Ai SolventVap 5L Rotary Evaporator with Motorized Lift

SKU | Roto-Ai-SE13

Specifications

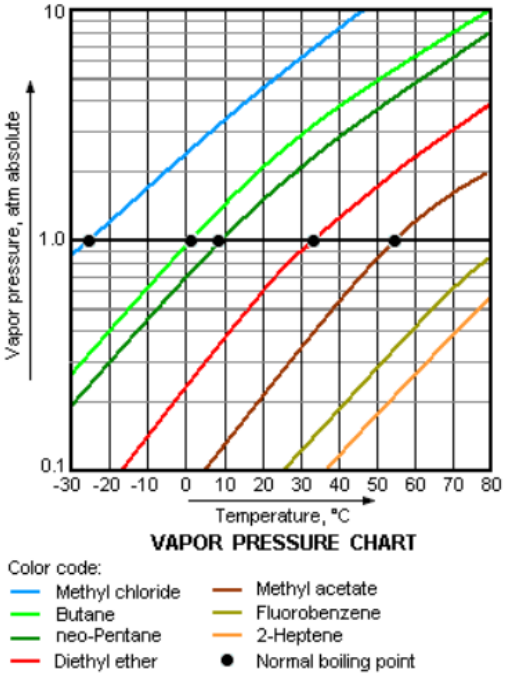
Electrical requirements	110V 60Hz single phase, 2300 watts, 21A or 220V 50/60Hz single phase, 2300 watts, 10.5A Rotation motor: 300 watts
Glass material	High borosilicate glass 3.3

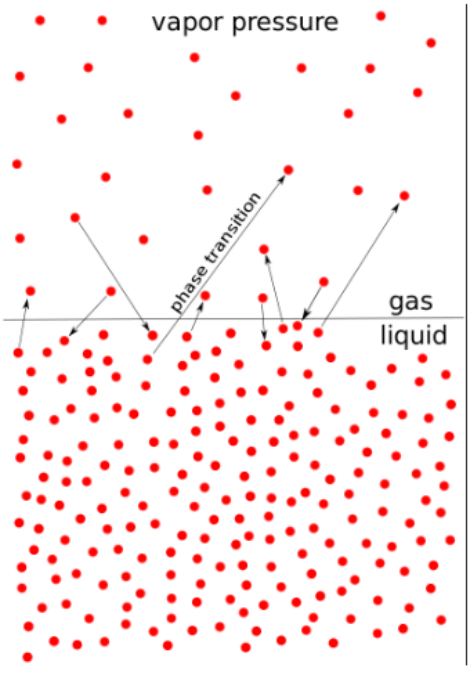
Evaporating flask	**Capacity: 1.32 gallon (5 liters)** **Maximum load: Not to exceed 60% of the flasks capacity** **Sealing flange: 2" diameter** **Rotation speed: 10 to 140 rpm** **Evaporating speed: 0.5 gallon/hour (water), 1 gallon/hour (alcohol)**
Receiving flask	**0.79 gallon (3 liter)**
Condenser	**Glassware: Dual-circulating coils, vertical** **Chilling fluid connection: 3/8" hose barb x 2** **Condensing surface: 2,780 cm2 or 3 sq ft**
Water bath	**Temperature range: ambient to 99°C (210°F)** **Temperature controller: digital** **Dimensions: 11.4" diameter x 6.7" depth x 9" height** **Material: stainless steel** **Media: distilled water only** **Max. water level: not to exceed 1" from the top rim of the bath** **Number of heaters: one** **Drain port: one** **Exterior liner: rubber** **Lifting: motoriezed** **Maximum lifting distance: 4 inches**
Vacuum	**Ultimate vacuum level: < 3 torrs** **Connection: 3/8" hose barb x 1** **Sealing: Viton & PTFE gaskets**
Safety	**Dry-run, over-temp shut-off, built-in circuit breakers**
Weight & dimensions	**105 Lb (evaporator), 57 Lb (glassware)** **Unit: 30 x 15.7 x 42" (WxDxH)** **Shipping: 29 x 17 x 35" (evaporator), 22 x 22 x 22" (glassware) (WxDxH)**
Warranty	**One year warranty on rotary evaporator except glassware and all sealing gaskets.** **Glassware may have minute blemishes that**

	will not affect the function. **If you believe there are imperfections on your glassware, please contact us.** **We check all our inventory and make sure no defective glassware is sent to our customers.**
Compliance	**UL 61010-1: 2012 Ed.3 + R: 29 Apr 2016** **CSA C22.2# 61010-1-12: 2012 Ed.3+ U1; U2 (R2017)** **CE**

Resources

A rotary evaporator is a device used in chemical laboratories for the efficient and gentle removal of solvents from samples by evaporation. The process of rotary evaporation is most often used to separate solvents with low boiling points, such a n-hexane or ethyl acetate, from compounds which are solid at room temperature and pressure. However, careful application also allows for the removal of a solvent from a sample containing a liquid compound, if there is minimal co-evaporation (azeotropic behavior) and a sufficient difference in boiling points at the chosen temperature and reduced pressure.



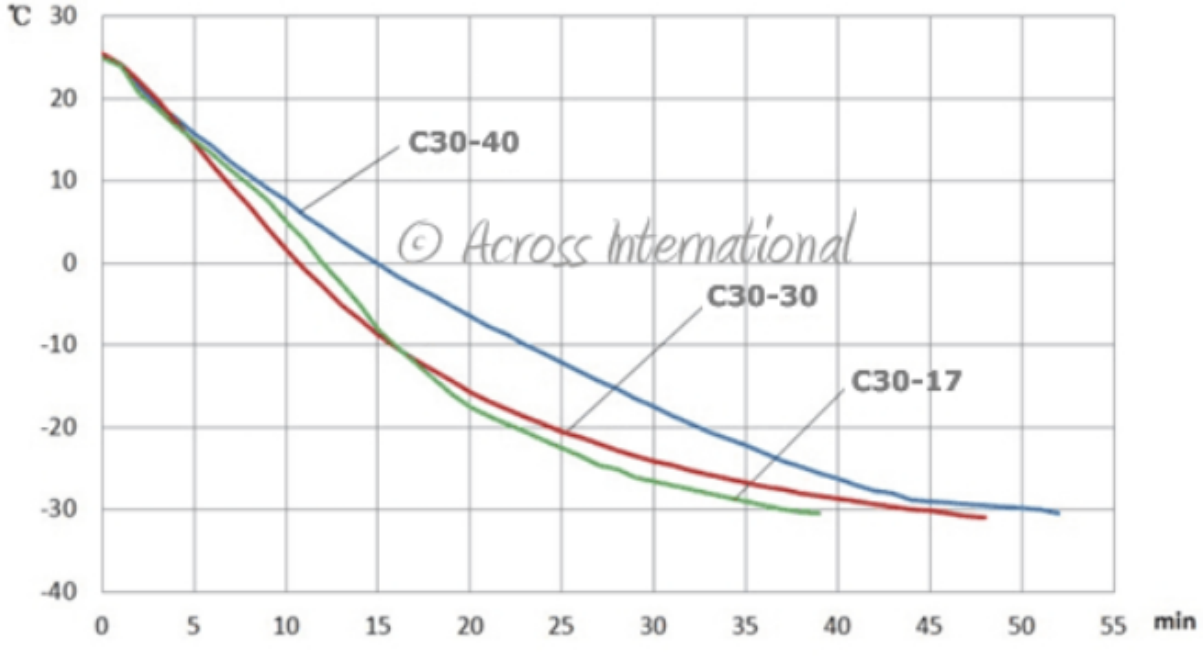


Example: The following table is a list of a variety of substances ordered by increasing vapor pressure (in absolute units).

Substance	Vapor Pressure (SI units)	Vapor Pressure (Bar)	Vapor Pressure (Torr / mmHg)	Temperature
Tungsten	100 Pa	0.001	0.75	3203 °C
Ethylene glycol	500 Pa	0.005	3.75	20 °C
Xenon difluoride	600 Pa	0.006	4.50	25 °C
Water (H_2O)	2.3 kPa	0.023	17.5	20 °C
Propanol	2.4 kPa	0.024	18.0	20 °C
Ethanol	5.83 kPa	0.0583	43.7	20 °C
Methyl isobutyl ketone	2.66 kPa	0.0266	19.95	25 °C
Freon 113	37.9 kPa	0.379	284	20 °C
Acetaldehyde	98.7 kPa	0.987	740	20 °C
Butane	220 kPa	2.2	1650	20 °C
Formaldehyde	435.7 kPa	4.357	3268	20 °C
Propane[9]	997.8 kPa	9.978	7584	26.85 °C
Carbonyl sulfide	1.255 MPa	12.55	9412	25 °C
Nitrous oxide[10]	5.660 MPa	56.60	42453	25 °C
Carbon dioxide	5.7 MPa	57	42753	20 °C

C30 Series Recirculating Pump Curves

Cooling media: ethanol



Safety Notice

Your safety is important to us! Please use caution when operating. Users of glass reaction equipment must take all necessary precautions to avoid contact with rotating parts, particularly entanglement of loose clothing, hair, necklaces, or other jewelry. Under these circumstances, the winding action of the rotating parts can draw the user(s) into the apparatus, resulting in breakage of glassware, burns, and/or chemical exposure. Extra caution must also be taken when operating with air-reactive materials, especially under vacuum. A leak can draw air into the apparatus and cause a violent reaction to occur.