ARDEN CRYOGENICS

CRYOGENIC VALVE CATALOGUE

Engineered for the cold.

LNG / HYDROGEN / INDUSTRIAL GASES

PRODUCT RANGE / 2026

ARDEN CRYOGENICS

From application to solution.

A structured reference for cryogenic valve selection.

Arden Cryogenics brings isolation, control, protection and specialist transfer references into one catalogue. Start with the valve family, compare the published configurations, then review the product-specific technical data with your application requirements.

110

PRODUCT REFERENCES

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PRODUCT FAMILIES

Specification-led support

Operating conditions, interfaces and documentation define the selected assembly.

FIND YOUR REFERENCE

Contents

Choose a family, compare configurations and open the product entry. All chapter names and page references are clickable.

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Article index Enquiry checklist Shared selection notes

SELECTION GUIDANCE

A clear route to selection.

01 Find the family

Use the contents or article index. Each family starts with a selection matrix comparing published sizes, pressure designations and end connections.

02 Review the reference

Read the product data, materials, construction notes and any dimensional schedules. Product and datasheet links open the matching Arden reference online.

03 Define the assembly

Read the linked S-numbered selection notes shown at each product entry. Send the medium, design conditions, size, connection standard and operation requirements with your enquiry.

Reading the technical data

Size & pressure	Series limits are not a size-by-pressure availability matrix. PN and ASME Class are distinct pressure designations. Confirm the selected pressure-temperature rating.
Connections	SW = socket weld; BW = butt weld. BSP and NPT are separate thread options. Confirm end standard, facing, pipe dimensions and mating interfaces.
Materials & medium	Use the material schedule for the selected configuration. Medium names identify published scope; final compatibility and cleaning requirements remain application-specific.
Illustrations & dimensions	Product images show illustrative arrangements. Dimensional tables apply only to their stated version. A dash means data is not supplied; obtain an approved outline drawing.

01

Ball valves

Top-entry, side-entry and compact constructions, followed by their dedicated operating packages.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-BV-001	**High-pressure cryogenic ball valve**	NPS 1/2-36 cast / NPS 1/2-48 forged	ASME Class 150-2500	Socket weld (SW) · Butt weld (BW) · Flanged	7
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ARD-BV-017*	**Pneumatic top-entry cryogenic floating ball valve**	NPS 1/2-3	ASME Class 150-1500	RF flanged / butt weld (BW)	14
ARD-BV-018*	**Electric top-entry cryogenic floating ball valve**	NPS 1/2-3	ASME Class 150-1500	RF flanged / butt weld (BW)	15
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* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

Ball valves

SELECTION MATRIX / CONTINUED

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ARD-BV-005	**Long-stem cryogenic ball valve · PN40 · BSP/NPT**	DN 10-50	PN40	BSP / NPT threaded	21
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* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-BV-001

Selection notes S01 S04 S07

High-pressure cryogenic ball valve

Extended-bonnet cryogenic ball valves in cast and forged constructions, with socket-weld, butt-weld or flanged connection options.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
NPS 1/2-36 cast / NPS 1/2-48 forged

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
Down to -196°C

END CONNECTIONS
Socket weld (SW) · Butt weld (BW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	API / BS / ASME / ASTM (specific standards to be confirmed)
Referenced pressure / seat tests	To be confirmed

Design features

- Extended bonnet
- Manual, pneumatic, electric or hydraulic operation
- Cavity pressure-relief design
- Cryogenic treatment of parts specified below -100°C
- Fire-safe construction described in the technical record

Connection details

Published connection

Socket weld, butt weld or flanged

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- Construction, materials, testing and fire-safe documentation are confirmed for the selected assembly.

ARD-BV-002

Selection notes S01 S04 S07 S11

Top-entry cryogenic ball valve

A top-entry body arrangement giving access to internal components, with an extended bonnet and cavity pressure-relief design.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
1/2-20 in cast / 1/2-36 in forged

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
Down to -196°C

END CONNECTIONS
Socket weld (SW) · Butt weld (BW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	BS 5351; ASME B16.34; B16.25 / B16.5
Referenced pressure / seat tests	API 598; BS 6364

Materials

Body	Forged Steel - ASTM A182-F304(L)/F316(L) Cast Steel - ASTM A351-CF8(M)/CF3(M)
Bonnet	Forged Steel - ASTM A182-F304(L)/F316(L) Cast Steel - ASTM A351-CF8(M)/CF3(M)
Seat	PCTFE/METAL
Ball	A182 F304(L)/316(L)+Ni60

Materials / continued

Stem	XM-19
Gasket	SPIRAL WOUND GRAPHITE
Gland Packing	SS316+Graphite

Design features

- Top-entry access
- Extended bonnet with drip plate
- Floating or trunnion-mounted ball
- Full- or reduced-bore options
- Manual, pneumatic, electric or hydraulic operation
- Uni- or bidirectional options; DBB design
- Live-loaded stem sealing

Product online **Download datasheet**

DATA REVISION 2026-10-28

ARD-BV-002

Top-entry cryogenic ball valve

Design features / continued

- Detachable seat assembly
- Cavity pressure relief
- Antistatic and anti-blowout features

Connection details

Published connection

Socket weld, butt weld or flanged

Referenced connection standards

BW: ASME B16.25; flanged: ASME B16.5. A SW standard is not specified on this page.

ARD-BV-013

Selection notes S02 S03 S13 S18 S22

Pneumatic top-entry cryogenic trunnion ball valve

A top-entry trunnion package for cryogenic isolation where access through a service cover is part of the maintenance plan. Remote air-operated isolation with the drive mounted above the cryogenic extension.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 50-600 / NPS 2-24

PRESSURE RATINGS
ASME Class 150-900

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Top-entry body with service cover; trunnion-supported ball
Operation	Pneumatic quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Top-entry service-cover architecture
- Extended stem keeps the drive above the cold zone

Design features / continued

- Pneumatic operating package

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Engineering requirements

Air and controls

Specify supply pressure, air quality, control signal, solenoid and position indication.

Related construction

ARD-BV-002 / Top-entry cryogenic ball valve

ARD-BV-014

Selection notes S02 S03 S22 S26 S27

Electric top-entry cryogenic trunnion ball valve

A top-entry trunnion package for cryogenic isolation where access through a service cover is part of the maintenance plan. Motor-operated isolation for installations where electrical power and remote position control are required.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 50-600 / NPS 2-24

PRESSURE RATINGS
ASME Class 150-900

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Top-entry body with service cover; trunnion-supported ball
Operation	Electric quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Top-entry service-cover architecture
- Extended stem keeps the drive above the cold zone
- Electric operating package

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Engineering requirements

Electrical interface

Specify voltage, frequency, duty cycle, local controls and command/feedback interface.

Related construction

ARD-BV-002 / Top-entry cryogenic ball valve

ARD-BV-015

Selection notes S02 S03 S19 S20 S21 S22

Hydraulic top-entry cryogenic trunnion ball valve

A top-entry trunnion package for cryogenic isolation where access through a service cover is part of the maintenance plan. Hydraulic isolation for projects requiring a defined high-load drive and a separately selected hydraulic supply.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 50-600 / NPS 2-24

PRESSURE RATINGS
ASME Class 150-900

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Top-entry body with service cover; trunnion-supported ball
Operation	Hydraulic quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Top-entry service-cover architecture
- Extended stem keeps the drive above the cold zone

Design features / continued

- Hydraulic operating package

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Related construction

ARD-BV-002 / Top-entry cryogenic ball valve

ARD-BV-016

Selection notes S02 S03 S34

Top-entry cryogenic floating ball valve

A compact top-entry floating-ball configuration for cryogenic gas-system isolation. The service-cover architecture is combined with manual operation for local access.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 1/2-3

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
-196 to +80°C

END CONNECTIONS
RF flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Top-entry floating ball; extended bonnet
Operation	Manual lever / gearbox selection

Materials

Body	Stainless steel; SS316 / CF8M options to select
Seats and packing	Low-temperature seal system to specify

Design features

- Floating-ball closure
- Top-entry service cover
- Extended stem with manual operation

Connection details

Connection options

RF flanged / butt weld (BW)

Engineering requirements

Seat and relief arrangement

Confirm pressure direction, seat/seal materials and cavity pressure relief for the selected medium.

Integration

Confirm operator load, maintenance clearance, end standard and approved outline.

Related construction

ARD-BV-002 / Top-entry cryogenic ball valve

ARD-BV-017

Selection notes S02 S03 S13 S18 S34

Pneumatic top-entry cryogenic floating ball valve

A compact top-entry floating-ball configuration for cryogenic gas-system isolation. The service-cover architecture is combined with pneumatic operation and a selected control interface.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 1/2-3

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
-196 to +80°C

END CONNECTIONS
RF flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Top-entry floating ball; extended bonnet
Operation	Pneumatic quarter-turn actuator

Materials

Body	Stainless steel; SS316 / CF8M options to select
Seats and packing	Low-temperature seal system to specify

Design features

- Floating-ball closure
- Top-entry service cover

Design features / continued

- Extended stem with pneumatic operation

Connection details

Connection options

RF flanged / butt weld (BW)

Engineering requirements

Air and controls

Specify supply pressure, air quality, control signal, solenoid and position indication.

Related construction

ARD-BV-016 / Top-entry cryogenic floating ball valve

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-BV-018

Selection notes S02 S03 S26 S27 S34

Electric top-entry cryogenic floating ball valve

A compact top-entry floating-ball configuration for cryogenic gas-system isolation. The service-cover architecture is combined with electric operation and a selected control interface.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 1/2-3

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
-196 to +80°C

END CONNECTIONS
RF flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Top-entry floating ball; extended bonnet
Operation	Electric quarter-turn actuator

Materials

Body	Stainless steel; SS316 / CF8M options to select
Seats and packing	Low-temperature seal system to specify

Design features

- Floating-ball closure
- Top-entry service cover
- Extended stem with electric operation

Connection details

Connection options

RF flanged / butt weld (BW)

Engineering requirements

Electrical interface

Specify voltage, frequency, duty cycle, local controls and command/feedback interface.

Related construction

ARD-BV-016 / Top-entry cryogenic floating ball valve

Product online **Download datasheet** DATA REVISION 2026-10-29

ARD-BV-019

Selection notes S02 S03 S19 S20 S21 S34

Hydraulic top-entry cryogenic floating ball valve

A compact top-entry floating-ball configuration for cryogenic gas-system isolation. The service-cover architecture is combined with hydraulic operation and a selected control interface.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 1/2-3

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
-196 to +80°C

END CONNECTIONS
RF flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Top-entry floating ball; extended bonnet
Operation	Hydraulic quarter-turn actuator

Materials

Body	Stainless steel; SS316 / CF8M options to select
Seats and packing	Low-temperature seal system to specify

Design features

- Floating-ball closure
- Top-entry service cover
- Extended stem with hydraulic operation

Connection details

Connection options
RF flanged / butt weld (BW)

Related construction

ARD-BV-016 / Top-entry cryogenic floating ball valve

ARD-BV-003

Selection notes S01 S04 S07 S11

Split-body cryogenic ball valve

An extended-bonnet ball-valve range covering larger line sizes, with manual and powered operator options.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
2-48 in cast

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
Down to -196°C

END CONNECTIONS
Socket weld (SW) · Butt weld (BW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	API 6D; BS 6364
Referenced pressure / seat tests	To be confirmed

Materials

Body	Forged Steel - ASTM A182-F304(L)/F316(L) / Cast Steel - ASTM A351-CF8(M)/CF3(M)
Bonnet	Forged Steel - ASTM A182-F304(L)/F316(L) / Cast Steel - ASTM A351-CF8(M)/CF3(M)
Seat	PCTFE/ METAL
Ball	ASTM A182 F304(L)/316(L)+Ni60
Stem	XM-19

Materials / continued

Gasket	SS316+Graphite
Gland Packing	GRAPHITE

Design features

- Extended bonnet
- Manual, pneumatic, electric or hydraulic operation
- Cavity pressure relief
- Cryogenic treatment of parts specified below -100°C
- Fire-safe construction described in the technical record

Connection details

Published connection

Socket weld, butt weld or flanged

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ARD-BV-003

TECHNICAL DATA / CONTINUED

Split-body cryogenic ball valve

Connection details / continued

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

ARD-BV-004

Selection notes S01 S04 S07 S11 S32

Cryogenic double block & bleed valve

A double-block-and-bleed arrangement with a dedicated cavity bleed connection and project-specific seat selection.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
NPS 1-12 / DN 25-300

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
-196 to +180°C

END CONNECTIONS
Socket weld (SW) · Butt weld (BW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	API 6D; API 6A; ASME B16.34; ISO 14313; ISO 10423; ISO 17292
Referenced pressure / seat tests	API 6D; ISO 5208; API 598; BS 6364; MESC SPE 77-200
Face-to-face	API 6D / GOST / custom
Fire-test references	API 607 / API 6FA
Functional safety reference	IEC 61508 / SIL 3 (reference claim; configuration to be confirmed)
Fugitive-emission reference	ISO 15848
Regulatory reference	PED 2014/68/EU, Annex III, Module H (reference claim)

Materials

Material families	Stainless steel; duplex / super duplex; nickel alloys; titanium
Seats	Soft or metal hard-faced
Secondary seals	Pure graphite

Design features

- Forged bolted two- or three-piece body; top-entry alternative
- Soft or hard-faced metal seats
- SPE / DPE seat combinations
- Manual wrench or gear with padlocking; pneumatic, hydraulic or electric actuation
- Secondary graphite seals
- Antistatic device and anti-blowout stem

Product online **Download datasheet**

DATA REVISION 2026-10-28

ARD-BV-004

Cryogenic double block & bleed valve

Design features / continued

- Low-emission packing, lip seals and graphite configurations available
- CRA overlay on dynamic sealing areas or wetted parts available
- Extended bonnet available for low temperature

Connection details

Published connection

RF / RTJ: ASME B16.5 / B16.47; BW: B16.25; SW: B16.11

Referenced connection standards

RF / RTJ flanges: ASME B16.5 / B16.47; BW: ASME B16.25; SW: ASME B16.11.

Selection notes

- DBB is not automatically DIB. Specify the pressure direction, seat arrangement and required isolation duty; the intended double-isolation performance must be confirmed.

ARD-BV-005

Selection notes S01 S05 S06 S08 S24 S25

Long-stem cryogenic ball valve · PN40 · BSP/NPT

A compact CF8 ball-valve range with a long stem and BSP or NPT threaded options. Manual lever, electric and pneumatic actuation packages are listed.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-50

PRESSURE RATINGS
PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
BSP / NPT threaded

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	BSP / NPT
Design	Long stem
Operation	double-acting pneumatic, electric actuator, hand lever, spring-return pneumatic
series temperature*	-196°C to +80°C

Materials

Body	CF8
Ball	CF8

Design features

- Catalogue body: CF8
- Published connections: BSP · NPT

Connection details

Published connection

BSP · NPT

ARD-BV-005

TECHNICAL DATA / CONTINUED

Long-stem cryogenic ball valve · PN40 · BSP/NPT

Connection details / continued

Reference drawing scope

All linear dimensions are in mm. L = selected end-to-end length; C = handle length. D = ball bore; CD/G = butt-weld end diameters; ID = socket bore. H1, H2, H3 and h follow the exact drawing datums. DN is the nominal-size mapping of the technical record inch size. Supplied ARD-BV-005 3-piece reference, CF8M body and PCTFE seat, NPT threaded ends. This is a reference variant of the current CF8 PN40 catalogue product. Confirm the quoted body, extension and connections before installation. NPT dimensions do not establish BSP end dimensions.

Engineering requirements

Dimension data

Reference table and drawing: DN10, DN15, DN20, DN25, DN32, DN40, DN50. ARD-BV-005 NPT threaded reference dimensions.

Reference material schedule

Body	CF8M
End cap	CF8M / CF3M
Ball	CF8M
Stem	17-4 PH stainless steel
Ball seat	PCTFE (Kel-F)
Body seal	Graphite / PCTFE
Thrust washer	PCTFE (Kel-F)
O-ring	Viton
Stem packing	PCTFE (Kel-F)
Handle and fasteners	SS304

Reference material schedule / continued

Extension	CF8M
Thrust bearing	25% carbon + 75% PTFE
Extension gasket	Graphite / PCTFE

Material schedule scope

- Materials apply to the supplied reference arrangement. Supplied ARD-BV-005 3-piece reference, CF8M body and PCTFE seat, NPT threaded ends. This is a reference variant of the current CF8 PN40 catalogue product. Confirm the quoted body, extension and connections before installation. NPT dimensions do not establish BSP end dimensions.

ARD-BV-005 / DIMENSIONS

Long-stem cryogenic ball valve · PN40 · BSP/NPT

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

ARD-BV-005 NPT threaded reference dimensions

DN	Size (inch)	L	D bore	C	H1	H2	H3	h
10	3/8	67	9.6	156	39.0	200	274	8
15	1/2	75	15.0	156	39.0	200	274	8
20	3/4	80	20.0	156	42.6	200	276	8
25	1	90	25.0	181	47.2	200	287	10
32	1 1/4	110	31.0	181	51.2	200	292	10
40	1 1/2	120	38.0	395	58.5	300	403	13
50	2	140	50.0	395	76.2	300	423	13

Reference mounting dimensions

DN	Square E (mm)	ISO pad A	ISO pad B
10	9	F04	F05
15	9	F04	F05
20	9	F04	F05
25	11	F05	F07
32	11	F05	F07
40	14	F07	F10
50	14	F07	F10

Reference ARD-BV-005 direct-mount arrangement. F04/F05/F07/F10 are ISO mounting designations, not diameters in mm. Confirm the selected actuator interface.

All linear dimensions are in mm. L = selected end-to-end length; C = handle length. D = ball bore; CD/G = butt-weld end diameters; ID = socket bore. H1, H2, H3 and h follow the exact drawing datums. DN is the nominal-size mapping of the technical record inch size. Supplied ARD-BV-005 3-piece reference, CF8M body and PCTFE seat, NPT threaded ends. This is a reference variant of the

ARD-BV-005 / DIMENSIONS

Long-stem cryogenic ball valve · PN40 · BSP/NPT

current CF8 PN40 catalogue product. Confirm the quoted body, extension and connections before installation. NPT dimensions do not establish BSP end dimensions.

ARD-BV-006

Selection notes S01 S05 S06 S16 S29 S31

Long-stem cryogenic ball valve · PN40 · flanged

A flanged CF8 cryogenic ball-valve range covering DN25-150. The long-stem layout is offered with lever, electric or pneumatic operation.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 25-150

PRESSURE RATINGS
PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Flanged

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Design	Long stem
Operation	double-acting pneumatic, electric actuator, hand lever, spring-return pneumatic
series temperature*	-196°C to +80°C

Materials

Body	CF8
Ball	CF8

Design features

- Catalogue body: CF8
- Published connections: Flanged

Connection details

Published connection
Flanged

Product online **Download datasheet** DATA REVISION 2026-10-28

ARD-BV-007

Selection notes S01 S05 S06 S08 S37 S38

Long-stem cryogenic ball valve · PN40 · BW

A long-stem CF8 ball valve for DN10-50 butt-weld lines. Manual lever, electric and pneumatic options share a configuration-specific extension and connection selection.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-50

PRESSURE RATINGS
PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Butt weld (BW)

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Butt Weld
Design	Long stem
Operation	double-acting pneumatic, electric actuator, hand lever, spring-return pneumatic
series temperature*	-196°C to +80°C

Materials

Body	CF8
Ball	CF8

Design features

- Catalogue body: CF8

Design features / continued

- Published connections: Butt Weld

Connection details

Published connection

Butt Weld

Reference drawing scope

All linear dimensions are in mm. L2 = selected end-to-end length; C = handle length. D = ball bore; CD/G = butt-weld end diameters; ID = socket bore. H1, H2, H3 and h follow the exact drawing datums. DN is the nominal-size mapping of the technical record inch size. Supplied ARD-BV-007 3-piece reference, CF8M body and PCTFE seat, butt-weld ends. This is a reference variant of the current CF8 PN40 catalogue product. Confirm the quoted body, extension and connections before installation.

ARD-BV-007

TECHNICAL DATA / CONTINUED

Long-stem cryogenic ball valve · PN40 · BW

Engineering requirements

Dimension data

Reference table and drawing: DN10, DN15, DN20, DN25, DN32, DN40, DN50. ARD-BV-007 butt-weld reference dimensions.

Reference material schedule

Body	CF8M
End cap	CF8M / CF3M
Ball	CF8M
Stem	17-4 PH stainless steel
Ball seat	PCTFE (Kel-F)
Body seal	Graphite / PCTFE
Thrust washer	PCTFE (Kel-F)
O-ring	Viton
Stem packing	PCTFE (Kel-F)
Handle and fasteners	SS304
Extension	CF8M
Thrust bearing	25% carbon + 75% PTFE
Extension gasket	Graphite / PCTFE

Material schedule scope

- Materials apply to the supplied reference arrangement. Supplied ARD-BV-007 3-piece reference, CF8M body and PCTFE seat, butt-weld ends. This is a reference variant of the current CF8 PN40 catalogue product. Confirm the quoted body, extension and connections before installation.

ARD-BV-007 / DIMENSIONS

Long-stem cryogenic ball valve · PN40 · BW

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

ARD-BV-007 butt-weld reference dimensions

DN	Size (inch)	D bore	CD end	G end	L2	C	H1	H2	H3	h
10	3/8	9.6	10.4	17.3	67	156	39.0	200	274	8
15	1/2	15.0	15.8	21.4	75	156	39.0	200	274	8
20	3/4	20.0	20.9	26.7	90	156	42.6	200	276	8
25	1	25.0	26.6	33.4	100	181	47.2	200	287	10
32	1 1/4	31.0	35.0	42.2	110	181	51.2	200	292	10
40	1 1/2	38.0	40.8	48.3	125	395	58.5	300	403	13
50	2	50.0	52.5	60.5	150	395	76.2	300	423	13

Reference mounting dimensions

DN	Square E (mm)	ISO pad A	ISO pad B
10	9	F04	F05
15	9	F04	F05
20	9	F04	F05
25	11	F05	F07
32	11	F05	F07
40	14	F07	F10
50	14	F07	F10

Reference ARD-BV-007 direct-mount arrangement. F04/F05/F07/F10 are ISO mounting designations, not diameters in mm. Confirm the selected actuator interface.

All linear dimensions are in mm. L2 = selected end-to-end length; C = handle length. D = ball bore; CD/G = butt-weld end diameters; ID = socket bore. H1, H2, H3 and h follow the exact drawing datums. DN is the nominal-size mapping of the technical record inch size. Supplied ARD-BV-007 3-piece reference, CF8M body and PCTFE seat, butt-weld ends. This is a reference variant

ARD-BV-007 / DIMENSIONS

Long-stem cryogenic ball valve · PN40 · BW

of the current CF8 PN40 catalogue product. Confirm the quoted body, extension and connections before installation.

ARD-BV-008

Selection notes S01 S05 S06 S08 S14 S15

Long-stem cryogenic ball valve · PN40 · SW

A long-stem CF8 ball-valve range with socket-weld ends for DN10-50. Match the socket bore and depth to the selected pipe and actuator package.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-50

PRESSURE RATINGS
PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Socket weld (SW)

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Socket Weld
Design	Long stem
Operation	double-acting pneumatic, electric actuator, hand lever, spring-return pneumatic
series temperature*	-196°C to +80°C

Materials

Body	CF8
Ball	CF8

Design features

- Catalogue body: CF8

Design features / continued

- Published connections: Socket Weld

Connection details

Published connection

Socket Weld

Reference drawing scope

All linear dimensions are in mm. L1 = selected end-to-end length; C = handle length. D = ball bore; CD/G = butt-weld end diameters; ID = socket bore. H1, H2, H3 and h follow the exact drawing datums. DN is the nominal-size mapping of the technical record inch size. Supplied ARD-BV-008 3-piece reference, CF8M body and PCTFE seat, socket-weld ends. This is a reference variant of the current CF8 PN40 catalogue product. Confirm the quoted body, extension and connections before installation.

ARD-BV-008

TECHNICAL DATA / CONTINUED

Long-stem cryogenic ball valve · PN40 · SW

Engineering requirements

Dimension data

Reference table and drawing: DN10, DN15, DN20, DN25, DN32, DN40, DN50. ARD-BV-008 socket-weld reference dimensions.

Reference material schedule

Body	CF8M
End cap	CF8M / CF3M
Ball	CF8M
Stem	17-4 PH stainless steel
Ball seat	PCTFE (Kel-F)
Body seal	Graphite / PCTFE
Thrust washer	PCTFE (Kel-F)
O-ring	Viton
Stem packing	PCTFE (Kel-F)
Handle and fasteners	SS304
Extension	CF8M
Thrust bearing	25% carbon + 75% PTFE
Extension gasket	Graphite / PCTFE

Material schedule scope

- Materials apply to the supplied reference arrangement. Supplied ARD-BV-008 3-piece reference, CF8M body and PCTFE seat, socket-weld ends. This is a reference variant of the current CF8 PN40 catalogue product. Confirm the quoted body, extension and connections before installation.

ARD-BV-008 / DIMENSIONS

Long-stem cryogenic ball valve · PN40 · SW

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

ARD-BV-008 socket-weld reference dimensions

DN	Size (inch)	D bore	ID socket	L1	C	H1	H2	H3	h	F depth
10	3/8	9.6	17.8	67	156	39.0	200	274	8	Not stated
15	1/2	15.0	22.0	75	156	39.0	200	274	8	16.2
20	3/4	20.0	27.4	80	156	42.6	200	276	8	18.8
25	1	25.0	34.1	90	181	47.2	200	287	10	20.4
32	1 1/4	31.0	42.9	110	181	51.2	200	292	10	22
40	1 1/2	38.0	49.0	120	395	58.5	300	403	13	23.4
50	2	50.0	61.5	140	395	76.2	300	423	13	24.8

Reference mounting dimensions

DN	Square E (mm)	ISO pad A	ISO pad B
10	9	F04	F05
15	9	F04	F05
20	9	F04	F05
25	11	F05	F07
32	11	F05	F07
40	14	F07	F10
50	14	F07	F10

Reference ARD-BV-008 direct-mount arrangement. F04/F05/F07/F10 are ISO mounting designations, not diameters in mm. Confirm the selected actuator interface. F socket depth is not stated for the 3/8-inch reference row.

All linear dimensions are in mm. L1 = selected end-to-end length; C = handle length. D = ball bore; CD/G = butt-weld end diameters; ID = socket bore. H1, H2, H3 and h follow the exact drawing datums. DN is the nominal-size mapping of the technical record inch size. Supplied ARD-BV-008 3-piece reference, CF8M body and PCTFE seat, socket-weld ends. This is a reference

ARD-BV-008 / DIMENSIONS

Long-stem cryogenic ball valve · PN40 · SW

variant of the current CF8 PN40 catalogue product. Confirm the quoted body, extension and connections before installation.

ARD-BV-009

Selection notes S01

PN-rated cryogenic trunnion ball valve · flanged

A flanged side-entry trunnion ball-valve series with a PN16-160 nominal range and sizes through DN600. The illustrated arrangement has an extended stem, a manual worm gearbox and support feet.

Reference-based product illustration of one arrangement. The approved outline drawing defines dimensions and supplied construction.

SIZE RANGE
DN 15-600

PRESSURE RATINGS
PN16-160

TEMPERATURE
-196 to +70°C

END CONNECTIONS
Flanged

MEDIUM
LNG / NG, LOX / O2, LN2 / N2, LAr / Ar

Technical data

Construction	Side-entry, trunnion-mounted ball
Operation	Manual worm gearbox in illustrated arrangement
Inspection references	GB/T 24925; BS 6364
Fire-design references	API 607; API 6FA - documentation for selected configuration

Design features

- Trunnion-supported ball and side-entry body
- Extended stem with manual worm gearbox
- Antistatic design
- Stem-packing and fire-design options reviewed for the selected assembly

Connection details

Connection options

Flanged

Interface selection

Specify the end standard, nominal size, pipe dimensions and required mating interface.

Flange definition

Select the flange standard, nominal pressure, facing, drilling and gasket for the line. A PN designation does not define the flange dimensions by itself.

Engineering requirements

Material schedule

Body, ball, stem, seat and packing grades require the selected configuration material list.

Mechanical integration

Confirm gearbox clearance, extension height, support loads and the approved dimensional drawing.

Product online **Download datasheet** DATA REVISION 2026-10-29

ARD-BV-009

PN-rated cryogenic trunnion ball valve · flanged

Selection notes

- DN and PN are independent series limits, not a verified size-by-pressure matrix. Confirm body grade, ball and seat construction, pressure-temperature rating and order-specific test documentation.

ARD-BV-010

Selection notes S02 S03 S13 S18 S22

Pneumatic side-entry cryogenic trunnion ball valve

A side-entry trunnion package for large cryogenic isolation lines, with split body joints and a supported ball. Remote air-operated isolation with the drive mounted above the cryogenic extension.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 50-600 / NPS 2-24

PRESSURE RATINGS
ASME Class 150-900

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Side-entry split body; trunnion-supported ball
Operation	Pneumatic quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Side-entry body joints
- Extended stem keeps the drive above the cold zone

Design features / continued

- Pneumatic operating package

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Engineering requirements

Air and controls

Specify supply pressure, air quality, control signal, solenoid and position indication.

Related construction

ARD-BV-009 / PN-rated cryogenic trunnion ball valve · flanged

ARD-BV-011

Selection notes S02 S03 S22 S26 S27

Electric side-entry cryogenic trunnion ball valve

A side-entry trunnion package for large cryogenic isolation lines, with split body joints and a supported ball. Motor-operated isolation for installations where electrical power and remote position control are required.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 50-600 / NPS 2-24

PRESSURE RATINGS
ASME Class 150-900

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Side-entry split body; trunnion-supported ball
Operation	Electric quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Side-entry body joints
- Extended stem keeps the drive above the cold zone
- Electric operating package

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Engineering requirements

Electrical interface

Specify voltage, frequency, duty cycle, local controls and command/feedback interface.

Related construction

ARD-BV-009 / PN-rated cryogenic trunnion ball valve · flanged

Product online **Download datasheet**

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ARD-BV-012

Selection notes S02 S03 S19 S20 S21 S22

Hydraulic side-entry cryogenic trunnion ball valve

A side-entry trunnion package for large cryogenic isolation lines, with split body joints and a supported ball. Hydraulic isolation for projects requiring a defined high-load drive and a separately selected hydraulic supply.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 50-600 / NPS 2-24

PRESSURE RATINGS
ASME Class 150-900

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Side-entry split body; trunnion-supported ball
Operation	Hydraulic quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Side-entry body joints
- Extended stem keeps the drive above the cold zone

Design features / continued

- Hydraulic operating package

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Related construction

ARD-BV-009 / PN-rated cryogenic trunnion ball valve · flanged

ARD-BV-020

Selection notes S02 S03

Liquid-hydrogen ball valve

A liquid-hydrogen ball-valve enquiry reference for specialized isolation duty. The illustrated extended-stem quarter-turn arrangement is developed around a selected hydrogen-compatible material, seat and pressure-relief design.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
Nominal size to specify

PRESSURE RATINGS
Pressure rating to specify

TEMPERATURE
LH2 service down to -253°C; selected limits to confirm

END CONNECTIONS
End connections to specify

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	LH2 ball-valve family; arrangement to select
Operation	Operator to select; manual gearbox illustrated

Materials

Pressure parts and stem	Hydrogen-compatible grades to select
Seats, seals and packing	Qualified LH2 material system to select

Design features

- Dedicated LH2 ball-valve selection
- Extended upper assembly illustrated

Design features / continued

- Seat and cavity-relief design specified for the duty

Connection details

Connection options

End connections to specify

Configuration selection

The LH2 family statement does not define a common end standard; specify the required interface.

Engineering requirements

Hydrogen design

Provide pressure, temperature, fluid state, leakage requirement, cleanliness and qualification documents.

Mechanical definition

Confirm bore, body construction, seat arrangement, operator and end connections.

ARD-BV-020

TECHNICAL DATA / CONTINUED

Liquid-hydrogen ball valve

Selection notes

- Capability for the LH2 ball family is documented, but no universal DN, Class/PN or material schedule is established. PN40 from a globe or safety valve must not be transferred to this product.

02

Globe valves

Extended-bonnet, angle and high-pressure arrangements for specification-led cryogenic selection.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-GL-001	**Long-stem globe valve · bolted bonnet**	DN 15-50	PN40 (4.0 MPa nominal)	Socket weld (SW)	43
ARD-GL-002	**Long-stem globe valve · union bonnet**	DN 10-40	PN40 (4.0 MPa nominal)	Socket weld (SW)	45
ARD-GL-003*	**Cryogenic angle globe valve**	DN 15-50	PN16 / PN25 / PN40	Socket weld (SW)	47
ARD-GL-004	**Forged cryogenic globe valve**	1/2-2 in	ASME Class 150-1500	Socket weld (SW) · Flanged	49
ARD-GL-005	**Cast cryogenic globe valve**	2-24 in	ASME Class 150-1500	Butt weld (BW) · Flanged	51
ARD-GL-011*	**Pneumatic cryogenic globe valve**	NPS 2-28	ASME Class 150-2500	Socket weld (SW) / butt weld (BW) / RF flanged	52
ARD-GL-012*	**Hydraulic cryogenic globe valve**	NPS 2-28	ASME Class 150-2500	Socket weld (SW) / butt weld (BW) / RF flanged	53
ARD-GL-006	**Cryogenic globe valve · PN320 · SW**	DN 10-25	PN320	Socket weld (SW)	54
ARD-GL-007	**Long-stem cryogenic globe valve · PN20/40 · BW**	DN 65-100	PN20 · PN40	Butt weld (BW)	57
ARD-GL-008	**Long-stem angle globe valve · PN40 · SW**	DN 32-50	PN40	Socket weld (SW)	60
ARD-GL-009	**Long-stem cryogenic globe valve · PN40 · SW**	DN 10-50	PN40	Socket weld (SW)	61

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

Globe valves

SELECTION MATRIX / CONTINUED

Article	Configuration	Size range	Pressure	Connection	Page
ARD-GL-010*	**Liquid-hydrogen globe valve**	DN 15-100 · project range	PN40 (4.0 MPa nominal)	Threaded / weld ends	64
ARD-GL-013*	**Cryogenic screw-down non-return valve**	Nominal size to specify	Pressure rating to specify	End connections to specify	66
ARD-GL-014*	**LH2 bellows-sealed angle globe valve**	DN 2-125; DN 150-300 on request	PN10 / PN25 / PN40 - size dependent	Butt weld (BW)	68
ARD-GL-015*	**LH2 modular inline globe valve**	DN 15 / DN 25 / DN 50	PN10 / PN18 / PN25 - size dependent	Butt weld (BW)	70
ARD-GL-016*	**LH2 cold-box bellows shut-off valve**	DN 2-250 - rating dependent	PN6 / PN25 / PN40 - size dependent	Butt weld (BW)	72
ARD-GL-017*	**LH2 thermal-barrier globe valve**	DN 15-250 / NPS 1/2-10 - series scope	ASME Class 150-300	Butt weld (BW)	74

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-GL-001

Selection notes S01 S04

Long-stem globe valve · bolted bonnet

An extended-stem globe design for cryogenic shut-off, with a bolted bonnet and socket-weld connections.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 15-50

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Technical data

Flow direction	Low to high

Materials

Body	CF8
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Socket weld
- Flow direction: Low to high

Connection details

Published connection

Socket weld

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-GL-001 / DIMENSIONS

Long-stem globe valve · bolted bonnet

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H/ OPEN	H/CLOSE	L	D0	DI	B	Weight (kg)
15	249	240	65	65	18.5	6	-
25	283	270	90	80	32.5	8	-
40	335	315	120	100	45.5	9	-
50	410	386	140	140	57.5	10	-

ARD-GL-002

Selection notes S01 S04

Long-stem globe valve · union bonnet

A compact union-bonnet globe pattern with an extended stem for low-temperature isolation.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-40

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
LO2, LN2, LAr, LCO2

Technical data

Flow direction	Low to high

Materials

Body	CF8
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Socket weld
- Flow direction: Low to high

Connection details

Published connection

Socket weld

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

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ARD-GL-002 / DIMENSIONS

Long-stem globe valve · union bonnet

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H/Open	H/Close	L	D0	DI	B	Weight (kg)
10	246	238	60	65	14.5	5	0.8
15	246	238	60	65	18.5	5	0.82
20	289	267	80	80	25.5	6	1.5
25	289	267	80	80	28.5	6	1.6
25	289	267	80	80	32.5	6	1.7
32	323	304	100	100	38.5	8	2.3
40	323	303	100	100	45.5	8	2.59

ARD-GL-003

Selection notes S04 S17 S23

Cryogenic angle globe valve

An angle-body globe valve for installations that require a change in flow direction within the valve.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 15-50

PRESSURE RATINGS
PN16 / PN25 / PN40

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
LO2, LN2, LAr, LCO2

Technical data

Flow direction	Low to high

Materials

Body	304
Bonnet	composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Socket Welding
- Flow direction: Low to high

Connection details

Published connection

Socket Welding

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- The technical panel lists DN 40; the dimensional table also lists DN 50 and DN 65. Confirm the required size and rating with your enquiry.
- "Top / closure element" follows the component designation in the reference material list.

ARD-GL-003 / DIMENSIONS

Cryogenic angle globe valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H/Open	H/Close	D0	L1	L2	D1	B	Weight (kg)
40	358	340	100	60	62	45.5	10	-
50	370	350	140	70	70	57.5	10	-
65	388	363	160	80	80	77	10	-

ARD-GL-004

Selection notes S01 S04 S07 S11

Forged cryogenic globe valve

An extended-bonnet forged globe range for shut-off and flow-adjustment duties.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
1/2-2 in

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
Down to -196°C

END CONNECTIONS
Socket weld (SW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	BS 6364; ASME B16.34; B16.11 / B16.5
Referenced pressure / seat tests	ASME B16.34

Materials

Body	Forged Steel - ASTM A182-F304(L)/F316(L)
Bonnet	Forged Steel - ASTM A182-F304(L)/F316(L)
Seat	ASTM A182-F304L(H.F)
Disk	ASTM A276-304(L) / 316(L)-(H.F)
Stem	ASTM A276-316(L)

Materials / continued

Gasket	SPIRAL WOUND GRAPHITE
Gland Packing	GRAPHITE

Design features

- Extended bonnet
- Manual or gear operation
- Pressure-balanced design
- Rising handwheel
- Fire-safe and antistatic design features

Connection details

Published connection

Socket weld or flanged

ARD-GL-004

TECHNICAL DATA / CONTINUED

Forged cryogenic globe valve

Connection details / continued

Referenced connection standards

SW: ASME B16.11; flanged: ASME B16.5 (reference reference).

ARD-GL-005

Selection notes S01 S04 S07 S11 S32

Cast cryogenic globe valve

A larger cast globe range for cryogenic isolation and throttling duties, with geared operation.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
2-24 in

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
Down to -196°C

END CONNECTIONS
Butt weld (BW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	BS 6364; ASME B16.34; B16.25 / B16.5
Referenced pressure / seat tests	ASME B16.34

Materials

Body	Cast Steel - ASTM A351-CF8(M)/CF3(M)
Bonnet	Cast Steel - ASTM A351-CF8(M)/CF3(M)
Seat	ASTM A276-304L(H.F)
Disk	ASTM A276-304(L)(H.F) / 316(L)(H.F) or Equivalent
Stem	ASTM A276-316(L)

Materials / continued

Gasket	SPIRAL WOUND GRAPHITE
Gland Packing	GRAPHITE

Design features

- Extended bonnet
- Gear operation
- Pressure-balanced design
- Fire-safe and antistatic design features

Connection details

Published connection

Flanged, butt weld or RTJ

Referenced connection standards

BW: ASME B16.25; flanged: ASME B16.5 (reference reference).

ARD-GL-011

Selection notes S02 S03 S13 S18

Pneumatic cryogenic globe valve

A larger lifting-type cryogenic globe configuration with a guided stem and long bonnet. The pneumatic linear drive is selected for the required seat load, travel and operating differential pressure.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 2-28

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
Socket weld (SW) / butt weld (BW) / RF flanged

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Lifting-type globe; L/Y-pattern selection
Operation	Pneumatic linear cylinder

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Linear globe-valve movement
- Extended bonnet and guided stem
- Pneumatic isolation package

Connection details

Connection options

Socket weld (SW) / butt weld (BW) / RF flanged

Engineering requirements

Air and controls

Specify supply pressure, air quality, control signal, solenoid and position indication.

Selection notes

- Specify flow direction, required shut-off, stroke and any throttling duty; no characterized control trim is implied.

Related construction

ARD-GL-005 / Cast cryogenic globe valve

ARD-GL-012

Selection notes S02 S03 S19 S20 S21

Hydraulic cryogenic globe valve

A larger lifting-type cryogenic globe configuration with a guided stem and long bonnet. The hydraulic linear drive is selected for the required seat load, travel and operating differential pressure.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 2-28

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
Socket weld (SW) / butt weld (BW) / RF flanged

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Lifting-type globe; L/Y-pattern selection
Operation	Hydraulic linear cylinder

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Linear globe-valve movement
- Extended bonnet and guided stem
- Hydraulic isolation package

Connection details

Connection options

Socket weld (SW) / butt weld (BW) / RF flanged

Selection notes

- Specify flow direction, required shut-off, stroke and any throttling duty; no characterized control trim is implied.

Related construction

ARD-GL-005 / Cast cryogenic globe valve

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-GL-006

Selection notes S01 S05 S06 S08 S14 S15

Cryogenic globe valve · PN320 · SW

A compact PN320 globe-valve reference for socket-weld cryogenic lines. The catalogue lists DN10-25 with a CF8 body; the supplied arrangement drawing covers a different body material.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-25

PRESSURE RATINGS
PN320

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Socket weld (SW)

MEDIUM
LNG, LOX, LN2, LAr

Technical data

Connection	Socket Weld
Operation	Manual handwheel
series temperature*	-196°C to +80°C

Materials

Body	CF8
Disc	S30408

Design features

- Catalogue body: CF8
- Published connections: Socket Weld

Connection details

Published connection

Socket Weld

Reference drawing scope

PN320 supplied socket-weld arrangement, DN15-DN25. Two DN20 body variants are listed. DN10 is not tabulated. Reference body material is S30408; the catalogue CF8 construction needs its own confirmed drawing.

Engineering requirements

Dimension data

Reference table and drawing: DN15, DN20, DN25. Dimensions and connection reference.

Selection notes

- The catalogue operation row says manual handwheel; the supplied image shows a T-bar. The illustration preserves that T-bar arrangement; confirm the operator supplied with the order.

Product online **Download datasheet** DATA REVISION 2026-10-28

ARD-GL-006

TECHNICAL DATA / CONTINUED

Cryogenic globe valve · PN320 · SW

Reference material schedule

Hand Lever	S30408
Stem	S30408
Connecting Nut	S30408
Gland Nut	S30408
Connecting Pipe	S30408
Disc	S30408
Gland	S30408
Bushing	HPb59-1
Body	S30408
Gasket	PTFE
Bonnet	S30408
Washer	HPb59-1
Gasket	T2

Material schedule scope

- Materials apply to the supplied reference arrangement. PN320 supplied socket-weld arrangement, DN15-DN25. Two DN20 body variants are listed. DN10 is not tabulated. Reference body material is S30408; the catalogue CF8 construction needs its own confirmed drawing.

ARD-GL-006 / DIMENSIONS

Cryogenic globe valve · PN320 · SW

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	H	A	L	B	D0	D1	D2
15	206.5	170	100	12	Ø15	Ø22.5	Ø36
20	206.5	170	100	12	Ø20	Ø26	Ø36
20	286	219	128	12.5	Ø20	Ø27.5	Ø46
25	286	219	128	12.5	Ø25	Ø32.5	Ø46

PN320 supplied socket-weld arrangement, DN15-DN25. Two DN20 body variants are listed. DN10 is not tabulated. Reference body material is S30408; the catalogue CF8 construction needs its own confirmed drawing.

ARD-GL-007

Selection notes S01 S05 S06 S08 S37 S38

Long-stem cryogenic globe valve · PN20/40 · BW

A long-stem globe valve for DN65-100 butt-weld cryogenic lines. PN20 and PN40 are catalogue options with configuration-specific weld ends and outlines.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 65-100

PRESSURE RATINGS
PN20 · PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Butt weld (BW)

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Butt Weld
Design	Long stem
Operation	Manual handwheel
series temperature*	-196°C to +80°C

Materials

Body	CF8
Disc	S30408

Design features

- Catalogue body: CF8
- Published connections: Butt Weld

Connection details

Published connection

Butt Weld

Reference drawing scope

PN40 long-stem butt-weld arrangement, DN65-DN100. The two DN100 rows have different weld-end diameters and lengths; select the required pipe variant. PN20 requires a separate drawing.

Engineering requirements

Dimension data

Reference table and drawing: DN65, DN80, DN100. Dimensions and connection reference.

Reference material schedule

Body	CF8
Hexagon Screw	S30408

Product online **Download datasheet**

DATA REVISION 2026-10-28

ARD-GL-007

Long-stem cryogenic globe valve · PN20/40 · BW

Reference material schedule / continued

Hexagon Nut	S30408
Disc Sealing	PCTFE
Stem	S30408
Connecting Nut	S30408
Disc	S30408
V Ring	PTFE
Connecting Pipe	S30408
Gasket	RPTFE
Gland Nut	S30408
Gland Packings	S30408
Bonnet	S30408
Hand Wheel	HT200

Material schedule scope

- Materials apply to the supplied reference arrangement. PN40 long-stem butt-weld arrangement, DN65-DN100. The two DN100 rows have different weld-end diameters and lengths; select the required pipe variant. PN20 requires a separate drawing.

ARD-GL-007 / DIMENSIONS

Long-stem cryogenic globe valve · PN20/40 · BW

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	H open	H closed	L	D	D0	D1	D2	Weight (kg)
65	520	495	216	Ø200	Ø65	Ø70	Ø76	15.4
80	549	522	241	Ø250	Ø80	Ø81	Ø89	22.8
100	634	601	292	Ø315	Ø100	Ø100	Ø108	31.8
100	634	601	275	Ø315	Ø100	Ø106.3	Ø114.3	31.8

PN40 long-stem butt-weld arrangement, DN65-DN100. The two DN100 rows have different weld-end diameters and lengths; select the required pipe variant. PN20 requires a separate drawing.

ARD-GL-008

Selection notes S01 S05 S06 S14 S15 S16

Long-stem angle globe valve · PN40 · SW

A right-angle globe valve with a long stem and CF8 body. The catalogue lists DN32, DN40 and DN50 socket-weld options for cryogenic pipe layouts.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 32-50

PRESSURE RATINGS
PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Socket weld (SW)

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Socket Weld
Design	Long stem
Operation	Manual handwheel
series temperature*	-196°C to +80°C

Materials

Body	CF8
Disc	S30408

Design features

- Catalogue body: CF8
- Published connections: Socket Weld

Connection details

Published connection
Socket Weld

ARD-GL-009

Selection notes S01 S05 S06 S08 S14 S15

Long-stem cryogenic globe valve · PN40 · SW

A CF8 long-stem globe valve for DN10-50 socket-weld installations. Published reference tables distinguish alternative socket bores for the selected pipe.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-50

PRESSURE RATINGS
PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Socket weld (SW)

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Socket Weld
Design	Long stem
Operation	Manual handwheel
series temperature*	-196°C to +80°C

Materials

Body	CF8
Disc	S30408

Design features

- Catalogue body: CF8
- Published connections: Socket Weld

Connection details

Published connection

Socket Weld

Reference drawing scope

PN40 long-stem socket-weld arrangement, DN10-DN50. Separate rows for each DN show alternative socket bores and, where stated, heights or weights. Select the socket bore to match the pipe.

Engineering requirements

Dimension data

Reference table and drawing: DN10, DN15, DN20, DN25, DN32, DN40, DN50. Dimensions and connection reference.

Reference material schedule

Body	CF8
Hexagon Screw	S30408

ARD-GL-009

TECHNICAL DATA / CONTINUED

Long-stem cryogenic globe valve · PN40 · SW

Reference material schedule / continued

Hexagon Nut	S30408
Disc Sealing	PCTFE
Stem	S30408
Connecting Nut	S30408
Disc	S30408
V Ring	PTFE
Connecting Pipe	S30408
Gasket	RPTFE
Gland Nut	S30408
Gland Packings	S30408
Bonnet	S30408
Hand Wheel	Y102

Material schedule scope

- Materials apply to the supplied reference arrangement. PN40 long-stem socket-weld arrangement, DN10-DN50. Separate rows for each DN show alternative socket bores and, where stated, heights or weights. Select the socket bore to match the pipe.

ARD-GL-009 / DIMENSIONS

Long-stem cryogenic globe valve · PN40 · SW

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	H open	H closed	L	D	D0	D1	D2	B	Weight (kg)
10	210	204	60	Ø65	Ø13	Ø14.5	Ø24	6	0.9
10	221	215	60	Ø65	Ø15	Ø17.8	Ø24	6	1.0
15	253	244	65	Ø80	Ø15	Ø18.5	Ø29.5	6	1.1
15	257	248	65	Ø80	Ø15	Ø22.7	Ø29.5	6	1.0
20	257	246	80	Ø80	Ø20	Ø25.5	Ø36	8	1.5
20	263	254	80	Ø80	Ø20	Ø27.7	Ø36	8	1.5
25	288	274.5	90	Ø100	Ø25	Ø32.5	Ø43.5	8	2.1
25	295	282	90	Ø100	Ø25	Ø34.5	Ø43.5	8	2.1
32	298	283.5	105	Ø100	Ø32	Ø38.5	Ø53	8	2.8
32	305.5	291	105	Ø100	Ø32	Ø43.2	Ø53	8	2.8
40	365.5	348	120	Ø125	Ø40	Ø45.5	Ø62	8	4.0
40	373.5	356	120	Ø125	Ø40	Ø49	Ø62	8	3.9
50	374.5	353.5	140	Ø140	Ø50	Ø57.5	Ø72	10	5.2
50	384.5	361.5	140	Ø140	Ø50	Ø61.1	Ø72	10	5.2

PN40 long-stem socket-weld arrangement, DN10-DN50. Separate rows for each DN show alternative socket bores and, where stated, heights or weights. Select the socket bore to match the pipe.

ARD-GL-010

Liquid-hydrogen globe valve

A manually operated globe-valve reference designed for liquid-hydrogen service down to -253°C. The 316L construction uses an extended upper assembly and a specified polymer sealing system.

Reference-based product illustration of one arrangement. The approved outline drawing defines dimensions and supplied construction.

SIZE RANGE
DN 15-100 · project range

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-253 to +80°C

END CONNECTIONS
Threaded / weld ends

MEDIUM
LH2 / liquid hydrogen

Technical data

Operation	Manual handwheel in illustrated arrangement
Design service	Liquid hydrogen
Size evidence	Manufactured globe-valve project references cover DN15-100; exact illustrated configuration requires confirmation

Materials

Body and bonnet	316L stainless steel
Sealing material	VESPEL / MELDEN - selected grade to confirm
Spring	316 stainless steel

Design features

- Dedicated liquid-hydrogen temperature range
- 316L body and bonnet
- Extended manual upper assembly
- Hydrogen and low-temperature helium inspection documentation specified with the order

Connection details

Connection options

Threaded / weld ends

Interface selection

Specify the end standard, nominal size, pipe dimensions and required mating interface.

Thread selection

Threaded alternatives are documented. Confirm thread form, nominal size and sealing method.

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-GL-010

Liquid-hydrogen globe valve

Connection details / continued

Weld selection

Welded alternatives are documented. Confirm end preparation and mating-pipe dimensions.

Engineering requirements

Liquid-hydrogen qualification

Confirm the selected materials, seal grade, cleanliness, leak-test method, acceptance limits and traceability.

Size and connections

Request the size-specific outline drawing and end-connection schedule before installation.

Selection notes

- The DN15-100 project range and illustrated manual arrangement require size-specific confirmation. These are not verified availability or approved operating limits for every configuration. Confirm the selected pressure-temperature rating and connection details.
- The DN15-100 span describes manufactured globe-valve project references, not a complete availability matrix for the illustrated manual arrangement.
- The nominal pressure is 4.0 MPa. A separately stated body-strength value is not an allowable service-pressure rating.

ARD-GL-013

Selection notes S02 S03

Cryogenic screw-down non-return valve

A cryogenic screw-down non-return selection for LNG marine pipework, combining automatic non-return duty with a manually imposed shut-off position. Confirm the selected disc and stem arrangement for the system.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
Nominal size to specify

PRESSURE RATINGS
Pressure rating to specify

TEMPERATURE
Cryogenic design temperature to specify

END CONNECTIONS
End connections to specify

MEDIUM
LNG service; exact process medium to specify

Technical data

Construction	Screw-down non-return (SDNR)
Operation	Automatic check action with manual screw-down isolation

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Combined non-return and manual shut-off duty
- Extended manual upper assembly illustrated
- Marine line integration selected for the project

Connection details

Connection options

End connections to specify

Configuration selection

Port pattern and end standard are project selections; the delivery reference does not establish a common dimensional schedule.

Engineering requirements

Operating duty

Specify required flow direction, check response, manual shut-off duty and line conditions.

Marine documentation

Confirm class-society requirements, selected design standard, material traceability and tests.

ARD-GL-013

TECHNICAL DATA / CONTINUED

Cryogenic screw-down non-return valve

Selection notes

- No class approval, nominal range, cracking pressure or closing time is inferred from delivery history or the illustration.

ARD-GL-014

Selection notes S09 S10 S12

LH2 bellows-sealed angle globe valve

A manual angle-pattern globe valve for liquid-hydrogen cold lines, with a stainless-steel bellows stem seal, monitoring port and extended bonnet prepared for vacuum-jacket integration.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 2-125; DN 150-300 on request

PRESSURE RATINGS
PN10 / PN25 / PN40 - size dependent

TEMPERATURE
LH2 selection at -253°C; upper limit +50°C

END CONNECTIONS
Butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Angle-pattern globe; bellows-sealed extended stem
Operation	Manual handwheel
Size / rating selection	DN2-80: PN40; DN100: PN25; DN125: PN10. Larger special sizes require a separate rating.
Vacuum interface	Weld-in flange; extension and thermal intercept selected for the installation
Stem sealing	Stainless-steel bellows with secondary warm seal and monitoring port

Materials

Body	Stainless steel; selected grade to confirm

Materials / continued

Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Angle-pattern flow path
- Bellows seal with secondary stem sealing
- Vacuum-jacket weld-in interface

Connection details

Process ends

Specify pipe OD, wall thickness, material and weld preparation.

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-GL-014

TECHNICAL DATA / CONTINUED

LH2 bellows-sealed angle globe valve

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

Selection notes

- The series also lists special sizes up to DN300. The standard published table extends to DN125; confirm larger-size construction and pressure limits.

ARD-GL-015

Selection notes S09 S10 S12

LH2 modular inline globe valve

A compact inline globe configuration with a replaceable valve insert, bellows stem seal and vacuum-jacket attachment flange. The manual upper assembly supports local isolation in space-constrained LH2 equipment.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE

DN 15 / DN 25 / DN 50

PRESSURE RATINGS

PN10 / PN18 / PN25 - size dependent

TEMPERATURE

LH2 cold-service version at -253°C; upper limit +50°C

END CONNECTIONS

Butt weld (BW)

MEDIUM

LH2 / liquid hydrogen

Technical data

Construction	Straight inline globe; replaceable insert; bellows stem seal
Operation	Manual handwheel
Size / rating selection	DN15: PN18 or PN25; DN25: PN10 or PN25; DN50: PN10
Vacuum integration	Weld-in flange; compatible replaceable inserts
LH2 execution	Confirm the selected low-temperature insert, seals and extension for 20 K service

Materials

Body	Stainless steel; selected grade to confirm

Materials / continued

Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Replaceable valve insert
- Small installation footprint
- Inline process connections

Connection details

Process ends

Specify pipe OD, wall thickness, material and weld preparation.

ARD-GL-015

TECHNICAL DATA / CONTINUED

LH2 modular inline globe valve

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

Selection notes

- The product page distinguishes standard and deeper cryogenic executions. This LH2 selection requires the low-temperature execution to be confirmed; a standard -196°C execution must not be substituted.

ARD-GL-016

Selection notes S09 S10 S12

LH2 cold-box bellows shut-off valve

A manual cold-box shut-off valve with a long cryogenic extension and metallic bellows sealing. Weld-in vacuum interfaces and optional thermal intercepts are selected to match the insulated pipework and heat-load budget.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 2-250 - rating dependent

PRESSURE RATINGS
PN6 / PN25 / PN40 - size dependent

TEMPERATURE
LH2 selection at -253°C; upper limit +100°C

END CONNECTIONS
Butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Bellows-sealed cold-box globe; angle arrangement illustrated
Operation	Manual handwheel
Size / rating selection	PN6: DN2-250; PN25: DN2-150; PN40: DN2-80
Body options	Angle or straight pattern; angle body illustrated
Vacuum boundary	Weld-in flange, jacket or selected interface

Materials

Body	Selected stainless-steel pressure-part schedule
Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Metal bellows stem sealing
- Long cold-box extension
- Manual cold-line isolation

Connection details

Process ends

Specify pipe OD, wall thickness, material and weld preparation.

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

ARD-GL-016

TECHNICAL DATA / CONTINUED

LH2 cold-box bellows shut-off valve

Selection notes

- Published size bands are separate pressure-dependent selections. Confirm allowable differential pressure and operating pressure at the selected temperature.

ARD-GL-017

Selection notes S09 S10 S12

LH2 thermal-barrier globe valve

An extended-bonnet LH2 globe valve combining bellows and gland packing with a thermal-barrier arrangement. Manual operation is illustrated; insulation and maintenance access are defined around the selected installation.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 15-250 / NPS 1/2-10 - series scope

PRESSURE RATINGS
ASME Class 150-300

TEMPERATURE
-253 to +80°C - LH2 selection

END CONNECTIONS
Butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Extended globe; bellows and gland packing; thermal barrier
Operation	Manual handwheel
Insulation options	Vacuum jacket with multi-layer insulation or non-jacketed arrangement
Seat options	Metal/PCTFE or metal/metal; selected leakage criterion to specify
End standard	Butt weld to ASME B16.25

Materials

Body	304L / 316L stainless steel
Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Thermal-barrier cold section
- Bellows and gland stem sealing
- Maintenance access outside the cold box

Connection details

Process ends

Butt weld to ASME B16.25; confirm the selected pipe schedule.

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

ARD-GL-017

TECHNICAL DATA / CONTINUED

LH2 thermal-barrier globe valve

Selection notes

- DN15-250 and Class150-300 describe the combined LH2 family. Confirm the size/class matrix for this manual globe construction.

03

Gate valves

Forged and cast isolation references, with manual and automated configurations kept together.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-GT-001	**Forged cryogenic gate valve**	1/2-2 in	ASME Class 150-1500	Socket weld (SW) · Flanged	77
ARD-GT-002	**Cast cryogenic gate valve**	21/2-24 in	ASME Class 150-1500	Butt weld (BW) · Flanged	79
ARD-GT-004*	**Pneumatic cryogenic gate valve**	NPS 2-42	ASME Class 150-2500	RF / RTJ flanged / butt weld (BW)	81
ARD-GT-005*	**Electric cryogenic gate valve**	NPS 2-42	ASME Class 150-2500	RF / RTJ flanged / butt weld (BW)	82
ARD-GT-006*	**Hydraulic cryogenic gate valve**	NPS 2-42	ASME Class 150-2500	RF / RTJ flanged / butt weld (BW)	83
ARD-GT-003	**Cryogenic gate valve · CF8 · flanged**	DN 50-300	PN16-160 / Class 150-900*	Flanged	84

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-GT-001

Selection notes S01 S04 S07 S11

Forged cryogenic gate valve

A small-bore forged isolation valve with an extended bonnet and manual or geared operation.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
1/2-2 in

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
Down to -196°C

END CONNECTIONS
Socket weld (SW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	BS 6364
Referenced pressure / seat tests	BS 6364

Materials

Body	Forged Steel- ASTM A182-F304(L)/F316(L)
Bonnet	Forged Steel- ASTM A182-F304(L)/F316(L)
Seat	ASTM A182-F304L(H.F)
Wedge	ASTM A182-F304L(H.F)
Stem	ASTM A276-304(L) / 316(L)

Materials / continued

Gasket	SPIRAL WOUND GRAPHITE

Design features

- Extended bonnet
- Manual or gear operation
- Cavity pressure-relief provision

Connection details

Published connection
Socket weld or flanged

Connection standard
Not specified on this product page. Confirm the mating standard with the offer.

Product online **Download datasheet**

DATA REVISION 2026-10-28

ARD-GT-001

TECHNICAL DATA / CONTINUED

Forged cryogenic gate valve

Selection notes

- The packing entry states "fugitive emission", without specifying a packing material. Confirm the required packing and emission performance.

ARD-GT-002

Selection notes S01 S04 S07 S11 S32

Cast cryogenic gate valve

A large-bore gate range with an extended bonnet and flanged, butt-weld or RTJ connections.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
21/2-24 in

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
Down to -196°C

END CONNECTIONS
Butt weld (BW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	BS 6364; ASME B16.34; B16.25 / B16.5
Referenced pressure / seat tests	API 598; BS 6364

Materials

Body	Cast Steel- ASTM A351-CF8(M)/CF3(M)
Bonnet	Cast Steel- ASTM A351-CF8(M)/CF3(M)
Seat	SOFT SEAT : PCTFE; metal SEAT : ASTM A276-304L(H.F)
Wedge	ASTM A276-304(L)(H.F) / 316(L)(H.F) or Equivalent
Stem	ASTM A276-316(L)

Materials / continued

Gasket	SPIRAL WOUND GRAPHITE
Gland Packing	GRAPHITE

Design features

- Extended bonnet
- Gear operation
- Uni- or bidirectional options
- Cavity pressure-relief provision
- Fire-safe and antistatic design features

Connection details

Published connection

Flanged, butt weld or RTJ

Product online **Download datasheet**

DATA REVISION 2026-10-28

ARD-GT-002

Cast cryogenic gate valve

Connection details / continued

Referenced connection standards

BW: ASME B16.25; flanged: ASME B16.5 (reference reference).

ARD-GT-004

Selection notes S02 S03 S13 S18 S41

Pneumatic cryogenic gate valve

A rising-stem cryogenic gate package for full-open or shut-off duty in larger process lines. The extended bonnet separates the packing and pneumatic drive from the cold pressure body.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 2-42

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	OS&Y rising-stem gate; flexible-wedge selection
Operation	Pneumatic linear cylinder

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Rising-stem isolation
- Extended bonnet
- Pneumatic linear cylinder

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Engineering requirements

Air and controls

Specify supply pressure, air quality, control signal, solenoid and position indication.

Related construction

ARD-GT-002 / Cast cryogenic gate valve

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-GT-005

Selection notes S02 S03 S26 S27 S41

Electric cryogenic gate valve

A rising-stem cryogenic gate package for full-open or shut-off duty in larger process lines. The extended bonnet separates the packing and electric drive from the cold pressure body.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 2-42

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	OS&Y rising-stem gate; flexible-wedge selection
Operation	Electric multi-turn actuator with rising-stem drive

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Rising-stem isolation
- Extended bonnet

Design features / continued

- Electric multi-turn drive

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Engineering requirements

Electrical interface

Specify voltage, frequency, duty cycle, local controls and command/feedback interface.

Related construction

ARD-GT-002 / Cast cryogenic gate valve

ARD-GT-006

Selection notes S02 S03 S19 S20 S21 S41

Hydraulic cryogenic gate valve

A rising-stem cryogenic gate package for full-open or shut-off duty in larger process lines. The extended bonnet separates the packing and hydraulic drive from the cold pressure body.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 2-42

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	OS&Y rising-stem gate; flexible-wedge selection
Operation	Hydraulic linear cylinder

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Rising-stem isolation
- Extended bonnet
- Hydraulic linear cylinder

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Related construction

ARD-GT-002 / Cast cryogenic gate valve

ARD-GT-003

Selection notes S01 S06 S16 S29 S31 S35 S36

Cryogenic gate valve · CF8 · flanged

A flanged CF8 gate-valve range covering DN50-300 for cryogenic enquiries. PN16-160 and Class 150-900 are separate published ranges, with final construction selected for the design conditions.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 50-300

PRESSURE RATINGS
PN16-160 / Class 150-900*

TEMPERATURE
Confirm design temperature

END CONNECTIONS
Flanged

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

PN range	PN16-PN160
ASME class range	Class 150-Class 900
Operation	double-acting pneumatic, electric actuator, gearbox, hand lever, spring-return pneumatic
Temperature	Confirm limits for the selected construction

Materials

Body	CF8
Disc	CF8

Design features

- Catalogue body: CF8

Design features / continued

- Published connections: Flanged

Connection details

Published connection

Flanged

04

Butterfly valves

Extended-neck and top-entry constructions, with the operating package identified for each reference.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-BF-001	**Triple-offset cryogenic butterfly valve**	2-42 in	ASME Class 150-900	Butt weld (BW) · Flanged	86
ARD-BF-005*	**Pneumatic cryogenic triple-offset butterfly valve**	NPS 3-72	ASME Class 150-600	Wafer / lug / RF flanged / butt weld (BW)	88
ARD-BF-006*	**Electric cryogenic triple-offset butterfly valve**	NPS 3-72	ASME Class 150-600	Wafer / lug / RF flanged / butt weld (BW)	89
ARD-BF-007*	**Hydraulic cryogenic triple-offset butterfly valve**	NPS 3-72	ASME Class 150-600	Wafer / lug / RF flanged / butt weld (BW)	90
ARD-BF-002*	**Cryogenic butterfly valve · gear operated**	DN 50-900 / NPS 2-36	PN16-PN50 / ASME Class 150-300	Weld ends · confirm specification	91
ARD-BF-003	**Triple-eccentric cryogenic butterfly valve · flanged**	DN 50-900	PN16-100 / Class 150-600*	Flanged	92
ARD-BF-004	**Top-entry cryogenic butterfly valve · weld ends**	DN 50-900	PN16-50 / Class 150-300*	Weld ends · confirm preparation	93
ARD-BF-008*	**Pneumatic frontal top-entry cryogenic butterfly valve**	NPS 6-48	ASME Class 150-600	Butt weld (BW)	94
ARD-BF-009*	**Hydraulic side-top top-entry cryogenic butterfly valve**	NPS 4-64	ASME Class 150-1500	Butt weld (BW)	96
ARD-BF-010*	**Manual liquid-hydrogen butterfly valve**	NPS 1/2-6	ASME Class 150-600	Wafer / lug / RF flanged / butt weld (BW)	97
ARD-BF-011*	**Pneumatic liquid-hydrogen butterfly valve**	NPS 1/2-6	ASME Class 150-600	Wafer / lug / RF flanged / butt weld (BW)	98

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-BF-001

Selection notes S01 S04 S07 S11

Triple-offset cryogenic butterfly valve

A metal-seated triple-offset range for large cryogenic lines, with an extended bonnet and a choice of operators.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
2-42 in

PRESSURE RATINGS
ASME Class 150-900

TEMPERATURE
Down to -196°C

END CONNECTIONS
Butt weld (BW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	BS 6364; ASME B16.34; ASME VIII
Referenced pressure / seat tests	API 598; API 6D; BS 6364 (published list)
Referenced emission tests	ISO 15848; API 622
Functional safety reference	IEC 61508 (configuration and evidence to be confirmed)

Materials

Body	- ASTM A351-CF8(M)/CF3(M)
Bonnet	- ASTM A351-CF8(M)/CF3(M)
Stem	ASTM A182-316 / Gr.660

Materials / continued

Disk	ASTM A351-CF8/A182 F316
Extended Bonnet	ASTM A351-CF3M)/ 316(L)
Gasket	SPIRAL WOUND GRAPHITE
Gland Packing	GRAPHITE

Design features

- Triple-offset metal-seated design
- Extended bonnet
- Manual, pneumatic, electric or hydraulic operation
- Reinforced stainless shaft bearings
- Internal shaft blowout protection
- Replaceable seat
- Fire-safe design features

Product online **Download datasheet** DATA REVISION 2026-10-28

ARD-BF-001

TECHNICAL DATA / CONTINUED

Triple-offset cryogenic butterfly valve

Connection details

Published connection

Butt weld or flanged

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

ARD-BF-005

Selection notes S02 S03 S13 S18 S39

Pneumatic cryogenic triple-offset butterfly valve

A large-diameter triple-offset butterfly operating package with a short axial body and an extended shaft. Remote air-operated isolation with the drive mounted above the cryogenic extension.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 3-72

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
Wafer / lug / RF flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Triple-offset disc; extended shaft
Operation	Pneumatic quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Triple-offset disc architecture
- Short body installation
- Pneumatic drive above the extension

Connection details

Connection options

Wafer / lug / RF flanged / butt weld (BW)

Engineering requirements

Air and controls

Specify supply pressure, air quality, control signal, solenoid and position indication.

Related construction

ARD-BF-001 / Triple-offset cryogenic butterfly valve

Product online **Download datasheet** DATA REVISION 2026-10-29

ARD-BF-006

Selection notes S02 S03 S26 S27 S39

Electric cryogenic triple-offset butterfly valve

A large-diameter triple-offset butterfly operating package with a short axial body and an extended shaft. Motor-operated isolation for installations where electrical power and remote position control are required.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 3-72

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
Wafer / lug / RF flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Triple-offset disc; extended shaft
Operation	Electric quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Triple-offset disc architecture
- Short body installation
- Electric drive above the extension

Connection details

Connection options

Wafer / lug / RF flanged / butt weld (BW)

Engineering requirements

Electrical interface

Specify voltage, frequency, duty cycle, local controls and command/feedback interface.

Related construction

ARD-BF-001 / Triple-offset cryogenic butterfly valve

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-BF-007

Selection notes S02 S03 S19 S20 S21 S39

Hydraulic cryogenic triple-offset butterfly valve

A large-diameter triple-offset butterfly operating package with a short axial body and an extended shaft. Hydraulic isolation for projects requiring a defined high-load drive and a separately selected hydraulic supply.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 3-72

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
Wafer / lug / RF flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Triple-offset disc; extended shaft
Operation	Hydraulic quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Triple-offset disc architecture
- Short body installation
- Hydraulic drive above the extension

Connection details

Connection options

Wafer / lug / RF flanged / butt weld (BW)

Related construction

ARD-BF-001 / Triple-offset cryogenic butterfly valve

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-BF-002

Selection notes S17

Cryogenic butterfly valve · gear operated

Gear-operated cryogenic butterfly valves with an extended neck and welded connection arrangement. Confirm size, pressure class and design conditions for the selected configuration.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 50-900 / NPS 2-36

PRESSURE RATINGS
PN16-PN50 / ASME Class 150-300

TEMPERATURE
Confirm design temperature

END CONNECTIONS
Weld ends · confirm specification

MEDIUM
Specify for the application

Technical data

Operator shown	Manual gearbox with red handwheel
Construction shown	Extended neck, drip plate and bolted access cover
Temperature range	Not published for this separate reference; confirm design temperature

Design features

- Extended neck with drip plate
- Manual gear operator
- Bolted access cover

Connection details

Published connection

Weld-end collars shown; end preparation and standard require confirmation

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

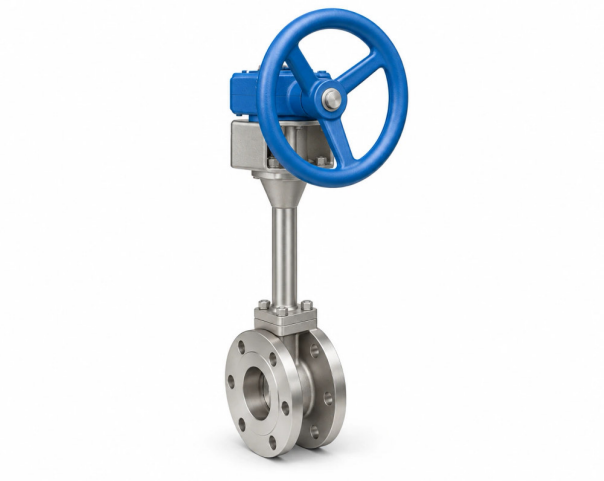
- The size and pressure ranges are proposed enquiry targets for this valve type. A qualified configuration, design temperature, material schedule and certified outline drawing must be confirmed before quotation or selection.

ARD-BF-003

Selection notes S01 S06 S16 S29 S31 S35 S36

Triple-eccentric cryogenic butterfly valve · flanged

A CF8 flanged triple-eccentric butterfly range covering DN50-900. Published PN and ASME ranges describe separate rating options; the cryogenic temperature limit requires confirmation.



Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 50-900

PRESSURE RATINGS
PN16-100 / Class 150-600*

TEMPERATURE
Confirm design temperature

END CONNECTIONS
Flanged

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

PN range	PN16-PN100
ASME class range	Class 150-Class 600
Design	Triple eccentric
Operation	double-acting pneumatic, electric actuator, gearbox, hand lever, spring-return pneumatic
Temperature	Confirm limits for the selected construction

Materials

Body	CF8
Disc	CF8

Design features

- Catalogue body: CF8
- Published connections: Flanged

Connection details

Published connection
Flanged

Product online **Download datasheet** DATA REVISION 2026-10-28

ARD-BF-004

Selection notes S01 S06 S16 S35 S36

Top-entry cryogenic butterfly valve · weld ends

A top-entry triple-eccentric butterfly range with welded connections and a CF8 body. the technical record lists DN50-900 with gearbox, electric and pneumatic operation options.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 50-900

PRESSURE RATINGS
PN16-50 / Class 150-300*

TEMPERATURE
Confirm design temperature

END CONNECTIONS
Weld ends · confirm preparation

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Weld
PN range	PN16-PN50
ASME class range	Class 150-Class 300
Design	Triple eccentric, Top-entry
Operation	double-acting pneumatic, electric actuator, gearbox, hand lever, spring-return pneumatic
Temperature	Confirm limits for the selected construction

Materials

Body	CF8
Disc	CF8

Design features

- Catalogue body: CF8
- Published connections: Weld

Connection details

Published connection

Weld

Weld interface

the technical record only states Weld. Confirm butt/socket preparation, pipe diameters, wall thickness and welding standard; no BW or SW standard is inferred.

Engineering requirements

Installation drawing

Confirm pipe outside diameter, wall thickness, weld preparation, overall height and service clearance; the technical record does not identify a socket or butt-weld standard.

Product online **Download datasheet**

DATA REVISION 2026-10-28

ARD-BF-008

Selection notes S02 S03 S13 S18

Pneumatic frontal top-entry cryogenic butterfly valve

A frontal top-entry cryogenic butterfly configuration for welded pipework, combining access for the service plan with a separately sized pneumatic operating package.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 6-48

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
Butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Frontal top-entry butterfly body
Operation	Pneumatic quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Frontal maintenance-entry architecture
- Butt-weld process connections

Design features / continued

- Pneumatic remote isolation

Connection details

Connection options

Butt weld (BW)

Engineering requirements

Air and controls

Specify supply pressure, air quality, control signal, solenoid and position indication.

Selection notes

- Confirm cover-removal clearance, disc extraction route, weld procedure and the approved outline drawing.

Product online **Download datasheet** DATA REVISION 2026-10-29

ARD-BF-008

TECHNICAL DATA / CONTINUED

Pneumatic frontal top-entry cryogenic butterfly valve

Related construction

ARD-BF-004 / Top-entry cryogenic butterfly valve · weld ends

ARD-BF-009

Selection notes S02 S03 S19 S20 S21

Hydraulic side-top top-entry cryogenic butterfly valve

A side-top top-entry cryogenic butterfly configuration for welded pipework, combining access for the service plan with a separately sized hydraulic operating package.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 4-64

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
Butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Side-top top-entry butterfly body
Operation	Hydraulic quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Side-top maintenance-entry architecture
- Butt-weld process connections

Design features / continued

- Hydraulic remote isolation

Connection details

Connection options

Butt weld (BW)

Selection notes

- Confirm cover-removal clearance, disc extraction route, weld procedure and the approved outline drawing.

Related construction

ARD-BF-004 / Top-entry cryogenic butterfly valve · weld ends

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-BF-010

Selection notes S02 S03

Manual liquid-hydrogen butterfly valve

A dedicated liquid-hydrogen disc-valve configuration with an extended stuffing box and replaceable sealing-ring arrangement. A manual gearbox is illustrated for local operation.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 1/2-6

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
-253 to +80°C

END CONNECTIONS
Wafer / lug / RF flanged / butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Extended-stuffing-box butterfly; replaceable seal ring
Operation	Manual gearbox

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Liquid-hydrogen temperature range
- Extended upper assembly
- Replaceable sealing-ring selection

Connection details

Connection options

Wafer / lug / RF flanged / butt weld (BW)

Engineering requirements

Hydrogen qualification

Specify cleanliness, material compatibility, seal grade, leak-test method and required traceability.

Installation and operation

Confirm disc clearance, sealing direction, drive load and the selected pipe interface.

Selection notes

- Class ratings are not allowable operating pressure at every temperature. Confirm the selected valve and seal qualification.

ARD-BF-011

Selection notes S02 S03 S13

Pneumatic liquid-hydrogen butterfly valve

A dedicated liquid-hydrogen disc-valve configuration with an extended stuffing box and replaceable sealing-ring arrangement. A pneumatic quarter-turn drive is illustrated for remote isolation.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 1/2-6

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
-253 to +80°C

END CONNECTIONS
Wafer / lug / RF flanged / butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Extended-stuffing-box butterfly; replaceable seal ring
Operation	Pneumatic quarter-turn actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Liquid-hydrogen temperature range
- Extended upper assembly
- Replaceable sealing-ring selection

Connection details

Connection options

Wafer / lug / RF flanged / butt weld (BW)

Engineering requirements

Hydrogen qualification

Specify cleanliness, material compatibility, seal grade, leak-test method and required traceability.

Installation and operation

Confirm disc clearance, sealing direction, drive load and the selected pipe interface.

Selection notes

- Class ratings are not allowable operating pressure at every temperature. Confirm the selected valve and seal qualification.

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-BF-011

TECHNICAL DATA / CONTINUED

Pneumatic liquid-hydrogen butterfly valve

Related construction

ARD-BF-010 / Manual liquid-hydrogen butterfly valve

05

Plunger valves

Straight and angle plunger arrangements, with their published connection and operating data.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-PL-001*	**Cryogenic plunger valve · angle pattern**	Up to NPS 40; pattern/class dependent	ASME Class 150-2500	End connections to specify	101
ARD-PL-002*	**Cryogenic plunger valve · straight pattern**	Up to NPS 40; pattern/class dependent	ASME Class 150-2500	End connections to specify	103

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-PL-001

Selection notes S02 S03

Cryogenic plunger valve · angle pattern

An angle-pattern cryogenic plunger-valve reference for a change in pipe direction. The metal-seated family has class-dependent size maxima; the illustrated extended manual upper assembly is selected with the required travel and duty.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
Up to NPS 40; pattern/class dependent

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
Cryogenic design temperature to specify

END CONNECTIONS
End connections to specify

MEDIUM
Specify for the application

Technical data

Construction	Angle-pattern plunger family; metal seated
Operation	Operator to select; manual geared arrangement illustrated
Combined family maxima	Class150/300: NPS40; Class600: NPS36; Class900: NPS30; Class1500: NPS24; Class2500: NPS12

Materials

Pressure parts	Material grade to specify
Closure and seat	Metal seated; selected grades to confirm

Design features

- Angle pipe pattern
- Metal-seated plunger selection
- Extended upper assembly illustrated

Connection details

Connection options

End connections to specify

Configuration selection

Port pattern and flange layout are illustrative; request the selected end-connection schedule.

Engineering requirements

Functional selection

Specify isolation duty, medium, differential pressure, travel and operating frequency.

ARD-PL-001

TECHNICAL DATA / CONTINUED

Cryogenic plunger valve · angle pattern

Engineering requirements / continued

Pattern and drive

Confirm internal design, selected operator, port geometry and the approved dimensional drawing.

Selection notes

- Angle and straight patterns share a published family row. Its maxima do not separately qualify every pattern or operator.
- No control characteristic, Cv/Kv or precision-regulation performance is established for this reference.

ARD-PL-002

Selection notes S02 S03

Cryogenic plunger valve · straight pattern

A straight-pattern cryogenic plunger-valve reference for inline isolation. The metal-seated family has class-dependent size maxima; the illustrated extended manual upper assembly is selected with the required travel and duty.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
Up to NPS 40; pattern/class dependent

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
Cryogenic design temperature to specify

END CONNECTIONS
End connections to specify

MEDIUM
Specify for the application

Technical data

Construction	Straight-pattern plunger family; metal seated
Operation	Operator to select; manual geared arrangement illustrated
Combined family maxima	Class150/300: NPS40; Class600: NPS36; Class900: NPS30; Class1500: NPS24; Class2500: NPS12

Materials

Pressure parts	Material grade to specify
Closure and seat	Metal seated; selected grades to confirm

Design features

- Straight pipe pattern
- Metal-seated plunger selection
- Extended upper assembly illustrated

Connection details

Connection options

End connections to specify

Configuration selection

Port pattern and flange layout are illustrative; request the selected end-connection schedule.

Engineering requirements

Functional selection

Specify isolation duty, medium, differential pressure, travel and operating frequency.

ARD-PL-002

TECHNICAL DATA / CONTINUED

Cryogenic plunger valve · straight pattern

Engineering requirements / continued

Pattern and drive

Confirm internal design, selected operator, port geometry and the approved dimensional drawing.

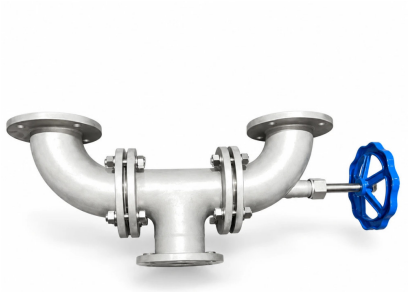
Selection notes

- Angle and straight patterns share a published family row. Its maxima do not separately qualify every pattern or operator.
- No control characteristic, Cv/Kv or precision-regulation performance is established for this reference.

06

Three-way valves

Three-way globe and ball arrangements for the specified flow-path and connection requirements.



Article	Configuration	Size range	Pressure	Connection	Page
ARD-TW-001	**Flanged three-way globe valve**	DN 100-200	PN6 (0.6 MPa nominal)	Flanged	106
ARD-TW-002	**Three-way globe valve**	DN 15/25	PN40 (4.0 MPa nominal)	Butt weld (BW)	108
ARD-TW-003	**Three-way globe valve with protective device**	DN 15/25	PN40 (4.0 MPa nominal)	Butt weld (BW)	110
ARD-TW-004	**Cryogenic three-way ball valve**	DN 15-40	PN40 (4.0 MPa nominal)	Threaded / union	112

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-TW-001

Selection notes S01 S07

Flanged three-way globe valve

A large three-way globe assembly with flanged connections for distribution and changeover arrangements.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 100-200

PRESSURE RATINGS
PN6 (0.6 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Flanged

MEDIUM
O2, N2, Ar, CO2, NG

Materials

Body	06Cr19Ni10
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Flange(HG/T20592

Connection details

Published connection

Flange(HG/T20592

Connection details / continued

Referenced flange standard

HG/T 20592; edition, facing, drilling and pressure designation must be specified.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-TW-001 / DIMENSIONS

Flanged three-way globe valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	L1	L2	H	D0	K	N-
100	562	430	329	220	170	4-18
150	680	570	410	350	225	8-18
200	680	600	480	350	280	8-18

ARD-TW-002

Selection notes S01 S04

Three-way globe valve

A compact three-way globe configuration with butt-weld connections for gas system manifolds.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 15/25

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Butt weld (BW)

MEDIUM
O2, N2, Ar, CO2, NG

Materials

Body	06Cr19Ni10
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Butt Welding Inlet direction accept customization

Connection details

Published connection

Butt Welding Inlet direction accept customization

Connection details / continued

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Drawing designation M

30x1.5, 36x2 (size-dependent; see dimension table).

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-TW-002 / DIMENSIONS

Three-way globe valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	L1	L2	L3	D1xt	M	Weight (kg)
15	216	62	80	62	18X3	30X1.5	2.5
25	216	62	80	62	28X3	36X2	2.63
25	216	62	80	62	32X3	36X2	2.63

ARD-TW-003

Selection notes S01 S04

Three-way globe valve with protective device

A three-way globe variant with the protective device described in the reference product reference.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 15/25

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Butt weld (BW)

MEDIUM
O2, N2, Ar, CO2, NG

Materials

Body	06Cr19Ni10
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Butt weld

Connection details

Published connection

Butt weld

Connection details / continued

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Drawing designation M

30x1.5, 36x2 (size-dependent; see dimension table).

Selection notes

- The reference calls the additional component an "explosion-proof device". Hazardous-area certification and suitability must be confirmed for the offered configuration.
- "Top / closure element" follows the component designation in the reference material list.

ARD-TW-003 / DIMENSIONS

Three-way globe valve with protective device

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	L1	L2	L3	L4	D1xt	M	Weight (kg)
15	216	62	80	62	79	18X3	30X1.5	-
25	216	62	80	62	79	28X3	36X2	3.18
25	216	62	80	62	79	32X3	36X2	3.18

ARD-TW-004

Selection notes S01 S30

Cryogenic three-way ball valve

A threaded three-way ball valve for multi-port switching arrangements.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 15-40

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Threaded / union

MEDIUM
O2, N2, Ar, CO2, NG

Materials

Body	CF8
Bonnet	CF8
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10
Gasket	PTFE

Design features

- Threaded

Connection details

Published connection

Threaded

Connection details / continued

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Drawing designation M

30x1.5, 36x2, 48x2, 52x2 (size-dependent; see dimension table).

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-TW-004 / DIMENSIONS

Cryogenic three-way ball valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	L1	L2	L3	D1xt	M	Weight (kg)
15	100	52	83	18X3	30X1.5	-
25	124	71	106	28X3	36X2	-
25	124	71	106	32X3	36X2	-
32	124	81	125	38X3	48X2	-
40	160	82	121	45X3	52X2	-

07

Check valves

Lift, swing, axial, piston and dual-plate references for the specified non-return duty.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-CK-001	**Cryogenic lift check · union cap**	DN 10-40	PN40 (4.0 MPa nominal)	Socket weld (SW)	116
ARD-CK-002	**Cryogenic lift check · bolted cap**	DN 10-200	PN40 (4.0 MPa nominal)	Socket weld (SW)	118
ARD-CK-003	**Forged cryogenic check valve**	1/2-2 in	ASME Class 150-1500	Socket weld (SW) · Flanged	120
ARD-CK-004	**Cast cryogenic check valve**	2-36 in	ASME Class 150-600	Butt weld (BW) · Flanged	121
ARD-CK-005	**Cryogenic lift check valve · PN40 · SW**	DN 65-100	PN40	Socket weld (SW)	122
ARD-CK-006	**Cryogenic swing check valve · PN40 · BSP/NPT**	3/8-2 in	PN40	BSP / NPT threaded	125
ARD-CK-007	**Cryogenic check valve · PN320 · SW**	DN 65-100	PN320	Socket weld (SW)	128
ARD-CK-008*	**Cryogenic axial-flow check valve**	NPS 2-42	ASME Class 150-900	RF / RTJ flanged / butt weld (BW)	129
ARD-CK-009*	**Cryogenic piston check valve**	Up to NPS 16; seat/class dependent	ASME Class 150-2500; seat dependent	End connections to specify	130
ARD-CK-010*	**Cryogenic dual-plate check valve**	NPS 2-36	ASME Class 150-1500	RF / RTJ flanged / butt weld (BW)	132

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

Check valves

SELECTION MATRIX / CONTINUED

Article	Configuration	Size range	Pressure	Connection	Page
ARD-CK-011*	**LH2 extended-bonnet spring check valve**	DN 10-100	PN40	Butt weld (BW)	133
ARD-CK-012*	**LH2 compact inline cold check valve**	DN 6-200 - rating dependent	PN25 / PN40 - size dependent	Butt weld (BW)	135
ARD-CK-013*	**LH2 thermal-barrier lift check valve**	DN 15-250 / NPS 1/2-10 - series scope	ASME Class 150-300	Butt weld (BW)	137

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-CK-001

Selection notes S01 S04

Cryogenic lift check · union cap

A compact lift check valve for preventing reverse flow in cryogenic lines.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-40

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
LO2, LN2, LAr, LCO2

Technical data

Flow direction	Low to high

Materials

Body	CF8
Bonnet	CF8
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Socket weld
- Flow direction: Low to high

Connection details

Published connection

Socket weld

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-CK-001 / DIMENSIONS

Cryogenic lift check · union cap

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	L	DI	B	Weight (kg)
10	47	60	14.5	5	-
15	47	60	18.5	5	-
20	59	80	25.5	6	-
25	59	80	28.5	6	-
25	59	80	32.5	6	-
32	70	100	38.5	8	2.45
40	70	100	45.5	8	2.50

ARD-CK-002

Selection notes S01 S04

Cryogenic lift check · bolted cap

A bolted-cap non-return range covering small process lines through DN 200.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-200

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Technical data

Flow direction	Low to high

Materials

Body	CF8
Bonnet	304
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Socket weld
- Flow direction: Low to high

Connection details

Published connection

Socket weld

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-CK-002 / DIMENSIONS

Cryogenic lift check · bolted cap

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	L	DI	B	Weight (kg)
10	64	60	14.5	5	-
15	64	60	18.5	5	-
20	77	80	25.5	6	-
25	77	80	32.5	6	-
32	90	100	38.5	8	-
40	90	100	45.5	8	-
50	104	130	57.5	8	-
65	110	150	76.5	10	-
80	135	180	90	15	10.42
100	144	200	109	15	14.48
125	205	280	134	15	-
150	204	350	160	30	-
200	255	400	220	20	-

ARD-CK-003

Selection notes S01 S04 S07 S11

Forged cryogenic check valve

A small-bore forged non-return range with socket-weld or flanged connections.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
1/2-2 in

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
Down to -196°C

END CONNECTIONS
Socket weld (SW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	BS 6364
Referenced pressure / seat tests	BS 6364

Materials

Body	Forged Steel- ASTM A182-F304(L)/F316(L)
Bonnet	Forged Steel- ASTM A182-F304(L)/F316(L)
Seat	ASTM A276-304(L) / 316(L)-(H.F)
Disk	ASTM A182-F304(L)/F316(L)
Stem	ASTM A276-304(L) / 316(L)

Materials / continued

Gasket	SPIRAL WOUND GRAPHITE

Design features

- Full- or reduced-bore configuration

Connection details

Published connection

Socket weld or flanged

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Product online **Download datasheet** DATA REVISION 2026-10-29

ARD-CK-004

Selection notes S01 S04 S07 S11 S32

Cast cryogenic check valve

A large-bore non-return range with soft- or metal-seat options and published sizes through 36 inches.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
2-36 in

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
Down to -196°C

END CONNECTIONS
Butt weld (BW) · Flanged

MEDIUM
Specify for the application

Technical data

Referenced design standards	BS 6364; ASME B16.34; B16.25 / B16.5
Referenced pressure / seat tests	API 598; BS 6364

Materials

Body	Cast Steel - ASTM A351-CF8(M)/CF3(M)
Bonnet	Cast Steel - ASTM A351-CF8(M)/CF3(M)
Seat	SOFT: PCTFE METAL: ASTM A276-304(L) / 316(L)-(H.F)
Disk	ASTM A351-CF8(M) / CF3(M), A276-304(L) / 316(L)-(H.F)
Gasket	SPIRAL WOUND GRAPHITE

Design features

- Full- or reduced-bore configuration
- Bolted, welded or pressure-seal bonnet variants
- Installation orientation to be confirmed for the selected design

Connection details

Published connection

Flanged, butt weld or RTJ

Referenced connection standards

BW: ASME B16.25; flanged: ASME B16.5 (reference reference).

Product online **Download datasheet** DATA REVISION 2026-10-28

ARD-CK-005

Selection notes S01 S05 S06 S08 S14 S15

Cryogenic lift check valve · PN40 · SW

A CF8 lift check valve for larger socket-weld cryogenic lines. The DN65-100 range provides automatic non-return operation.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 65-100

PRESSURE RATINGS
PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Socket weld (SW)

MEDIUM
LNG, LOX, LN2, LAr

Technical data

Connection	Socket Weld
Operation	Automatic non-return
series temperature*	-196°C to +80°C

Materials

Body	CF8
Disc	S30408

Design features

- Catalogue body: CF8
- Published connections: Socket Weld

Connection details

Published connection

Socket Weld

Reference drawing scope

PN50 socket-weld body reference. The current product offers PN40; confirm the PN40 body drawing before using these dimensions.

Engineering requirements

Dimension data

Reference table and drawing: DN65, DN80, DN100. Dimensions and connection reference.

Reference material schedule

Hexagon Screw	S30408
Gasket	S30408

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ARD-CK-005

Cryogenic lift check valve · PN40 · SW

Reference material schedule / continued

Hexagon Nut	S30408
Bonnet	CF8
Split Pin	S30408
Gasket	RPTFE
Disc	S30408
Body	CF8
Disc Sealing	PTFE

Material schedule scope

- Materials apply to the supplied reference arrangement. PN50 socket-weld body reference. The current product offers PN40; confirm the PN40 body drawing before using these dimensions.

ARD-CK-005 / DIMENSIONS

Cryogenic lift check valve · PN40 · SW

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	H	L	D0	D1	D2	B	Weight (kg)
65	112	216	Ø65	Ø70	Ø76	7	10
80	118	241	Ø80	Ø81	Ø89	8	14
100	138	292	Ø100	Ø100	Ø108	9	16

PN50 socket-weld body reference. The current product offers PN40; confirm the PN40 body drawing before using these dimensions.

ARD-CK-006

Selection notes S01 S05 S06 S08 S24 S25

Cryogenic swing check valve · PN40 · BSP/NPT

A compact CF8 swing check valve for threaded cryogenic pipework. BSP and NPT are separate connection options across the 3/8-2-inch catalogue range.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
3/8-2 in

PRESSURE RATINGS
PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
BSP / NPT threaded

MEDIUM
LNG, LOX, LN2, LAr

Technical data

Connection	BSP / NPT
Operation	Automatic non-return
series temperature*	-196°C to +80°C

Materials

Body	CF8
Disc	S30408

Design features

- Catalogue body: CF8
- Published connections: BSP · NPT

Connection details

Published connection

BSP · NPT

Reference drawing scope

PN40 threaded reference arrangement, DN10, DN15, DN25, DN40 and DN50. DN20 and DN32 dimensions are not supplied. the technical record 2-M column is reproduced as a drawing value; it does not identify the BSP/NPT thread designation.

Engineering requirements

Dimension data

Reference table and drawing: DN10, DN15, DN25, DN40, DN50. Dimensions and connection reference.

Reference material schedule

Bonnet	CF8

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ARD-CK-006

Cryogenic swing check valve · PN40 · BSP/NPT

Reference material schedule / continued

Body	CF8
Disc	HPb59-1
Gasket	T2
Gasket	PTFE
Nut	HPb59-1
Rolling Bar	HPb59-1
Round Pin	S30408

Material schedule scope

- Materials apply to the supplied reference arrangement. PN40 threaded reference arrangement, DN10, DN15, DN25, DN40 and DN50. DN20 and DN32 dimensions are not supplied. the technical record 2-M column is reproduced as a drawing value; it does not identify the BSP/NPT thread designation.

ARD-CK-006 / DIMENSIONS

Cryogenic swing check valve · PN40 · BSP/NPT

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	Size (inch)	L	H	2-M	D0	Weight (kg)
10	3/8	54	34.5	17	Ø10	0.50
15	1/2	67	39	21	Ø15	0.60
25	1	95	55	32	Ø25	0.65
40	1 1/2	137	69	47	Ø40	0.75
50	2	147	85	58	Ø50	1.00

PN40 threaded reference arrangement, DN10, DN15, DN25, DN40 and DN50. DN20 and DN32 dimensions are not supplied. the technical record 2-M column is reproduced as a drawing value; it does not identify the BSP/NPT thread designation.

ARD-CK-007

Selection notes S01 S05 S06 S14 S15 S16

Cryogenic check valve · PN320 · SW

A PN320 catalogue check-valve reference with a CF8 body and socket-weld connections. Request the size-specific construction and pressure-temperature limits for the duty.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 65-100

PRESSURE RATINGS
PN320

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Socket weld (SW)

MEDIUM
LNG, LOX, LN2, LAr

Technical data

Connection	Socket Weld
Operation	Automatic non-return
series temperature*	-196°C to +80°C

Materials

Body	CF8
Disc	S30408

Design features

- Catalogue body: CF8
- Published connections: Socket Weld

Connection details

Published connection
Socket Weld

ARD-CK-008

Selection notes S02 S03

Cryogenic axial-flow check valve

A spring-assisted axial-flow non-return configuration for large cryogenic lines. The guided closure moves along the flow axis, with a streamlined inline body and no external operator.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 2-42

PRESSURE RATINGS
ASME Class 150-900

TEMPERATURE
-196 to +150°C

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Axial guided closure
Operation	Automatic non-return

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Axial disc movement
- Streamlined inline pressure body
- Spring-assisted return selected for the duty

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Engineering requirements

Transient duty

Provide flow range, fluid state, pump rundown and permissible reverse-flow conditions.

Installation

Confirm orientation, cracking pressure, pressure loss and the approved outline.

Selection notes

- Closing response and pressure-surge performance require a system assessment; no guaranteed non-slam behaviour or pressure-loss value is inferred from the image.

Product online **Download datasheet** DATA REVISION 2026-10-29

ARD-CK-009

Selection notes S02 S03

Cryogenic piston check valve

An industrial piston-check selection for cryogenic non-return duty, with separate soft-seat and metal-seat size limits. The piston-type closure is enclosed beneath a service cap and operates without an external drive.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE

Up to NPS 16; seat/class dependent

PRESSURE RATINGS

ASME Class 150-2500; seat dependent

TEMPERATURE

Cryogenic design temperature to specify

END CONNECTIONS

End connections to specify

MEDIUM

Specify for the application

Technical data

Construction	Piston-type non-return; soft or metal seat
Operation	Automatic non-return
Metal-seat maxima	Class150: NPS16; Class300: NPS12; Class600-2500: NPS10
Soft-seat maxima	Class150: NPS12; Class300: NPS10; Class600: NPS4

Materials

Body and cap	Material grade to specify
Piston and seat	Soft-seat or metal-seat design to select

Design features

- Piston closure
- Seat-specific pressure and size selection
- Bolted-cap arrangement illustrated

Connection details

Connection options

End connections to specify

Configuration selection

Flanged ends illustrate one requested arrangement; the selected connection is not established by the range table.

Engineering requirements

Check-valve sizing

Specify normal/minimum flow, fluid state, differential pressure and permitted mounting orientation.

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-CK-009

Cryogenic piston check valve

Engineering requirements / continued

Design confirmation

Confirm minimum size, material, connection and cryogenic temperature for the selected assembly.

Selection notes

- Published numbers are upper family limits by seat and Class; a minimum size and a complete size-by-pressure matrix are not established.

ARD-CK-010

Selection notes S02 S03

Cryogenic dual-plate check valve

A compact cryogenic non-return configuration with two hinged closure plates. The dual-plate architecture is selected for line conditions, mounting orientation and the required reverse-flow response.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 2-36

PRESSURE RATINGS
ASME Class 150-1500

TEMPERATURE
Down to -196°C; upper limit to confirm

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	Two hinged closure plates
Operation	Automatic non-return

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Dual-plate closure
- Compact inline installation
- Automatic operation without an external drive

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Engineering requirements

Dynamic conditions

Specify flow velocity, pump rundown, reverse flow and installation orientation.

Mechanical interface

Confirm connection style, hinge clearance, pressure loss and the approved installation envelope.

Selection notes

- The image illustrates a flanged arrangement. Disc travel, spring selection and transient performance require the selected assembly data.

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-CK-011

Selection notes S09 S10 S12

LH2 extended-bonnet spring check valve

A self-acting spring-loaded non-return valve with an extended service bonnet for insulated LH2 pipework. The straight-through pressure body and removable upper closure support maintenance planning.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 10-100

PRESSURE RATINGS
PN40

TEMPERATURE
LH2 cold-service version at -253°C; upper limit +50°C

END CONNECTIONS
Butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Inline spring-loaded check with extended service bonnet
Operation	Automatic / spring-loaded
Opening pressure	Published minimum opening pressure up to 0.3 bar; selected spring and flow response to confirm
Installation	Horizontal flow, service bonnet upwards
Vacuum interface	Optional weld-in flange

Materials

Body	Stainless steel; selected grade to confirm
Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Self-acting non-return function
- Extended maintenance bonnet
- Optional vacuum-jacket interface

Connection details

Process ends

Specify pipe OD, wall thickness, material and weld preparation.

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-CK-011

LH2 extended-bonnet spring check valve

Selection notes

- Specify the deeper cryogenic construction and seals for LH2. Confirm spring setting, pressure drop and reverse-flow closure against the actual operating cases.

ARD-CK-012

Selection notes S09 S10 S12

LH2 compact inline cold check valve

A compact inline non-return valve for direct installation in LH2 cold boxes and cryogenic pipelines. The enclosed weld-end body has no external actuator and is selected for the required low opening pressure.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 6-200 - rating dependent

PRESSURE RATINGS
PN25 / PN40 - size dependent

TEMPERATURE
LH2 selection at -253°C; upper limit +50°C

END CONNECTIONS
Butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Compact enclosed inline cold check valve
Operation	Automatic / self-acting
Size / rating selection	PN25: DN6-200; PN40: DN6-50
Cracking pressure	Published series band 23-65 mbar; selected value to confirm
Seat bypass option	Optional bypass bore; specify whether reverse leakage is permissible

Materials

Body	Selected stainless-steel pressure-part schedule

Materials / continued

Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Compact in-line pressure body
- Low opening-pressure selection
- Direct cold-box installation

Connection details

Process ends

Specify pipe OD, wall thickness, material and weld preparation.

ARD-CK-012

TECHNICAL DATA / CONTINUED

LH2 compact inline cold check valve

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

Selection notes

- An optional bypass bore intentionally permits a small flow path. Select it only where the system specification calls for that arrangement.

ARD-CK-013

Selection notes S09 S10 S12

LH2 thermal-barrier lift check valve

A lift-type LH2 non-return valve with an extended service tower and thermal-barrier construction. Jacketed and non-jacketed selections support cold-box or insulated-line integration.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 15-250 / NPS 1/2-10 - series scope

PRESSURE RATINGS
ASME Class 150-300

TEMPERATURE
-253 to +80°C - LH2 selection

END CONNECTIONS
Butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Lift-type check; extended service tower; thermal barrier
Operation	Automatic / self-acting
Insulation options	Vacuum jacket with multi-layer insulation or non-jacketed arrangement
Seat options	Metal/PCTFE or metal/metal; selected leakage criterion to specify
End standard	Butt weld to ASME B16.25

Materials

Body	304L / 316L stainless steel
Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Automatic lift-check function
- Extended service arrangement
- Thermal-barrier design

Connection details

Process ends

Butt weld to ASME B16.25; confirm the selected pipe schedule.

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

Product online Download datasheet DATA REVISION 2026-10-29

ARD-CK-013

TECHNICAL DATA / CONTINUED

LH2 thermal-barrier lift check valve

Selection notes

- The published family range includes globe and check constructions. Confirm available lift-check sizes, opening pressure and orientation for the selected model.

08

Control valves

Control-valve constructions and actuation packages, selected against the process and control duty.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-CV-001	**Pneumatic diaphragm control valve**	DN 25-80	PN40 (4.0 MPa nominal)	Socket weld (SW)	140
ARD-CV-003*	**Pneumatic diaphragm cryogenic control valve**	DN 20-300 / NPS 3/4-12	ASME Class 150-2500	RF / RTJ flanged / butt weld (BW)	142
ARD-CV-004*	**Pneumatic cylinder cryogenic control valve**	DN 20-300 / NPS 3/4-12	ASME Class 150-2500	RF / RTJ flanged / butt weld (BW)	143
ARD-CV-005*	**Electric cryogenic control valve**	DN 20-300 / NPS 3/4-12	ASME Class 150-2500	RF / RTJ flanged / butt weld (BW)	144
ARD-CV-002	**Cryogenic solenoid valve**	DN 25-40	PN25 (2.5 MPa nominal)	Flanged	145
ARD-CV-006*	**LH2 bellows-sealed angle control valve**	DN 2-125; DN 150-300 on request	PN10 / PN25 / PN40 - size dependent	Butt weld (BW)	147
ARD-CV-007*	**LH2 cold-box bellows control valve**	DN 2-250 - rating dependent	PN6 / PN25 / PN40 - size dependent	Butt weld (BW)	149

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-CV-001

Selection notes S01 S04

Pneumatic diaphragm control valve

A diaphragm-actuated globe valve with an extended stem for cryogenic process control.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 25-80

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Technical data

Flow direction	Low to high

Materials

Body	CF8
Bonnet	06Cr19Ni10
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+CO112
Gasket	PTFE

Design features

- Socket weld
- Flow direction: Low to high

Connection details

Published connection

Socket weld

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-CV-001 / DIMENSIONS

Pneumatic diaphragm control valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	D0	L	DI	B	Weight (kg)
25	760	280	80	32.5	6	-
32	735	310	100	38.5	8	-
40	735	310	100	45.5	8	-
50	860	310	130	57.5	8	-
65	912	395	150	76.5	10	-
80	1100	395	180	90	15	-

ARD-CV-003

Selection notes S02 S03 S40 S42 S43 S44

Pneumatic diaphragm cryogenic control valve

A guided S-pattern globe control assembly with an extended packing box and pneumatic diaphragm linear actuation. Select the trim and drive from the process flow cases rather than nominal line size alone.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE

DN 20-300 / NPS 3/4-12

PRESSURE RATINGS

ASME Class 150-2500

TEMPERATURE

Cryogenic design temperature to specify

END CONNECTIONS

RF / RTJ flanged / butt weld (BW)

MEDIUM

LNG / LPG; exact process medium to specify

Technical data

Construction	S-pattern globe body; guided plug; extended packing box
Operation	Pneumatic diaphragm linear actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Guided linear control plug
- Extended packing-box assembly

Design features / continued

- Pneumatic diaphragm modulating package

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Related construction

ARD-CV-001 / Pneumatic diaphragm control valve

ARD-CV-004

Selection notes S02 S03 S40 S42 S43 S44

Pneumatic cylinder cryogenic control valve

A guided S-pattern globe control assembly with an extended packing box and pneumatic cylinder linear actuation. Select the trim and drive from the process flow cases rather than nominal line size alone.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 20-300 / NPS 3/4-12

PRESSURE RATINGS
ASME Class 150-2500

TEMPERATURE
Cryogenic design temperature to specify

END CONNECTIONS
RF / RTJ flanged / butt weld (BW)

MEDIUM
LNG / LPG; exact process medium to specify

Technical data

Construction	S-pattern globe body; guided plug; extended packing box
Operation	Pneumatic cylinder linear actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Guided linear control plug
- Extended packing-box assembly
- Pneumatic cylinder modulating package

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Related construction

ARD-CV-001 / Pneumatic diaphragm control valve

ARD-CV-005

Selection notes S02 S03 S40 S42 S43 S44

Electric cryogenic control valve

A guided S-pattern globe control assembly with an extended packing box and electric linear actuation. Select the trim and drive from the process flow cases rather than nominal line size alone.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE

DN 20-300 / NPS 3/4-12

PRESSURE RATINGS

ASME Class 150-2500

TEMPERATURE

Cryogenic design temperature to specify

END CONNECTIONS

RF / RTJ flanged / butt weld (BW)

MEDIUM

LNG / LPG; exact process medium to specify

Technical data

Construction	S-pattern globe body; guided plug; extended packing box
Operation	Electric linear actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Guided linear control plug
- Extended packing-box assembly
- Electric modulating package

Connection details

Connection options

RF / RTJ flanged / butt weld (BW)

Related construction

ARD-CV-001 / Pneumatic diaphragm control valve

Product online **Download datasheet** DATA REVISION 2026-10-29

ARD-CV-002

Selection notes S01 S07

Cryogenic solenoid valve

An electrically operated cryogenic globe valve with flanged connections and published coil-voltage options.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 25-40

PRESSURE RATINGS
PN25 (2.5 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Flanged

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Technical data

Flow direction	High to low
Coil voltage	DC24V/AC220V
Published explosion-protection marking	EXmbII CT4 GB

Materials

Body	CF8
Bonnet	CF8
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+RPTFE
Gasket	PTFE

Design features

- Flange HG/T20592
- Flow direction: High to low

Connection details

Published connection
Flange HG/T20592

Referenced flange standard
HG/T 20592; edition, facing, drilling and pressure designation must be specified.

Selection notes

- The explosion-protection marking is reproduced as published; confirm the certificate, zone suitability and selected coil before ordering.
- "Top / closure element" follows the component designation in the reference material list.

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ARD-CV-002 / DIMENSIONS

Cryogenic solenoid valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	L	H	K	N-	Weight (kg)
25	124	197	85	4-14	-
32	140	210	100	4-18	-
40	154	220	110	4-18	-

ARD-CV-006

Selection notes S09 S10 S12

LH2 bellows-sealed angle control valve

An angle-pattern LH2 control assembly with bellows stem sealing, an extended cold section and a pneumatic diaphragm actuator with an electro-pneumatic positioner. Trim and actuator are selected from the required flow and pressure cases.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE

DN 2-125; DN 150-300 on request

PRESSURE RATINGS

PN10 / PN25 / PN40 - size dependent

TEMPERATURE

LH2 selection at -253°C; upper limit +50°C

END CONNECTIONS

Butt weld (BW)

MEDIUM

LH2 / liquid hydrogen

Technical data

Construction	Angle-pattern globe control; bellows-sealed extended stem
Operation	Pneumatic diaphragm with positioner
Size / rating selection	PN40: DN2-80; PN25: DN2-100; PN10: DN125. Larger sizes require separate selection.
Control trim	Flow characteristic, Kv, rangeability and seat load selected for the duty
Air supply	Published actuator supply 6 to 6.5 bar; selected actuator requirements to confirm

Materials

Body	Stainless steel; selected grade to confirm

Materials / continued

Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Electro-pneumatic positioning
- Bellows stem seal and monitored warm seal
- Vacuum-jacket integration flange

Connection details

Process ends

Specify pipe OD, wall thickness, material and weld preparation.

Product online **Download datasheet** DATA REVISION 2026-10-29

ARD-CV-006

TECHNICAL DATA / CONTINUED

LH2 bellows-sealed angle control valve

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

Selection notes

- Normally-open or normally-closed arrangements are selected for the complete assembly; closing time and safety qualification are project-specific.

Related construction

ARD-GL-014 / LH2 bellows-sealed angle globe valve

ARD-CV-007

Selection notes S09 S10 S12

LH2 cold-box bellows control valve

A pneumatic bellows-sealed control valve for LH2 cold boxes and vacuum-insulated lines. The extended cold section separates the process body from the warm diaphragm actuator and positioner.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 2-250 - rating dependent

PRESSURE RATINGS
PN6 / PN25 / PN40 - size dependent

TEMPERATURE
LH2 selection at -253°C; upper limit +100°C

END CONNECTIONS
Butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Pneumatic bellows-sealed globe control; angle arrangement illustrated
Operation	Pneumatic diaphragm with positioner
Size / rating selection	PN6: DN2-250; PN25: DN2-150; PN40: DN2-80
Control selection	Kv, characteristic, differential pressure and actuator thrust to specify
Insulation interface	Vacuum weld-in flange and thermal intercepts selected for the cold box

Materials

Body	Selected stainless-steel pressure-part schedule

Materials / continued

Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Pneumatic modulating operation
- Bellows isolation of the process
- Optional thermal shields and position feedback

Connection details

Process ends

Specify pipe OD, wall thickness, material and weld preparation.

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ARD-CV-007

TECHNICAL DATA / CONTINUED

LH2 cold-box bellows control valve

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

Selection notes

- Fail position, instrument-air supply, signal protocol, closing time and any safety function are selected for the complete operating package.

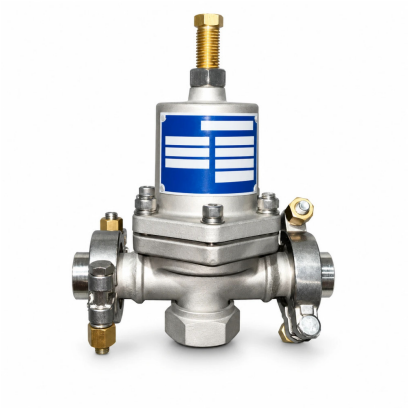
Related construction

ARD-GL-016 / LH2 cold-box bellows shut-off valve

09

Pressure regulators

Pressure-building and pressure-reducing references for the defined inlet, outlet and flow conditions.



Article	Configuration	Size range	Pressure	Connection	Page
ARD-RG-001	**Cryogenic pressure-building valve**	DN 20-50	PN40 (4.0 MPa nominal)	Threaded / union	152
ARD-RG-002	**Self-operated pressure-reducing valve**	DN 25-150	PN40 (4.0 MPa nominal)	Socket weld (SW)	154
ARD-RG-003*	**Liquid-hydrogen pressure-reducing valve**	Nominal size to specify	Inlet / outlet pressure to specify	End connections to specify	156

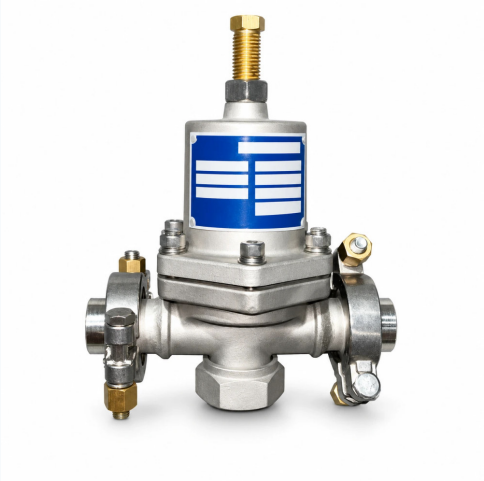
* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-RG-001

Selection notes S01 S30

Cryogenic pressure-building valve

A self-operated pressure-building valve for tank pressure management, with threaded connections.



Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 20-50

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Threaded / union

MEDIUM
O2, N2, Ar, CO2, NG

Technical data

Flow direction	Low to high

Materials

Body	CF8
Bonnet	CF8
Spring	1Cr18Ni9
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Threaded
- Flow direction: Low to high

Connection details

Published connection
Threaded

Connection standard
Not specified on this product page. Confirm the mating standard with the offer.

Drawing designation M
36x2, 52x2, 80x2 (size-dependent; see dimension table).

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

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ARD-RG-001 / DIMENSIONS

Cryogenic pressure-building valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	L	L1	DIxt	M	Weight (kg)
20	185	140	212	25x2.5	36x2	3.83
25	185	140	212	29x3	36x2	3.83
25	185	140	212	32x3	36x2	3.83
32	214	251	173	38x3	52x2	-
40	214	251	173	45x4	52x2	-
50	335	328	260	60x5	80x2	-

ARD-RG-002

Selection notes S01 S04

Self-operated pressure-reducing valve

A spring-operated regulator for pressure reduction, with socket-weld ends and stainless steel wetted components.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 25-150

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
O2, N2, Ar, CO2, NG

Technical data

Flow direction	Low to high

Materials

Body	CF8
Bonnet	06Cr19Ni10
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE
Cylinder	Aluminum alloy

Design features

- Socket weld

Design features / continued

- Flow direction: Low to high

Connection details

Published connection

Socket weld

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-RG-002 / DIMENSIONS

Self-operated pressure-reducing valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	L	DI	B	Weight (kg)
25	412	80	32.5	6	3.83
32	437	100	38.5	8	5.42
40	437	100	45.5	8	-
50	492	130	57.5	8	-
65	562	150	76.5	10	-
80	584	180	90	15	-
100	630	200	109	15	-
125	670	280	134	15	-
150	687	350	160	30	-

ARD-RG-003

Selection notes S02 S03

Liquid-hydrogen pressure-reducing valve

A liquid-hydrogen pressure-reducing enquiry reference for a defined upstream and downstream pressure duty. Regulating architecture, sensing arrangement and insulation are selected from the actual process cases.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE

Nominal size to specify

PRESSURE RATINGS

Inlet / outlet pressure to specify

TEMPERATURE

LH2 service down to -253°C; selected limits to confirm

END CONNECTIONS

End connections to specify

MEDIUM

LH2 / liquid hydrogen

Technical data

Construction	LH2 pressure-reducing family; selected architecture to confirm
Operation	Regulating system to select; spring-loaded arrangement illustrated

Materials

Pressure parts	Hydrogen-compatible grades to select
Regulating trim and seals	Duty-specific LH2 material system to confirm

Design features

- Dedicated LH2 pressure-reduction duty
- Inlet/outlet cases define the selection

Design features / continued

- Sensing and control arrangement specified for the project

Connection details

Connection options

End connections to specify

Configuration selection

The flanged layout and regulator exterior are illustrative; the selected pressure-reducing design requires confirmation.

Engineering requirements

Regulator sizing

Provide inlet range, outlet set point, minimum/normal/maximum flow and permissible droop.

Process integration

Confirm fluid phase, flashing risk, sensing arrangement, relief protection and insulated interfaces.

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-RG-003

Liquid-hydrogen pressure-reducing valve

Selection notes

- No set-point band, capacity, Cv/Kv, droop or self-operated/pilot mechanism is established by the family statement. Select these explicitly before quotation.

10

Emergency shut-off

Emergency shut-off arrangements with operating, loss-of-supply and integration requirements to define.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-ES-001	**Pneumatic emergency shut-off valve**	DN 10-200	PN40 (4.0 MPa nominal)	Socket weld (SW)	159
ARD-ES-002	**Cryogenic emergency shut-off valve · PN16 · BW**	DN 65-100	PN16	Butt weld (BW)	161
ARD-ES-003	**Cryogenic emergency shut-off valve · PN16/40 · SW**	DN 10-50	PN16 · PN40	Socket weld (SW)	162
ARD-ES-004	**High-pressure cryogenic shut-off valve · PN160**	DN 10-40	PN160 (16.0 MPa nominal)	Weld ends - preparation to specify	165
ARD-ES-005*	**Vacuum-jacketed liquid-hydrogen pneumatic shut-off valve**	NPS 1/2-6	ASME Class 150-600	Socket weld (SW) / butt weld (BW) / RF flanged	167
ARD-ES-006*	**LH2 thermal-barrier pneumatic shut-off valve**	DN 15-250 / NPS 1/2-10 - series scope	ASME Class 150-300	Butt weld (BW)	169

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-ES-001

Selection notes S01 S04

Pneumatic emergency shut-off valve

A pneumatic shut-off range with an extended bonnet and a published thermal emergency shut-off temperature.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-200

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Technical data

Emergency shut-off temperature	70°C±5°C
Flow direction	High to low

Materials

Body	CF8
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Socket weld
- Flow direction: High to low

Connection details

Published connection
Socket weld

Connection standard
Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-ES-001 / DIMENSIONS

Pneumatic emergency shut-off valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	H1	L	D0	DI	B	Weight (kg)
10	392	238	60	80	14.5	5	-
15	392	238	60	80	18.5	5	-
20	459	305	80	80	25.5	6	-
25	459	305	80	80	32.5	6	4.825
32	474	317	100	80	38.5	8	8.97
40	516	338	100	140	45.5	8	9.05
50	557	377	130	140	57.5	8	11.20
65	567	387	150	140	76.5	10	13
80	698	470	180	220	90	15	27
100	698	470	200	220	109	15	-
125	782	554	280	220	134	15	-
150	833	605	350	220	160	30	-
200	914	686	400	220	220	20	67.5

ARD-ES-002

Selection notes S01 S05 S06 S16 S37 S38

Cryogenic emergency shut-off valve · PN16 · BW

A pneumatically operated shut-off valve for DN65-100 butt-weld cryogenic lines. The pictured actuator includes a manual override; the fail action and shutdown duty require selection.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 65-100

PRESSURE RATINGS
PN16

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Butt weld (BW)

MEDIUM
LNG, LOX, LN2, LAr

Technical data

Connection	Butt Weld
Operation	Pneumatic actuator with handwheel
series temperature*	-196°C to +80°C

Materials

Body	CF8
Disc	S30408

Design features

- Catalogue body: CF8
- Published connections: Butt Weld

Connection details

Published connection
Butt Weld

Selection notes

- Specify required fail position, air pressure, closure time, actuator sizing and shutdown-test requirements; no SIL or fail-safe certification is asserted.

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DATA REVISION 2026-10-28

ARD-ES-003

Selection notes S01 S05 S06 S08 S14 S15

Cryogenic emergency shut-off valve · PN16/40 · SW

A compact socket-weld shut-off range with pneumatic actuation and manual override. PN16 and PN40 options are listed for DN10-50.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-50

PRESSURE RATINGS
PN16 · PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Socket weld (SW)

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Socket Weld
Operation	Pneumatic actuator with handwheel
series temperature*	-196°C to +80°C

Materials

Body	CF8
Disc	S30408

Design features

- Catalogue body: CF8
- Published connections: Socket Weld

Connection details

Published connection

Socket Weld

Reference drawing scope

PN16 socket-weld arrangement with the illustrated actuator, DN15-DN50. DN10 is not tabulated. PN40 and other actuators require their own drawings. M is the pilot-air connection, not a linear dimension.

Engineering requirements

Dimension data

Reference table and drawing: DN15, DN20, DN25, DN32, DN40, DN50. Dimensions and connection reference.

ARD-ES-003

Cryogenic emergency shut-off valve · PN16/40 · SW

Selection notes

- Specify required fail position, air pressure, closure time, actuator sizing and shutdown-test requirements; no SIL or fail-safe certification is asserted.

Reference material schedule

Body	CF8
Screw	S30408
Hexagon Nut	S30408
Disc Sealing	PCTFE
Stem	S30408
Connecting Nut	S30408
Disc	S30408
V Ring	PTFE
Connecting Pipe	S30408
Gasket	RPTFE
Gland Nut	S30408
Gland Packings	S30408
Bonnet	S30408
Cylinder Body & Cover	ZL104
Hand Wheel	Y102

Material schedule scope

- Materials apply to the supplied reference arrangement. PN16 socket-weld arrangement with the illustrated actuator, DN15-DN50. DN10 is not tabulated. PN40 and other actuators require their own drawings. M is the pilot-air connection, not a linear dimension.

ARD-ES-003 / DIMENSIONS

Cryogenic emergency shut-off valve · PN16/40 · SW

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	H	H1	D	D0	D1	D2	B	W1	W2	M
15	457	175	Ø100	Ø15	Ø18.5	Ø29.5	6	65	Ø130	Rc1/4
20	479	179	Ø100	Ø20	Ø25.5	Ø36	8	80	Ø130	Rc1/4
25	486	186	Ø100	Ø25	Ø32.5	Ø43.5	8	90	Ø130	Rc1/4
32	500	200	Ø100	Ø32	Ø38.5	Ø53	8	105	Ø130	Rc1/4
40	577	223	Ø125	Ø40	Ø45.5	Ø62	8	120	Ø160	Rc1/4
50	587	233	Ø125	Ø50	Ø57.5	Ø72	10	140	Ø160	Rc1/4

PN16 socket-weld arrangement with the illustrated actuator, DN15-DN50. DN10 is not tabulated. PN40 and other actuators require their own drawings. M is the pilot-air connection, not a linear dimension.

ARD-ES-004

Selection notes S01

High-pressure cryogenic shut-off valve · PN160

A PN160 cryogenic shut-off series for DN10-40 welded lines, with hard-alloy sealing. The illustrated pneumatic assembly includes a cylindrical actuator, an open yoke, an extended neck and a T-bar manual override.

Reference-based product illustration of one arrangement. The approved outline drawing defines dimensions and supplied construction.

SIZE RANGE
DN 10-40

PRESSURE RATINGS
PN160 (16.0 MPa nominal)

TEMPERATURE
-196 to +75°C

END CONNECTIONS
Weld ends - preparation to specify

MEDIUM
LNG / NG, LOX / O2, LN2 / N2, LAr / Ar

Technical data

Operation	Pneumatic cylinder with manual override in illustrated arrangement
Flow direction	Under the disc to above the disc
Inspection reference	GB/T 24918

Materials

Body, bonnet and stem	Stainless steel; exact grade to specify
Seal	Hard alloy; grade to specify

Design features

- PN160 nominal-pressure series
- Hard-alloy sealing

Design features / continued

- Extended-neck pneumatic assembly with manual override

Connection details

Connection options

Weld ends - preparation to specify

Interface selection

Specify the end standard, nominal size, pipe dimensions and required mating interface.

Weld preparation

The series is documented as welded. Specify BW/SW type, bore, pipe OD and wall thickness; no weld preparation is inferred from the illustration.

Engineering requirements

Duty definition

Specify differential pressure, flow direction, leakage requirement and operating frequency.

ARD-ES-004

High-pressure cryogenic shut-off valve · PN160

Engineering requirements / continued

Pneumatic controls

Specify air supply, fail action, control signal, feedback and required manual-override operation.

Selection notes

- Fail-open/fail-close action, spring arrangement, control supply, closing time and any ESD or SIL documentation are specified for the selected assembly; the photograph does not establish these functions.

ARD-ES-005

Selection notes S02 S03

Vacuum-jacketed liquid-hydrogen pneumatic shut-off valve

A lifting-type liquid-hydrogen shut-off assembly combining pneumatic linear actuation, an extended bonnet, a vacuum-jacketed body and a selected bellows sealing arrangement.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 1/2-6

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
-253 to +80°C

END CONNECTIONS
Socket weld (SW) / butt weld (BW) / RF flanged

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Lifting-type shut-off; vacuum jacket; bellows seal
Operation	Pneumatic linear actuator

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Dedicated LH2 isolation
- Insulated body and extended bonnet

Design features / continued

- Linear pneumatic operating package

Connection details

Connection options

Socket weld (SW) / butt weld (BW) / RF flanged

Engineering requirements

Shutdown function

Specify trip logic, fail action, utility loss cases and required closing behaviour.

Assembly qualification

Confirm seat load, bellows design, material schedule and low-temperature leak testing.

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ARD-ES-005

Vacuum-jacketed liquid-hydrogen pneumatic shut-off valve

Selection notes

- Fail-close action, response time, fire-test coverage and SIL qualification require evidence for the complete selected assembly; none follows from the product name alone.

ARD-ES-006

Selection notes S09 S10 S12

LH2 thermal-barrier pneumatic shut-off valve

A pneumatic LH2 shut-off globe assembly with an extended thermal-barrier bonnet. The cold pressure body and warm operating package are selected together for the required isolation sequence.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 15-250 / NPS 1/2-10 - series scope

PRESSURE RATINGS
ASME Class 150-300

TEMPERATURE
-253 to +80°C - LH2 selection

END CONNECTIONS
Butt weld (BW)

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Pneumatic shut-off globe; thermal barrier; extended bellows/packing seal
Operation	Pneumatic diaphragm
Insulation options	Vacuum jacket with multi-layer insulation or non-jacketed arrangement
Operating package	Fail position, air pressure, solenoid, feedback and trip interface to specify
End standard	Butt weld to ASME B16.25

Materials

Body	304L / 316L stainless steel

Materials / continued

Trim / seats	Selected cryogenic metal and polymer trim; confirm grades for LH2

Design features

- Pneumatic remote isolation
- Extended thermal-barrier bonnet
- Cold-box maintenance planning

Connection details

Process ends

Butt weld to ASME B16.25; confirm the selected pipe schedule.

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ARD-ES-006

TECHNICAL DATA / CONTINUED

LH2 thermal-barrier pneumatic shut-off valve

Engineering requirements

Process duty

Specify LH2 phase, design temperature, pressure, flow and differential pressure.

Selection notes

- The size range is the combined LH2 family scope; confirm the emergency shut-off model matrix. A specified fail action, closing time or SIL status requires qualification of the complete assembly.

Related construction

ARD-GL-017 / LH2 thermal-barrier globe valve

11

Safety & protection

Relief and protection references. Set pressure, capacity and discharge requirements form part of selection.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-SF-001	**Low-lift safety valve**	DN 10-40	PN40 (4.0 MPa nominal)	Threaded / union	172
ARD-SF-002	**Full-lift safety valve**	DN 10-40	PN40 (4.0 MPa nominal)	Threaded / union	174
ARD-SF-003	**Flanged flame arrester**	DN 25-250	PN16 (1.6 MPa nominal)	Flanged	176
ARD-SF-004	**Cryogenic safety valve · male BSP/NPT**	DN 10-25	Set pressure to specify	Male BSP / NPT threaded	178
ARD-SF-005*	**Cryogenic safety valve · PN320 · male BSP/NPT**	DN 10-25	PN320	Male BSP / NPT threaded	181
ARD-SF-006	**Cryogenic safety valve · female BSP/NPT**	DN 15-25	Set pressure to specify	Female BSP / NPT threaded	184
ARD-SF-007	**Cryogenic safety valve · Class 150 / PN40 flanges**	DN 40-150	Relief setting to specify	Flanged · Class 150 / PN40	187
ARD-SF-008*	**Liquid-hydrogen safety valve**	Connection size to specify	PN40 nominal; set pressure to specify	Threaded / weld ends	188

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-SF-001

Selection notes S01 S30

Low-lift safety valve

A threaded low-lift relief valve range for pressure protection duties defined by the application.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-40

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +80°C

END CONNECTIONS
Threaded / union

MEDIUM
O2, N2, Ar, CO2, NG

Materials

Body	CF8
Spring	1Cr18Ni9
Top / closure element	06Cr19Ni10+RPTFE
Gasket	PTFE

Design features

- Threaded

Connection details

Published connection

Threaded

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Connection details / continued

Drawing designation M1

16x1, 20x1.5, G3/8, 30x1.5, 36x2, 48x2, 52x2 (size-dependent; see dimension table).

Drawing designation M2

20x1.5, 22x1.5, 32x2, 42x2, 52x2 (size-dependent; see dimension table).

Selection notes

- Nominal pressure is not a selected set pressure. Specify the set pressure, required relieving capacity, medium and applicable approval requirements.
- "Top / closure element" follows the component designation in the reference material list.

ARD-SF-001 / DIMENSIONS

Low-lift safety valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	M1	M2	L1	L2	Weight (kg)
10	98	16X1	20X1.5	57	28	0.32
10	98	20X1.5	22X1.5	57	28	0.32
10	98	G3/8	20X1.5	57	28	0.32
15	116	30X1.5	32X2	61	38	0.62
25	138	36X2	42X2	82	40	0.91
32	195	48X2	52X2	104	60	-
40	195	52X2	52X2	104	60	-

ARD-SF-002

Selection notes S01 S30

Full-lift safety valve

A full-lift safety valve range with a stainless steel body and hard-faced closure components.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-40

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +80°C

END CONNECTIONS
Threaded / union

MEDIUM
O2, N2, Ar, CO2, NG

Materials

Body	CF8
Seat	06Cr19Ni10+CO112
Spring	1Cr18Ni9
Top / closure element	06Cr19Ni10+CO112
Gasket	PTFE

Design features

- Threaded

Connection details

Published connection

Threaded

Connection details / continued

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Drawing designation M1

31x1.5, 30x1.5, 36x2, 48x2, 52x2 (size-dependent; see dimension table).

Drawing designation M2

24x1.5, 30x1.5, 42x2, 45x2, 52x2, 62x2 (size-dependent; see dimension table).

Selection notes

- Nominal pressure is not a selected set pressure. Specify the set pressure, required relieving capacity, medium and applicable approval requirements.
- "Top / closure element" follows the component designation in the reference material list.

ARD-SF-002 / DIMENSIONS

Full-lift safety valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	M1	M2	L1	L2	Weight (kg)
10	138	31X1.5	24X1.5	48	35	-
15	168	30X1.5	30X1.5	56	45	1.05
20	180	36X2	42X2	55	48	1.405
25	180	36X2	42X2	55	48	-
25	181	36X2	45X2	59	47	-
32	211	48X2	52X2	76	63	-
40	214	52X2	62X2	75	68	-

ARD-SF-003

Selection notes S01 S07

Flanged flame arrester

A flanged stainless steel flame-arrester range with published dimensional data through DN 250.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 25-250

PRESSURE RATINGS
PN16 (1.6 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Flanged

MEDIUM
Specify for the application

Technical data

Published medium	IIC

Materials

Body	06Cr19Ni10
Core	06Cr19Ni10
Gasket	06Cr19Ni10+graphite

Design features

- Flange HG20592

Connection details

Published connection

Flange HG20592

Connection details / continued

Referenced flange standard

HG 20592 (designation as published); edition, facing, drilling and pressure designation must be specified.

Selection notes

- "IIC" is the medium classification stated in the reference. The required gas group, flame-arresting duty and certification must be specified for selection.

ARD-SF-003 / DIMENSIONS

Flanged flame arrester

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	L	K	D	N-	Weight (kg)
25	204	85	115	4-14	-
32	234	100	140	4-18	-
40	238	110	150	4-18	-
50	260	125	165	4-18	-
65	260	145	185	8-18	-
80	322	160	200	8-18	-
100	326	180	220	8-18	-
125	366	210	250	8-18	-
150	406	240	285	8-22	-
200	464	295	340	12-22	-
250	546	355	405	12-26	-

ARD-SF-004

Selection notes S01 S05 S08 S24 S25 S28 S33

Cryogenic safety valve · male BSP/NPT

A spring-loaded pressure-relief valve with male threaded catalogue connections. DN10, DN15 and DN25 are listed; set pressure and certified relieving capacity are selected separately.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-25

PRESSURE RATINGS
Set pressure to specify

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Male BSP / NPT threaded

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Male threaded, BSP / NPT
Pressure / setting	Specify rating and required set pressure
Operation	Spring-loaded pressure relief
series temperature*	-196°C to +80°C

Materials

Body	CF8
Seat	HPb59-1
Disc	HPb59-1

Design features

- Catalogue body: CF8
- Published connections: BSP · NPT · Male

Connection details

Published connection

BSP · NPT · Male

Reference drawing scope

PN40 reference relief arrangement with metric M1/M2 connections, DN10, DN15 and DN25. BSP/NPT variants need their own drawings. Spring bands are listed separately; certified discharge capacity is required for sizing.

Engineering requirements

Dimension data

Reference table and drawing: DN10, DN15, DN25. Dimensions and connection reference.

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ARD-SF-004

TECHNICAL DATA / CONTINUED

Cryogenic safety valve · male BSP/NPT

Reference material schedule

Dust Cover	HPb59-1
Bonnet	CF8
Disc	HPb59-1
Upper Gasket	T2
Stem	HPb59-1
Gasket	PTFE+C
Lock Nut	HPb59-1
Spring Bottom Pad	HPb59-1
Body	CF8
Adjusting Nut	HPb59-1
Sealing	T2
Valve Seat	HPb59-1
Spring	S30210
Gland Ring	HPb59-1

Material schedule scope

- Materials apply to the supplied reference arrangement. PN40 reference relief arrangement with metric M1/M2 connections, DN10, DN15 and DN25. BSP/NPT variants need their own drawings. Spring bands are listed separately; certified discharge capacity is required for sizing.

ARD-SF-004 / DIMENSIONS

Cryogenic safety valve · male BSP/NPT

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	H	H1	D0	L	M1	M2	Set pressure (MPa)	Weight (kg)
10	161	56	Ø10.5	49	M30x1.5	M36x2	0.4 - 1.59	0.8
10	161	56	Ø10.5	49	M30x1.5	M36x2	1.60 - 2.7	0.8
10	161	56	Ø10.5	49	M30x1.5	M36x2	2.71 - 3.5	0.8
15	161	56	Ø10.5	49	M30x1.5	M36x2	0.4 - 1.59	1.0
15	161	56	Ø10.5	49	M30x1.5	M36x2	1.60 - 2.7	1.0
15	161	56	Ø10.5	49	M30x1.5	M36x2	2.71 - 3.5	1.0
25	186	69.5	Ø15	63	M36x2	M45x2	0.4 - 1.59	1.5
25	186	69.5	Ø15	63	M36x2	M45x2	1.60 - 2.7	1.5
25	186	69.5	Ø15	63	M36x2	M45x2	2.71 - 3.5	1.5

PN40 reference relief arrangement with metric M1/M2 connections, DN10, DN15 and DN25. BSP/NPT variants need their own drawings. Spring bands are listed separately; certified discharge capacity is required for sizing.

ARD-SF-005

Selection notes S05 S08 S17 S24 S25 S28 S33

Cryogenic safety valve · PN320 · male BSP/NPT

A DN15 PN320 safety-valve range with three published set-pressure bands. The catalogue coefficient is 0.66; certified capacity and the final relief sizing remain order-specific.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-25

PRESSURE RATINGS
PN320

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Male BSP / NPT threaded

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Male threaded, BSP / NPT
Operation	Spring-loaded pressure relief
series temperature*	-196°C to +80°C
Set-pressure bands	5-10.9 / 11-19.9 / 20-28 MPa
Catalogue coefficient	0.66

Materials

Body	CF8
Seat	HPb59-1
Disc	HPb59-1

Design features

- Catalogue body: CF8
- Published connections: BSP · NPT · Male

Connection details

Published connection

BSP · NPT · Male

Reference drawing scope

PN320 DN15 reference arrangement with M36x2 / M39x2 metric connections. Reference body/trim are S30408 / S32168. Catalogue CF8 / HPb59-1 and BSP/NPT variants need their own drawings. Setting bands are not certified discharge capacity.

Engineering requirements

Dimension data

Reference table and drawing: DN15. Dimensions and connection reference.

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ARD-SF-005

TECHNICAL DATA / CONTINUED

Cryogenic safety valve · PN320 · male BSP/NPT

Selection notes

- Available dimensional data: DN 15; PN320. Other sizes and ratings require technical confirmation.

Reference material schedule

Cover	HPb59-1
Spring	S30210
Body	S30408
Adjusting Screw	HPb59-1
Spring Seat	S30408
Sealing	T2
Gasket	PTFE
Disc	S32168
Valve Seat	S32168
Ejector Bar	S42020
Adjusting Ring	HPb59-1
Bonnet	S30408

Material schedule scope

- Materials apply to the supplied reference arrangement. PN320 DN15 reference arrangement with M36x2 / M39x2 metric connections. Reference body/trim are S30408 / S32168. Catalogue CF8 / HPb59-1 and BSP/NPT variants need their own drawings. Setting bands are not certified discharge capacity.

ARD-SF-005 / DIMENSIONS

Cryogenic safety valve · PN320 · male BSP/NPT

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	H	H1	D0	W	M1	M2	Set pressure (MPa)
15	269	72.5	Ø8	57.5	M36x2	M39x2	11 - 19.9
15	269	72.5	Ø8	57.5	M36x2	M39x2	20 - 28
15	269	72.5	Ø8	57.5	M36x2	M39x2	5 - 10.9

PN320 DN15 reference arrangement with M36x2 / M39x2 metric connections. Reference body/trim are S30408 / S32168. Catalogue CF8 / HPb59-1 and BSP/NPT variants need their own drawings. Setting bands are not certified discharge capacity.

ARD-SF-006

Selection notes S01 S05 S08 S24 S25 S28 S33

Cryogenic safety valve · female BSP/NPT

A spring-loaded safety-valve catalogue reference offering female BSP or NPT connections. DN15-25 are listed, with a separate reference arrangement for connection and spring-band reference.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 15-25

PRESSURE RATINGS
Set pressure to specify

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Female BSP / NPT threaded

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Female threaded, BSP / NPT
Pressure / setting	Specify rating and required set pressure
Operation	Spring-loaded pressure relief
series temperature*	-196°C to +80°C

Materials

Body	CF8
Seat	HPb59-1
Disc	HPb59-1

Design features

- Catalogue body: CF8
- Published connections: BSP · NPT · Female

Connection details

Published connection

BSP · NPT · Female

Reference drawing scope

Supplied female-threaded relief arrangement, DN15 and DN25. M1/M2 are the exact reference connection designations, including metric threads; do not substitute BSP/NPT. DN20 is not tabulated. Set-pressure bands do not establish relief capacity.

Pictured thread arrangement

The supplied illustration shows a female side port and a male downward adapter. Confirm the complete inlet/outlet arrangement for the female-threaded catalogue option.

ARD-SF-006

TECHNICAL DATA / CONTINUED

Cryogenic safety valve · female BSP/NPT

Engineering requirements

Dimension data

Reference table and drawing: DN15, DN25. Dimensions and connection reference.

Selection notes

- the technical record offers female BSP/NPT connections, while its illustration includes a male downward adapter. Confirm the complete port arrangement using the order drawing; the image is retained as a illustrated arrangement.

Reference material schedule

Cover	HPb59-1
Spring Seat	S30408
Adjusting Ring	HPb59-1
Adjusting Screw	HPb59-1
Ejector Bar	20Cr13
Body	S30408
Lock Nut	S30408
Spring	S30210
Sealing	T2
Sealing	PTFE
Disc	S32168
Valve Seat	S32168
Bonnet	S30408

Material schedule scope

- Materials apply to the supplied reference arrangement. Supplied female-threaded relief arrangement, DN15 and DN25. M1/M2 are the exact reference connection designations, including metric threads; do not substitute BSP/NPT. DN20 is not tabulated. Set-pressure bands do not establish relief capacity.

ARD-SF-006 / DIMENSIONS

Cryogenic safety valve · female BSP/NPT

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	H	H1	M1	M2	L	Operating pressure (MPa)	Set pressure (MPa)
15	150	56	G3/4	M30x1.5	35	4.0	0.4 - 1.0
15	150	56	G3/4	M30x1.5	35	4.0	1.0 - 2.0
15	150	56	G3/4	M30x1.5	35	4.0	2.0 - 3.0
25	197	69	G1 1/4	M36x2	47	4.0	0.4 - 1.0
25	197	69	G1 1/4	M36x2	47	4.0	1.0 - 2.0
25	197	69	G1 1/4	M36x2	47	4.0	2.0 - 3.0

Supplied female-threaded relief arrangement, DN15 and DN25. M1/M2 are the exact reference connection designations, including metric threads; do not substitute BSP/NPT. DN20 is not tabulated. Set-pressure bands do not establish relief capacity.

ARD-SF-007

Selection notes S01 S16 S28 S29 S31 S33 S35

Cryogenic safety valve · Class 150 / PN40 flanges

A flanged cryogenic safety-valve range covering DN40-150. Class 150 and PN40 describe separate flange options; the required relief setting and capacity are specified independently.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 40-150

PRESSURE RATINGS
Relief setting to specify

TEMPERATURE
Confirm design temperature

END CONNECTIONS
Flanged · Class 150 / PN40

MEDIUM
LNG, LOX, LN2, LAr, CO2

Technical data

Connection	Flanged CL150 / Flanged PN40
Pressure / setting	Specify rating and required set pressure
Operation	Spring-loaded pressure relief
Temperature	Confirm limits for the selected construction

Materials

Body	CF8

Design features

- Catalogue body: CF8

Design features / continued

- Published connections: Flanged CL150 · Flanged PN40

Connection details

Published connection

Flanged CL150 · Flanged PN40

Published flange options

Class 150 and PN40 are alternative flange ranges, not relief set pressures or equivalent designations.

ARD-SF-008

Liquid-hydrogen safety valve

A 316L safety-valve reference for liquid-hydrogen pressure protection down to -253°C. Connection size, set pressure and certified relieving capacity are defined for the protected equipment.

Reference-based product illustration of one arrangement. The approved outline drawing defines dimensions and supplied construction.

SIZE RANGE
Connection size to specify

PRESSURE RATINGS
PN40 nominal; set pressure to specify

TEMPERATURE
-253 to +80°C

END CONNECTIONS
Threaded / weld ends

MEDIUM
LH2 / liquid hydrogen

Technical data

Protection duty	Liquid-hydrogen pressure relief
Set pressure	To be specified and certified
Relieving capacity	To be sized and certified for the protected equipment
Back pressure	To be specified

Materials

Body and bonnet	316L stainless steel
Sealing material	VESPEL / MELDEN - selected grade to confirm
Spring	316 stainless steel

Design features

- Dedicated liquid-hydrogen reference
- 316L construction and defined sealing-material selection
- Inlet and outlet arrangement reviewed for the protected system

Connection details

Connection options

Threaded / weld ends

Interface selection

Specify the end standard, nominal size, pipe dimensions and required mating interface.

Illustrated ports

Two male-threaded ports are visible; the thread standard and sizes are not established by the photograph.

ARD-SF-008

Liquid-hydrogen safety valve

Connection details / continued

Documented alternatives

Threaded and welded alternatives are listed; confirm the selected inlet and outlet arrangement.

Engineering requirements

Relief sizing

Specify protected volume/equipment, credible heat input or other relief case, set pressure, medium state and required discharge capacity.

Discharge system

Confirm inlet pressure loss, outlet connection, back pressure and the approved relief-system arrangement.

Selection notes

- Connection size, set pressure and certified capacity require project selection. These are not verified availability or approved operating limits for an unspecified safety-valve configuration.
- No numeric DN range, spring setting range, discharge coefficient or certified relieving capacity is established by this reference. Nominal pressure must not be used as a relief set pressure.
- Opening behavior, accumulation, blowdown, back-pressure limits and required approval are confirmed for the selected valve.

12

Vacuum-jacketed

Vacuum-jacketed arrangements for installations with defined insulation and interface requirements.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-VJ-001	**Vacuum-jacketed globe valve**	DN 15-80	PN40 (4.0 MPa nominal)	Socket weld (SW)	191
ARD-VJ-002	**Vacuum-jacketed emergency shut-off valve**	DN 15-80	PN40 (4.0 MPa nominal)	Socket weld (SW)	193
ARD-VJ-003	**Vacuum-jacketed cryogenic lift check valve**	DN 25-50	PN40 (4.0 MPa nominal)	Weld ends - preparation to specify	195
ARD-VJ-004*	**Vacuum-jacketed liquid-hydrogen lift check valve**	NPS 1/2-6 / DN 15-150	ASME Class 150-600	Socket weld (SW) / butt weld (BW) / RF flanged	197
ARD-VJ-005*	**Vacuum-insulated liquid-hydrogen globe valve**	DN 8-100	PN50 (5.0 MPa nominal)	Weld ends - preparation to specify	199

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-VJ-001

Selection notes S01 S04

Vacuum-jacketed globe valve

A vacuum-jacketed globe configuration for insulated cryogenic pipework.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 15-80

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Technical data

Flow direction	Low to high

Materials

Body	06Cr19Ni10
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Socket weld
- Flow direction: Low to high

Connection details

Published connection

Socket weld

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-VJ-001 / DIMENSIONS

Vacuum-jacketed globe valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H1	H2	H3	K	D0	L	D1	B	Weight (kg)
15	210	20	97	69	65	60	18.5	5	-
25	210	20	97	82	80	80	32.5	6	-
40	250	22	110	101	100	100	45.5	8	-
50	280	25	143	126	140	130	57.5	8	-
65	280	25	143	152	160	150	76.5	10	-
80	350	30	155	162	220	180	90	15	-

ARD-VJ-002

Selection notes S01 S04

Vacuum-jacketed emergency shut-off valve

A jacketed emergency shut-off configuration combining cryogenic insulation with pneumatic operation.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 15-80

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Socket weld (SW)

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Materials

Body	06Cr19Ni10
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Socket weld

Connection details

Published connection

Socket weld

Connection details / continued

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- The range is listed as DN 15-80; published dimensional values are available for DN 15, 25, 40 and 50 only.
- "Top / closure element" follows the component designation in the reference material list.

ARD-VJ-002 / DIMENSIONS

Vacuum-jacketed emergency shut-off valve

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	H1	H2	H3	K	D0	L	D1	B	Weight (kg)
15	535	210	20	152	69	80	60	18.5	5	-
25	535	210	20	152	82	80	80	32.5	6	-
40	627	250	22	177	101	140	100	45.5	8	-
50	662	280	25	178	126	140	130	57.5	8	-

ARD-VJ-003

Selection notes S01

Vacuum-jacketed cryogenic lift check valve

An insulated lift-check configuration for DN25-50 cryogenic pipework, combining a vacuum-jacketed body arrangement with automatic non-return operation and PTFE sealing.

Reference-based product illustration of one arrangement. The approved outline drawing defines dimensions and supplied construction.

SIZE RANGE
DN 25-50

PRESSURE RATINGS
PN40 (4.0 MPa nominal)

TEMPERATURE
-196 to +80°C

END CONNECTIONS
Weld ends - preparation to specify

MEDIUM
LNG / NG, LOX / O2, LN2 / N2, LAr / Ar

Technical data

Function	Automatic lift-type non-return
Flow direction	Under the disc to above the disc
Inspection reference	GB/T 24925

Materials

Body, bonnet and disc	Stainless steel; exact grade to specify
Seal	PTFE

Design features

- Vacuum-jacketed lift-check construction
- PTFE sealing

Design features / continued

- Automatic operation without an external drive

Connection details

Connection options

Weld ends - preparation to specify

Interface selection

Specify the end standard, nominal size, pipe dimensions and required mating interface.

Process welds

Confirm end preparation, pipe OD, wall thickness and the process-pipe material. The published designation is welded.

Vacuum-jacket interface

Confirm jacket dimensions, vacuum boundary and integration with the insulated line.

ARD-VJ-003

TECHNICAL DATA / CONTINUED

Vacuum-jacketed cryogenic lift check valve

Engineering requirements

Installation

Confirm permitted mounting orientation and service clearance above the bolted jacket.

Insulation system

Specify the process line and jacket dimensions and required vacuum-system documentation.

Selection notes

- Cracking pressure, allowable differential pressure, installation orientation and vacuum performance require the selected assembly data; no values are inferred from the image.

ARD-VJ-004

Selection notes S02 S03

Vacuum-jacketed liquid-hydrogen lift check valve

A dedicated liquid-hydrogen non-return assembly with an insulated body and a guided, spring-return lift closure. The passive valve is selected with the flow regime and installation orientation.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 1/2-6 / DN 15-150

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
-253 to +120°C

END CONNECTIONS
Socket weld (SW) / butt weld (BW) / RF flanged

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Vacuum-jacketed guided lift disc; spring return
Operation	Automatic non-return

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Dedicated LH2 non-return duty
- Guided lift closure

Design features / continued

- Vacuum-jacketed body

Connection details

Connection options

Socket weld (SW) / butt weld (BW) / RF flanged

Engineering requirements

Non-return duty

Specify normal/minimum flow, allowable reverse flow, cracking pressure and mounting orientation.

Insulated-line interface

Confirm process pipe, jacket boundary, vacuum performance and service clearance.

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-VJ-004

TECHNICAL DATA / CONTINUED

Vacuum-jacketed liquid-hydrogen lift check valve

Selection notes

- No cracking-pressure value, pressure-loss coefficient or transient closure guarantee is inferred from the illustration.

ARD-VJ-005

Selection notes S02 S03

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.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
DN 8-100

PRESSURE RATINGS
PN50 (5.0 MPa nominal)

TEMPERATURE
-253 to +150°C

END CONNECTIONS
Weld ends - preparation to specify

MEDIUM
LH2 / liquid hydrogen

Technical data

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

Materials

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

Design features

- Vacuum-insulated LH2 configuration
- Full-penetration welded construction

Design features / continued

- Manual extended upper assembly

Connection details

Connection options

Weld ends - preparation to specify

Configuration selection

Full-penetration welding describes the construction, not a named process-pipe end standard. Confirm the process and jacket interfaces.

Engineering requirements

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.

Product online **Download datasheet**

DATA REVISION 2026-10-29

ARD-VJ-005

TECHNICAL DATA / CONTINUED

Vacuum-insulated liquid-hydrogen globe valve

Selection notes

- 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.

13

Cryogenic strainers

Cryogenic filtration references with the connection, filter specification and service conditions to define.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-ST-001	**Cryogenic strainer · PN40 · SW**	DN 10-50	PN40	Socket weld (SW)	202
ARD-ST-002*	**Vacuum-jacketed liquid-hydrogen filter**	NPS 1/2-6	ASME Class 150-600	Socket weld (SW) / butt weld (BW) / RF flanged	205

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-ST-001

Selection notes S01 S05 S06 S08 S14 S15

Cryogenic strainer · PN40 · SW

A socket-weld cryogenic strainer with a CF8 body and S30408 filter element. Select the mesh or aperture, allowable pressure loss and maintenance clearance for the line.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 10-50

PRESSURE RATINGS
PN40

TEMPERATURE
-196 to +80°C · series*

END CONNECTIONS
Socket weld (SW)

MEDIUM
LNG, LOX, LN2, LAr

Technical data

Connection	Socket Weld
series temperature*	-196°C to +80°C

Materials

Body	CF8
Filter	S30408

Design features

- Catalogue body: CF8
- Published connections: Socket Weld

Connection details

Published connection

Socket Weld

Reference drawing scope

PN40 socket-weld strainer arrangement, DN10-DN50. Exact duplicate reference rows are consolidated. Confirm filter aperture or mesh and element-removal clearance.

Engineering requirements

Dimension data

Reference table and drawing: DN10, DN15, DN20, DN25, DN32, DN40, DN50. Dimensions and connection reference.

Selection notes

- Filter mesh/aperture and clean/dirty pressure loss are not published. Specify these with the element-removal clearance and the required cleaning procedure.

ARD-ST-001

TECHNICAL DATA / CONTINUED

Cryogenic strainer · PN40 · SW

Reference material schedule

Hexagon Screw	S30408
Spring of Gland Nut	S30210
Body	CF8
Bonnet	CF8
Spring Pad	S30408
Filter Assembly	S30408
Gasket	RPTFE

Material schedule scope

- Materials apply to the supplied reference arrangement. PN40 socket-weld strainer arrangement, DN10-DN50. Exact duplicate reference rows are consolidated. Confirm filter aperture or mesh and element-removal clearance.

ARD-ST-001 / DIMENSIONS

Cryogenic strainer · PN40 · SW

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Dimensions and connection reference

DN	H	L	D0	D1	D2	B
10	55	60	Ø13	Ø14.5	Ø24	6
15	62	65	Ø15	Ø18.5	Ø29.5	6
20	70	80	Ø20	Ø25.5	Ø36	8
25	77	90	Ø25	Ø32.5	Ø43.5	8
32	89	105	Ø32	Ø38.5	Ø53	8
40	98	120	Ø40	Ø45.5	Ø62	8
50	111	140	Ø50	Ø57.5	Ø72	10

PN40 socket-weld strainer arrangement, DN10-DN50. Exact duplicate reference rows are consolidated. Confirm filter aperture or mesh and element-removal clearance.

ARD-ST-002

Selection notes S02 S03

Vacuum-jacketed liquid-hydrogen filter

A vacuum-jacketed filter reference for liquid-hydrogen pipework, with an extended insulated body and a replaceable filtration element selected for the process cleanliness requirement.

Illustrative assembly. Final construction, operator and connection details are confirmed for the selected configuration.

SIZE RANGE
NPS 1/2-6

PRESSURE RATINGS
ASME Class 150-600

TEMPERATURE
-253 to +80°C

END CONNECTIONS
Socket weld (SW) / butt weld (BW) / RF flanged

MEDIUM
LH2 / liquid hydrogen

Technical data

Construction	Vacuum-jacketed passive filter
Operation	Passive filtration; no external drive

Materials

Body and bonnet	Cryogenic stainless steel; selected grade to confirm
Trim, seats and seals	Selected material schedule to confirm

Design features

- Dedicated LH2 filtration
- Vacuum-jacketed body
- Element and service access selected for the line

Connection details

Connection options

Socket weld (SW) / butt weld (BW) / RF flanged

Engineering requirements

Filtration duty

Specify particle retention, allowable pressure drop, flow range and cleanliness target.

Maintenance

Confirm element material, replacement access, thermal cycling and vacuum-jacket interface.

Selection notes

- Mesh, micron rating, filtration area and rated flow are not established by the series description; these require element selection.

Product online **Download datasheet**

DATA REVISION 2026-10-29

14

Instrumentation

Instrumentation arrangements for the specified pressure, measurement and connection requirements.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-IN-001*	**Liquid-level indicator valve assembly**	DN 4-10	PN16 / PN25 / PN40	Butt weld (BW)	207

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-IN-001

Selection notes S04 S17

Liquid-level indicator valve assembly

A compact valve manifold for liquid-level indication connections on cryogenic equipment.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 4-10

PRESSURE RATINGS
PN16 / PN25 / PN40

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Butt weld (BW)

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Materials

Body	06Cr19Ni10
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Butt weld

Connection details

Published connection

Butt weld

Connection details / continued

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.
- Available dimensional data: DN 4; 4.0 MPa. Other sizes and ratings require technical confirmation.

ARD-IN-001 / DIMENSIONS

Liquid-level indicator valve assembly

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

H1	H2	L	L1	L2	D	Weight (kg)
118	74	180	35	25	9	-

15

Transfer & couplings

Charging, coupling and transfer references, with mating interfaces and operating requirements to confirm.

Article	Configuration	Size range	Pressure	Connection	Page
ARD-TR-001*	**Cryogenic charging valve assembly**	DN 25-50	PN16 / PN25 / PN40	Butt weld (BW)	210
ARD-TR-002*	**Cryogenic breakaway coupling**	DN 25-50	PN16 / PN25 / PN40	Flanged · Quick coupling	212
ARD-TR-003*	**Flanged charging coupling**	DN 25-50	PN16 / PN25 / PN40	Flanged	214
ARD-TR-004*	**Cryogenic quick coupling**	DN 25-50	PN16 / PN25 / PN40	Quick coupling	216
ARD-TR-005	**Large-bore cryogenic emergency release valve**	DN 150-400	PN16 / PN20 (1.6 / 2.0 MPa nominal)	Flanged / weld ends	217

* Range confirmation required. All entries are series references; confirm the selected size, rating, materials and assembly. Page numbers open the corresponding product entry.

ARD-TR-001

Selection notes S04 S17 S23

Cryogenic charging valve assembly

An integrated charging valve manifold with published assembly dimensions and butt-weld connections.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 25-50

PRESSURE RATINGS
PN16 / PN25 / PN40

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Butt weld (BW)

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Materials

Body	06Cr19Ni10
Bonnet	Composite
Stem	06Cr19Ni10
Top / closure element	06Cr19Ni10+PTFE
Gasket	PTFE

Design features

- Butt weld

Connection details

Published connection

Butt weld

Connection details / continued

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-TR-001 / DIMENSIONS

Cryogenic charging valve assembly

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

H	H1	H2	L	L1	L2	D	D1	D2	F1	F2	N-	Weight (kg)
159	447	498	120	83	74	45x3	65	100	90	110	4-14	9.50

ARD-TR-002

Selection notes S07 S17 S23

Cryogenic breakaway coupling

A breakaway coupling for cryogenic transfer connections, with a flanged quick-connector seat.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 25-50

PRESSURE RATINGS
PN16 / PN25 / PN40

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Flanged · Quick coupling

MEDIUM
LO2, LN2, LAr, LCO2, LNG

Materials

Body	06Cr19Ni10
Seat	06Cr19Ni10
Top / closure element	06Cr19Ni10+RPTFE
Gasket	7072

Design features

- Flange with quick connector seat

Connection details

Published connection

Flange with quick connector seat

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- "Top / closure element" follows the component designation in the reference material list.

ARD-TR-002 / DIMENSIONS

Cryogenic breakaway coupling

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	L	D0	K	D1	D2	D3	B	N-	Weight (kg)
40	159	110	90	70	69	54	5	4-14	-

ARD-TR-003

Selection notes S07 S17 S23

Flanged charging coupling

A flanged charging joint with three published dimensional variants.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 25-50

PRESSURE RATINGS
PN16 / PN25 / PN40

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Flanged

MEDIUM
O2, N2, Ar, CO2, NG

Materials

Body / variant	CF8

Design features

- Flange(HG20592

Connection details

Published connection

Flange(HG20592

Referenced flange standard

HG 20592 (designation as published); edition, facing, drilling and pressure designation must be specified.

Selection notes

- The technical panel lists DN 40; the dimensional table additionally includes an ARD-TR-003 / DN 32 variant.

ARD-TR-003 / DIMENSIONS

Flanged charging coupling

Dimensions apply to the tabulated version only. Confirm the approved outline drawing for the selected size, rating and connections before installation.

Linear dimensions are in mm and weights in kg unless stated otherwise. Pressure bands, thread designations and ISO mounting codes are not linear dimensions.

Reference dimensions

DN	H	D0	D1	D2	K	N-	Weight (kg)
32	93	75	78	140	100	4-18	-
40	93	75	88	150	110	4-18	-
40	93	75	80	126	100	4-14	-

ARD-TR-004

Selection notes S17 S23

Cryogenic quick coupling

A quick coupling in two published stainless steel material variants.

Reference-based product illustration. The shown size and connections are one catalogue configuration.

SIZE RANGE
DN 25-50

PRESSURE RATINGS
PN16 / PN25 / PN40

TEMPERATURE
-196 to +60°C

END CONNECTIONS
Quick coupling

MEDIUM
O2, N2, Ar, CO2, NG

Materials

Body / variant	CF8
Body / variant	06Cr19Ni10

Connection details

Published connection

Quick-connect interface; pipe-side termination not published

Connection standard

Not specified on this product page. Confirm the mating standard with the offer.

Selection notes

- Two material variants are published: CF8 and 06Cr19Ni10. Specify the required variant; no separate numeric dimension table is published.

ARD-TR-005

Selection notes S01

Large-bore cryogenic emergency release valve

A stainless steel emergency-disengagement valve series for large cryogenic transfer lines. The DN150-400 range uses PFA sealing and is illustrated as a bare-stem valve for a separately specified operating arrangement.

Reference-based product illustration of one arrangement. The approved outline drawing defines dimensions and supplied construction.

SIZE RANGE
DN 150-400

PRESSURE RATINGS
PN16 / PN20 (1.6 / 2.0 MPa nominal)

TEMPERATURE
-196 to +80°C

END CONNECTIONS
Flanged / weld ends

MEDIUM
LNG / NG, LOX / O2, LN2 / N2, LAr / Ar

Technical data

Inspection references	GB/T 12237; GB/T 24925
Operating arrangement	Bare shaft shown; operating and release package to specify

Materials

Body, bonnet, stem and ball	Stainless steel; exact grade to specify
Seal	PFA

Design features

- Large-bore DN150-400 transfer-line configuration
- Stainless steel wetted construction with PFA sealing

Design features / continued

- Extended shaft and upper mounting interface in the illustrated arrangement

Connection details

Connection options

Flanged / weld ends

Interface selection

Specify the end standard, nominal size, pipe dimensions and required mating interface.

Flange selection

Confirm pressure designation, facing, drilling and gasket; no flange standard is established by the photograph.

Weld alternative

Welded connections are listed as an alternative. Confirm BW/SW preparation and the selected outline drawing.

ARD-TR-005

TECHNICAL DATA / CONTINUED

Large-bore cryogenic emergency release valve

Engineering requirements

Transfer-system definition

Specify medium, flow, line size, design conditions and the required emergency isolation or release sequence.

Actuation and mounting

Confirm actuator type, mounting, required torque and fail action. The illustrated valve has no actuator.

Selection notes

- The reference establishes a valve series, not a complete certified emergency-release system. Release logic, drive, isolation sequence and mating equipment must be specified for the selected assembly.

TECHNICAL SELECTION

Shared selection notes

The S-numbered requirements below apply where referenced by a product entry. Select an S-number at the product to open its full wording.

S01

Selection requirements

Sizes and pressure ratings depend on construction, materials and configuration. Confirm the selected pressure-temperature rating with the quotation.

S02

Mating interface

Confirm end standard, facing or weld preparation, pipe dimensions and installation envelope.

S03

Selection requirements

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.

S04

Weld selection

Specify pipe OD, wall thickness/schedule, material and weld preparation. SW and BW are different connections.

S05

Selection requirements

*-196 to +80°C is the series/reference range. It does not establish the allowable pressure at each temperature or suitability of every seat, seal and actuator. Confirm the selected assembly's minimum design temperature and pressure-temperature curve.

S06

Pressure-temperature rating

Obtain the allowable-pressure table or curve versus temperature for the selected body, seat and seals, including minimum and maximum design temperature. Nominal rating and a family temperature range do not define this curve.

S07

Flange selection

Specify nominal size, flange rating, facing, drilling and gasket. Do not infer these from the image alone.

TECHNICAL SELECTION

Shared selection notes

The S-numbered requirements below apply where referenced by a product entry. Select an S-number at the product to open its full wording.

S08

Selection requirements

Catalogue construction and supplied reference-arrangement materials are shown separately below the material schedule. Use the approved drawing for the quoted body, trim and connections.

S09

Selected assembly

Confirm insulation interface, materials, leakage acceptance and project test documentation.

S10

Insulation interface

Define the jacket, vacuum boundary and extension length separately from the process connection.

S11

Selection requirements

Published series limits are not a size-by-pressure availability matrix. Materials, temperature capability, leakage class, testing and certification are confirmed for the selected configuration.

S12

Selection requirements

Series data guide enquiry and are not verified availability or approved operating limits for every size, pressure and execution. Confirm the selected LH2 configuration and pressure-temperature rating.

S13

Selection requirements

Air-operated does not establish spring return, fail-close action or a SIL-rated shutdown assembly.

S14

Installation drawing

Confirm end-to-end length, socket bore/depth, pipe size and wall thickness, overall height and operating/removal clearance.

S15

Socket interface

Confirm pipe outside diameter, socket bore, depth and wall thickness for the chosen size. SW is not a threaded or butt-weld interface.

TECHNICAL SELECTION

Shared selection notes

The S-numbered requirements below apply where referenced by a product entry. Select an S-number at the product to open its full wording.

S16

Dimension data

Order-specific dimensions required; no matched dimension table is published for this configuration.

S17

Selection requirements

These size and pressure ranges are subject to technical confirmation. They are not verified availability or approved operating limits. Exact size, rating, materials and design temperature require written confirmation.

S18

Actuator sizing

Confirm breakaway and running load at maximum differential pressure, closing time and required fail action.

S19

Motion and emergency duty

Confirm load, speed control, accumulator requirements, manual override and the required loss-of-pressure action.

S20

Hydraulic system

Specify working pressure, fluid, supply/return interfaces and the location of the power unit.

S21

Selection requirements

The illustration does not include a hydraulic power unit. Accumulators, emergency energy storage and fail action are project selections.

S22

Selection requirements

Specify bore, differential pressure, seat arrangement, trapped-liquid relief and required test documentation.

S23

Selection requirements

Available dimensional data: DN 40; 4.0 MPa. Other sizes and ratings require technical confirmation.

TECHNICAL SELECTION

Shared selection notes

The S-numbered requirements below apply where referenced by a product entry. Select an S-number at the product to open its full wording.

S24

Thread standard

BSP and NPT are separate options. Confirm exact designation, taper/parallel form and male/female inlet and outlet; metric reference threads must not be relabelled as BSP or NPT.

S25

Installation drawing

Confirm BSP or NPT, male/female ends, thread sizes, engagement, end-to-end length and installation clearance.

S26

Mechanical protection

Confirm torque or thrust settings, end stops, travel limits, manual override and ambient enclosure requirements.

S27

Selection requirements

Loss-of-power behaviour, emergency operation and a modulating duty are selected separately; a motor alone does not establish fail-safe action.

S28

Pressure-temperature rating

Confirm allowable inlet pressure at the relieving temperature for the selected body, trim and seals. Specify set pressure, back pressure and certified relief capacity separately.

S29

Installation drawing

Confirm end-to-end length, overall height, flange standard, facing, drilling and operating/removal clearance.

S30

Thread selection

Confirm male/female, diameter, pitch and sealing method. Metric M and G references must not be substituted with NPT.

TECHNICAL SELECTION

Shared selection notes

The S-numbered requirements below apply where referenced by a product entry. Select an S-number at the product to open its full wording.

S31

Flange interface

Confirm standard, pressure class, facing, drilling and mating dimensions. The image alone does not establish any of these.

S32

Flange facing

RTJ = ring-type joint facing, not a separate pipe-connection family. Confirm RF / RTJ and gasket designation.

S33

Selection requirements

Specify required set pressure, relieving medium and temperature, back pressure and certified capacity. Spring-setting bands, nominal pressure and flange rating are separate values. No capacity or approval is inferred from the product illustration.

S34

Selection requirements

The NPS span is used because a published DN equivalent is inconsistent. Request the exact bore and connection dimensions.

S35

Selection requirements

the technical record categorises this range for cryogenic service but does not publish a numeric temperature limit for this construction. Confirm the minimum design temperature and trim before selection.

S36

Selection requirements

*PN and ASME Class ranges are separate ranges. They are not conversions or a complete size-by-rating availability matrix.

S37

Installation drawing

Confirm end-to-end length, pipe outside diameter, wall thickness, weld preparation and operating/removal clearance.

TECHNICAL SELECTION

Shared selection notes

The S-numbered requirements below apply where referenced by a product entry. Select an S-number at the product to open its full wording.

S38

Weld preparation

Confirm pipe outside diameter, wall thickness and bevel/preparation. The weld standard is not stated on this catalogue page.

S39

Selection requirements

Confirm sealing direction, seat construction, disc clearance and the selected flange or weld arrangement.

S40

Selection requirements

Cv/Kv, characteristic, rangeability, cavitation/flashing behaviour and actuator thrust are calculated for the selected duty.

S41

Selection requirements

Gate valves are selected for isolation; throttling and prolonged partial opening require a separate duty assessment.

S42

Process sizing

Provide minimum/normal/maximum flow, inlet and outlet pressure, temperature and fluid state.

S43

Control interface

Specify control signal, position feedback, fail action, shut-off class and available utility.

S44

Selection requirements

The selected trim requires a confirmed design-temperature range; ordinary cryogenic duty does not establish liquid-hydrogen suitability.

QUICK REFERENCE

Article index

Sorted by Arden article code. Select a row to open the product entry.

Article	Product	Family	Page
ARD-BF-001	Triple-offset cryogenic butterfly valve	Butterfly valves	86
ARD-BF-002	Cryogenic butterfly valve · gear operated	Butterfly valves	91
ARD-BF-003	Triple-eccentric cryogenic butterfly valve · flanged	Butterfly valves	92
ARD-BF-004	Top-entry cryogenic butterfly valve · weld ends	Butterfly valves	93
ARD-BF-005	Pneumatic cryogenic triple-offset butterfly valve	Butterfly valves	88
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QUICK REFERENCE

Article index

Sorted by Arden article code. Select a row to open the product entry.

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ENGINEERING SUPPORT

Define your requirement.

Include the Arden article code and the following information with your enquiry. A clear duty specification helps us identify the appropriate assembly and supporting documentation.

01 Process & medium

Medium and physical state; composition and purity; compatibility or oxygen-cleaning requirements.

02 Operating conditions

Minimum / normal / maximum operating and design temperature, pressure and differential pressure.

03 Size & interface

DN / NPS, bore, flange standard and facing, thread designation or weld preparation, pipe OD and wall thickness.

04 Construction & materials

Body, trim, seat and seal requirements; flow direction, cavity-pressure relief and installation constraints.

05 Operation & control

Manual or actuated duty; power or air supply; signal, feedback, fail action, operating time and control duty.

06 Tests & documentation

Required inspection, material certificates, cryogenic or leakage tests, project standards and approval requirements.

07 Quantity & delivery

Required quantity, delivery location, target date, project reference and any packing requirements.

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Published series data supports enquiry. The selected configuration, pressure-temperature limits, materials and documentation are confirmed with the quotation.