donuts. It can handle virtually any prepared surface; grass, gravel or pavement. This gear is light, simple and inexpensive, and with Van’s typical attention to detail, produces so little drag that the RV-10 will outrun several similarly powered retractables.

Power is provided by standard six cylinder aircraft engines. The RV-10 is powered by a fuel injected 260 horsepower Lycoming IO-540 — probably one of the most reliable internal combustion engines ever devised. Some builders have used versions of the same engine rated at slightly less power with excellent results.

Occupant protection is an important concern. The composite cabin top provides roll-over protection. The cabin interior is designed around Oregon Aero seats and seat cushions, (provided in the kit) which provide the best available impact mitigation — and comfort. Like all other RVs, the RV-10 has impressively low stall and landing speeds. If necessary, it can be safely landed in very small spaces at speeds that give the occupants the best possible chance of escaping injury.

CAPABILITIES

The RV-10 cabin accommodates four full-sized adults. Both front and back seats will hold people at least 6’4” tall and provide them with truly comfortable leg and headroom.

The tanks hold sixty U.S. gallons of fuel — enough to fly for four hours at a cruise speed of 201 mph. Economy cruise at 175 mph results in an endurance of over five hours.

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The baggage compartment will accept 100 lbs of "stuff" loaded through the baggage door on the left side. If fewer than four people are traveling, the rear seat backs may be removed in minutes for extra baggage space.

RVs are known for short-field capability and the RV-10 is no exception. Even at gross weight, the RV-10 can operate from very short runways and climb well at high density altitudes. A light airframe and a powerful engine combine to make the RV-10 an excellent "weight-lifter." Our prototype will carry four FAA standard people, full fuel and sixty pounds of baggage.

Many customer-built examples feature full IFR, multi-screen panels that rival airliners'.

PERFORMANCE

When many pilots say "performance", they really mean "speed." By most standards the RV-10 is quite a fast airplane, but speed is only part of the story.

The RV-10 derives its high cruise speed from a light, clean and fairly small airframe, instead of from a big, consumptive engine. This means not only will it cruise at relatively high speeds, but cruise at lower speeds can be very economical. Company pilots often choose to cruise at 50-55% power and take advantage of the economy available there. At 175 mph, the RV-10 is getting better miles-per-gallon than most of the luxury cars and SUVs it is flying over.

On the other end of the spectrum, generous wing area and big slotted flaps allow the RV-10 to land at virtually any small airport...and if you can land closer to your destination, you can gain a lot of time over "faster" airplanes that must use big paved airports a long way from town.

RVs have always enjoyed a reputation for excellent handling qualities. The famous "RV Grin" can usually be found on any pilot who has just taxied up...the result of a flight in a truly responsive, agile airplane that goes exactly where you want it to — almost as if it read your thoughts directly.

The RV-10 continues this tradition, in a manner appropriate to a four-place airplane. It is not an aerobatic airplane, so flick-of-the-wrist sensitivity is not the point. It is a very responsive airplane, but at the same time stable and easy to fly. Pilot workload is very low, because the airplane responds quickly and positively to small control inputs. It is not the least bit "twitchy" and does not require constant attention to maintain heading or altitude. A long trip in the RV-10 can be positively relaxing.

BUILDING IT

The RV-10 Standard Kit is amazingly accurate and complete. All the aluminum components are formed and prepunched for all the rivet and bolt holes. The "matched-hole" punching technology makes the airframe essentially self-jigging: when all the holes line up, the airframe *must* be straight. Those who have built metal airplanes in the past, when all the hole location and drilling was up to the builder, often find themselves giggling uncontrollably while they put the RV-10 parts together.

In the popular QuickBuild (QB) Kit both wings and fuselage are partially assembled. Many time-consuming assemblies (fuel tanks, for example) are completed, so a QB RV-10 Kit will take 25-30% less time to finish.

Most composite components, found in both Standard and QB Kits, are made of pre-preg epoxy fiberglass cured in the mold around a honeycomb core. The result is very strong, light and accurate parts.

The kit is very complete. For example, the only component of the landing gear and brake system *not* included in the kit is the brake fluid.

All welded steel components, like the engine mount, landing gear supports, flap actuator, etc, come powder-coated and ready to install.

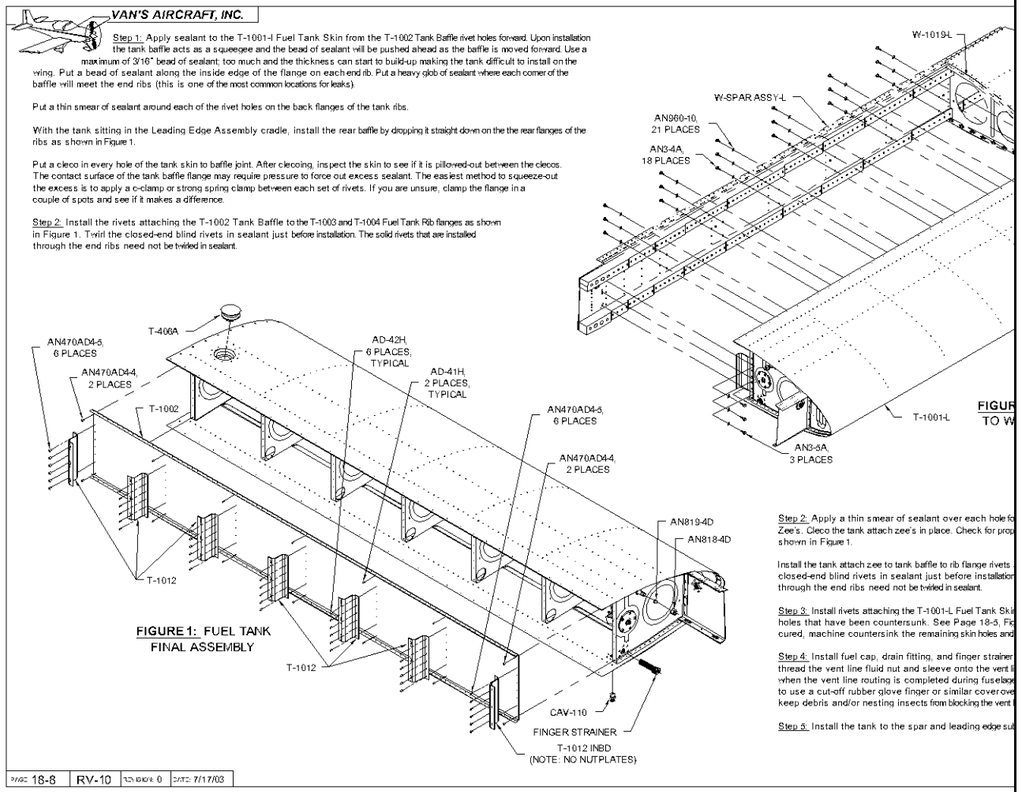
To complement such a highly developed airframe kit, a Firewall Forward Kit has been developed. This supplies all components necessary to install the engine and make it run — exhaust system, oil cooler, vibration isolators, cooling baffles, hoses, etc.

For the RV-10, Van's has developed a new instructional package, combining drawings and step-by-step instructions on the same page. Building the airplane requires a modest array of tools and a comfortable space about the size of a two-car garage.

Most RVs are completed by people with no aircraft building background at all. Still, new RVs fly at an average rate of more than one per day. The RV-10 has averaged one "first flight" every two weeks since the day the first kit was sold. Well over 750 have been flown.

Building an RV does not require any special skill, but it does demand attention, commitment and perseverance. It is a large project that will put you through every imaginable emotion. It is unlikely that you will do everything you are doing today and build an airplane, too. It will require some sacrifice, but when you finish, you will have a unique high-performance airplane that you understand completely.

Many builders describe building and flying an RV as one of the most satisfying things they have ever done.



Above: an excerpt from an RV-10 plans page. Note the step-by-step construction sequences included on the same page as the drawings. Each part has a part number and is provided in the kit.

At right: when we set out to design the RV-10, we wanted to create a four-seat airplane that held four full-sized adults comfortably , allowed them to get in and out without painful contortions, let them take a reasonable amount of baggage, provided an excellent view of the passing country, and made that country pass at a rapid rate.

We did it.