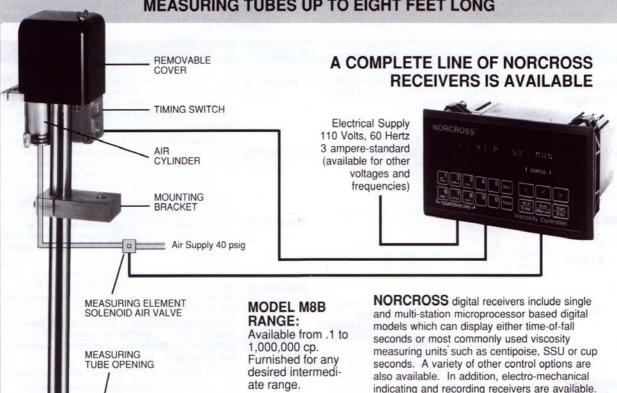
NORCROSS® Model M8B ATMOSPHERIC PRESSURE VISCOMETER

FOR GENERAL AND SOLVENT CONTROL APPLICATIONS FOR TANKS REQUIRING
MEASURING TUBES UP TO EIGHT FEET LONG



PRINCIPLE OF OPERATION

1 A piston assembly shown at right is periodically raised by an air lifting mechanism, drawing a sample of the liquid to be measured down through the clearance between the piston and the inside of the cylinder into the space which is formed below the piston as it is raised.

2 The assembly is then allowed to fall by gravity, expelling the sample out through the same path as it entered. The time of fall is a measure of viscosity, with the clearance between the piston and inside of the cylinder forming the measuring orifice.

Wetted

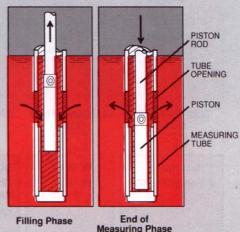
removable

for easy

cleaning

parts

3 NORCROSS receivers automatically measure the time of fall to record, indicate and/or control the viscosity.



EASY TO INSTALL . CORROSION RESISTANT . EXPLOSION PROOF . EASY TO CLEAN

NORCROSS

NORCROSS® MODEL M8B for ATMOSPHERIC PRESSURE APPLICATIONS

FEATURES

Uses a Proven Principle - Over four decades of experience with hundreds of installations in diversified industries on both Newtonian and non-Newtonian liquids.

Easy to Install - The measuring element can be installed on any tank, vessel, or in a sampling chamber and the receiver can be remotely located as desired.

Continuously Self-Cleaning - The reverse flushing from the normal up and down piston

motion provides effective self cleaning during operation. The element is designed for easy removal of wetted parts for cleaning when necessary.

Explosion Proof - Measuring element electrical components are furnished in housings approved by Underwriter's Laboratories for Class 1, Group D, Division 1 locations.

Corrosion Resistant - Wetted parts are of stainless steel (303 and 304 standard).

Repeatability and Sensitivity - Repeatability 1/4 percent, sensitivity is adjustable by suppressing zero.

Rugged and Dependable - The patented falling piston principle permits the design of a simple and dependable instrument that can be easily serviced by any maintenance department.

ECIFICATIO

Viscosity
The Model M8B can be used over a viscosity range of 20:1 within the limits of .1 to 100,000 cp. On a practical Range: basis the measuring element should be used over a 5:1

viscosity range.

This measuring element is available for use in a

Location: hazardous or non-hazardous location. When ordered for use in a hazardous location all electrical components will be UL Listed for Class1, Division 1, Group C&D

Locations.

Wetted Parts: Wetted part construction SS303-304 standard. SS316

wetted parts available.

The length of the portion of the measuring element extending into the vessel. This length is dimension L on

Drawing A-2863-MA.

Valve: The Model M8B is available with the air valve furnished separately for remote mounting or can be ordered

factory mounted to the measuring element with a solvent addition valve in the form of an Integral Valve Assembly

(See Drawing A-4285-M).

Temperature

The standard model can be used on vessels up to 250F. For higher temperature, radiating fins can be installed on

Range: the upper part of the measuring tube.

Tube:

Flushing A flushing tube can be installed in the upper portion of the measuring tube. This tube can be connected to a pressurized solvent supply via a manually operated valve. This allows for flushing of the inside of the tube during

washdowns

Circulating Holes:

These holes are furnished for applications not involving volatile solvents. Their purpose is to permit the free passage of liquid throughout the measuring tube which is effective in preventing liquid from drying and building up on the piston rod and the inside of the measuring tube.

The Model M8B is normally secured to the top of the vessel by means of a standard mounting bracket. Mounting:

Alternate mounting configurations are adjustable or welded flanges. When welded flanges are ordered there will be a pressure release hole drilled in the tube above

the flange.

Standard procedure is to polish the outside of the measuring tube to a Satin Finish. Mirror Finish #7 is Polishing:

available of the inside and outside of the measuring tube

and on the piston rod.

Voltage Code 1 standard for all receivers with Valve Codes S and V (for 220/240 vac operation with Voltage:

electromechanical receivers a transformer is required to

reduce voltage to 120 vac).

Voltage Code 2 and 2A for microprocessor receivers with Valve Code S. Voltage Code 3 and 3A for microprocessor receivers with Valve Code V1 and V4.

SELECTION ORDERING GUIDE

FOR MODEL M8B MEASURING ELEMENT LOCATION CODE WETTED PARTS CODE LENGTH CODE VALVE CODE B 12" 8 Hazardous S Only Air Valve supplied, as 1 SS 303-304 V1 Integral Valve Assembly for 24" B use with microprocessor MP1-8 separate item 2 SS 316 7 Non-Hazardous C receiver, see print A-4285-M. 36" V Integral Valve Assembly for 3 Special D 48' use with electromechanical and V4Same as V1 except designed MP90 receiver, see print for water as solvent. E 60" A-4285-M. F 72" FLUSHING TUBE CIRCULATING HOLES **TEMPERATURE** MOUNTING POLISHING VOLTAGE CODE CODE CODE

CODE CODE CODE 1 Up to 250F NF None NC None Standard Bracket. Satin 120/60 or 110/50 2 From 250F - 600F CH1 With Length A & B Welded 1 1/2" 150# MSS FT Yes 2 Mirror 240/60 or CH2 With Length C & D 1 1/2" 150# MSS 3 220/50 Welded 2" 150# MSS CH3 With Length E & F 4 2A 240/50 5 Flange by customer 240/60 or Metric flange by Norcross 220/50 3A 240/50