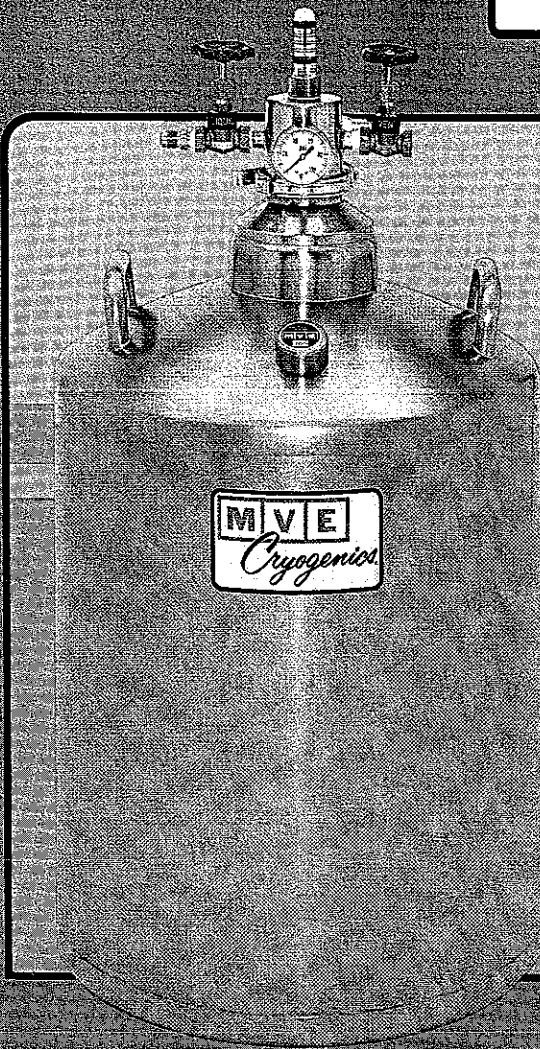




Division of Beatrice Foods Co.

99-10749

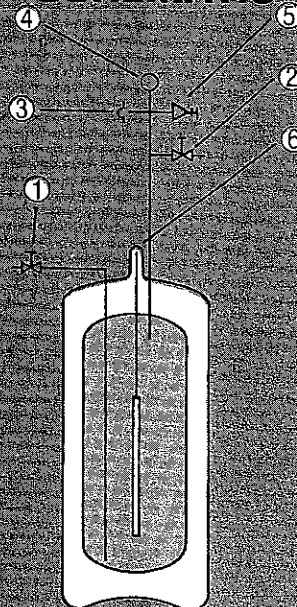
# MINI PRESSURE VESSEL



## MODEL LW-60

The Model LW-60 is designed for users of liquid nitrogen who require less capacity than commonly provided by 110 or 160 liter cylinders. This includes many research and medical laboratories as well as industrial applications. Designed to operate at 22 PSI the LW-60 has a 60 liter liquid nitrogen capacity and is completely fabricated from *stainless steel*. Ease of operation is provided by a  $\frac{3}{8}$  inch fill valve,  $\frac{1}{2}$  inch vent valve, and float type liquid level sight gauge. A roller base is also available. The LW-60 has two convenient carrying handles.

## SCHEMATIC



## NOMENCLATURE

- 1. Liquid Valve
- 2. Vent Valve
- 3. Burst Disc (45 PSI)
- 4. Pressure Gauge
- 5. Relief Valve (22 PSI)
- 6. Liquid Level Gauge

## Specifications

Liquid Capacity	60 Liters
Loss Rate	1.4 Liters Per Day Max.
Operating Pressure	22 PSI
Weight Empty	62 Pounds
Weight Full	165 Pounds
Outside Diameter	18 Inches
Overall Height (To top of liquid level sight gauge)	32½ Inches
Overall Height (To top of flange)	27½ Inches
Connections	
Fill and Withdraw	$\frac{3}{8}$ " Female NPT
Vent	$\frac{1}{2}$ " Female NPT

# Minnesota Valley Engineering

407 7TH ST. N.W. NEW PRAGUE, MN 56071 U.S.A.

TELEPHONE 612-758-8291

TELEX NO. 29-0571



# LAB • DEWAR • TECH Series

## Liquid Nitrogen Storage, Transport and Withdrawal Was Never Easier.

The LAB Series cryogenic dewars earned their name from wide acceptance by laboratories and medical offices requiring a convenient, economical way to store and pour liquid nitrogen. They use high efficiency super-insulation and aluminum construction to make them light weight, and the most efficient containers available today. The LAB Series shape and handles makes them easy to lift and pour. The different LAB units can be fitted with pouring spouts, pressurized discharge devices, or dippers to aid in liquid nitrogen transfer.

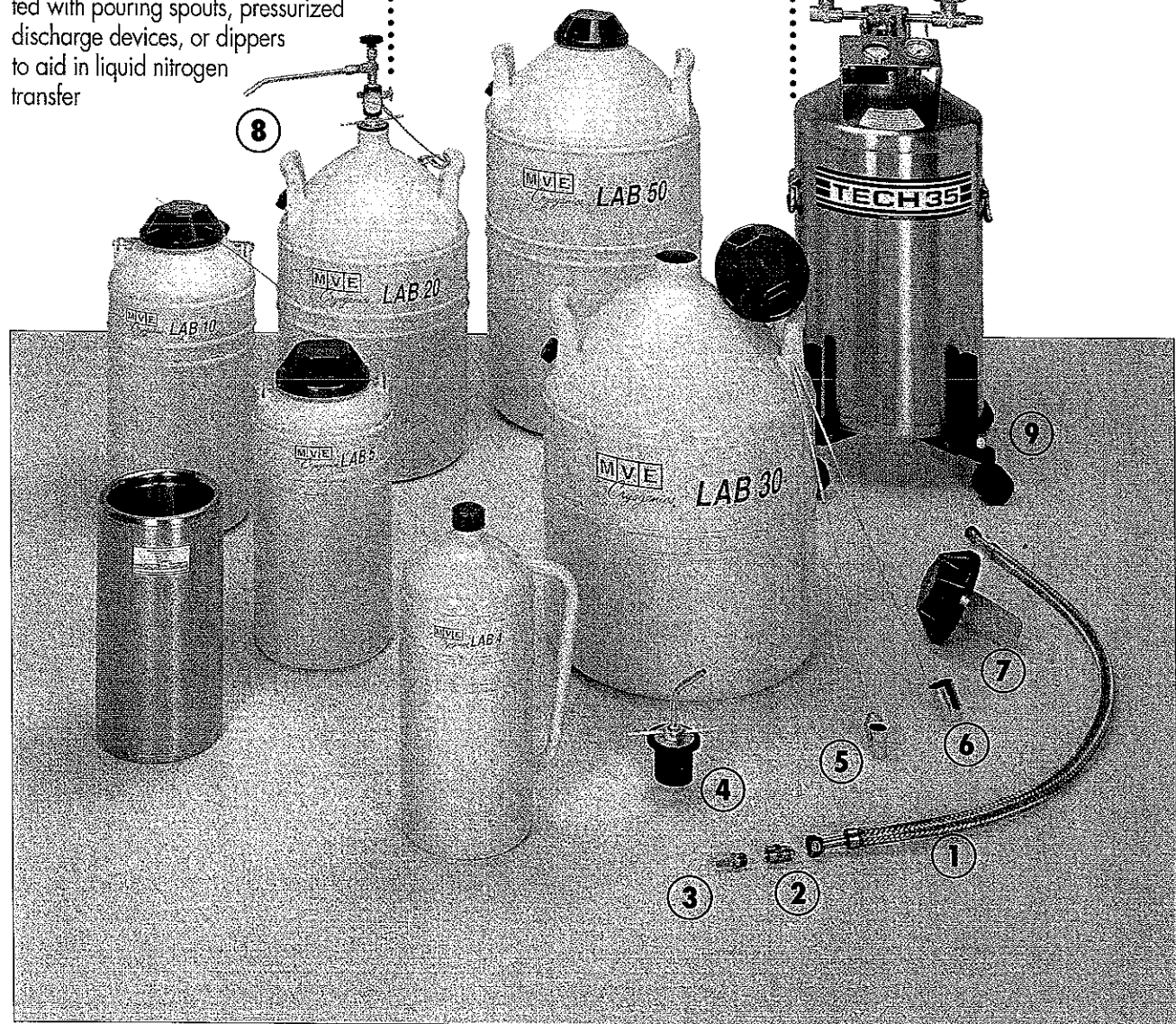
The Tech 35 and 50 are pressurized containers that allow you to transfer liquid nitrogen through a transfer hose and phase separator. These units are constructed of all stainless steel and have a convenient pressure and liquid contents gauges. Their valving allows you to attach these dewars to any equipment that requires liquid nitrogen.

## Open Dewars

No other company offers the capacity range of MVE's open dewar flasks. The standard stainless steel design incorporates a vacuum space and super-insulation to reduce nitrogen

evaporation and provide unequalled holding time. Opening sizes range from 1 7/8" to 30" and capacities to 1180 liters. MVE can offer you an open dewar flask for any purpose.

**MVE**  
*Cryogenics*



## SPECIFICATIONS

	LAB 4	LAB 5	LAB 10	LAB 20	LAB 30	LAB 50	TECH 35	TECH 50
<b>PERFORMANCE</b>								
Liquid nitrogen capacity (liters)	4	5	10	21	32	50	30	50
Static evaporation rate (liters/day)	0.2	0.15	0.18	0.18	0.25	0.45	1	1.1
Static holding time (days)	18	33.3	55.6	116.7	128	111	30	45
<b>UNIT DIMENSIONS</b>								
Neck opening (in/mm)	1.4 35.5	2.2 56	2.2 56	2 51	2.5 64	2.5 64	- -	- -
Usable height (in/mm)	7.8 198	10.5 266	13.5 343	13.7 348	14.9 378	22 559	- -	- -
Overall height (in/mm)	16.8 426	18.2 462	21.5 546	24.7 627	24.1 611	30.7 779	33 838	42 1,067
Outside diameter (in/mm)	7.3 185	8.8 222	10.3 260	14.5 368	17 432	17 432	14 356	14 356
Internal diameter (in/mm)	5.5 139	6.5 165	8.3 210	11.4 289	14 356	14 356	12 305	12 305
Weight empty (lbs/kg)	6 2.7	8 4	13 6	19 9	27 12	34 15	45 20	65 30
Weight full (lbs/kg)	13 6	17 8	31 14	56 26	84 38	123 56	107 49	155 70

## SPECIFICATIONS OPEN DEWAR

MODEL	A1	B	C1	D1	E1	F1	G1
Inside diameter (in/mm)	1.87 48	2.75 70	3.5 89	4.5 114	6 152	7.37 187	8.25 210
Inside depth (in/mm)	3.62 92	9 229	9 229	9 229	12 305	14 356	16 406
Outside diameter (in/mm)	2.62 67	3.5 89	4.62 117	5.62 143	7.25 184	8.75 222	9.75 248
Overall height (in/mm)	5.25 133	10.25 260	10.62 270	10.62 270	13.75 349	16 406	18 457
Capacity (liters)	0.16	0.875	1.38	2.25	5.5	9.5	13.6

\* Other models available upon request

## ACCESSORIES

<b>1</b>	Transfer Hose - 1/2" ID flexible steel hose to connect freezer to LN2 source
<b>2</b>	Fittings - Adaptors to connect the transfer hose to phase separators
<b>3</b>	Phase Separator - Reduces the nitrogen vapor loss and splashing during a fill
<b>4</b>	Pouring Spout - For pouring small amounts of liquid
<b>5</b>	Swivel Dipper - Allows liquid to be removed from Lab and set on a flat surface
<b>6</b>	Dipper - Allows liquid to be removed from Lab and poured into a flask
<b>7</b>	Spare Corks - High efficiency foam
<b>8</b>	Pressurized Discharge Device - Used for pressurized liquid transfers from Lab
<b>9</b>	Caster base - Allows for ease movement of the lab units

