

Xenon / krypton regulation systems



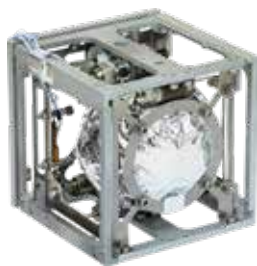
By leveraging Air Liquide's expertise in gas management and equipment manufacturing, our team offers customized solutions covering a wide range of components and systems for the management of propellants for electric propulsion.

Air Liquide masters the entire supply chain of the propellant, **from production (xenon, krypton) to delivery to the point-of-use**, and manufactures **filling equipment** (xenon loading carts). We offer **packaged solutions such as filling services** including gases needs.

• **BUSINESS CONFIDENTIAL INFORMATION**

This document is property of Air Liquide advanced Technologies – 2 rue Clémencières – B.P. 15 – 38360 Sassenage. It is strictly confidential and not be reproduced nor given away without the written consent of Air Liquide advanced Technologies.

Technical characteristics



Propellant management assembly (tank + feed system)



Propellant feed system

Functions

Storage	Tank for 200g of xenon with heating system for thermal regulation	No
Xenon regulation	1 regulation line with 2 ranges of mass flow rate \Leftrightarrow 1 outlet	2 lines with 2 mass flow rates always proportional \Leftrightarrow 2 outlets
Redundancy	High flow rate line can be used as a redundancy of the low flow rate line	No

Performances

Media compatibility	Inert gas (helium / argon / krypton / xenon)	Inert gas (helium / argon / krypton / xenon)
Mass flow rate (given with Xe)*	0.01-0.2 mg/s or 0.5-10mg/s (depending on the line used)	Line 1: 0.5-10mg/s Line 2: from 0.1 to 1 x massflow of line 1
External leak rate	10-4mbar.L/s	10-5mbar.L/s
Internal leak rate	10-6mbar.L/s	10-6mbar.L/s

Sizing

Volume	10cm x 10cm x 10cm	3.5cm x 8cm x 8cm
Mass	500g (without xenon)	500g
Maximum pressure	140bar	340bar
Proof factor	1.5	1.5

Environments

Temperature	-40°C/50°C		-40°C/50°C	
Sine (3 axes)	13g		24g	
Random (3 axes)	20Hz: 0.01125 g ² /Hz 800Hz: 0.05625 g ² /Hz	130Hz: 0.05625 g ² /Hz 2000Hz: 0.015 g ² /Hz	20Hz: 0.008 g ² /Hz 250Hz: 1.0 g ² /Hz	100Hz: 1.0 g ² /Hz 2000Hz: 0.004 g ² /Hz

Interfaces

Inlet Outlet	1/16" SS capillary	Male VCR 1/8" 2 Males VCR 1/8"
Electrical	Wires (details on demand)	2 connectors (TBC)
Excluded	Electronic	Tank, electronic

Availability

Lead time	From 5 months	Available from March 2020
------------------	---------------	---------------------------

* These flow rates are given as orders of magnitude. For upper or lower massflow rate please contact us.

Contacts

Air Liquide
Advanced Technologies
2, rue de Clémencière
BP 15 – 38360 Sassenage, France
Phone: +33 4 76 43 62 27
E-mail: gcom.alat@airliquide.com
www.advancedtech.airliquide.com

www.airliquide.com



A world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 66,000 employees and serves more than 3.6 million customers and patients.

• BUSINESS CONFIDENTIAL INFORMATION

This document is property of Air Liquide advanced Technologies – 2 rue Clémencières – B.P. 15 – 38360 Sassenage. It is strictly confidential and not be reproduced nor given away without the written consent of Air Liquide advanced Technologies.