

## UTDZL / F14AZ

### CRYOGENIC SERVICE (-196 C)

#### Floating Ball Valve, ASME CLASS 150 / CLASS 300



#### Features

Full bore.

Design Standards: ISO 17292:2004 / API 608:2012 /  
BS 5351:1986\*

\*Although it is obsolete, it is adopted because most customers specify it

Flanges: ASME B16.5:1996, RF

Lengths/Face-to-face: ASME B16.10:2010

Leak test: EN 12266-1 Rate A / API 598, MESC SPE  
77/200 (Only the % of valves required by the customer)

Top flange: ISO 5211:2001 and CAPI: 2002

Seats: Modified PTFE HYPATITE

Stem: Anti-static

Autoadjustable packing

NACE MR0175

#### Approvals

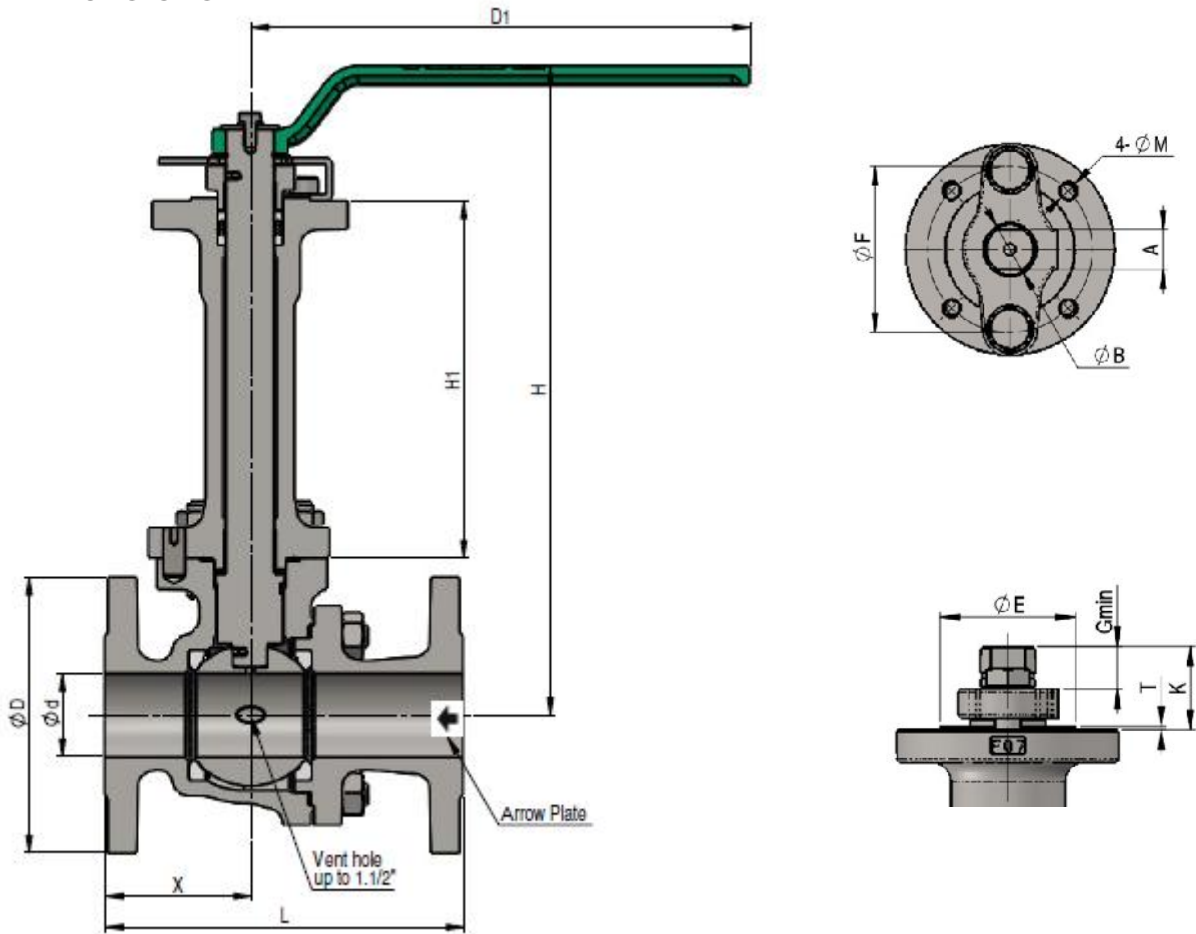
Fire test Certification: API 607 ed. 6<sup>th</sup>

PED 2014-68-UE approval for CE marked products

Marine Division certificate

ATEX 2014-34-UE approval

## Dimensions

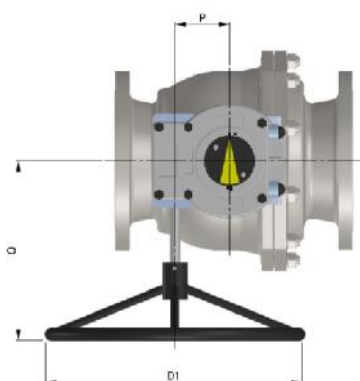


Class 150																	
Size	General Dimensions [mm]															Kv	Weight
inch.	Ød	ØD	L	X	D1	H	H1	A	B	E	F	G	K	T	ISO 5211	[m <sup>3</sup> /h] [bar]	[Kg]
1/2"	14	89	108	44,5	130	330	221,5	9	12	25	36	9	22	1	F03	13	3,3
3/4"	19	99	117	47,5	130	333	221,5	9	12	25	36	9	22	1	F03	28,5	3,5
1"	24	108	127	49	160	354	229	14	18	35	50	14	30	1,5	F05	51	5,9
1 1/2"	38	127	165	67	230	421	285,5	17	22	55	70	17	34	1,5	F07	156,5	11,5
2"	50	152	178	73	400	433	285,5	17	22	55	70	17	34	1,5	F07	299,3	16
3"	76	190	203	94	700	566	346,5	22	28	70	102	22	45	2	F10	882,3	35
4"	100	229	229	110	-	627	359,5	27	36	85	125	27	52	2	F12	1652,1	73
6"	151	279	394	175	-	780	421	36	48	100	140	36	63	2	F14	3734,2	140
8"	202	343	457	220	-	889	431,5	46	60	130	165	46	79	2	F16	7429,5	254
10"	253	406	533	266,5	-	977	481,5	46	60	130	165	46	79	2	F16	12402,3	336

(\*) Manual Gear

Class 300																	
Size	General Dimensions [mm]															Kv	Weight
inch.	Ød	ØD	L	X	D1	H	H1	A	B	E	F	G	K	T	ISO 5211	[m <sup>3</sup> /h] [bar]	[Kg]
1/2"	14	95	140	58	130	330	221,5	9	12	25	36	9	22	1	F03	13	4,2
3/4"	19	117	152	65	130	333	221,5	9	12	25	36	9	22	1	F03	28,5	5,7
1"	24	124	165	69	160	354	229	14	18	35	50	14	30	1,5	F05	51	10
1 1/2"	38	156	190	80	400	424	285,5	17	22	55	70	17	34	1,5	F07	156,5	18
2"	50	165	216	89	450	440	285,5	17	22	55	70	17	34	1,5	F07	299,3	23
3"	76	210	283	135	-	579	346,5	22	28	70	102	22	45	2	F10	882,3	60
4"	100	254	305	143	-	627	359,5	27	36	85	125	27	52	2	F12	1652,1	92
6"	151	318	403	190	-	786	421	36	48	100	140	36	63	2	F14	3734,2	178
8"	202	381	502	251	-	889	431,5	46	60	130	165	46	79	2	F16	7429,5	298

(\*) Manual Gear



Gear Dimensions [mm] UTAZL								
Size	Class 150				Class 300			
Inch.	Gear Type	D1	P	Q	Gear Type	D1	P	Q
3"	-	-	-	-	AB 550	300	71	283
4"	AB 550	300	71	283	AB 550	400	71	283
6"	AB 880	500	86	306	AB 1250	500	104,5	347
8"	AB 2000 LB	400	53	329	AB 2000 LB	600	53	349
10"	AB 2000 LB	800	53	349	-	-	-	-

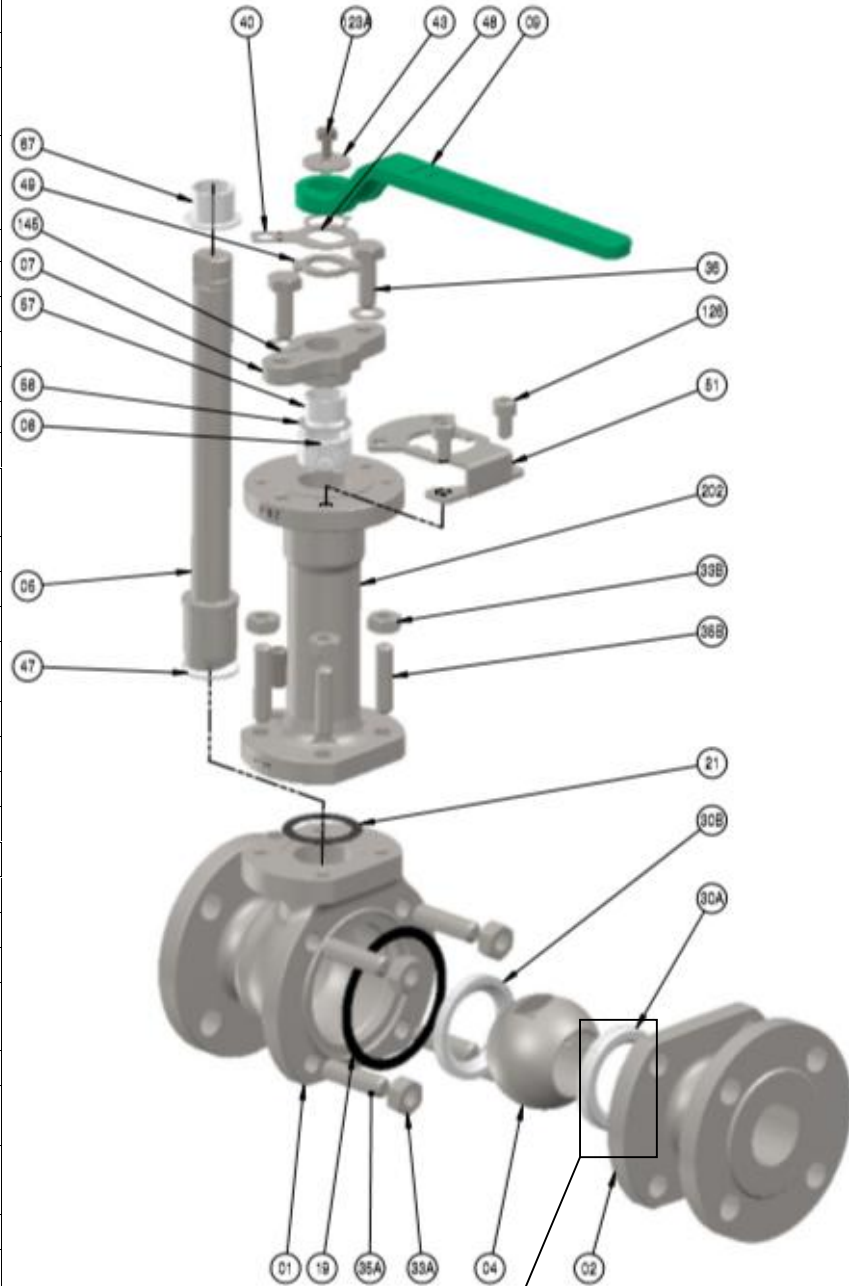
Note: Other Gear model as optional.

## Operation Torque (BTO)

Valve Size		Maximum differential pressure [barg] / Operation torque [Nm]				MAST	
		Class 150		Class 300		[Nm]	
		*Without Safety Factor (SF) [Nm]	With 30% SF [Nm]	*Without SF [Nm]	With 30% SF [Nm]	Cl. 150	Cl. 300
15	½"	8,4	10,4	8,7	11,3	35,7	
20	¾"	11,8	15,3	15,3	19,9	35,7	
25	1"	26,3	34,2	27,9	36,3	128	
40	1½"	80,5	39,2	89,7	116,6	232	
50	2"	107,1	139,2	150,5	195,6	232	819
80	3"	207	269,1	298	387,4	493	1741
100	4"	381	495,3	659	856,7	965	2433
150	6"	955	1241,5	1536	1996,8	2288	5770
200	8"	2011	2614,3	3195	4153,5	4645	9380
250	10"	3775	4907,5	-	-	4645	9380

## Material List

CCC	DESCRIPTION	CARBON STEEL
1	Body	ASTM A351 Gr.CF8M
2	Cap	ASTM A351 Gr.CF8M
3	Stem	ASTM A182 Gr.F316 ASTM A479 Type 316
4	Ball	ASTM A479 Type 316 ASTM A351 Gr.CF8M ASTM A182 Gr.F316
7	Gland	ASTM A351 Gr.CF8M
8	Gland Packing	Flexible Graphite
9	Handle	Carbon Steel
14	Pin	Stainless Steel
19	Gasket	Flexible Graphite
21	Gasket (SPW)	316Lss + Graphite
30A	Seat (Insert side)	H-PTFE
30B	Seat (Body side)	PCTFE (Up to 1.1/2") H-PTFE (2-10")
33A	Nut	ASTM A194 Gr.8M
35A	Stud bolt	ASTM A320 Gr.B8M
33B	Nut extension	ASTM A194 Gr.8M
35B	Stud bolt extension	ASTM A320 Gr.B8M
36	Gland bolt	Stainless Steel
40	Key lock plate	Stainless Steel
43	Handlelock plate	Stainless Steel
47	Stem bearing	PTFE + Glass Filled
48	Snap bearing	Stainless Steel
49	Stopper	Stainless Steel
51	Stopper plate	Stainless Steel
57	Gland bush	PTFE + Glass Filled
58	Gland washer	ASTM A240 Type 304 ASTM A276 Type 304
67	Stem bearing	PTFE + Glass Filled
123A	Handle lock plate bolt	Stainless Steel
124	Spring & Spin	ASTM A313 Type 316 ASTM A276 Type 316
126	Stopper plate bolt	Stainless Steel
143	Seat Spring ( From 2" to 10")	INCONEL X750
145	Coned disc springs	Stainless Steel
202	Bonnet extension	ASTM A351 Gr.CF8M ASTM A182 Gr.F316 ASTM A276 Type 316



2" and up sizes



\* Various stem and seats materials are available as optional.

Note: Components arrangement may vary depending on the size.

## P-T Rating

Pressure-Temperature Ratings [bar]								
Class 150				Class 300				
Temperature	Size	1/2" ~ 1.1/2" CF8M	2" ~ 10" CF8M	1/2" ~ 1.1/2" CF8M	2" CF8M	3" ~ 4" CF8M	6" CF8M	8" CF8M
-196°C ~ 38°C		19		49,6			40	40
130°C (Up to 1.1/2") 150°C (2" to 10")		15,4	14,8	20	37,3	28,5	22,6	19,2

