Resinex™
Ion Exchange Resin

Resinex™ OR-1

Strong acid cation resin for oil removal

Resinex™ OR-1 is a strongly acidic gel-type, polystyrene-divinylbenzene-copolymer cation exchange resin especially developed for the oil removal from condensate. Resinex™ OR-1 acts like an coalescing agent and does not require regeneration of the resin beads to allow an economic operation. The superior mechanical strength combined with the selected bead size ensures a low pressure drop and prevents strainers from blocking. Resinex™ OR-1 is able to reduce the oil concentration from 100 ppm down to 1 ppm.

Typical Properties

Type	Crosslinked polystyrene divinylbenzene
Form	Gel-type, amber, spherical beads
Functional group	Sulfonic acid
Whole bead count	95% min.
Ionic form, as shipped	Na^+
Bead size	0.42 - 1.25 mm
Effective bead size	0.60 ± 0.15 mm
Uniformity coefficient	1.60 max.
Bulk density, as shipped	830 kg/m^3
Real density	1.28 g/cm^3
Water retention	43 - 48%
Total capacity (Na^+ form)	2.00 eq/l min.
Stability, temperature	120°C max.
Stability, pH	0 - 14

Standard Design Conditions

Bed depth	> 700 mm
Service flow rate (Upflow)	20 - 30 BV/h
Backwash expansion	50 - 75%

Key Features and Benefits

- **High Integrity Beads**
  Excellent resistance to mechanical degradation ensures low pressure drop
- **Extended Operating Capacity**
  Economical advantage
- **Chemical Resistancy**
  Insoluble in acids, alkalies and all common solvents
- **Selected Bead Size**
  Prevent blocking of the strainers

Typical Applications

- Oil Removal from Condensate streams

Standard Packaging

- 25 lit. PE valve bag
- 1000 litre big bag

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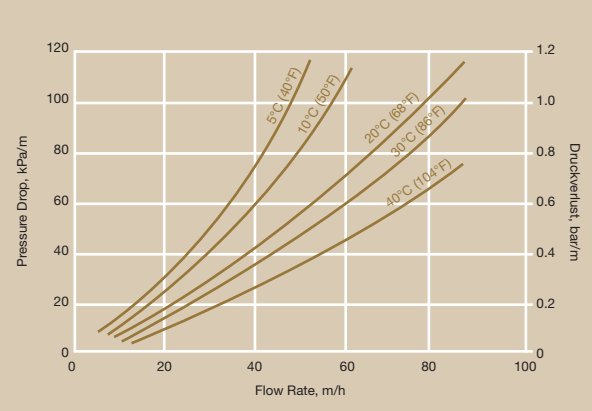
Pressure Drop

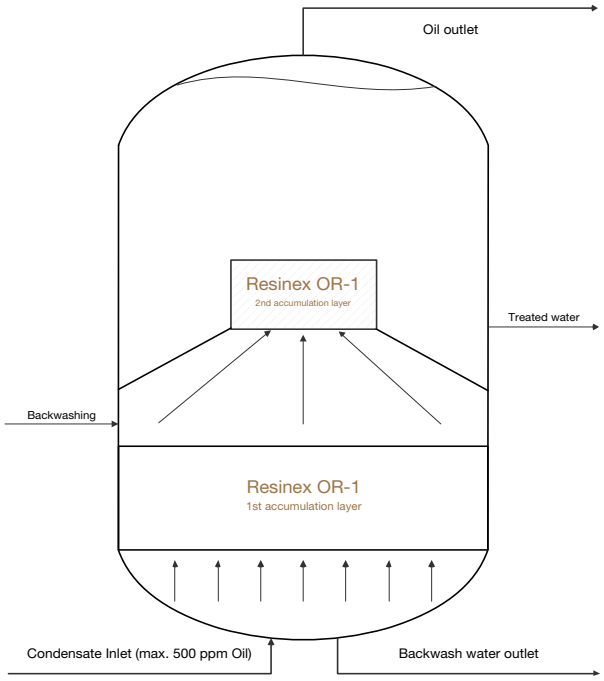


Operation Parameter

Conductivity of feed water	50 µS/cm max.
Total suspended solids	5 ppm max.
Oil content	500 ppm max.
Iron content	0.5 ppm max.
Hardness	0.3 mmol/l max.
Alkalinity	1.5 mmol/l max.
Linear velocity	5 - 15 m/h
pH	6-9

Principles of the De-greasing process

The oily contaminated water passes the resin layer from the bottom to the top of the de-greaser, short grained oil drops gathered into large drops on the resin surface, disappear from the resin layer and will be transferred to the second accumulation layer. After passing this step, the oil will be separated by gravity - the oil is on top of the unit and can be taken out.



Product Packing

25 lit. polyethylene valve bag
42 bags per pallet

Polypropylene FIBCs
(big bag), 1.000 lit.

CAUTION Strong oxidizing agents such as nitric acid can react violently with ion exchange resins and cause explosive type reactions. Before using strong oxidants, consult sources knowledgeable in the handling of these materials.

RX-OR1_e_Rev10_20140419

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