



Packaged Gas

TECHNICAL SPECIFICATION

PERMA-CYL 230 Standard

1. General

Type of tank:	Stationary liquid cylinder
Gas service:	LIN, LOX, LAR, CO ₂ , N ₂ O
MIN./MAX. ambient temperature:	-30 °C / +50 °C
Design regulation:	PED (EN 13458)
Notified body:	Apragaz

2. Pressure vessel

Design code:	PED (EN 13458)
Material:	Stainless steel 1.4301
MIN./MAX. allowable temperature:	-196 °C / +50 °C
Piping material:	Stainless steel

3. Outer jacket

Design code:	EN 13458
Material:	Stainless steel 1.4301
MIN./MAX. allowable temperature:	-196 °C / +50 °C

4. Insulation

Type of insulation:	Super insulation
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5. Plumbing

Safety relief valves:	2 off, each safety relief valve designed for 100 % capacity
Piping material:	Stainless steel
Pressure build-up vaporizer:	Copper piping soldered on the outer jacket
Product vaporizer:	Copper piping soldered on the outer jacket
DP Gauge:	Capacitance gauge with 4-20 mA

6. Connections

Bottom Liquid Withdrawal:	3/8" NPT Female
Vent/Trycock:	3/8" NPT Female
Gas Use:	3/8" NPT Female



Cooler By Design.™

Top Fill: 3/8" NPT Female

7. Documentation

Data Dossier: Tank dossier in English electronically
Operation Manual: Operating manual electronically either in English or on request in language of final destination (may be subject of additional charges)

Paper Dossier & Operation Manual: Optional

8. Miscellaneous

Final surface: Stainless steel buffed surface
Pallet Frame: SB (square base) model include pull handle and casters

Model		230/22 FR	230/22 SB
Capacity			
Liquid (gross)	(liters)	240	240
Liquid (net)	(liters)	228	228
Gas*	(N ₂) (Nm ³)	147	147
	(O ₂) (Nm ³)	182	182
	(Ar) (Nm ³)	178	178
Performance & general information			
NER**	(N ₂) (% day)	1,8	1,8
Gas Flow	(N ₂ , O ₂ , Ar) (Nm ³ /hr)	11	11
Max. Relief Valve Setting	(bar)	22	22
Code		PED (EN 13458)	
Dimensions & weight			
Tank Diameter	(mm)	660	660
Base Dime (LxW)	(mm)	See above	715 X 715
Base type		Foot Ring	Square Caster Base
Height	(mm)	1462	1459
Tare Weight (approx.)	(kg)	170	189

* At 0 barg pressure

** NER: Nominal Evaporation Rate

Note: All models and specifications are conditional and subject to change without prior notice.