

AstraValve Product Requirement Questionnaire

Thank you for your interest in AstraValve products.

To help us understand your application and recommend the most suitable valve configuration, please complete the questionnaire below as accurately as possible. Approximate values are acceptable at this stage if final system parameters are not yet frozen.

1. General Information

Company / Organization:

Contact person:

Email:

Project / Program name:

Target application:

- ☐ Rocket engine
- ☐ Test stand
- ☐ Propulsion feed system
- ☐ Pressurization system
- ☐ Ground support equipment
- ☐ Other:

Brief description of the system and valve function:

2. Valve Function

What type of valve are you looking for?

- ☐ Isolation valve
- ☐ Main propellant valve
- ☐ Bang-bang / on-off valve
- ☐ Proportional / throttling valve
- ☐ Check valve
- ☐ Vent / drain valve
- ☐ Pressurization valve
- ☐ Purge valve
- ☐ Other:

Required valve position in the system:

- ☐ Fuel line
- ☐ Oxidizer line
- ☐ Pressurant gas line
- ☐ Purge line
- ☐ Test stand line
- ☐ Other:

Valve state without control pressure / electrical power:

- ☐ Normally closed
- ☐ Normally open
- ☐ No preference / to be discussed

3. Reverse Flow

Can reverse flow occur during operation, shutdown, venting, testing, or fault conditions?

☐ Yes

☐ No

☐ Unknown

Can the valve be exposed to reverse pressure while closed?

☐ Yes

☐ No

☐ Unknown

Does the valve need to provide tight shutoff against reverse pressure?

☐ Yes

☐ No

☐ Unknown

4. Working Medium

Working medium (fluid/gas):

Concentration / composition, if applicable:

Cleanliness requirements, if known:

Known compatibility restrictions:

Please mark all that apply:

- ☐ Liquid hydrocarbon fuel
- ☐ Cryogenic liquid
- ☐ Concentrated hydrogen peroxide
- ☐ Gaseous oxygen
- ☐ Inert gas
- ☐ Water / test fluid
- ☐ Other:

5. Operating Conditions

Please provide the expected operating range.

Parameter	Nominal	Minimum	Maximum	Unit
Inlet pressure				bar
Outlet pressure				bar
Pressure drop across valve				bar
Fluid temperature				°C
Ambient temperature				°C
Mass flow rate				kg/s
Volume flow rate, if preferred				L/s
Required Kv / Cv, if known				-

Required proof pressure, if defined [bar]:

Required burst pressure, if defined [bar]:

Maximum expected transient pressure [bar]:

Expected operating mode:

- ☐ Single-shot operation
- ☐ Repeated test operation
- ☐ Flight operation
- ☐ Ground-only use
- ☐ Other:

Estimated number of cycles:

- ☐ < 10
- ☐ 10–100
- ☐ 100–1,000
- ☐ > 1,000
- ☐ Not yet defined

6. Actuation and Control

Preferred actuation method:

- ☐ Pneumatic
- ☐ Hydraulic
- ☐ Electric
- ☐ Solenoid
- ☐ Manual
- ☐ No preference / to be proposed

If pneumatic or hydraulic:

Preferred control medium:	
Available control pressure, if pneumatic or hydraulic:	
Nominal [bar]:	
Maximum [bar]:	

If electric/solenoid:

Available electrical supply, if applicable: ☐ 12 VDC ☐ 24 VDC ☐ 28 VDC ☐ Other:
Control signal, if applicable: ☐ On/off ☐ PWM ☐ 0–5 V ☐ 0–10 V ☐ 4–20 mA ☐ Digital / bus-controlled ☐ Other:
Maximum allowable electrical power, if known:

Required opening time:

- ☐ Not critical
- ☐ < 1 s
- ☐ < 100 ms
- ☐ Other:

Required closing time:

- ☐ Not critical
- ☐ < 1 s
- ☐ < 100 ms
- ☐ Other:

Position feedback required?

- ☐ No
- ☐ Open/closed indication
- ☐ Continuous position measurement
- ☐ To be discussed

7. Interfaces and Installation

Please specify preferred size, wall thickness and material of connection, if known:

Installation constraints:

Maximum allowable envelope:

Maximum allowable mass:

Preferred mounting method:

Orientation restrictions:

CAD envelope available?

☐ Yes

☐ No

8. Leakage Requirements

Internal leakage requirement:

- ☐ No specific requirement
- ☐ Bubble-tight preferred
- ☐ Defined maximum leakage rate:

External leakage requirement:

- ☐ No specific requirement
- ☐ Bubble-tight preferred
- ☐ Defined maximum leakage rate:

Leak test medium preferred:

- ☐ Helium ☐ Nitrogen ☐ Air ☐ Water ☐ Other:

9. Failure Mode

Preferred failure mode in case of loss of control pressure / electrical power:

- ☐ Fail closed
- ☐ Fail open
- ☐ Fail as-is
- ☐ No requirement
- ☐ To be discussed

10. Materials and Compatibility

Are there required or preferred material standards?

- ☐ Stainless steel
- ☐ Aluminium
- ☐ Titanium
- ☐ Oxygen-compatible materials required
- ☐ Hydrogen peroxide-compatible materials required
- ☐ Customer-specified material list
- ☐ No preference / to be proposed

Please list any prohibited materials, coatings, lubricants, elastomers, or manufacturing processes, if known:

11. Testing and Documentation

Required acceptance testing:

- | | |
|---|---|
| ☐ Dimensional inspection | ☐ Proof pressure test |
| ☐ Leak test | ☐ Functional test |
| ☐ Flow test | ☐ Cycling test |
| ☐ Material certificates | ☐ Cleaning certificate |
| ☐ Other: | |

Required documentation:

- | | |
|--|--|
| ☐ Datasheet | ☐ Interface drawing |
| ☐ 3D CAD model | ☐ Test report |
| ☐ Certificate of conformity | ☐ Material certificates |
| ☐ Other: | |

12. Development Status and Schedule

Is this requirement for:

- | | | |
|--|---|--|
| ☐ Immediate procurement | ☐ Prototype development | ☐ Engineering study |
| ☐ Future program planning | ☐ Replacement of an existing component | |

Target delivery date or required lead time:

Project maturity:

- | | | |
|--|---|--|
| ☐ Concept phase | ☐ Preliminary design | ☐ Detailed design |
| ☐ Test campaign | ☐ Flight / production system | |

13. Quantities and Commercial Information

Estimated quantity:

- ☐ 1–2 units
- ☐ 3–10 units
- ☐ 10+ units
- ☐ Not yet defined

Budgetary target, if available:

Preferred Incoterms / delivery location:

14. Attachments

Please attach any available supporting information, such as:

- System schematic
- P&ID
- Interface drawing
- Existing valve datasheet
- CAD envelope
- Fluid compatibility requirements
- Test requirements
- Cleanliness specification
- Applicable standards

15. Additional Notes

Please describe any other requirements, constraints, concerns, or questions that may help us propose the most suitable valve solution.