

**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 Application

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

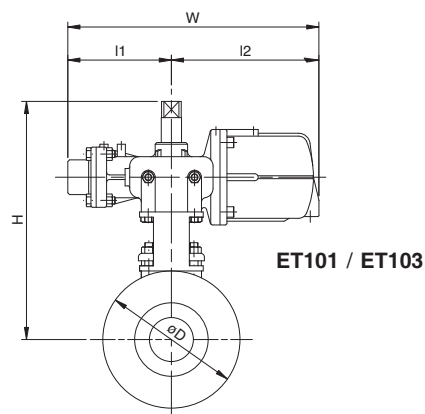
Models	: ET101, ET103
Sizes	: Model ET101 3/4" to 10" (20mm to 250mm) : Model ET103 1" to 6" (25mm to 150mm)
Pressure rating	: ASME Class 150, JIS 10K (JPI available)
Test pressure	: 1.0MPa / 20mm to 100mm 0.6MPa / 125mm and larger
Temperature	: -29°C to 230°C

# KTM Tank Bottom Valve

## Ball Type

### Ball type Tank Valve

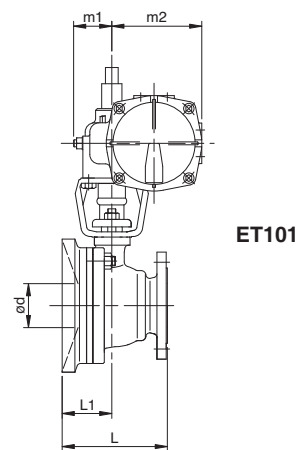
Operating the handle or the drive unit rotates the ball 90 degrees to discharge the liquid. When open, there are no obstacles in the port and a full port is obtained, allowing a large amount of fluid to drain. Model ET101 can accommodate both manual and automatic valves, while model ET103 is fitted only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



### Double Acting Dimensions (mm) ET101 / AGN06 to 13, AW13 to 28

Valve size (mm)	ød	øD	H	L	L <sub>1</sub>	Actuator model*	W	l <sub>1</sub>	l <sub>2</sub>	m <sub>1</sub>	m <sub>2</sub>
20	19	92	217	98	47	AGN06	211	75	136	45	78
25	25	125	233	109	54	AGN06	211	75	136	45	78
25	25	125	259	109	54	AGN09	286	105	181	50	105
40	38	150	282	126	60	AGN09	286	105	181	50	105
50	51	170	290	139	64	AGN09	286	105	181	50	105
50	51	170	356	139	64	AGN13	405	148	257	73	155
65	64	185	391	162	72	AGN13	405	148	257	73	155
80	76	230	410	182	86	AGN13	405	148	257	73	155
100	102	270	435	216	101	AGN13	405	148	257	73	155
80	76	230	473	182	86	AW13	574	287	287	71	132
100	102	270	498	216	101	AW13	574	287	287	71	132
125	127	310	552	260	120	AW13	574	287	287	71	132
150	152	360	572	300	140	AW13	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	1,360	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.



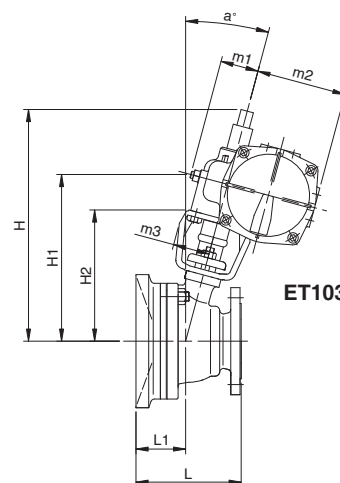
For other information including the sizes of the following automatic valves, please consult for the details.

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

### Double Acting Dimensions (mm) ET103 / AGN06 to 13, AW13 or 17

Valve size (mm)	H	H <sub>1</sub>	H <sub>2</sub>	L	L <sub>1</sub>	Actuator model*	W	l <sub>1</sub>	l <sub>2</sub>	m <sub>1</sub>	m <sub>2</sub>	m <sub>3</sub>	a°
25	245	178	140	112	57	AGN06	211	75	136	45	78	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	AW13	574	287	287	71	132	78	15
100	490	377	267	233	105	AW13	574	287	287	71	132	78	15
125	575	455	345	271	126	AW13	574	287	287	71	132	85	13
150	595	475	365	310	145	AW13	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.

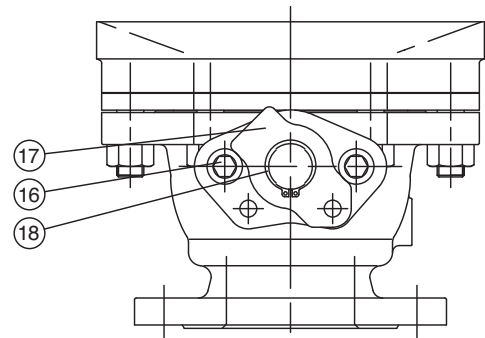
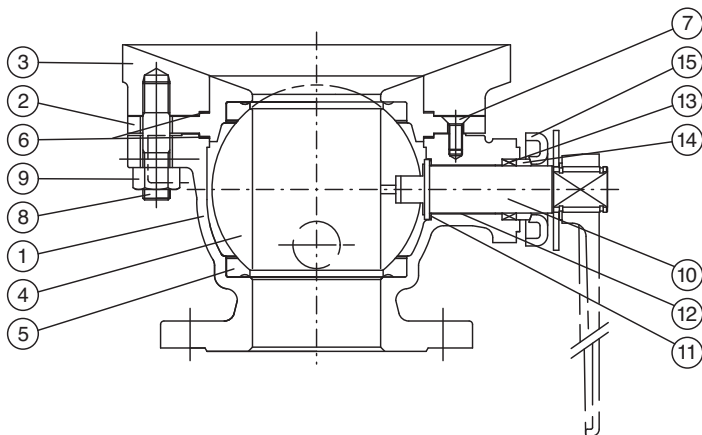


For other information including the sizes of the following automatic valves, please consult for the details.

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

# KTM Tank Bottom Valve

Ball Type



• The figures show a product in ASME Class 150 (JIS 10K) of size 1" to 4" (25mm to 100mm) for model code ET101.

## Parts list

### ASME Class 150, JIS 10K

No.	Parts name	Material code		
		31-1T / E / G	32-1T / E / G	33-1T / E / G
1	Body	SCS13A (CF8)	SCS14A (CF8M)	SCS16A (CF3M)
2	Cap	SCS13A (CF8)	SCS14A (CF8M)	SCS16A (CF3M)
3	Tank base	SCS13A (CF8)	SCS14A (CF8M)	SCS16A (CF3M)
4	Ball	SCS13A (CF8)	SCS14 (CF8M)	SCS16A (CF3M)
5	Seat	PTFE or RPTFE	PTFE or RPTFE	PTFE or RPTFE
6	Gasket	PTFE or RPTFE	PTFE or RPTFE	PTFE or RPTFE
7	Bolt	SUS304 (304SS)	SUS304 (304SS)	SUS304 (304SS)
8	Stud bolt	SUS304 (304SS)	SUS304 (304SS)	SUS304 (304SS)
9	Nut	SUS304 (304SS)	SUS304 (304SS)	SUS304 (304SS)
10	Stem	SUS304 (304SS)	SUS316 (316SS)	SUS316L (316LSS)
11	Thrust bearing	PTFE	PTFE	PTFE
12	Stem bearing	RPTFE	RPTFE	RPTFE
13	Gland packing	PTFE	PTFE	PTFE
14	Gland	SUS316LSS	SUS316LSS	SUS316LSS
15	Gland flange	SUS304 (304SS)	SUS304 (304SS)	SUS304 (304SS)
16	Gland bolt	SUS304 (304SS)	SUS304 (304SS)	SUS304 (304SS)
17	Stopper	SUS304 (304SS)	SUS304 (304SS)	SUS304 (304SS)
18	Snap ring	SUS304 (304SS)	SUS304 (304SS)	SUS304 (304SS)

• Materials in parentheses indicate equivalent JIS material

## Pressure - Temperature Rating

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

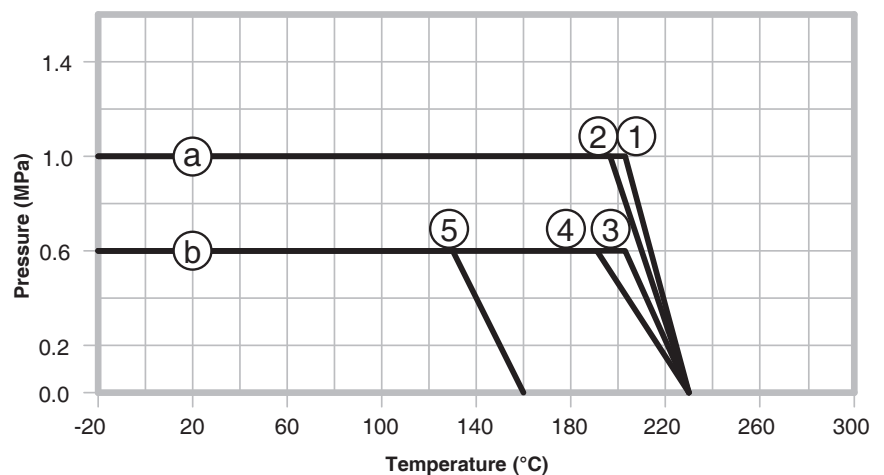
For applicable working temperature and working pressure range please refer to the following rating table. Using valves outside the range of the rating table may damage the valve or its components and result in external leakage or seat leakage.

Valve Size (Full bore)

- ① 25mm~65mm (1" to 2½")
- ② 80mm~100mm (3" to 4")
- ③ 125mm~150mm (5" to 6")
- ④ 200mm (8")
- ⑤ 250mm (10")

Maximum Pressure

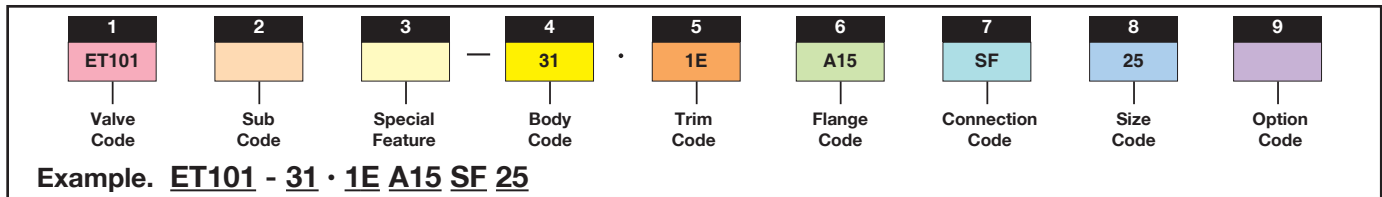
- Ⓐ 25mm~100mm (1" to 4")
- Ⓑ 125mm~250mm (5" to 10")



# KTM Tank Bottom Valve

Ball Type

## KTM Model Coding System



1	
Valve Code	Description
	<b>JIS</b> <b>ASME</b>
ET101	10K      150      Full bore, Floating 20mm to 250mm
ET103	10K      150      Full bore, Floating 25mm to 150mm

2	
Sub Code	Description
Blank	Soft Seat
G	Gratite Seat (For model code ET101)

3	
Special Feature	Description
Blank	No Special Feature

4	
Body Code	Material
	<b>JIS</b> <b>ASTM</b>
31	SCS13A (304SS)      CF8 (304SS)
32	SCS14A (316SS)      CF8M (316SS)
33	SCS16A (316LSS)      CF3M (316LSS)

5				
Trim Code	Ball	Seat	Packing	Stem
<b>Soft Seated Valves</b>				
1T	CF8 <sup>*1</sup> /CF8M <sup>*2</sup> /CF3M <sup>*3</sup>	PTFE	PTFE	304SS <sup>*1</sup> / 316SS <sup>*2</sup> / 316LSS <sup>*3</sup>
1E	CF8 <sup>*1</sup> /CF8M <sup>*2</sup> /CF3M <sup>*3</sup>	PTFE / PFA Copolymer	PTFE	304SS <sup>*1</sup> / 316SS <sup>*2</sup> / 316LSS <sup>*3</sup>
1G	CF8 <sup>*1</sup> /CF8M <sup>*2</sup> /CF3M <sup>*3</sup>	RPTFE	PTFE	304SS <sup>*1</sup> / 316SS <sup>*2</sup> / 316LSS <sup>*3</sup>
5T <sup>*1</sup>	CF8M	PTFE	PTFE	316SS
5E <sup>*1</sup>	CF8M	PTFE / PFA Copolymer	PTFE	316SS
5G <sup>*1</sup>	CF8M	RPTFE	PTFE	316SS
<b>Gratite Seated Valves (For model code ET101)</b>				
	<b>Ball</b>	<b>Seat</b>	<b>Packing</b>	<b>Stem</b>
CC	CF8 <sup>*1</sup> /CF8M <sup>*2</sup> /CF3M <sup>*3</sup>	Hard graphite	Graphite	329J1

<sup>\*1</sup> For body code 31  
<sup>\*2</sup> For body code 32  
<sup>\*3</sup> For body code 33

6	
Flange Code	Description
<b>JIS</b>	
J10	JIS 10K
<b>ASME</b>	
A15	ASME Class 150
(JPI also available)	

7	
Connection Code	Description
Blank	Raised Face
SF	Smooth Finish 125 to 250 AARH

8		
Size Code	mm	Inch
20	20*	¾*
25	25	1
40	40	1½
50	50	2
65	65	2½
80	80	3
100	100	4
125	125	5
150	150	6
200	200*	8*
250	250*	10*

\*For model code ET101

9	
Option Code	Description
Blank	No additional option