

Description (cont'd) The device consists of the following main parts:-

- (a) a rear counter which indicates the volume passed through the meter at line conditions of temperature and pressure.
- (b) a temperature element with associated linkage and pointer which indicates the flowing temperature and in conjunction with the integrating drum actuates the *gearing system* for the drive of the pressure integrating cylinder.
- (c) a pressure element with associated linkage and pointer which indicates the line pressure and in conjunction with the integrating cylinder actuates the gearing which drives the front counter.
- (d) the front counter which indicates the volume passed through the meter at base conditions.

The integrating cylinders for temperature and pressure have a raised portion on their surfaces over which slides the stylus of the indicating pointer. During the time the stylus is on the raised portion the gearing is engaged to provide the drive for the micrometer wheel carrying suitable scale for calibration purposes. The temperature micrometer wheel is permanently attached to the pressure integrating cylinder and the pressure micrometer wheel is geared to the front counter.

For technical reasons the temperature integrating cylinder introduces, in addition to the required temperature factor, a *cam factor* as listed above, and it must be taken into account during calibration of the temperature integrator alone. This factor is however eliminated by suitable gearing between the pressure micrometer wheel and the front counter and it does not enter into computation of the overall correcting factor.

There are two types of the rear counters and three types of the front counters available for use with the Base Volume Index. Proper multipliers are selected for each counter and these are stamped on the *coefficient plate* together with the drive shaft rate in cubic feet per revolution, temperature cam factor and the instruments serial number.

Base Volume Indexes may be used on any approved diaphragm or rotary type positive displacement gas meter, provided the instrument baseplate fits the meter properly and carries its designation. The Indexes are not intended for use on domestic type meters.

Base Volume Indexes may be used in conjunction with any approved Volume and Pressure Gauge, or 'Telemike' or 'Telecount' Transmitter manufactured by the Canadian Meter Company Limited.