



Cooler By Design.™



Packaged Gas

TECHNICAL SPECIFICATION

PERMA-CYL® 37 bar ZX M12 Standard



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1. General

Type of tank:	Stationary liquid cylinder
Gas service:	LIN, LOX, LAR, CO ₂ , N ₂ O
Volume tolerance:	± 4%
MIN./MAX. ambient temperature:	-30 °C / +50 °C
Max. allowable working pressure:	37 bar
Design regulation:	PED (EN 13458)
Module:	B+D
Notified body:	TÜV NORD

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

Flow schematic:	See appendix 1
Components specification:	See appendix 1
Piping material:	Stainless steel, copper
Pressure build-up vaporizer:	External aluminum flat fin
Product vaporizer:	External aluminum star fins
DP Gauge:	Digital DP gauge Cyl-Tel (4-20 mA in standard)

6. Connection

Bottom Liquid Withdrawal:	1/2" NPT Female
Vent/Trycock:	1/2" NPT Female
Gas Use:	1/2" NPT Female
Top Fill:	1/2" NPT Female (Check Valve as standard, ball valve can be added as an option)



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7. Documentation

Data Dossier:	Tank dossier in English electronically
Operation Manual:	Operating manual electronically either in English or <u>on request</u> 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:	Galvanized carbon steel

Model		600/37 ZX	1000/37 ZX	1500/37 ZX	2000/37 ZX
		M12	M12	M12	M12
Capacity					
Liquid (gross)*	(liters)	601	997	1539	2021
Liquid (net)	(liters)	571	947	1462	1920
Gas**	(Nm ³)				
	(N ₂)	369	612	945	1241
	(O ₂)	456	756	1167	1533
	(Ar)	446	740	1142	1500
Performance & general information					
NER***	(N ₂) (% day)	1	0,9	0,8	0,8
Gas Flow (N ₂ , O ₂ , Ar)	(Nm ³ /hr)	70 [#]	100 [#]	120 [#]	130 [#]
Gas Flow (CO ₂ & N ₂ O)	(Nm ³ /hr)	21 [#]	30 [#]	40 [#]	42 [#]
Max. Primary Relief Valve Setting	(bar)	37	37	37	37
Design Regulation		PED (EN 13458)			
Dimensions & weight					
Tank Diameter	(mm)	900	1100	1400	1400
Base Dime (LxW)	(mm)	1070 x 1360	1270 x 1560	1570 x 1860	
Base type		Pallet Base			
Height	(mm)	2135	2150	2150	2550
Tare Weight (approx.)	(kg)	703	906	1279	1470

* Volume tolerance is ±4%

** At 0 barg pressure for N₂, O₂, Ar and 10 bar for CO₂, N₂O

*** NER: Nominal Evaporation Rate

Values indicate the maximum short peak flow rate, continuous flowrates are roughly at 60% of published values

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