

## Tecumseh's 1655 Full Variable Speed Centrifuge



### (Model Tec-1655-FVS)

Tecumseh Industries Ltd. would like to introduce our Tec-1655-FVS centrifuge.

This centrifuge was developed to provide customers with a Full Variable Speed centrifuge suitable for applications where a small footprint is required due to limited space. The Tec-1655-FVS centrifuge is a significantly shorter than our “direct drive” conveyor drive or, HD models.

With real-time full variable speed adjustment capability of all operating parameters, operators have the ability to fine tune the centrifuge for optimum performance over a wide range of different applications, and in situations where process characteristics are ever changing.

Full variable speed capability is achieved by applying three (3) variable frequency drives to each drive motor of the centrifuge respectively (main drive, conveyor drive, and feed rate). This allows operators to adjust the differential rpm, feed rate and “G” of the centrifuge while in fill operation.

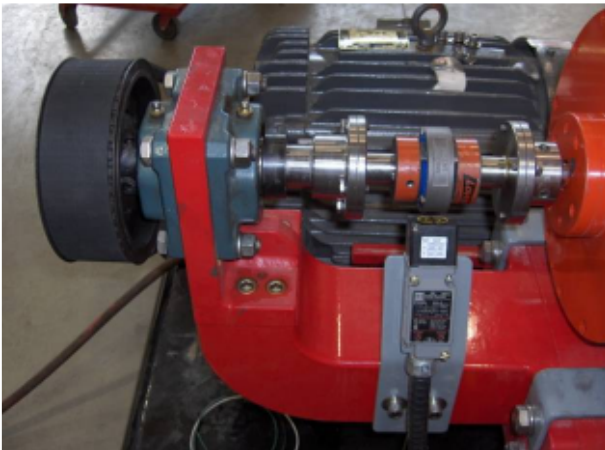
A Pro Logic Control (PLC) and touch screen can also be added to the control system providing a level of control logic to help achieve your process automation and preset parameter needs.



**Tec-1655-FVS Centrifuge Solids Discharge End**



**Tec-1655-FVS Centrifuge Liquid Discharge End**



**Tec-1655-FVS Centrifuge Conveyor Drive Assembly**

## **Centrifuge Applications:**

- Drilling Fluids Processing
- Dewatering
- Barite Recovery
- Rendering
- Waste Fluids Treatment, Recovery, and Disposal
- Produced Water Processing
- Pulp and Paper
- Sump Cleaning
- Heavy Oil Drilling and Plant Processes
- Distillers (Brewing Industry)

## **Processing Specifications**

Maximum Hydraulic Capacity is 265 GPM/min. or 1 M<sup>3</sup>/min. (rated with water)

Maximum Rate of Solid Loading: 14,000 lbs/hour (7 tons/hour)

## **Operating Speeds for Oilfield Applications**

### **Low Speed Operations for High Gravity solids removal (i.e. barite)**

Bowl Speed: 1,480 – 2,000 RPM

Acceleration: 498 - 908 g

Differential: 40 - 60 RPM

### **High Speed Operations for Low Gravity solids removal (i.e. fine drilled solids)**

Bowl Speed: 2,814 – 3,050 RPM

Acceleration: 1,800 – 2,113 g

Differential: 25 - 40 RPM

### **Maximum Safe Operating Speed**

Bowl Speed: 3,700 RPM (Max Recommend: 3,250 RPM)

Acceleration @ 3,250 RPM: 2,400 G's

Differential: 60 RPM

## **Other Specification:**

### **Pool Port (pond) Adjustment**

1 – 13 units of adjustment.

### **Beach Angle**

10 degree beach angle

### **Flighting Pitch**

110mm (4.25 in.)

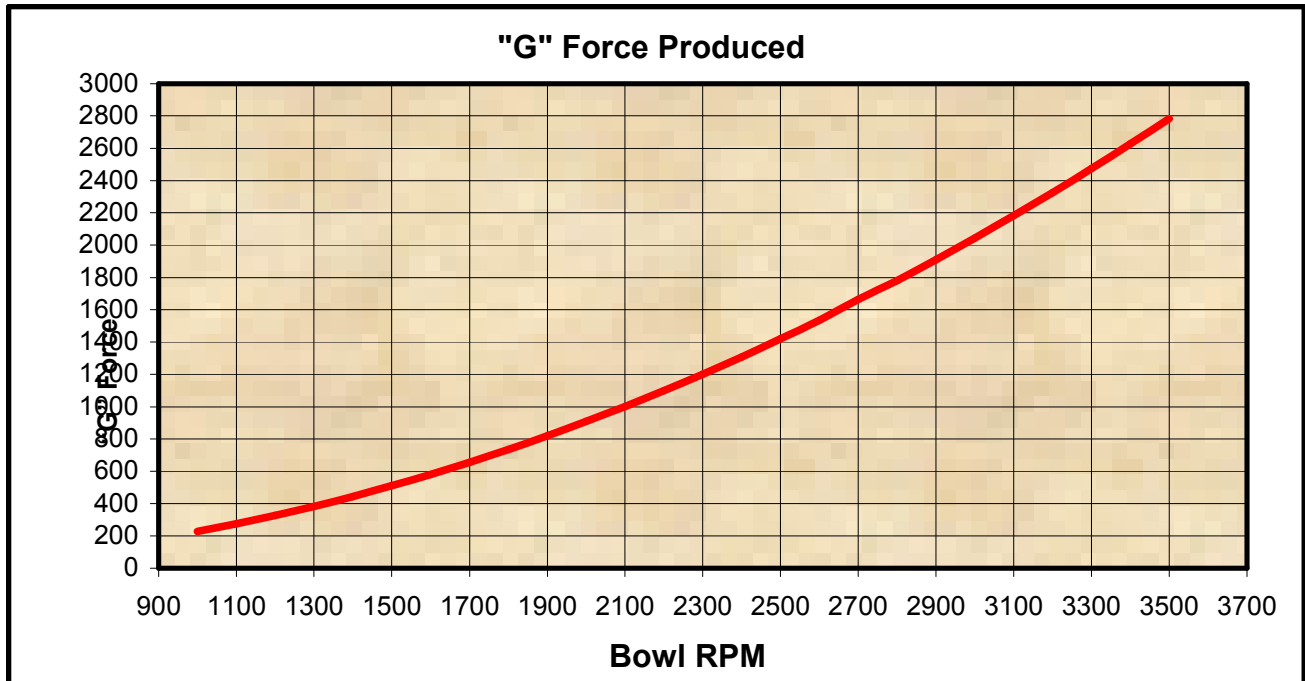
### **Maximum Safe Operating Conveyor Torque**

100,000 in/lbs (11.3 kNm) of torque

### **Gearbox Ratio**

56:1 ratio

## 'G' Force Calculation



The following is a formula used to calculate 'G' force:

$$G = \text{Bowl Diameter (in)} \times \text{Bowl RPM}^2 \times .0000142$$