



NEOTECHA NXR PFA LINED BALL VALVES (DISCONTINUED)

THIS PRODUCT IS NOW DISCONTINUED

A PFA lined ball valve suitable for severe corrosive and toxic applications meeting global ISO 15848 fugitive emission standards



FEATURES

- The Neotecha NXR PFA Lined Ball Valve is now discontinued. Please see the relevant documentation for product features.
- PFA lining offers highest corrosion resistance
- Bubble tight shut-off: precision machined ball and seats guarantees an absolute leak-free valve.
- One-piece ball/stem: no possibility of damaging PFA-lining on ball by the stem, no hysteresis.
- Specific anti blow-out shaft design, which can not be affected by the media, according API 609.
- Static electricity: build-up of static electricity is eliminated since the ball/stem and the housing are of the same potential.
- Fugitive emissions: the unique two-piece body seal construction together with the spring loaded stem seal guarantee a best in class performance, meeting TA Luft, ISO15848-1 and API641 approval.
- The self adjusting packing is maintenance free and provides a leak free stem seal.
- The handlever features a positive locked position in the open and closed position.
- The body has a thermally applied polyester powder coating (RAL 9002) which offers excellent protection against external corrosion and rust.
- Actuator mounting according to ISO 5211.

GENERAL APPLICATION

The valves are ideally suited for corrosive applications, requiring reliable performance, tight shutoff, constant torque and no maintenance. The valves successfully handle a multitude of corrosive applications in industries such as chemical, petro-chemical, pharmaceutical, pulp and paper, foundries and mining like chloric acid, etc. This unique design, together with the self adjusting patented stem seal are two of the reasons behind the excellent performance and broad industry acceptance of this valve.

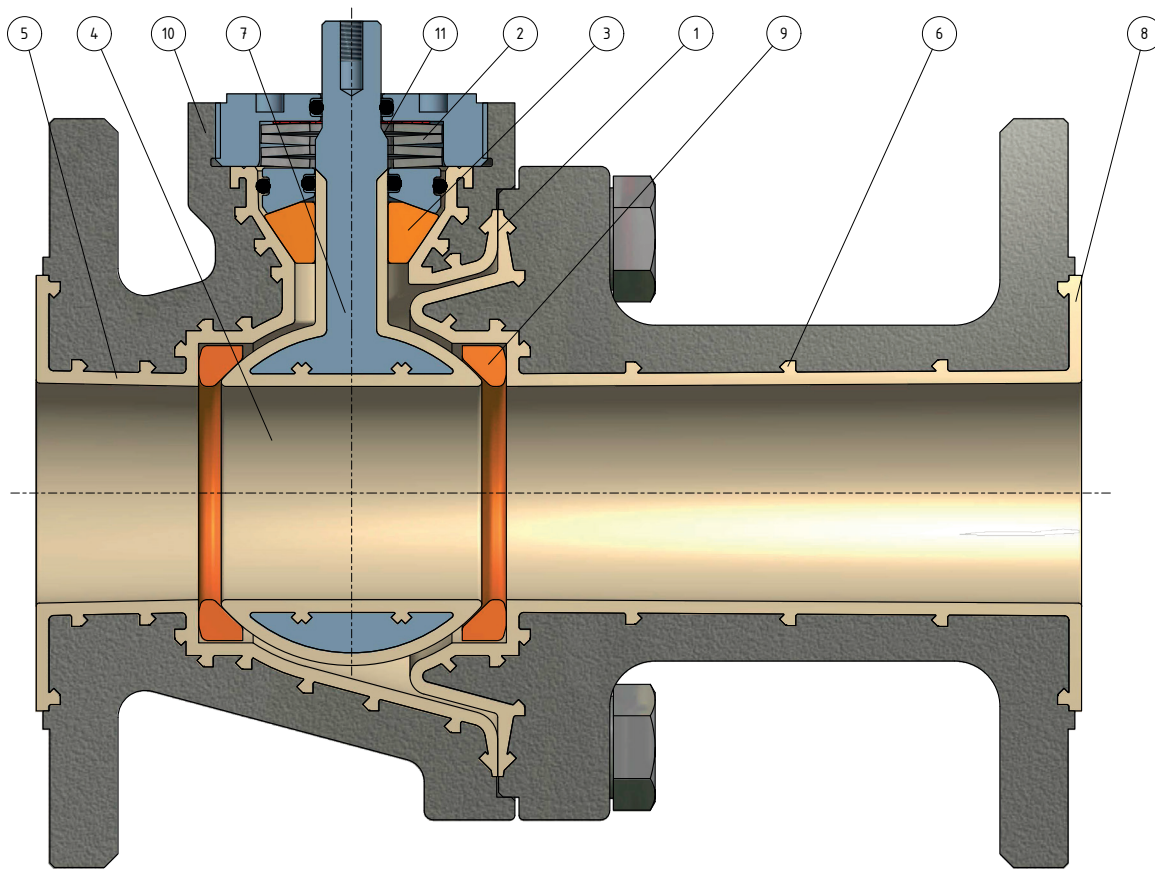
TECHNICAL DATA

Size range:	DN 15 - 150 (NPS ½ - 6)
Temperature:	-40 up to +200°C (-40 up to +392°F)
Pressure range:	vacuum to 16 bar (vacuum to 232 psi) (see diagram)
Flange connections:	DIN PN 16 ASME 150 JIS B 2212 10 K
Face to face:	DIN EN 558, row 1 ASME B 16.10
Certifications:	TA Luft VDI2440, ISO 15848-1 and API 641

DISCONTINUED

NEOTECHA NXR PFA LINED BALL VALVES (DISCONTINUED)

FEATURES



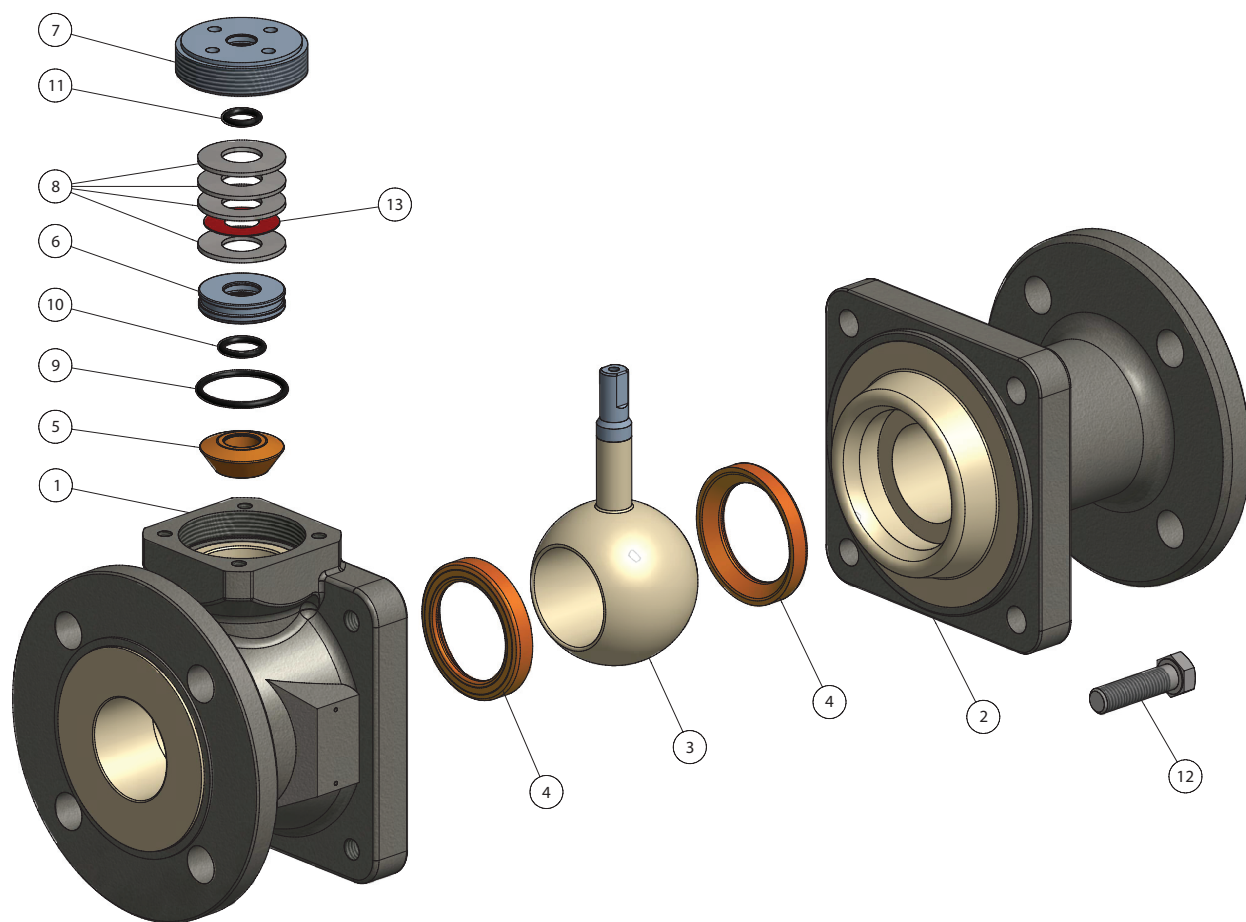
1. One piece ball - stem design with body split out of the spindle sealing.
2. A set of Belleville disc springs exert uniform loading on the packing, resulting in a maintenance free operation.
3. Flexible and corrosion resistant TFM packing ensures a leak-free stem seal (ISO15848-1 approved). The continuous energized spindle seal (using belleville washers) allows the seal to expand at elevated temperatures, and shrink when cooling down. This maintenance free solution avoids the requirement of packing compression bolts.
4. Full bore design * resulting in high K_v-value, especially required when high viscosity liquids have to be controlled.
5. The PFA lining is spark tested at 20 000 Volts, homogeneous, void of any pinholes, and with thickness giving best-in-class protection against diffusion and corrosion.
6. The liner is locked to the casting by means of machined dovetails in the casting, permitting the valve to be used on high vacuum and elevated temperature without the danger of a liner collapse.
7. The one-piece ball/stem provides control of the ball without damaging any PFA lining. As a result there is no hysteresis.
8. Available in DIN and ASME face to face dimensions, which allow an easy replacement of plug and diaphragm valves.
9. Locked in seats ensure both up stream and down stream bubble tight sealing, constant and low operating torque, and extended service life.
10. Body and adapter part made from ductile iron having a metal to metal contact to withstand all vibrations in the piping while ensuring perfect sealing. The bodies are coated on the outside with a coating which offers excellent corrosion protection.
11. Full proof anti blow-out shaft design, located in the dry area of the valve and therefore unaffected by the media.

* Excluded sizes are ANSI NPS 2, 3, 4, 6, these sizes are built in reduced bore design

DISCONTINUED

NEOTECHA NXR PFA LINED BALL VALVES (DISCONTINUED)

CONSTRUCTIONS, ASSEMBLY AND MATERIALS



BALL VALVE ASSEMBLY

Pos.	Description	Material
1	Body part	PFA lined ductile iron ASTM A395
2	Adapter part	PFA lined ductile iron ASTM A395
3	Ball-stem	PFA lined stainless steel
4	Ball seat	TFM
5	Stem seal	TFM
6	Press ring	Stainless steel
7	Threaded top flange	Stainless steel
8	Spring package	Spring steel
9	O-ring	FKM
10	O-ring	FKM
11	O-ring	FKM
12	Hex bolt	A4-70
13	Discharge ring	TFM Conductive

DISCONTINUED

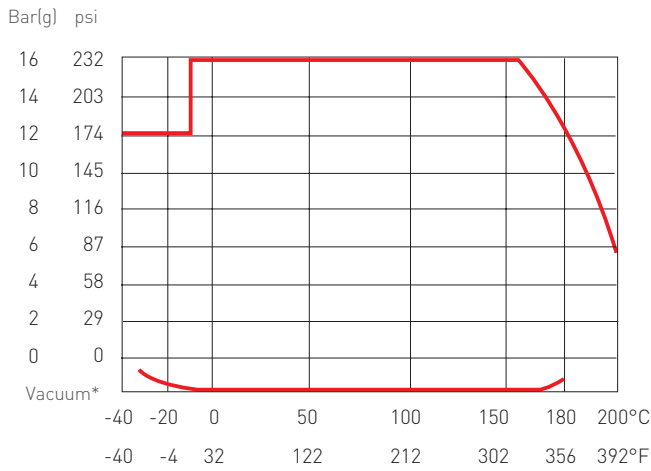
NEOTECHA NXR PFA LINED BALL VALVES (DISCONTINUED)

TECHNICAL DATA

FLOW COEFFICIENT K_v / C_v VALUES

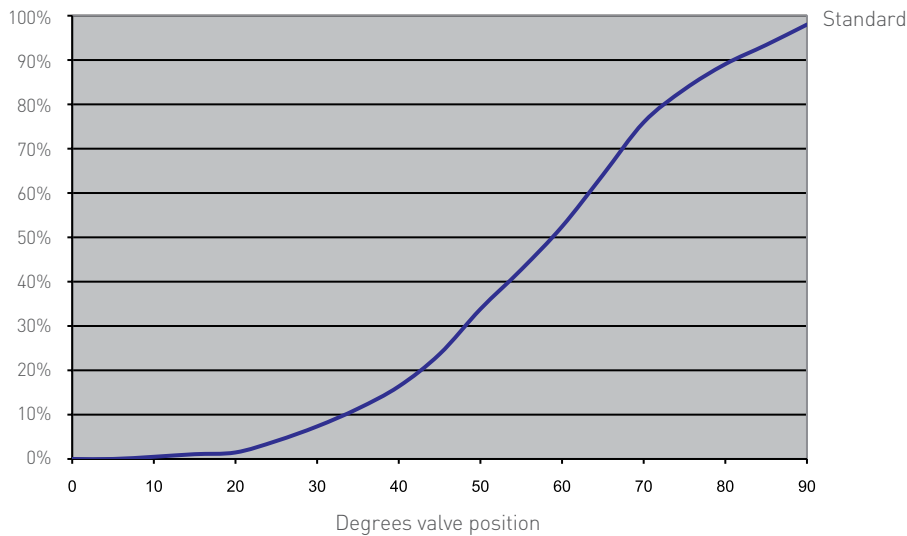
Size DN (NPS)	ASME		DIN		JIS 10K	
	K_v (m³/h)	C_v (USGPM)	K_v (m³/h)	C_v (USGPM)	K_v (m³/h)	C_v (USGPM)
15 (1/2)	12	14	12	14	12	14
20 (3/4)	18	21	18	21	18	21
25 (1)	37	43	37	43	37	43
40 (1 1/2)	96	111	96	111	96	111
50 (2)	96	111	170	196	170	196
80 (3)	170	196	490	566	490	566
100 (4)	490	566	780	901	780	901
150 (6)	780	901	1900	2196	1900	2196

PRESSURE-TEMPERATURE DIAGRAM



* Vacuum limit is 0.1 mbar (0.0015 psi) absolute pressure

EXAMPLE OF INHERENT FLOW CHARACTERISTIC



NXR DN 80 with standard seat

DISCONTINUED

NEOTECHA NXR PFA LINED BALL VALVES (DISCONTINUED)

TECHNICAL DATA

SELECTION GUIDE

Example:	NXR	-	0050	R0	A1	01	16	-	D2	L11	SH	TD	T0	I	B	-	NP1
Series																	
NXR	Model NXR																
Size (DN/NPS)																	
0015	NPS ½		0050	NPS 2													
0020	NPS ¾		0080	NPS 3													
0025	NPS 1		0100	NPS 4													
0040	NPS 1½		0150	NPS 6													
End connection																	
R0	Flange - Raised face (RF)																
Drilling																	
A1	ASME 150																
P3	PN16																
J3	JIS 10K																
Face to face																	
01	EN558 Series 01																
03	EN558 Series 03 - ASME B16.10 DF CL.150																
Pressure rating																	
16	16 bar / 230 psi																
Body material																	
D2	Ductile Iron A395 60-40-18 / EN 5.3103 (JS1049)																
Ball material																	
L11	Stainless Steel - PFA																
L21	Stainless Steel - Conductive PFA																
Stem material																	
SH	Stainless Steel 17-4 PH (630)																
Seat material																	
TD	TFM																
TE	TFM Conductive																
Sealing material																	
T0	TFM																
Operator mounting																	
I	ISO 5211																
Actuation type																	
B	Bare stem																
Options																	
NP1	Additional 316 Stainless Steel Tag																
TPZ	Hydrostatic Test Report																
HS-25	Default handle (F414 high temp)																
GS-000	Neotecha manual gearbox																

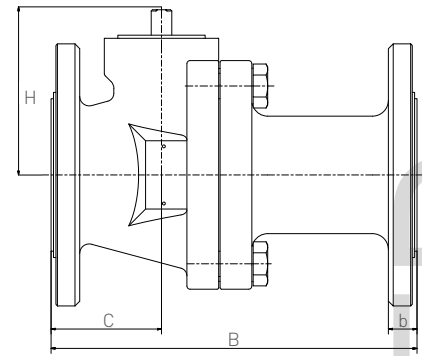
DISCONTINUED

NEOTECHA NXR PFA LINED BALL VALVES (DISCONTINUED)

DIMENSIONS - METRIC

FLANGE DRILLED DIN PN 16, FACE TO FACE DIN EN 558, ROW 1

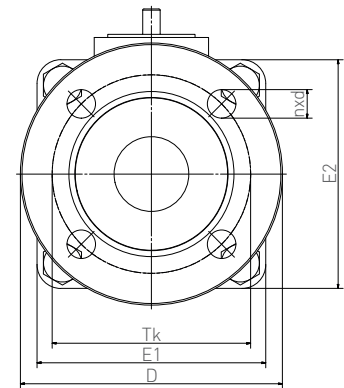
Size (DN)	B	H	L	D	E1	E2	Tk	C	nxd	b	Weight (kg)
15	130	67.0	-	95	105	95	65	55.0	4x14	16	4.0
20	150	71.5	-	105	105	105	75	57.0	4x14	18	5.1
25	160	77.5	-	115	115	115	85	57.0	4x14	18	6.3
40	200	97.5	-	150	140	140	110	73.0	4x18	18	11.7
50	230	104.0	-	165	144	144	125	69.5	4x18	18	13.4
80	310	133.5	-	200	210	210	160	100.0	8x18	20	29.1
100	350	170.0	-	220	250	250	180	117.0	8x18	20	40.6
150	480	210.0	-	285	340	340	240	137.0	8x22	22	80.5



FLANGE DRILLED ASME B 16.5 CLASS 150, FACE TO FACE ASME B 16.10 CLASS 150

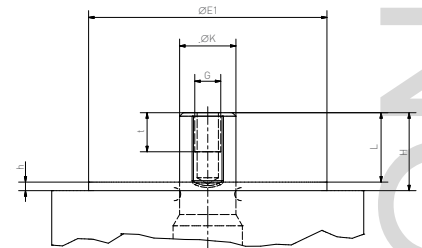
Size (NPS)	B	H	L	D	E1	E2	Tk	C	nxd	b	Weight (kg)
1/2	130	67.0	-	90	105	95	60.3	55	4x16	10.0	3.5
3/4	150	71.5	-	100	105	105	69.9	57	4x16	12.0	4.4
1	127	77.5	-	110	115	115	79.4	57	4x16	12.5	5.2
1 1/2	165	97.5	-	125	140	140	98.4	73	4x16	16.0	9.9
2*	178	97.5	-	150	140	140	120.7	73	4x19	18.0	11.4
3*	203	104.0	-	190	144	144	152.4	85	4x19	23.0	16.0
4*	229	133.5	-	229	210	210	190.5	105	8x19	23.0	30.0
6*	267	170.0	-	280	250	250	241.3	137	8x22	23.0	45.2

* Reduced bore design



FLANGE DRILLED JIS - JIS 10K, FACE TO FACE DIN EN 558, ROW 1

Size (DN)	B	H	L	D	E1	E2	Tk	C	nxd	b	Weight (kg)
15	130	67.0	-	95	105	95	70	55.0	4x15	16	4.0
20	150	71.5	-	100	105	105	75	57.0	4x15	18	5.1
25	160	77.5	-	115	115	115	90	57.0	4x19	18	6.3
40	200	97.5	-	140	140	140	105	73.0	4x19	18	11.7
50	230	104.0	-	155	144	144	120	69.5	4x19	18	13.4
80	310	133.5	-	185	210	210	150	100.0	8x19	20	29.1
100	350	170.0	-	210	250	250	175	117.0	8x19	20	40.6
150	480	210.0	-	280	340	340	240	137.0	8x23	22	80.5



FLANGE AND STEM DIMENSIONS

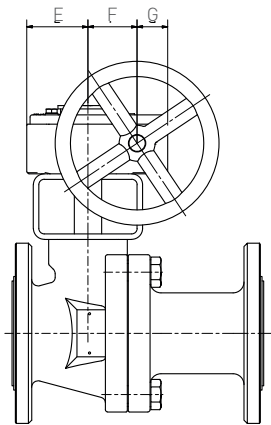
Size DN (NPS)	K	Flat	ISO	Flange	E1	G	H	h	L	t
15 (1/2)	11	9	F05	50	35	M4	14.5	2	13.0	6
20 (3/4)	11	9	F05	50	35	M4	14.5	2	13.0	6
25 (1)	11	9	F05	50	35	M4	14.5	2	13.0	6
40 (1 1/2)	13	11	F07	70	55	M6	18.0	2	15.0	8
50 (2)	13	11	F07	70	55	M6	18.0	2	16.0	9
80 (3)	16	14	F10	102	70	M8	16.5	2	14.0	12
100 (4)	20	17	F10	102	70	M8	28.0	2	24.0	12
150 (6)	27	22	F12	125	85	-	37.0	2	33.5	12

NEOTECHA NXR PFA LINED BALL VALVES (DISCONTINUED)

DIMENSIONS - METRIC

OPERATING TORQUES

Size DN (NPS)	ASME		DIN		JIS 10K	
	Torque	MAST	Torque	MAST	Torque	MAST
	Nm	Nm	Nm	Nm	Nm	Nm
15 (1/2)	8	22	8	22	8	22
20 (3/4)	8	24	8	24	8	24
25 (1)	10	27	10	27	10	27
40 (1 1/2)	20	55	20	55	20	55
50 (2)	20	55	25	68	25	68
80 (3)	25	68	90	245	90	245
100 (4)	90	245	150	410	150	410
150 (6)	150	410	350	960	350	960



GEAR OPERATOR

Size DN (NPS)	Gear	ISO	B	H	Ø D	E	F	G	Weight (kg)
15 (1/2)	*	F07	186	141	150	56	45	28	8.5
20 (3/4)	*	F07	186	145	150	56	45	28	9.6
25 (1)	*	F07	186	151	150	56	45	28	10.8
40 (1 1/2)	*	F07	186	168	150	56	45	28	16.2
50 (2)	*	F07	186	174	150	56	45	28	17.9
80 (3)	**	F10	247	211	300	77	66	34	38.2
100 (4)	**	F10	247	236	300	77	66	34	49.7
150 (6)	**	F10	247	267	300	77	66	34	89.6

* Type 1

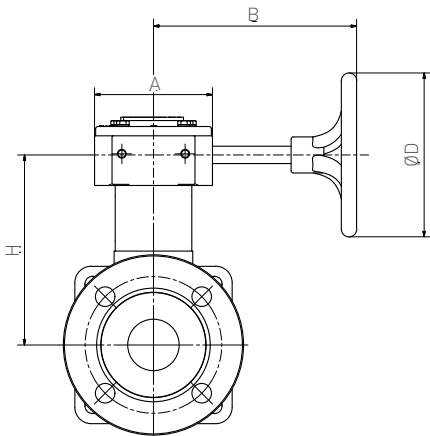
** Type 2

GEAR OPERATOR DIMENSIONS

Size DN (NPS)	Gear	ISO	A	B	Ø D	E	F	G
15-50 (1/2-2)	*	F07	108	186	150	56	45	28
80-150 (3-6)	**	F10	155	247	300	77	66	34

* Type 1

** Type 2

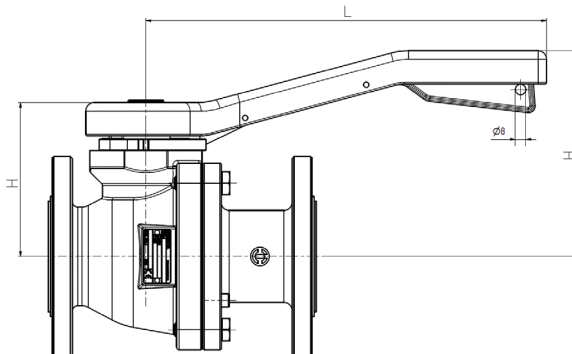


HANDLE

Size DN (NPS)	Handle	ISO	Flange	H	L	Weight (kg)
15 (1/2)	*	F05	50	95	230	8.5
20 (3/4)	*	F05	50	105	230	9.6
25 (1)	*	F05	50	115	230	10.8
40 (1 1/2)	**	F07	70	150	300	16.2
50 (2)	**	F07	70	165	300	17.9
80 (3)	***	F10	102	200	300	38.2
100 (4)	****	F10	102	220	300	49.7
150 (6)	-	F12	125	285	300	89.6

* Type 1 *** Type 3

** Type 2 **** Type 4

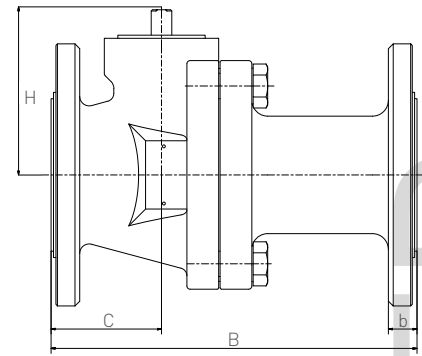


NEOTECHA NXR PFA LINED BALL VALVES (DISCONTINUED)

DIMENSIONS - IMPERIAL

FLANGE DRILLED DIN PN 16, FACE TO FACE DIN EN 558, ROW 1

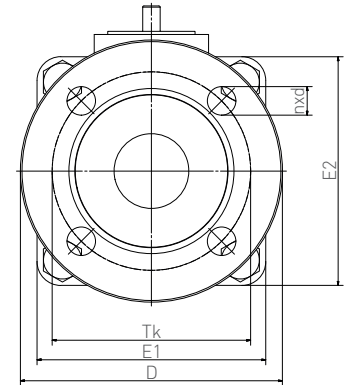
Size (DN)	B	H	L	D	E1	E2	Tk	C	nxd	b	Weight (lbs)
15	5.12	2.64	-	3.74	4.13	3.74	2.56	2.17	4x0.55	0.63	8.8
20	5.91	2.81	-	4.13	4.13	4.13	2.95	2.24	4x0.55	0.71	11.2
25	6.30	3.05	-	4.53	4.53	4.53	3.35	2.24	4x0.55	0.71	13.9
40	7.87	3.84	-	5.91	5.51	5.51	4.33	2.87	4x0.71	0.71	25.8
50	9.06	4.09	-	6.50	5.67	5.67	4.92	2.74	4x0.71	0.71	29.5
80	12.20	5.26	-	7.87	8.27	8.27	6.30	3.94	8x0.71	0.79	64.2
100	13.78	6.69	-	8.66	9.84	9.84	7.09	4.61	8x0.71	0.79	89.5
150	18.90	8.27	-	11.22	13.39	13.39	9.45	5.39	8x0.87	0.87	177.5



FLANGE DRILLED ASME B 16.5 CLASS 150, FACE TO FACE ASME B 16.10 CLASS 150

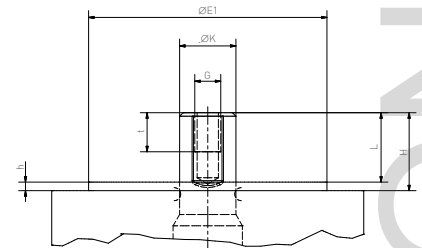
Size (NPS)	B	H	L	D	E1	E2	Tk	C	nxd	b	Weight (lbs)
1/2	5.12	2.64	-	3.54	4.13	3.74	2.37	2.17	4x0.63	0.39	7.7
3/4	5.91	2.81	-	3.94	4.13	4.13	2.75	2.24	4x0.63	0.47	9.7
1	5.00	3.05	-	4.33	4.53	4.53	3.13	2.24	4x0.63	0.49	11.5
1 1/2	6.50	3.84	-	4.92	5.51	5.51	3.87	2.87	4x0.63	0.63	21.8
2*	7.01	3.84	-	5.91	5.51	5.51	4.75	2.87	4x0.75	0.71	25.1
3*	7.99	4.09	-	7.48	5.67	5.67	6.00	3.35	4x0.75	0.91	35.3
4*	9.02	5.26	-	9.02	8.27	8.27	7.50	4.13	8x0.75	0.91	66.1
6*	10.51	6.69	-	11.02	9.84	9.84	9.50	5.39	8x0.87	0.91	99.6

* Reduced bore design



FLANGE DRILLED JIS - JIS 10K, FACE TO FACE DIN EN 558, ROW 1

Size (DN)	B	H	L	D	E1	E2	Tk	C	nxd	b	Weight (lbs)
15	5.12	2.64	-	3.74	4.13	3.74	2.76	2.17	4x0.55	0.63	8.8
20	5.91	2.81	-	3.94	4.13	4.13	2.95	2.24	4x0.55	0.71	11.2
25	6.30	3.05	-	4.53	4.53	4.53	3.54	2.24	4x0.55	0.71	13.9
40	7.87	3.84	-	5.51	5.51	5.51	4.13	2.87	4x0.71	0.71	25.8
50	9.06	4.09	-	6.10	5.67	5.67	4.72	2.74	4x0.71	0.71	29.5
80	12.20	5.26	-	7.28	8.27	8.27	5.91	3.94	8x0.71	0.79	64.2
100	13.78	6.69	-	8.27	9.84	9.84	6.89	4.61	8x0.71	0.79	89.5
150	18.90	8.27	-	11.02	13.39	13.39	9.45	5.39	8x0.87	0.87	177.5



FLANGE AND STEM DIMENSIONS

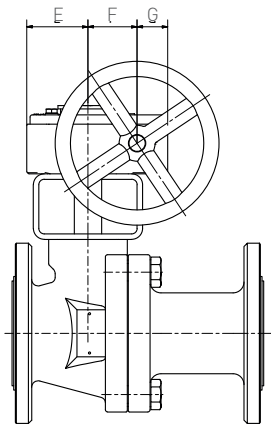
Size DN (NPS)	K	Flat	ISO	Flange	E1	G	H	h	L	t
15 (1/2)	0.43	0.35	F05	1.97	1.38	M4	0.57	0.08	0.51	0.24
20 (3/4)	0.43	0.35	F05	1.97	1.38	M4	0.57	0.08	0.51	0.24
25 (1)	0.43	0.35	F05	1.97	1.38	M4	0.57	0.08	0.51	0.24
40 (1 1/2)	0.51	0.43	F07	2.76	2.17	M6	0.71	0.08	0.59	0.31
50 (2)	0.51	0.43	F07	2.76	2.17	M6	0.71	0.08	0.63	0.35
80 (3)	0.63	0.55	F10	4.02	2.76	M8	0.65	0.08	0.55	0.47
100 (4)	0.79	0.67	F10	4.02	2.76	M8	1.10	0.08	0.94	0.47
150 (6)	1.06	0.87	F12	4.92	3.35	-	1.46	0.08	1.32	0.47

NEOTECHA NXR PFA LINED BALL VALVES (DISCONTINUED)

DIMENSIONS - IMPERIAL

OPERATING TORQUES

Size DN (NPS)	ASME		DIN		JIS 10K	
	Torque	MAST	Torque	MAST	Torque	MAST
	lbin	lbin	lbin	lbin	lbin	lbin
15 (1/2)	71	195	71	195	71	195
20 (3/4)	71	212	71	212	71	212
25 (1)	89	239	89	239	89	239
40 (1 1/2)	177	487	177	487	177	487
50 (2)	177	487	221	602	221	602
80 (3)	221	602	797	2168	797	2168
100 (4)	797	2168	1328	3628	1328	3628
150 (6)	1328	3628	3098	8497	3098	8497



GEAR OPERATOR

Size DN (NPS)	Gear	ISO	B	H	Ø D	E	F	G	Weight (lbs)
15 (1/2)	*	F07	7.32	5.55	5.91	2.20	1.77	1.10	18.7
20 (3/4)	*	F07	7.32	5.71	5.91	2.20	1.77	1.10	21.2
25 (1)	*	F07	7.32	5.94	5.91	2.20	1.77	1.10	23.8
40 (1 1/2)	*	F07	7.32	6.61	5.91	2.20	1.77	1.10	35.7
50 (2)	*	F07	7.32	6.85	5.91	2.20	1.77	1.10	39.5
80 (3)	**	F10	9.72	8.31	11.81	3.03	2.60	1.34	84.2
100 (4)	**	F10	9.72	9.29	11.81	3.03	2.60	1.34	109.6
150 (6)	**	F10	9.72	10.51	11.81	3.03	2.60	1.34	197.5

* Type 1

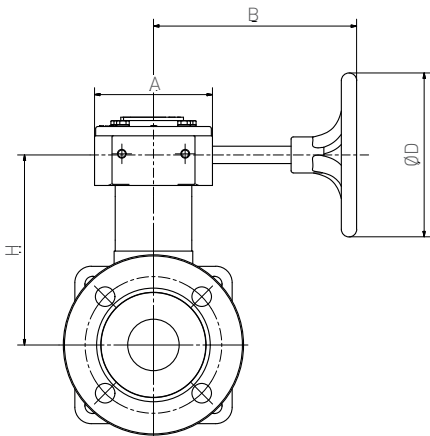
** Type 2

GEAR OPERATOR DIMENSIONS

Size DN (NPS)	Gear	ISO	A	B	Ø D	E	F	G
15-50 (1/2-2)	*	F07	108	186	150	56	45	28
80-150 (3-6)	**	F10	155	247	300	77	66	34

* Type 1

** Type 2

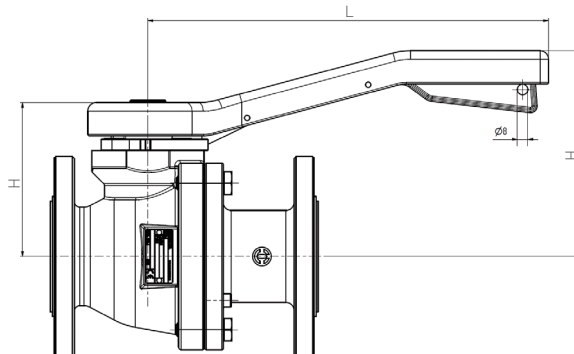


HANDLE

Size DN (NPS)	Handle	ISO	Flange	H	L	Weight (lbs)
15 (1/2)	*	F05	1.97	3.74	230	19
20 (3/4)	*	F05	1.97	4.13	230	21
25 (1)	*	F05	1.97	4.53	230	24
40 (1 1/2)	**	F07	2.76	5.91	300	36
50 (2)	**	F07	2.76	6.50	300	39
80 (3)	***	F10	4.02	7.87	300	84
100 (4)	****	F10	4.02	8.66	300	109
150 (6)	-	F12	4.92	11.22	300	197

* Type 1 *** Type 3

** Type 2 **** Type 4



DISCONTINUED

VCTDS-03402-EN © 2015, 2021 Emerson Electric Co. All rights reserved 09/21. Neotecha is a mark owned by one of the companies in the Emerson Automation Solutions business unit of Emerson Electric Co. The Emerson logo is a trademark and service mark of Emerson Electric Co. All other marks are the property of their prospective owners.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available upon request. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.

Emerson Electric Co. does not assume responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use and maintenance of any Emerson Electric Co. product remains solely with the purchaser.

Emerson.com/FinalControl