RV–6/6A General Information

RV-6/6A Gallery

The RV-6/6A was replaced by the RV-7/7A in 2001

The side-by-side RV-6 and its cousin, the tricycle gear RV-6A were introduced in 1986 and soon became the best-selling kit aircraft to date. We spent time with many RV-6/6A builders and listened carefully to what they liked and didn't like about their airplanes. We acquired better tools and manufacturing capability, including digitally controlled punch presses. After fifteen years, we found we had the ability and knowledge to build a little better airplane and a far superior kit.

So we did. In 2001, the RV-6/6A was replaced by the **RV-7/7A**.

While Van's no longer offers RV-6/6A Empennage Kits, Van's continues to supply the needed parts to thousands of builders who are finishing RV-6/6As. New ones still fly with regularity. The information below is interesting history, but if you're looking for Van's current side-by-side sport aerobatic airplane read about the **RV-7/7A**.

History of the RV-6/6A

Soon after the RV-4 proved that a two seat RV was a practical and exciting airplane, prospective customers began asking for a side-by-side RV.

When the demand became too big to ignore, Van went back to the drafting board. Initially, he was reluctant, because he felt that a wider, and inevitably heavier, airplane would suffer in comparison to the sleek centerline seating airplanes. It wasn't long before his quest for optimization surfaced again. Using what he'd learned from the RV-3 and RV-4, and striving in every way he knew to avoid losing performance, he designed the RV-6.

He made it 43 inches wide and gave it a generous baggage compartment behind the seats. The wing on the RV-4 worked so well that there was no point in changing it, so he didn't. The canopy was a forward opening bubble that closed almost seamlessly and, like all RVs, the visibility was superb. The landing gear was the same tailwheel arrangement that had worked so well on the RV-3 and RV-4. Since a side-by-side airplane was more likely to be flown cross-country, the fuel capacity was increased.

The RV-6 made its first flight in 1985. When all the flight testing was done, Van was delighted to find that despite the wide fuselage, it was only three miles per hour slower than the RV-4! The handling qualities and STOL characteristics were so close that a pilot who couldn't see the altered visual picture caused by sitting off the centerline probably couldn't tell the RV-4 and RV-6 apart.

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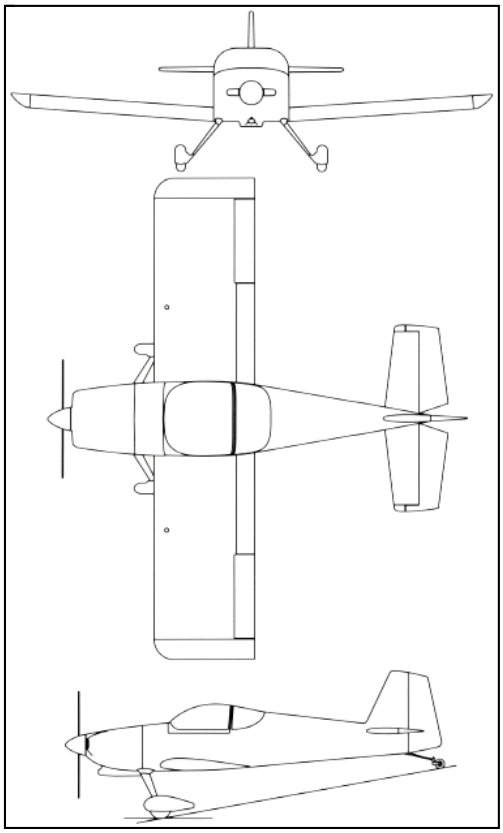
One limit to RV sales had always been the fact that they were all tailwheel airplanes. They had no nasty habits and in many ways were easier to fly and land than many production tailwheel aircraft, but there was no denying that many prospective customers had never had the chance to even try a tailwheel and were reluctant to plunge into building one.

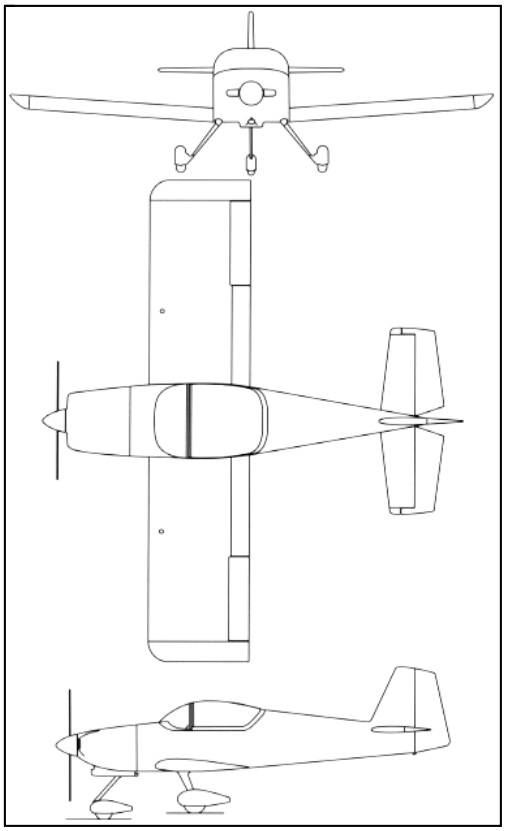
Installing a nose wheel solved the problem. The RV-6A featured a very simple tricycle gear, with steel rod main gear legs and a free castoring nosewheel. The nosegear leg was supported by the steel engine mount and required no complicated steering mechanisms or shock absorbers. The modification resulted in very little weight gain and almost negligible performance loss…in fact; it is not unusual for a given trigear RV-6A to be slightly lighter and faster than a specific RV-6. Landing and taxi became easier than ever.

After the RV-6A was flying, Van's designed another major change. A sliding canopy became an option on both the RV-6 and RV-6A. This proved very popular in hot climates, where long taxis under a burning sun could become very uncomfortable. Sliding the canopy back and hanging an elbow over the rail made the pilot cool two ways! Because the tail and wings are identical on the RV-6 and RV-6A, a customer can build a great deal of the airplane before committing to a landing gear or canopy design.

RV-6



RV-6A



RV–6/6A Specifications

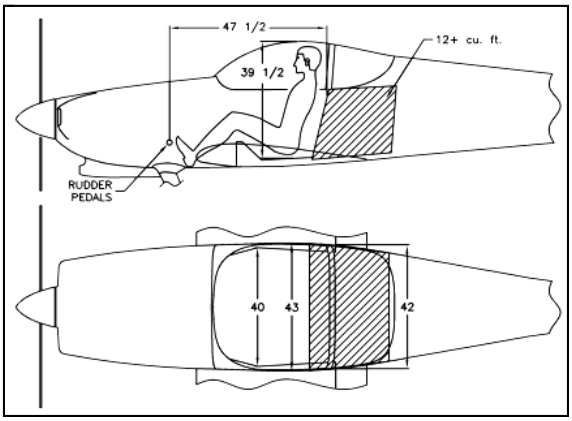
RV-6

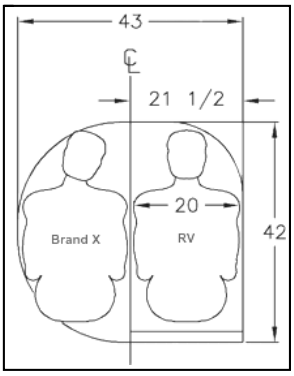
Exterior Dimensions	
Span	23 ft
Length	20 ft 2 in
Height	5 ft 3 in
Wing Area	110 sq ft
Weights	
Empty Weight	965 lbs
Gross Weight	1600 lbs
Loadings	
Wing Loading	14.5 lb/sq ft
Power Loading	10 lb/hp
Powerplant/Systems	
Engine	150-180 hp
Propeller	Fixed or C/S
Fuel Capacity	38 US gal
Other	
Baggage	60 lbs

RV-6A

Exterior Dimensions	
Span	23 ft
Length	19 ft 9 in
Height	6 ft 8 in
Wing Area	110 sq ft
Weights	
Empty Weight	985 lbs
Gross Weight	1650 lbs
Loadings	
Wing Loading	15 lb/sq ft
Power Loading	10.3 lb/hp
Powerplant/Systems	
Engine	150-180 hp
Propeller	Fixed or C/S
Fuel Capacity	38 US gal
Other	
Baggage	60 lbs

Interior Dimensions and Baggage Area





RV–6/6A Performance

RV - 6

Solo Weight 965 lbs *Gross Weight 1600 lbs*	**150 hp**	**160 hp**	**180 hp**
Speeds and ranges in statute mph (sm) Empty weight and performance measured with Fixed pitch prop			
Speed - Solo Weight			
Top Speed	198 mph	202 mph	210 mph
Cruise [75% @ 8000 ft]	187 mph	191 mph	199 mph
Cruise [55% @ 8000 ft]	169 mph	172 mph	179 mph
Stall Speed	49 mph	49 mph	49 mph
Speed - Gross Weight			
Top Speed	197 mph	201 mph	209 mph
Cruise [75% @ 8000 ft]	186 mph	190 mph	198 mph
Cruise [55% @ 8000 ft]	168 mph	171 mph	178 mph
Stall Speed	55 mph	55 mph	55 mph
Ground Performance - Solo Weight			
Takeoff Distance	325 ft	300 ft	270 ft
Landing Distance	300 ft	300 ft	300 ft
Ground Performance - Gross Weight			
Takeoff Distance	550 ft	535 ft	475 ft
Landing Distance	500 ft	500 ft	500 ft
Climb/Ceiling - Solo Weight			
Rate of Climb	1,710 fpm	1,900 fpm	2,275 fpm
Ceiling	19,300 ft	21,500 ft	25,700 ft
Climb/Ceiling - Gross Weight			
Rate of Climb	1,355 fpm	1,500 fpm	1,790 fpm
Ceiling	15,800 ft	17,400 ft	20,800 ft
Range			
Range [75% @ 8000 ft]	775 sm	775 sm	720 sm
Range [55% @ 8000 ft]	950 sm	950 sm	880 sm

RV - 6A

Solo Weight 985 lbs *Gross Weight 1650 lbs*	**150 hp**	**160 hp**	**180 hp**
Speeds and ranges in statute mph (sm) Empty weight and performance measured with Fixed pitch prop			
Speed - Solo Weight			
Top Speed	196 mph	200 mph	208 mph
Cruise [75% @ 8000 ft]	185 mph	189 mph	197 mph
Cruise [55% @ 8000 ft]	167 mph	170 mph	177 mph
Stall Speed	49 mph	49 mph	49 mph
Speed - Gross Weight			
Top Speed	195 mph	199 mph	207 mph
Cruise [75% @ 8000 ft]	184 mph	188 mph	196 mph
Cruise [55% @ 8000 ft]	166 mph	169 mph	176 mph
Stall Speed	55 mph	55 mph	55 mph
Ground Performance - Solo Weight			
Takeoff Distance	325 ft	300 ft	270 ft
Landing Distance	300 ft	300 ft	300 ft
Ground Performance - Gross Weight			
Takeoff Distance	560 ft	535 ft	485 ft
Landing Distance	500 ft	500 ft	500 ft
Climb/Ceiling - Solo Weight			
Rate of Climb	1,665 fpm	1,850 fpm	2,225 fpm
Ceiling	18,500 ft	20,500 ft	24,700 ft
Climb/Ceiling - Gross Weight			
Rate of Climb	1,305 fpm	1,450 fpm	1,740 fpm
Ceiling	14,750 ft	13,300 ft	19,700 ft
Range			
Range [75% @ 8000 ft]	760 sm	760 sm	705 sm
Range [55% @ 8000 ft]	875 sm	875 sm	810 sm