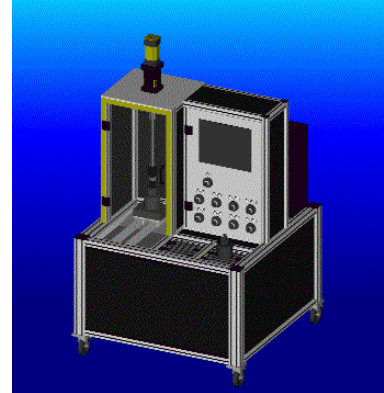


TRUEVOLUME™ *Fiber Pump Test Stands*



Problem

Volumetric accuracy and stream-to-stream consistency are critical in producing fiber of the highest quality. New and rebuilt pumps must deliver the exact same volume of polymer per revolution to produce fibers of uniform denier. The surest way to know that all of your pumps are producing fiber of uniform denier is to test the volumetric accuracy of your pumps.

Unfortunately, the most common way of testing gear pump accuracy is by measuring the weight of the fluid displaced during a specified number of revolutions of a gear pump at a given speed and differential pressure and at a known temperature. This method can be messy, requires many calculations and still may not yield accurate or repeatable results. Consequently, many operators skip the test and hope for the best.

Solution

The **TRUEVOLUME™** Test Stand, developed by Parker Hannifin Corporation's Zenith Pumps Division is the easiest most accurate way to check the volumetric accuracy of any fiber spinning gear pump. The **TRUEVOLUME™** Test Stand is an automated, computer-controlled system that precisely measures the volume of fluid displaced by a gear pump under steady state running conditions. The **TRUEVOLUME™** Test Stand measures the volumetric displacement directly without converting from weight to volume. It's not even necessary to compensate for changes in specific gravity due to temperature. Operating parameters are stored in the **TRUEVOLUME™** Test Stand's internal database and verified before the each test is begun. The test results are automatically logged into another internal database after each test is complete and can be viewed immediately on the touch-screen display or later by connecting the test stand to your computer network or printed out via the parallel printer port.

Ease of Use

Designed for accuracy and ease of use, all that's required is to attach the gear pump to the uniquely designed port plate, slide the port plate into position, attach the drive shaft and push the start button. The **TRUEVOLUME™** Test Stand will automatically start the supply and test pumps and verify conformance to all preset test parameters. If the inlet and outlet pressures are not correct the **TRUEVOLUME™** Test Stand prompts the operator to adjust the valves until the preset pressure is reached. Once all parameters are met the test begins. When the system reaches steady state, the displaced volume per revolution is measured, displayed on the touch screen and stored in memory for latter use.

TRUEVOLUME™ Test Stand

Specifications as Configured:

1. Single pump test stand: One inlet, up to eight outlets
2. Capacity: One pump with eight streams of 5 cc/rev/stream or one pump with four streams of 10 cc/rev/stream
3. Inlet pressures: Up to 500 psi
4. Discharge pressures: Up to 1000 psi
5. Test fluid: Mobil DTE-BB Oil
6. Test fluid capacity: 3 gallons
7. Power requirement: 240 V / 60HZ / 3Ø, or can be retrofitted for 380 V / 50Hz / 3 Ø with CE specifications
8. Control system: PC control with data acquisition options:
 - Pentium 533Mhz
 - 64 Meg RAM
 - 40X CD ROM
 - Parallel Printer Port
 - 10.1 GB Hard Drive
 - RS232 Communications
 - Network Communications
9. 12" Touch Screen Interface
10. Pressure measurement accuracy: +/- .25% full scale (0-1000psi)
11. Volumetric accuracy: +/- .27% linear error
12. Rotation accuracy of test pump: 120,000 pulses per revolution
13. Test pump drive: Compumotor
14. Supply pump drive: Zenith Vector Drive
15. Size: 4' x 4' x 7'
16. Adapter plate required for each pump model