CRYOGENIC VALVES

CRYOGENIC BALL VALVE

Long Stem | Socket Weld

Long-stem cryogenic ball valve with a CF8 body and socket-weld ends for low-temperature isolation.



Product illustration. End connections follow the selected configuration.

TECHNICAL SPECIFICATIONS

Specification	Catalogue data
Size range	DN10-DN50
Connection	Socket Weld
Nominal rating	PN40
Design	Long stem
Operation	double-acting pneumatic, electric actuator, hand lever, spring-return pneumatic
Family temperature*	-196°C to +80°C
Catalogue media	LNG, LOX, LN2, LAr, CO2

MATERIALS

Component	Catalogue material
Body	CF8
Ball	CF8

Catalogue options. Nominal ratings are not the allowable pressure at every temperature; confirm the selected configuration. *Documented family temperature range; confirm pressure-temperature limits and the selected trim.

DIMENSIONS & P/T

Dimension table and drawing on page 2; reference construction materials on page 3. DN10, DN15, DN20, DN25, DN32, DN40, DN50. Confirm the specified reference arrangement.

P/T rating: confirm allowable pressure versus temperature for the selected body, seat and seals. Nominal class and temperature range do not define a P/T curve.

CONFIGURATION & SERVICE REQUIREMENTS

Specify the seat material and required manual, electric or pneumatic operation. For actuated valves, include supply voltage or air pressure, control signal and fail position.

Include pipe outside diameter, wall thickness and weld-end requirements. Butt-weld and socket-weld ends require different connection drawings.

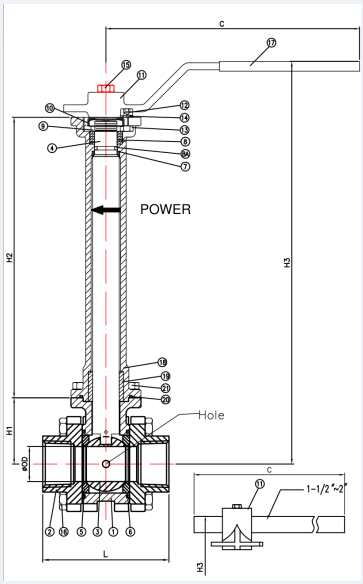
PRODUCT INFORMATION & QUOTATIONS

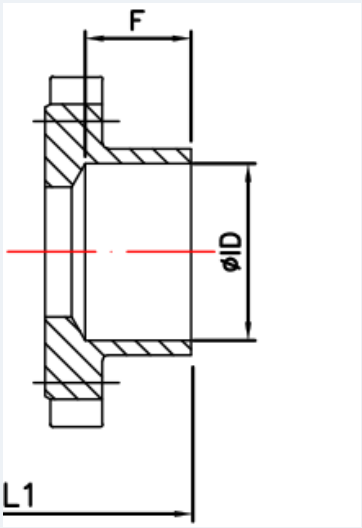
nordicvalves.com/products/ball-valves/cryogenic-ball-valve-long-stem-socket-weld

REFERENCE DRAWING & DIMENSIONS

Cryogenic Ball Valve - Long Stem - Socket Weld

Supplied CG3D 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.





CG3D-20 SOCKET-WELD REFERENCE DIMENSIONS

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 source inch size.

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

Drawing reference: CG3D-20 / CG3D-102030-1 (2023-12-14)

Use the approved order drawing for installation and fabrication. Reference dimensions do not establish the pressure-temperature rating of a different variant.

REFERENCE CONSTRUCTION & MATERIALS

Cryogenic Ball Valve - Long Stem - Socket Weld

Supplied CG3D 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.

Component	Source arrangement material
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

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

Source CG3D 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 source row.

Reference: CG3D-20 / CG3D-102030-1 (2023-12-14)

The materials above belong to the illustrated source arrangement. Catalogue options are shown on page 1. Confirm the ordered body, trim, seats and seals when a different material, pressure class or connection is selected.

Nominal pressure, temperature range and relief set pressure are separate specifications. Confirm allowable pressure at the actual design temperature and any required cleaning, testing and certification with the quotation.