

MVE DOBLE SERIES



The traditional method of export shipment and distribution for biological products such as semen and vaccines has been based around wet shipment under liquid nitrogen. Over the past few years, many of the traditional shipping companies have either prohibited the shipment of liquid nitrogen, or placed hazardous material surcharges on shipments to the point where this method is uneconomical.

In many cases, vapor shippers have become the method of choice for cryogenic shipment. These shippers hold product at cryogenic temperature and allow most shipping methods to be employed, even for export shipments. From a transport point of view, this is a perfect solution. From a distribution standpoint, it leaves much to be desired. Once at a destination, the samples have to be transferred into a liquid storage tank and the shipping container has to be recovered by the shipping company. Therefore, there is an additional "return shipment".

Since the early 1960's Chart MVE has been at the forefront of innovation and excellence in the field of storage and transportation of frozen biological samples. Once again, Chart MVE has taken a step in front of all other cryogenic manufacturers.

The Doble series tanks are the first units to be designed for both vapor shipment and liquid storage. A unique absorbent layer in the base of the storage tanks enable them to be charged with nitrogen and employed as dry shippers with hold times of up to 30 days. Once at the final destination, the tanks can be filled with liquid and used for long term storage.

- **Reduce Investment.** No need to purchase dedicated shipping tanks in addition to storage units.
- **Optimize Investment.** Inventory is more flexible, since tanks can be used for either/or both purposes.
- **40 Years of Technology.** The Chart MVE Doble hybrid tanks utilize the same components and vacuum technology that make our current range the best selling units in the world market.
- **3 Year Warranty.** Our faith in our product is your guarantee of performance.
- **Up to 30 Days of Hold Time.** Compare to lower cost systems.
- **Rugged Construction.** The same durability for shipment and storage - no short term investment, these tanks are designed to last on the place, truck or farm.
- **High Capacity.** Reduce the number of shipments with vapor shipments of up to 3,500 straws.
- **Flexibility.** The units can be used as a vapor shipper for export shipment and simply filled with liquid on arrival, to become a high quality liquid storage tank for on-site use and resale.
- **Safe and Integrity of Shipment.** The vapor shipping method reduces the possibility of spillage accidents and in addition, the unique design of the Doble units ensures the tank will maintain temperature for up to 30 days before requiring a recharge.
- **Simple to Decontaminate.** Chart MVE's exclusive hydrophobic absorption material not only guarantees optimum performance at all times (with no down time to dry out the tank) but enables water soluble solvents and disinfectant to be used for decontamination.

MVE DOBLE SERIES



PRODUCT SPECIFICATIONS

MODEL	Doble-11	Doble-20	Doble-28	Doble-34	Doble-47	Doble47-10
PART NUMBER	11507886	11492151	11527730	11497948	11498684	115543508
Number of Canisters	6	6	6	6	6	10
No. of 1/2 cc Straws (10/cane)	480	660	2400	2100	4500	3500
PERFORMANCE						
Liquid Nitrogen Capacity (liters)	10	18.5	28	32	46	46
Vapor Capacity (liters)	3.4	3.4	8.4	6.7	8.4	9.6
Static Evaporation Rate (liters/day)	0.17	0.1	0.36	0.2	0.4	0.4
Normal Working Duration (days for liquid)	42	125	50	100	74	72
Normal Working Duration (days for vapor)	21	21	24	30	21	21
UNIT DIMENSIONS						
Neck Opening (in/mm)	2 / 51	2.18 / 55	3.81 / 97	3.5 / 89	5 / 127	5 / 127
Overall Height (in/mm)	21.6 / 549	25.7 / 652	22 / 559	26.6 / 676	26.5 / 673	26.5 / 673
Outside Diameter (in/mm)	10.2 / 260	14.5 / 368	18.2 / 462	18.2 / 462	20 / 508	20 / 508
Canister Height (in/mm)	11 / 279	11 / 279	11 / 279	11 / 279	11 / 279	11 / 279
Canister Diameter (in/mm)	1.5 / 38	1.65 / 42	3.09 / 78	2.81 / 72	4 / 101.6	2.81 / 72
Weight Empty (lbs/kg)	19 / 8.7	25.2 / 12	34 / 16	39.2 / 18	47 / 21.3	48 / 21.8
Weight Charged (vapor lbs/kg)	24 / 11	30.2 / 14	49 / 22	51 / 23	63 / 28.6	64 / 29
Weight Full (liquid lbs/kg)	36 / 16	60 / 27	84 / 38	95 / 43	125 / 57	120 / 54.5
Lbs/Kg of Cabosil	1 / .45	1 / .45	3.5 / 1.58	2 / .9	3.5 / 1.58	3.5 / 1.58

ACCESSORIES:

- Caster Base
- Spare Corks
- Canister
- Liquid Level Measuring Stick
- Transfer Hose
- Level Alarm
- Phase Separator
- Shipping Carton

THREE Year Vacuum Warranty

Conforms to MDD 93/42/EEC, the Medical Device Directive for the EU.

MVE Bio-Medical, Chart Industries, Inc.
1800 Sandy Plains Industrial Parkway, Suite 316
Phone: 770-425-4470 . 888-683-2796 Local Fax: 770-425-4740 . www.chartbiomed.com

