PENTAIR

KTM

KTM tank bottom valve completely drains off fluids from the tank bottom and maintains optimum performance of the whole tank

Features

- Construction prevents fluid accumulation at point of connection to completely drain fluids from the tank
- Both automatic and manual operating methods available, depending on application conditions (Manual devices can be mounted on automatic operation type)
- In the event that a viscous fluid adheres to the inner surface, a cleaning nozzle can be mounted
- Compact mounting design available where space is a premium
- Various body and trim material can be chosen in accordance with specified conditions
- For remote control operation, an automatic tank valve with a mounted cylinder drive is readily available
- Purging hole optional

*The valve performance is integral to the tank bottom application. Consequently, it is important to choose a suitable valve with utmost care given to fluid pressure, temperature, viscosity, corrosiveness, etc. and with the mounting environment thoroughly taken into account.

General applications

The tank bottom valve is mounted to the bottom of reactors and various liquid storage tanks and is popularly used as the main valve for containers and a variety of equipment.

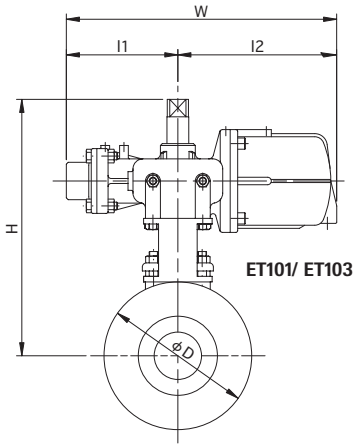
Technical data

Models / Sizes	: ET101 / DN 25 to DN 250
	: ET103 / DN 25 to DN 150
Pressure rating	: ASME Class 150 / JIS 10K (JPI available)
Test pressure	: 1.0 MPa / DN 25 to DN 100 0.6 MPa / DN 125 and larger
Temperature	: -20°C to 230°C

KTMNM-0069-EN-1306

Ball type tank valve

Operating the handle or the drive unit rotates the ball 90 degrees to discharge the liquid. When open, there are no obstacles in the port and a full port is obtained, allowing a large amount of fluid to drain. Model ET101 can accommodate both manual and automatic valves, while model ET103 is fitted only to automatic valves.

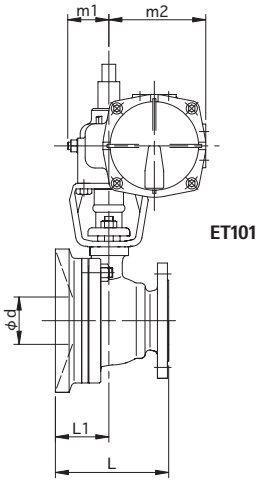


ET101/ ET103

Double acting dimensions (mm) ET101 / AGN06 to AGN13, AWN13 to AW28

Valve size (DN)	Ød	ØD	H	L	L_1	Actuator model*	W	l_1	l_2	m_1	m_2
25	25	125	235	109	54	AGN06	211	75	136	45	79
25	25	125	259	109	54	AGN09	286	105	181	50	106
40	38	150	282	126	60	AGN09	286	105	181	50	106
50	51	170	290	139	64	AGN09	286	105	181	50	106
50	51	170	356	139	64	AGN13	405	148	257	73	156
65	64	185	391	162	72	AGN13	405	148	257	73	156
80	76	230	410	182	86	AGN13	405	148	257	73	156
100	102	270	435	216	101	AGN13	405	148	257	73	156
80	76	230	473	182	86	AWN13	574	287	287	71	132
100	102	270	498	216	101	AWN13	574	287	287	71	132
125	127	310	552	260	120	AWN13	574	287	287	71	132
150	152	360	572	300	140	AWN13	574	287	287	71	132
125	127	310	646	260	120	AW17	755	377.5	377.5	98	176
150	152	360	666	300	140	AW17	755	377.5	377.5	98	176
200	203	440	747	381	176	AW17	755	377.5	377.5	98	176
250	254	524	791	449	209	AW17	755	377.5	377.5	98	176
200	203	440	826	381	176	AW20	1,060	530	530	118	232
250	254	524	870	449	209	AW20	1,060	530	530	118	232
250	254	524	980	449	209	AW28	1,060	680	680	161	302

* The above actuators are chosen for normal fluids. For fluids that increase the torque due to viscosity, foreign matters, etc., actuator shall be chosen separately.



ET101

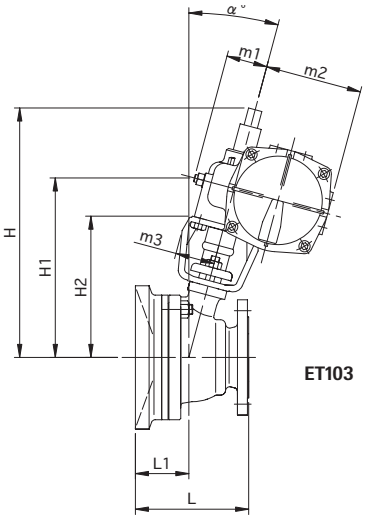
Double acting dimensions (mm) ET103 / AGN06 to 13, AW13 or 17

Valve size (DN)	H	H_1	H_2	L	L_1	Actuator model*	W	l_1	l_2	m_1	m_2	m_3	α°
25	245	178	140	112	57	AGN06	211	75	136	45	79	40	15
25	269	187	142	112	57	AGN09	286	105	181	50	105	45	15
40	284	203	159	129	62	AGN09	286	105	181	50	105	47	15
50	297	214	171	145	67	AGN09	286	105	181	50	105	47	15
50	362	248	188	145	67	AGN13	405	148	257	73	155	66	15
65	397	283	223	171	76	AGN13	405	148	257	73	155	66	15
80	405	292	230	190	89	AGN13	405	148	257	73	155	66	15
100	426	314	252	233	105	AGN13	405	148	257	73	155	66	15
80	467	354	244	190	89	AWN13	574	287	287	71	132	78	15
100	490	377	267	233	105	AWN13	574	287	287	71	132	78	15
125	575	455	345	271	126	AWN13	574	287	287	71	132	85	13
150	595	475	365	310	145	AWN13	574	287	287	71	132	85	13
125	665	469	373	271	126	AW17	755	377.5	377.5	98	176	104	13
150	686	489	393	310	145	AW17	755	377.5	377.5	98	176	104	13

* The above actuators are chosen for normal fluids. For fluids that increase the torque due to viscosity, foreign matters, etc., actuator shall be chosen separately.

For other information including the sizes of the following automatic valves, please consult for the details.

- Valve model : ET101
  Actuator model : AGN-S, AW-S (Spring return)

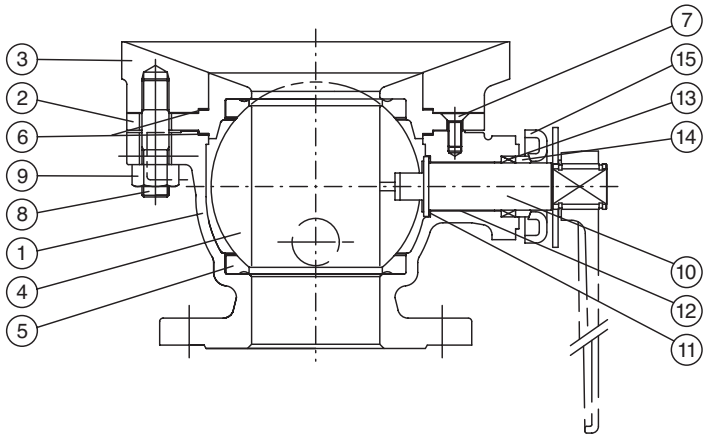


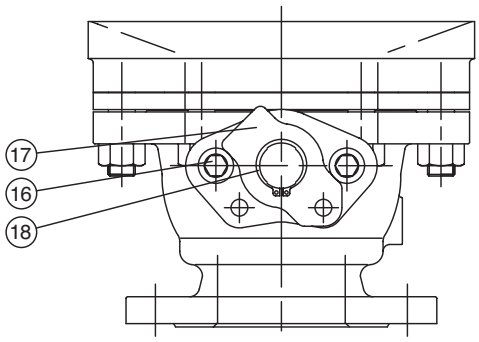
ET103

For other information including the sizes of the following automatic valves, please consult for the details.

- Valve model : ET103
  Actuator model : AGN-D, AW-S (Spring return), AK series (Spring return, double acting)

Note: The above drawing shows AGN double acting type.





• The figures show a product in ASME Class 150 (JIS 10K) of size DN 25 to DN 100 for model code ET101.

Parts list

No.	Parts name	ASME Class 150, JIS 10K Material code 31-1T / E / G	32-1T / E / G
1	Body	CF8 (SCS13A)	CF8M (SCS14A)
2	Cap	CF8 (SCS13A)	CF8M (SCS14A)
3	Tank base	CF8 (SCS13A)	CF8M (SCS14A)
4	Ball	CF8 (SCS13A)	CF8M (SCS14A)
5	Seat	PTFE or RPTFE	PTFE or RPTFE
6	Gasket	PTFE or RPTFE	PTFE or RPTFE
7	Bolt	304SS (SUS304)	304SS (SUS304)
8	Stud bolt	304SS (SUS304)	304SS (SUS304)
9	Nut	304SS (SUS304)	304SS (SUS304)
10	Shaft	304SS (SUS304)	316SS (SUS316)
11	Thrust bearing	PTFE	PTFE
12	Stem bearing	RPTFE	RPTFE
13	Gland packing	PTFE	PTFE
14	Gland	SUS316LSS	SUS316LSS
15	Gland flange	304SS (SUS304)	304SS (SUS304)
16	Gland bolt	304SS (SUS304)	304SS (SUS304)
17	Stopper	304SS (SUS304)	304SS (SUS304)
18	Snap ring	304SS (SUS304)	304SS (SUS304)

• Materials in parentheses indicate equivalent JIS material

Note

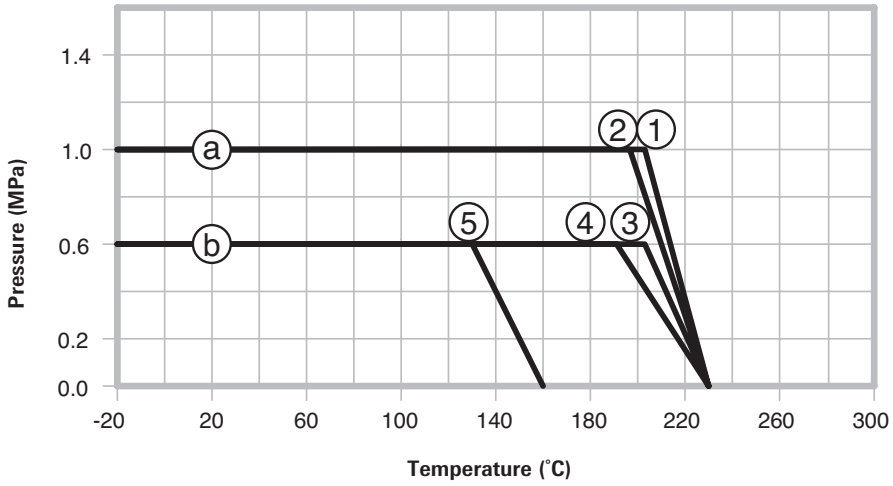
The right table indicates the seat rating for PTFE (T) seat. For RPTFE (E / G) seat, please consult for the details.

Valve size (Full bore)
① DN 25 to DN 65
② DN 80 to DN 100
③ DN 125 to DN 150
④ DN 200
⑤ DN 250

Maximum pressure
ⓐ DN 25 to DN 100
ⓑ DN 125 to DN 250

Pressure - temperature rating

For applicable working temperature and working pressure range please refer to the following rating table. Using valves outside the range of the rating table may damage the valve or its components and result in external leakage or seat leakage.



Ordering instructions

ET101	-	31	•	1E	A15	RF	25
Body style		**Body material**		**Ball-seat-packing-shaft material**	**Pressure class**	**Connection**	**Valve size (DN)**

Example **ET101 - 31 • 1E A15 RF 25**
Body style: Full bore, floating ball, DN 25 to DN 250. **Body material:** 304SS. **Ball material:** CF8.
Seat material: PTFE/PFA copolymer. **Packing material:** PTFE. **Shaft material:** 304SS. **Pressure class:** ASME 150.
Connection: Raised face 125 to 250 AARH. **Valve size:** DN 25.

Code	Body style
ET101	Full bore, floating ball, DN 25 to DN 250
ET103	Full bore, floating ball, DN 25 to DN 150

Code	Subcode
Blank	Soft seat

Code	Special feature
Blank	No special feature

Code	Body materials
31	304SS - JIS: SCS13A / ASTM: CF8
32	316SS - JIS: SCS14A / ASTM: CF8M

Code	Trim - Soft seated valves			
	Ball	**Seat**	**Packing**	**Shaft**
1T	CF8[*1] / CF8M[*2]	PTFE	PTFE	304SS[*1] / 316SS[*2]
1E	CF8[*1] / CF8M[*2]	PTFE/PFA copolymer	PTFE	304SS[*1] / 316SS[*2]
1G	CF8[*1] / CF8M[*2]	RPTFE	PTFE	304SS[*1] / 316SS[*2]
5T[*1]	CF8M	PTFE	PTFE	316SS
5E[*1]	CF8M	PTFE/PFA copolymer	PTFE	316SS
5G[*1]	CF8M	RPTFE	PTFE	316SS

[*1] For body code 31
[*2] For body code 32

Code	Pressure class
A15	ASME 150
J10	JIS 10K
(JPI also available)	

Code	Connection
RF	Raised face 125 to 250 AARH
SM	Smooth finish 63 to 125 AARH

Code	Size (DN)
25	25
40	40
50	50
65	65
80	80
100	100
125	125
150	150
200	200*
250	250*
* Available only for ET101	

Code	Option
Blank	No additional option

Body styles

Tank bottom valves

Code	Body style	Bore	Connection	Pressure class	Sizes
ET101	Floating ball	Full bore	Raised face or smooth finish	ASME 150, JIS 10K	DN 25-250
ET103	Floating ball	Full bore	Raised face or smooth finish	ASME 150, JIS 10K	DN 25-150