IKON Northwest Pilatus Porter

On that size airplane, with a 1.20 4-stroke, you are probably running a 16-inch prop, and for a plane of that size, a 16 to 17-inch prop would be a good size for electric conversion. Our BadAss 4530 series motors work very well on models of this size, and in most cases, you can use a 6-cell LiPo battery with a capacity between 5000 and 6000mah to get good power and flight times.

Looking at the various motors in the BA-4530 series, the 4530-440Kv model works best on props of this size when running on a 6-cell battery. Props such as the APC 16x7 and 17x7 do very well without pulling too much current. Our BadAss wood electric props also work very well and look very nice on the front of your plane. In that line, our 16x8 or 17x8 props would do very well on this plane.

Here are the full throttle performance numbers for the APC 16x7-E prop on 6 cells.

Volts - 22.2
Amps - 67.8
Watts - 1505
RPM - 8528
Thrust - 219 ounces (13 pounds 11 ounces)
Speed - 57 MPH

Here are the numbers with the APC 17x7-E prop.

Volts - 22.2
Amps - 70.9
Watts - 1574
RPM - 8471
Thrust - 241 ounces (15 pounds 1 ounce)
Speed - 56 MPH

Here are the full throttle performance numbers for the BadAss Props. First the 16x8.

Volts - 22.2
Amps - 73.9
Watts - 1640
RPM - 8410
Thrust - 210 ounces (13 pounds 2 ounces)
Speed - 64 MPH

And here is the data for the BadAss 17x8 prop.

Volts - 22.2
Amps - 85.3
Watts - 1893
RPM - 8256
Thrust - 257 ounces (16 pounds 1 ounce)

Speed - 63 MPH

Any one of these props will give you excellent performance with this motor, and you can see how you can get the desired thrust and speed by simply changing the prop.

This motor is rated for up to 110 amps of current, but since any of the props shown would pull 85 amps of current or less, you would be good with our BadAss Renegade 105-Amp ESC on this motor. For batteries, as I said earlier, a 6-cell pack with a 5000 to 6000mah capacity would work well. With good throttle management, and most of the flying done down around 2/3 throttle, a 5000mah pack will get you about 7-8 minutes of flying time, and a 6000mah pack will get you 9-10 minutes of flying time per charge.

Our new Version 2 ESC's have "On-The-Fly" thrust reversing available in them, so if you want to do STOL landings and give reverse thrust after touchdown to reduce the landing rollout you can. You would need to get the BadAss Version 2 ESC Programmer to activate and set up this feature. In addition to programming the ESC's, the programmer also is a 4-in-1 test tool with a built in 8-cell LiPo battery meter, servo Driver and tested, ESC driver and it will also read the PWM Pulse Width coming from your radio receiver so you can calibrate your throttle endpoints and measure servo travel settings.

Here are links to all the items discussed in the above recommendation.

BadAss 4530-440Kv Motor: https://innov8tivedesigns.com/badass-4530-440kv-brushless-motor.html

BadAss Renegade V2 105-Amp ESC: https://innov8tivedesigns.com/badass-renegade-v2-series-brushless-esc-105a.html

BadAss Version 2 ESC Programmer: https://innov8tivedesigns.com/badass-rebel-v2-series-brushless-esc-lcd-programmer.html

BadAss 6-cell 5000mah LiPo Battery: https://innov8tivedesigns.com/badass-45c-5000mah-6s-lipo-battery.html

APC 16x7-E Propeller: https://innov8tivedesigns.com/apc-16x7e-propeller.html

APC 17x7-E Propeller: https://innov8tivedesigns.com/apc-17x7e-propeller.html

BadAss 16x8 Wood Propeller: https://innov8tivedesigns.com/badass-wood-electric-propeller-16x8.html

BadAss 17x8 Wood Propeller: https://innov8tivedesigns.com/badass-wood-electric-propeller-17x8.html

We also have a full line of spinners available if you need one of those. https://innov8tivedesigns.com/products/spinners.html