

ARD-VJ-005

# Vacuum-insulated liquid-hydrogen globe valve



A manual liquid-hydrogen globe reference with a metallic vacuum-insulation jacket and full-penetration welded construction. The extended upper assembly combines a selected bellows and spring-energized sealing system.

Series limits guide enquiry and are not verified availability or approved operating limits for every size, pressure and operator combination. Confirm the selected design and pressure-temperature rating.

Product illustration. Appearance and dimensions depend on the selected configuration.

| Selection        | Specification                      |
|------------------|------------------------------------|
| Size range       | DN 8-100                           |
| Pressure ratings | PN50 (5.0 MPa nominal)             |
| Temperature      | -253 to +150°C                     |
| Connections      | Weld ends - preparation to specify |
| Medium           | LH2 / liquid hydrogen              |

## Define your requirement

Specify medium, design pressure and temperature, nominal size, connection standard, operation, quantity and required inspection documentation.

## Project selection

| Topic               | Selection requirement                                                                             |
|---------------------|---------------------------------------------------------------------------------------------------|
| Insulated interface | Specify process pipe OD/wall, jacket dimensions, vacuum boundary and installation heat load.      |
| Qualification       | Confirm material schedule, bellows life, leak test, cleanliness and selected order documentation. |

View this product and request a quotation

This catalogue datasheet supports selection and enquiry. It is not a certified pressure-temperature curve, installation drawing or order-specific approval.

### Technical specification

| Parameter    | Specification                                                           |
|--------------|-------------------------------------------------------------------------|
| Construction | Manual globe; metallic vacuum jacket; bellows and spring-energized seal |
| Operation    | Manual handwheel                                                        |

### End connections

Illustrated arrangement: a vacuum-jacketed extended globe body, two weld stubs and manual upper handwheel

| Connection detail       | Selection requirement                                                                                                                  |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Connection options      | Weld ends - preparation to specify                                                                                                     |
| Mating interface        | Confirm end standard, facing or weld preparation, pipe dimensions and installation envelope.                                           |
| Configuration selection | Full-penetration welding describes the construction, not a named process-pipe end standard. Confirm the process and jacket interfaces. |

### Materials

| Component                        | Material / option                                              |
|----------------------------------|----------------------------------------------------------------|
| Pressure parts and vacuum jacket | Selected metallic material schedule to confirm                 |
| Seal system                      | Bellows and spring-energized seals; selected grades to confirm |

### Configuration features

- Vacuum-insulated LH2 configuration
- Full-penetration welded construction
- Manual extended upper assembly

### Selection notes

Series limits guide enquiry and are not verified availability or approved operating limits for every size, pressure and operator combination. Confirm the selected design and pressure-temperature rating.

DN8-100 and PN50 describe the product-sheet range; they do not certify every size at every design condition. Type-test family coverage is separate from order-specific documentation.

Confirm pressure-temperature limits, material compatibility, oxygen cleaning, trapped-liquid relief and certification for the selected assembly. PN, ASME Class and relief set pressure are separate values.