

SUNTEC **A-7000B** model contains a unique and hydraulic safety cut-on/off, driven by a motor speed dependent device, and a high single pipe lift capacity. (Except A-77xx models). This unit is supplied for 1-pipe operation, without by-pass plug installed. Please verify before installation.

### COMPATIBILITY

Fuel oil #2 and lighter, B6-B20 (blends from 6% up to 20% biodiesel, per ASTM D396).

### PUMP OPERATING PRINCIPLE

As the motor starts, the fuel from the gearset flowing through the cone valve creates a pressure drop across the diaphragm valve. When the pressure difference is sufficient to overcome the spring force, the diaphragm valve closes and the pressure is built up causing the piston to open and the fuel flow through the nozzle port.

The piston spring is adjusted such that a given nozzle pressure can be maintained while any resulting excess fuel is dumped.

Cut-off speed is factory set so that the cone valve gives the necessary pressure drop to open the diaphragm valve. This in turn reduces the piston chamber pressure and the piston shuts off the nozzle.

#### One pipe installation :

The by-pass plug must not be installed. The excess fuel is returned back to the inlet.

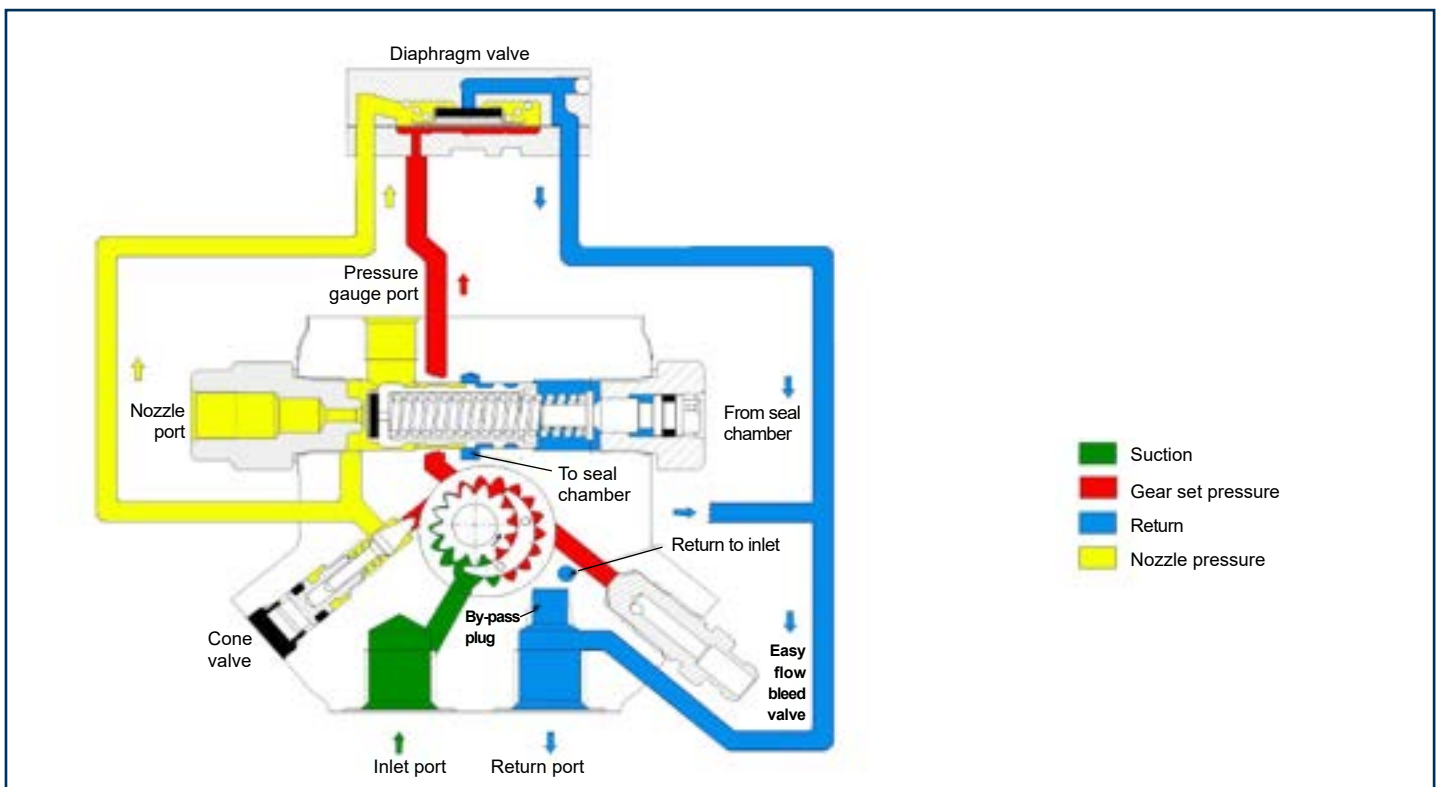
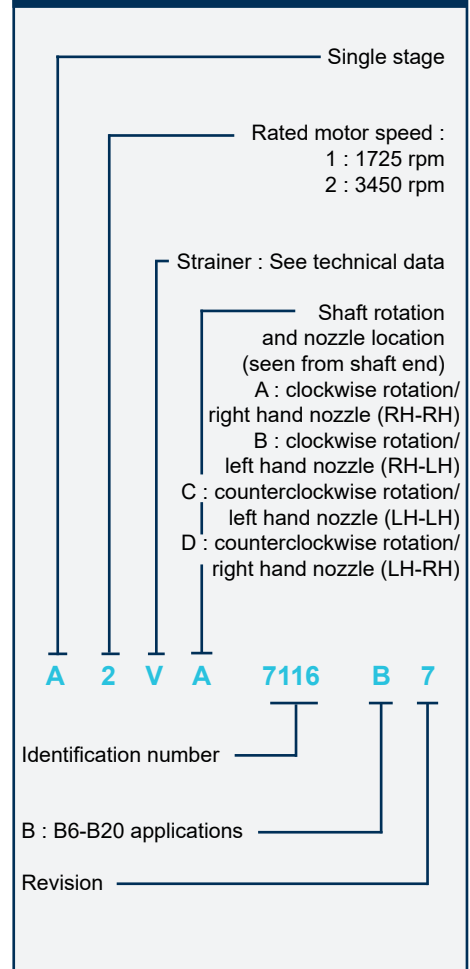
#### Two pipe installation :

The steel plug of the return port must be removed and the by-pass plug must be inserted in the return port allowing excess fuel is bypassed back to the tank. The return plug must not be reinstalled.

#### Bleed :


In one pipe operation, the easy flow bleeder valve must be loosened to bleed the system. Bleeding in two pipe operation is automatic, but it may be accelerated by loosening the easy flow bleeder.

### PUMP IDENTIFICATION



## TECHNICAL DATA

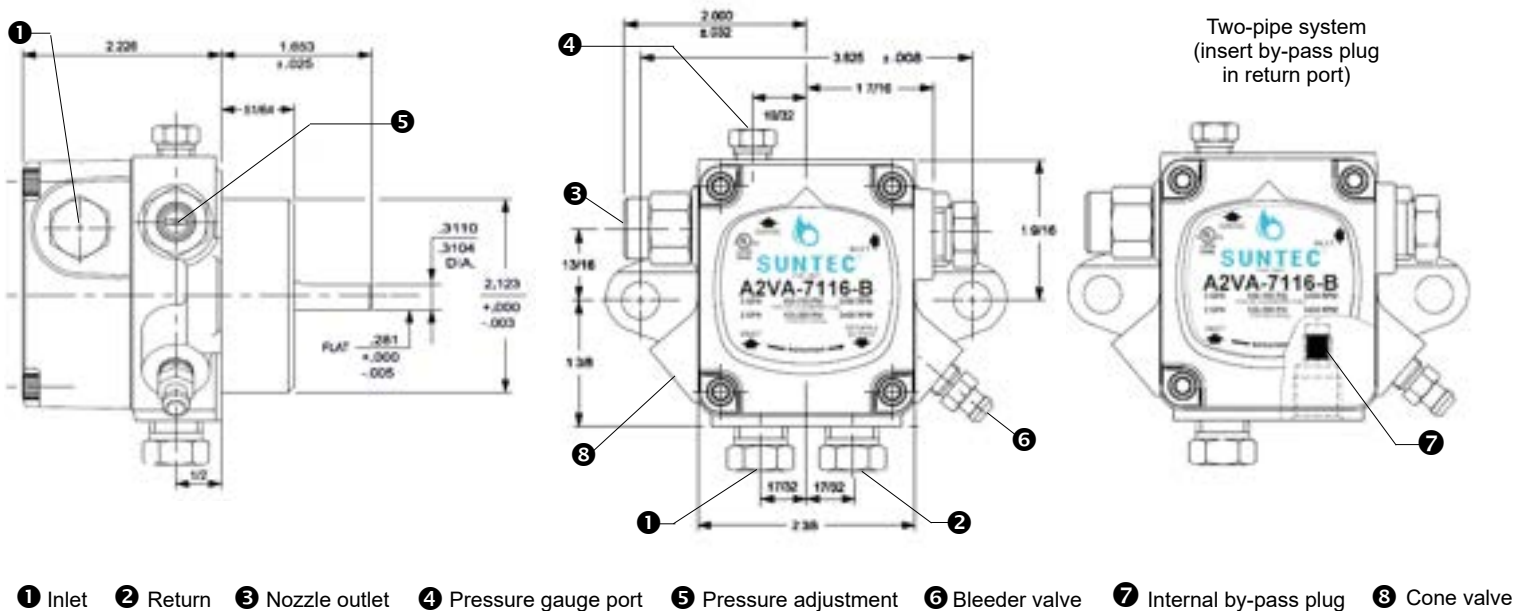
### General

Mounting	Flange mounting	Strainer open area	V = min 3 in <sup>2</sup> Y = min 5 in <sup>2</sup> T = min 10.5 in <sup>2</sup>
Connection threads		Certified	 B6-B20: US only
Inlet	1/4 NPTF	Hydraulic data	
Nozzle outlet	1/8 NPTF	Oil temperature	32 - 140°F
Pressure gauge port	1/8 NPTF	Ambient temperature	32 - 140°F
Bleeder valve port	1/8 NPTF	Inlet and return pressures	10 psi max. <i>NFPA limits pressures to 3 psi max</i>
Valve function	Pressure regulation and cut-off	Suction height	Single pipe: 6" Hg max. vacuum, Two-pipe: 12" Hg max. vacuum, to prevent air separation from oil
Cut-off	Motor speed dependent		
Shaft	5/16 in		
By-pass plug	Not inserted in return port, for one pipe system. To be inserted in return port with a 5/32 allen key for two-pipe system.		

### Ratings

Model number	Pressure range	Delivery pressure	Nozzle rating	Power consumption at delivery pressure
A2VA-7116B	100 to 200 PSI	100 PSI	3 GPH at 150 PSI / 2 GPH at 200 PSI	80 W
A2VD-7119B	100 to 200 PSI	100 PSI	3 GPH at 150 PSI / 2 GPH at 200 PSI	80 W
A2VA-7142B	100 to 200 PSI	100 PSI	3 GPH at 150 PSI	80 W
A2VA-7145B	100 to 200 PSI	145 PSI	3 GPH at 150 PSI / 2 GPH at 150 PSI	90 W
A1TD-7149B	100 to 200 PSI	100 PSI	11GPH at 100 PSI / 6 GPH at 150 PSI	75 W
A1YD-7154B	100 to 200 PSI	100 PSI	4 GPH at 100 PSI / 3 GPH at 150 PSI	60 W
A1YA-7912B	100 to 200 PSI	100 PSI	7 GPH at 100 PSI / 3 GPH at 150 PSI	60 W
A1YC-7914B	100 to 150 PSI	100 PSI	7 GPH at 100 PSI / 3 GPH at 150 PSI	60 W
A2YA-7916B	100 to 200 PSI	100 PSI	7 GPH at 150 PSI / 3 GPH at 200 PSI	80 W
A1YC-7944B	100 to 150 PSI	100 PSI	7 GPH at 100 PSI / 3 GPH at 150 PSI	60 W
A1YC-7946B	100 to 200 PSI	100 PSI	7 GPH at 150 PSI / 2 GPH at 200 PSI	170 W

### PUMP DIMENSIONS



- ① Inlet ② Return ③ Nozzle outlet ④ Pressure gauge port ⑤ Pressure adjustment ⑥ Bleeder valve ⑦ Internal by-pass plug ⑧ Cone valve