

# MEAB Solvent Extraction Equipment

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## MSU SQ IND - INDUSTRIAL MIXER-SETTLER EQUIPMENT

- Equipment ideally suited for:**
- Industrial Plant Operation and Small Scale Production
  - Development of Chemicals and Processes
  - Flow Sheet Evaluation
  - Education and Industrial Training

The industrial mixer-settler equipment, type SQ, are ideally suited for solvent extraction plant operation. The mixers are equipped with AC-motors and adjustable frequency inverters for mixer speed control. A complete range of standard mixer-settler sizes is available. The standard units are offered separately or integrated in complete process arrangements. Standard materials of construction are Deracane 470 (GRP) with internal parts in polyvinylidene fluoride (PVDF). The MSU SQ mixer-settler units are available in flow ranges (org+aq++recycle) from 100 l/h and upward. Tailor-made units (equipment of special sizes and materials) are produced on request



The MSU SQ mixer-settler units in smaller size are ideally suited for pilot-scale testing and demonstration and as small-scale production equipment. The modular construction allows you to design your own, suitably sized testing equipment with the inherent flexibility needed for the efficient development and evaluation of your solvent extraction processes. The mixer-settler units can be supplied with a complete range of auxiliary equipment. The equipment can provide reliable chemical and engineering data and sufficient product solutions for further evaluation.

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### MEAB Product Info 08-2010

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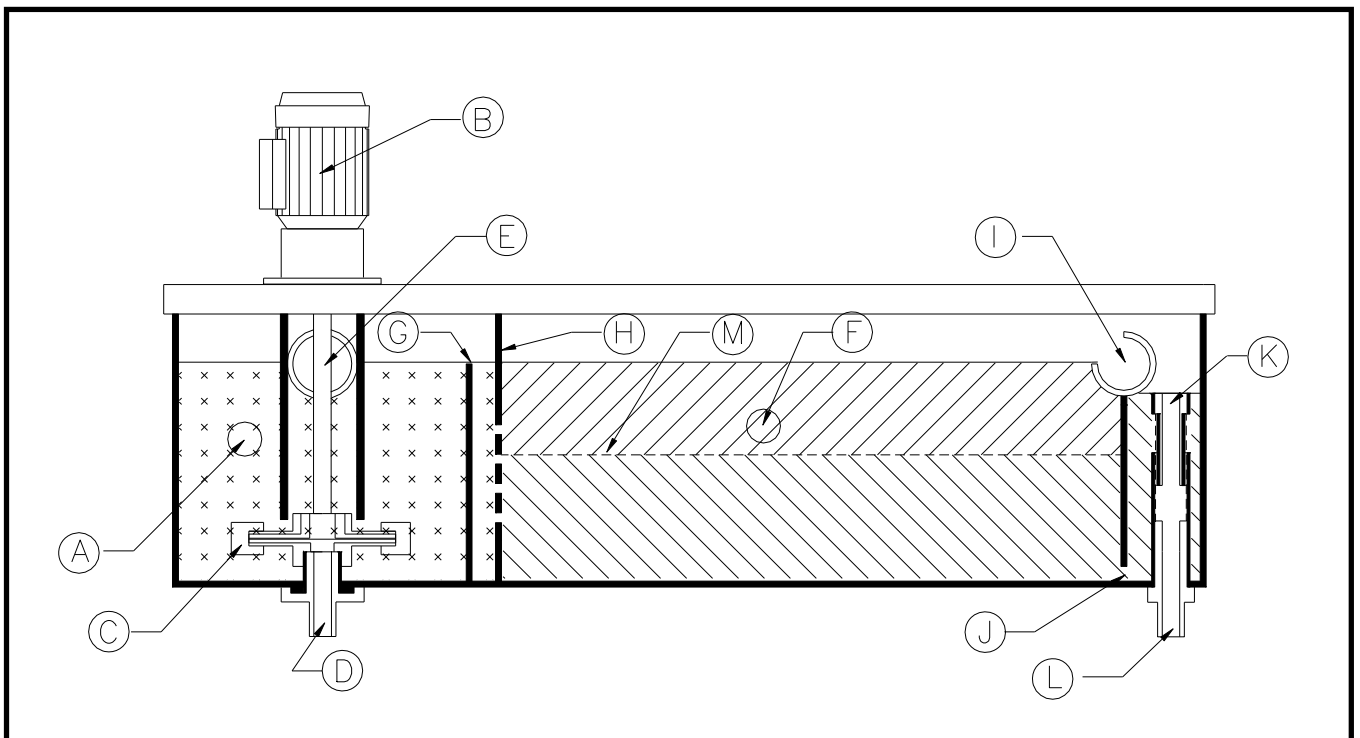
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# MEAB

The MSU SQ units are pump-mixer-settler units, built in a squared tank as shown in the drawing below. An AC motor, equipped with an adjustable frequency inverter for stirrer speed control, drives the stirrer. Each unit is designed to operate hydrodynamically independent of other units, an advantage which enables flexibility in selecting number of stages. A wide selection of construction materials are available; like stainless steel (SS), glass fibre reinforced polyester (GRP), polyvinyl chloride (PVC), polypropylene (PP) and/or polyvinyliden fluoride (PVDF). Below some examples of equipment sizes delivered

| Size (type SQ)  | MSU-15        | MSU-100 | MSU-500                         | MSU-2K | MSU-4,5K |
|---|---------------|---------|---------------------------------|--------|----------|
| Construction material                                     | Thermoplastic |         | Glass Fibre Armed Plastic /PVDF |        |          |
| Recommended flow (org+aq+recycle), l/h at 2,5 m/h loading | 200           | 825     | 2500                            | 6400   | 12000    |
| Mixer active volume                                       | 6             | 27      | 125                             | 500    | 1000     |
| Settler active volume                                     | 15            | 100     | 500                             | 2000   | 4500     |

## MSU SQ Mixer-Settler Units – Construction principles



- |                                    |  |
|------------------------------------|--|
| A. Mixing chamber                  | B. Variable speed stirrer motor                  |
| C. Turbine pump impeller           | D. Inlet, heavier solvent                        |
| E. Inlet, lighter solvent          | F. Settling compartment                          |
| G. Outlet/inlet mixer/settler      | H. Picket fence distributor                      |
| I. Outlet weir, lighter solvent    | J. Underflow, heavier solvent                    |
| K. Outflow cavity, heavier solvent | L. Adjustable jack-leg outflows, heavier solvent |
| M. Phase boundary                  |  |