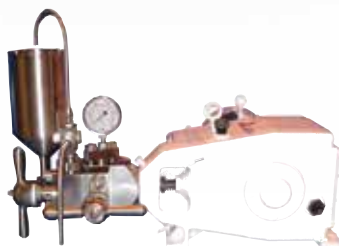


APV 15MR and 31MR

LABORATORY HOMOGENIZERS

APV brand laboratory homogenizers employ a single-plunger, positive-displacement pump equipped with a versatile homogenizing valve assembly, specifically designed for laboratory or pilot-plant use. Gauge



fluctuations usually associated with single-plunger pumps are reduced by a special dampener assembly. The motor, through a gear-reduction unit, turns an eccentric shaft which causes the plunger to reciprocate. The product being processed is drawn from the supply tank, through a pump valve and into the pumping chamber ... then forced through the homogenizing valve on the pressure stroke of the pump. Homogenizing pressure is controlled by a simple adjustment of the handwheel, which controls the gap between the homogenizing valve and seat. The product is discharged through the three-way valve for sample collection or recirculation back to the supply tank.

The 15MR and 31MR Laboratory Homogenizers can be used for processing many different types of products in the chemical, food, dairy, cosmetic and pharmaceutical industries. These products include water- in-oil emulsions, oil-in-water emulsions, dispersions of many types (solids dispersed in water or oils), and for disruption of cells.

Standard lab-scale homogenizers can be rented or purchased.

STANDARD CONSTRUCTION

All units are single-plunger, 2.125" (54mm) stroke, positive displacement; ball valve cylinder; removable, tapered, Tungsten Carbide ball valve seat; adjustable-screw packing assembly; three-way valve and bypass assembly with stainless steel tubing; a one gallon, 316 stainless steel feed tank. Cylinder and wettable parts 316 stainless steel. The motor is 3 hp, 3 phase, 1,800 rpm, TEFC.

DIMENSIONS AND WEIGHTS

- Height: 24" (610 mm)
- Width: 36" (914 mm)
- Depth: 38" (965 mm)
- Weight (uncrated): 350 lbs (159 kg)

HOMOGENIZING VALVE ASSEMBLIES

Lab-scale homogenizers can be supplied with a single-stage homogenizing valve assembly, recommended for dispersions; or a two-stage valve assembly, recommended for emulsions. Stellite 20 is standard for homogenizing valves, seats and impact rings; and is suitable for emulsions and some dispersions. For abrasive applications a tungsten carbide material is also available.

They can also be equipped with the "CD" valve for high efficiency cell disruption. These parts are constructed of ceramic for long wear life.

OPTIONS

Pressure Feeder

The stainless steel assembly utilizes a simple plunger design, actuated by operator controlled air pressure and should be used where viscosity of the product results in a decrease in capacity.



APV 15MR & 31MR	
PRESSURE CAPABILITIES	NOMINAL CAPABILITIES
15MR: to 10,000 psi (689 bar)	15MR: 15 gph/57 lph
31MR: to 3,500 psi (241 bar)	31MR: 31 gph/117 lph

For applications requiring higher pressures, the APV-1000 and APV-2000 series Laboratory Homogenizers are available.

SAMPLE OF APPLICATIONS

The following is a representative sampling of a few of the many thousands of products processed by APV equipment:

- Antacid
- Baby Food
- Beverage Emulsions
- Car Polish
- Carbon Black
- Cell Disruption
- Cosmetics
- Cream Soups
- Dairy Products
- Greases
- Herbicides
- Infant Formula
- Intravenous Emulsions
- Insect Repellents
- Latex
- Motor Oil Additives
- Peanut Butter
- Pharmaceuticals
- Pigments
- Polymer Emulsions
- Resins/Rosins
- Salad Dressings
- Sulphur
- Tomato Products
- Typist Correction Fluid
- Viscosity Improvers



Healthcare/Cosmetics



Chemical



Food/Beverage



Pharmaceutical/Biotech

The robust and reliable APV brand 15MR and 31MR Laboratory Homogenizers allow you the ability to achieve fully-reproducible results for emulsions, dispersions, or cell disruption that can be applied to full-scale production with complete confidence.

Based in Charlotte, North Carolina, SPX FLOW, Inc. (NYSE: FLOW) is a multi-industry manufacturing leader. For more information, please visit www.spxflow.com

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ISSUED 03/2017 3138-01-08-2008-US

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