

ARD-BV-005

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.

Sizes and pressure ratings depend on construction, materials and configuration. Confirm the selected pressure-temperature rating with the quotation.

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

Selection	Specification
Size range	DN 10-50
Pressure ratings	PN40
Temperature	-196 to +80°C · series*
Connections	BSP / NPT threaded
Medium	LNG, LOX, LN2, LAr, CO2

Define your requirement

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

[View this product and request a quotation](#)

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

Technical specification

Parameter	Specification
Size range	DN 10-50
Pressure ratings	PN40
Connection	BSP / NPT
Design	Long stem
Operation	double-acting pneumatic, electric actuator, hand lever, spring-return pneumatic
series temperature*	-196°C to +80°C
Medium	LNG, LOX, LN2, LAr, CO2

End connections

Illustrated arrangement: Three-piece body with female threaded end bosses, long extension and red lever.

Connection detail	Selection requirement
Published connection	BSP · NPT
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.
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.

Materials

Component	Material / option
Body	CF8
Ball	CF8

Alternative arrangement materials

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.

Component	Material
Body	CF8M
End cap	CF8M / CF3M
Ball	CF8M

Component	Material
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

Reference dimensions

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

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.

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

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

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

Linear dimensions: mm; weights: kg unless stated otherwise. Thread, mounting and pressure designations are not linear dimensions. A dash means that no value is documented. Request the approved outline drawing for installation.

Engineering requirements

Topic	Requirement
Dimension data	Reference table and drawing: DN10, DN15, DN20, DN25, DN32, DN40, DN50. ARD-BV-005 NPT threaded reference dimensions.
Installation drawing	Confirm BSP or NPT, male/female ends, thread sizes, engagement, end-to-end length and installation clearance.
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.

Configuration features

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

Selection notes

Sizes and pressure ratings depend on construction, materials and configuration. Confirm the selected pressure-temperature rating with the quotation.

*-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.

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.

PN, ASME Class and safety-valve set pressure are separate values. Confirm allowable pressure versus temperature, material compatibility, oxygen cleaning, trapped-liquid relief and required certification for the selected assembly. Liquid hydrogen and helium service require a separate assessment.