

# CRYO-CYL 230 MP & LP

## MEDIUM & LOW PRESSURE CRYOGENIC STORAGE SYSTEM

Chart's VRV Cryo-Cyl® 230 MP & LP Liquid Cylinder is a vacuum sealed, super-insulated, transportable liquid cylinder that permits a low evaporation rate, grants several years of efficient performance, and provides the lowest life cycle costs.

The optimized, ergonomic design with complete stainless steel construction, seamless pipes and world-class components guarantee years of care-free operations.

Available in 230 litre capacity in 1.5 bar, 4 bar and 24 bar pressures, VRV Cryo-Cyl 230 MP & LP is designed for LIN, LOX, LAR, LCO<sub>2</sub> and LN<sub>2</sub>O to meet most industrial and medical applications and is suitable for both liquid withdrawal and gas use.

The Cryo-Cyl 230 MP & LP cylinder is designed according to EN1251-2:2000 and is approved for TPED standards.



### PRODUCT HIGHLIGHTS

- **Modular, robust construction** - full welded stainless steel construction, super insulated, seamless stainless steel piping to ensure a long, leak-free and maintenance-free life.
- **100% seamless pipe** - seamless stainless steel 304 for all inner vessel piping to ensure a long, leak-free and maintenance-free life.
- **High quality components** - selected for their reliability, high grade bronze valves and level gauge.
- **Ergonomic design** - pipework layout with few connections eliminates potential leaks and ease of operation and maintenance.
- **Vacuum quality guarantee** - innovative vacuum and multi-layer insulation process guarantees an extremely long life with superior holding times, backed up by an extended warranty.
- **Ultra clean** - inner vessel and piping are pickled, passivated and hydraulically tested, certified and degreased for oxygen service.
- **User friendly** - perfect height with ease of access, excellent center of gravity for movement on any surface.



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CRYO-CYL 230 LTR General Specifications			
Model (Volume/Pressure)	230/24 MP	230/24 MP	230/24 MP
MAWP (bar)	24	4	1.5
<b>Capacity</b>			
Liq. gross (ltr.)		234	
Liq. useful (ltr.)		222	
<b>Gas-useful (Sm<sup>3</sup>)</b>			
N <sub>2</sub>		159.5	
O <sub>2</sub>		196	
Ar		192.1	
CO <sub>2</sub> , N <sub>2</sub> O		146.8	
<b>Performances</b>			
<b>NER (evaporation %/day)</b>			
N <sub>2</sub>		1.6	
O <sub>2</sub> - Ar		1.1	
CO <sub>2</sub> - N <sub>2</sub> O		0.6	
<b>Gas flow (Nm<sup>3</sup>/hr.)</b>			
N <sub>2</sub>		11	
O <sub>2</sub>		10	
Ar		12	
CO <sub>2</sub> , N <sub>2</sub> O		3	
Application		Transportable	
Design Code		EN1251-2:2000	
Approval		PESO, Gas Cylinder Rules-2005	
<b>Dimensions (mm)</b>			
Vessel diameter		670	
Overall dimensions		685 x 715 x 1500	
<b>Theoretical weight (kg)</b>			
Empty vessel on pallet		208	
Trolley weight		70	
<b>Filled vessel on pallet*</b>			
N <sub>2</sub>		388	
O <sub>2</sub>		462	
Ar		518	
CO <sub>2</sub> , N <sub>2</sub> O		470	
<b>Material</b>			
Inner vessel		X5CrNi18-10 EN10028-7	
Outer vessel		X5CrNi18-10 EN10028-7	
Wheeled Trolley in CS		Standard	
Wheeled Trolley in SS		Option	
<b>Liquid measurement</b>			
Floating Level Gauge		Standard	
Digital Level Gauge		Option	
*weight without trolley			