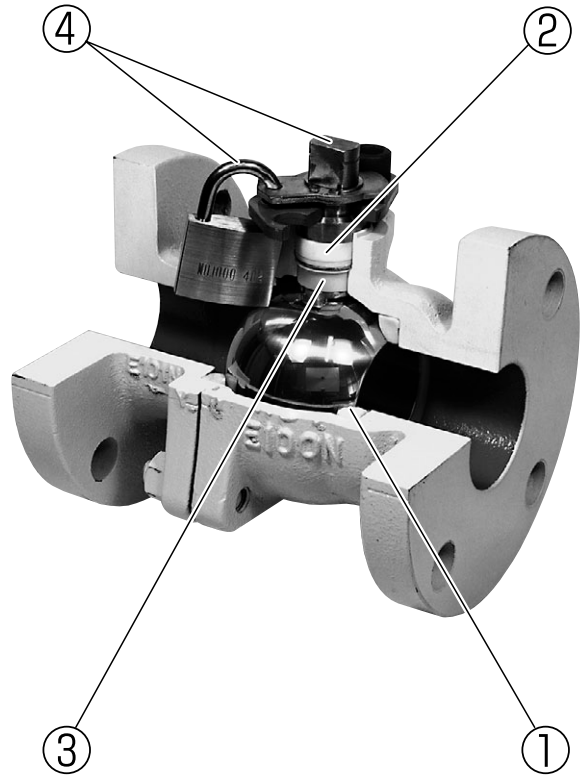


■ 2-Way Type E Ball Valve (E100N, E200N)

● Features

1. **Secure sealing**
Nippon Daiya Valve's unique lipped seat configuration reduces operating torque, ensuring that the valve seat seals securely.
2. **Gland packing for excellent shaft sealing**
Two PTFE packings that are tapered with respect to one another provide a wedge effect that ensures excellent shaft sealing with little clamping force.
3. **PTFE bearings for smooth action**
PTFE bearings are provided between the body and the stem, so there is no rusting, locking (caused by the deposit of crystals or the like from the fluid) or galling (seizing) of stainless steel or other parts.
4. **Handle position prevents malfunctioning**
The top of the stem is the same size as the width across the flats, and the direction in which the handle is attached is the same as the direction of movement of the ball port, preventing erroneous open and close operation. The valve can also be locked in the fully open or fully closed position using a key lock, pin lock or the like.
5. **Changing the method of operation is easy**
The modular configuration makes it easy to attach an actuator (pneumatic or solenoid) for automatic operation to the manual valve.



● Standard Specification

- Nominal size :
 - Full port Floating ball (E100N) DN15 ~ 350
 - Trunnion ball (EK100N) DN40 ~ 500
 - Reduced Port Floating ball (E200N) DN100 ~ 300
- Face-to-face dimension : Please see "Boundary demensions".
- Parts Materials : Please see "Standard configuration".
- Operation Style : Lever operated, Gear operated
 - Pneumatic (Double/Reverse/ Forward acting)
 - Electric
- Pressure-temperature range : Please see the seat rating.
- Connection : Flange

Connection	JIS	10K		10K · 20K			
	ANSI	Class 125	Class 150	Class 125 · Class 150 · Class 300			
Code	Full port	E101N	E104N	E105N	E107N	E112N	E113N
	Reduced port	E201N	E204N	E205N	E207N	E212N	E213N
Body Material	Material code	FC200	FCD-S	SCPH2	SCS13	SCS14	SCS16
	Material	Cast Iron	Ductile	Cast steel	Stainless steel		

- Coating : Only primary coating (rust preventive paint) for Manual type.
No coatings for the valves with stainless steel body.

2-Way Type E Ball Valve (E100N, E200N)

Configuration

- E100N (Full port)

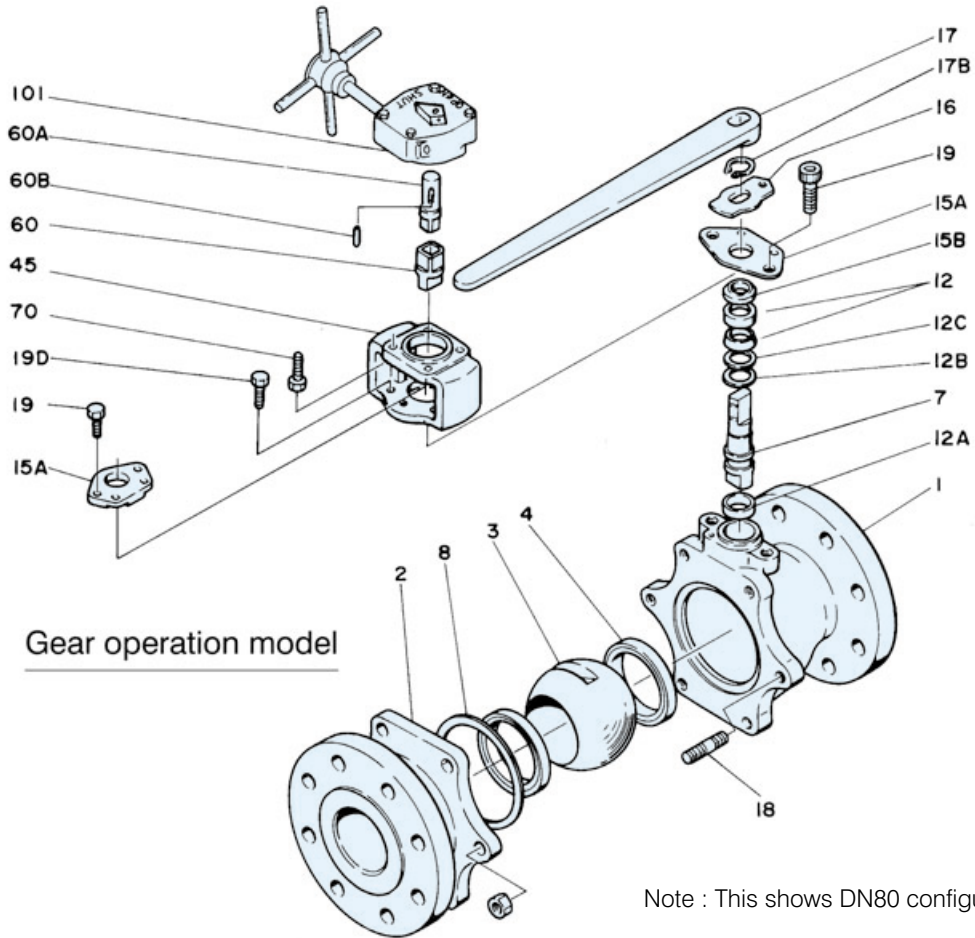


Figure 1

Standard configuration

Code		E101N	E104N	E105N	E107N	E112N	E113N
		E201N	E204N	E205N	E207N	E212N	E213N
Parts name		Cast steel	Ductile cast iron	Cast steel	Stainless cast steel		
1	Body	FC200	FCD-S	SCPH2	SCS13	SCS14	SCS16
2	Flange	FC200	FCD-S	SCPH2	SCS13	SCS14	SCS16
3	Ball	SCS13 ①	SCS13 ①	SCS13 ①	SCS13 ①	SCS14 ②	SCS16 ③
4	Seat	New-PTFE	New-PTFE	New-PTFE	New-PTFE	New-PTFE	New-PTFE
7	Stem	SUS420J2	SUS420J2	SUS420J2	SUS304	SUS316	SUS316L
8	Gasket	Aspect	Aspect	Aspect	PTFE	PTFE	PTFE
12	Packing	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
12A	Bearing	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
12B	Thrust bearing	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
12C	Bearing raceway	SUS304	SUS304	SUS304	SUS304	SUS316	SUS316L
15A	Grand follower	SS400 ④	SS400 ④	SS400 ④	SUS304 ⑤	SUS304 ⑤	SUS304 ⑤
15B	Grand ring	SUS304	SUS304	SUS304	SUS304	SUS304	SUS304
16	Stopper	SUS304	SUS304	SUS304	SUS304	SUS304	SUS304
17	Handle	SS400 ⑥	SS400 ⑥	SS400 ⑥	SS400 ⑥	SS400 ⑥	SS400 ⑥
17B	Snap ring	SUS304	SUS304	SUS304	SUS304	SUS304	SUS304
18	Embedded nut	SS400 ⑦	SS400 ⑦	SS400 ⑦	SUS304 ⑦	SUS304 ⑦	SUS304 ⑦
19	Hex socket head bolt	S45C	S45C ⑧	S45C ⑧	SUS304	SUS304	SUS304

- Note ① DN is below 125 : SUS304
 ② DN is below 125 : SUS316
 ③ DN is below 125 : US316
 ④ DN is above 125 : FCD400
 20K, CL300(15~100) : SUS304
 ⑤ DN is above 125 : SCS13

- ⑥ DN is below 125 : SS400 + PVC dipping
 DN is between 65 and 100 : S20C
 DN is above 125 : CD400 + STK50
 ⑦ 20K, CL300 : SNB7 + S45C
 ⑧ 20K, CL300 : SUS304

Gear application parts

ID	Parts name	Material	Amount
15A	Gland follower	*	1
19	Hex bolt	SS400	2
19D	Hex bolt	SS400	4
45	Yoke	FCD450	1
60	Joint	SCS13	1
60A	Joint A	SS400	1
60B	Key	S45C	1
70	Hex bolt	SS400	4
101	Manipulator		1S

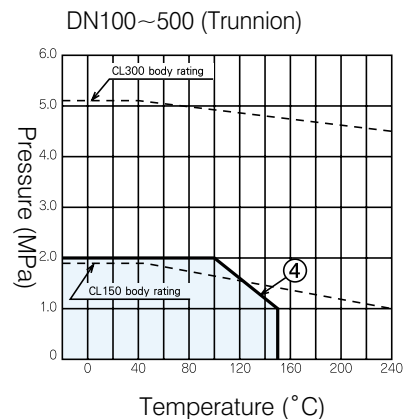
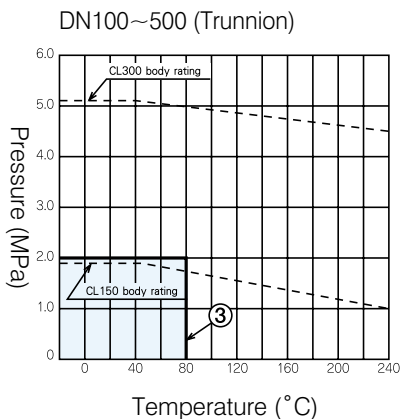
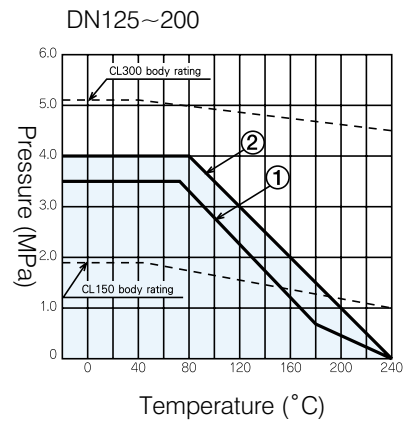
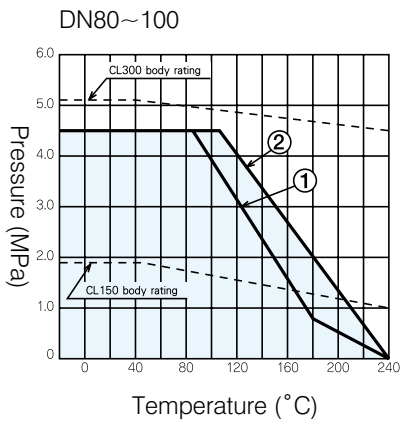
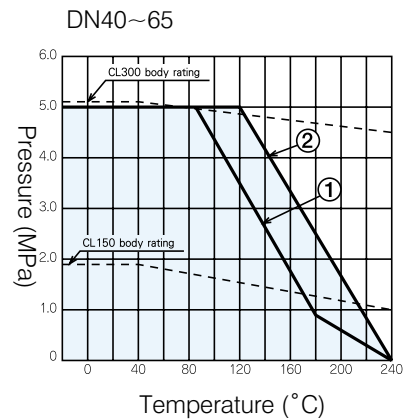
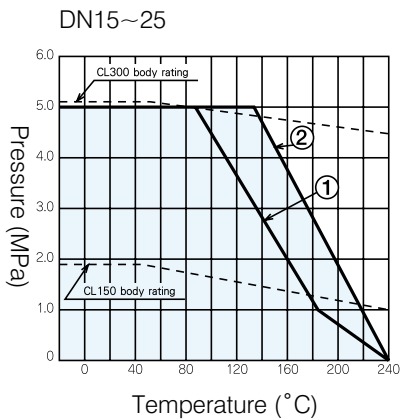
The nominal size is for E100N type.

● Pressure-temperature range

Nominal size is based on E100N type.

○ Valves : E100N, E200N, E100JNB, E200JNB, F100NB, E300N

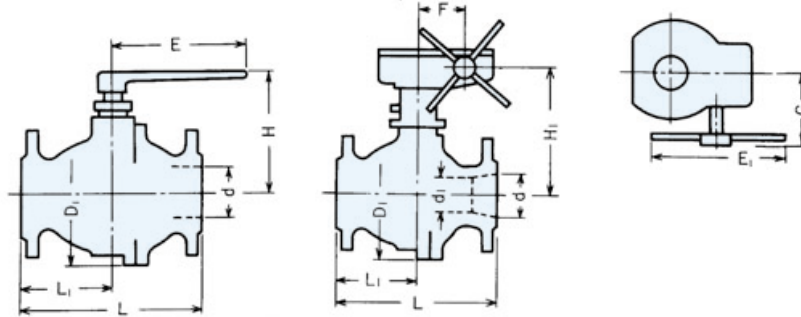
Code	Seat materials	applied to	Type
NTF	New-PTFE	①	for Floating Ball
NCF	Reinforced PTFE (with carbon fiber)		
CFMR	CF + Outside & Inside metal ring	②	
CFRS	CF + Additional retainer + O ring (NBR)	③	for Trunnion Ball
	CF + Additional retainer + O ring (Viton)	④	



2-Way Type E Ball Valve (E100N, E200N)

● Boundary dimension

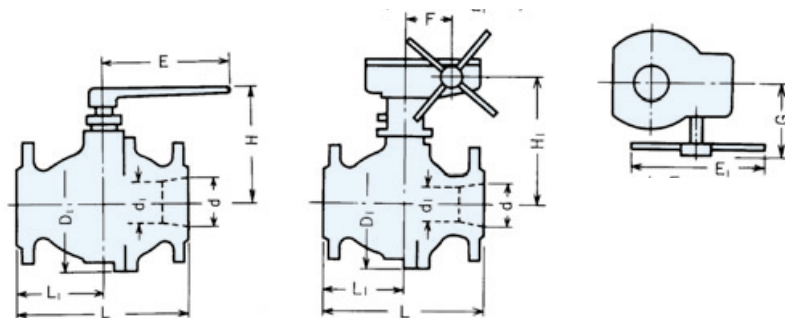
○ E100N (Full port)



Unit : mm

Nominal size DN	d	L					D1		Lever operated		Gear operated								Approx. Weight (kg)						
		Cast steel			Stainless cast steel Ductile				H	E		H1		G		F		E1		Lever operated			Gear operated		
		10K CL125	10K CL150	20K CL300	10K CL125 CL150	20K CL300	10K CL125 CL150	20K CL300		10K CL125 CL150	20K CL300	10K CL125 CL150	20K CL300	10K CL125 CL150	20K CL300	10K CL125 CL150	20K CL300	10K CL125 CL150	20K CL300	10K CL125 CL150	20K CL300	10K CL125 CL150	20K CL300		
1 5	13	110	108	140	□60	□66	80	130	130	—	—	—	—	—	—	—	—	—	—	2.5	2.1	2.6	—	—	—
2 0	19	120	117	152	□66	□72	85	130	130	—	—	—	—	—	—	—	—	—	—	3.0	2.5	3.4	—	—	—
2 5	25	130	127	165	□78	□84	95	160	160	—	—	—	—	—	—	—	—	—	—	4.9	4.3	5.5	—	—	—
4 0	38	165	165	190	□92	□102	110	230	230	—	—	—	—	—	—	—	—	—	—	7.4	6.6	10.2	—	—	—
5 0	51	180	178	216	□112	□121	120	230	230	—	—	—	—	—	—	—	—	—	—	10.5	9.4	13.6	—	—	—
6 5	64	190	190	241	168	178	135	350	350	—	—	—	—	—	—	—	—	—	—	15.5	14.1	19.8	—	—	—
8 0	76	200	203	283	194	198	145	350	350	—	—	—	—	—	—	—	—	—	—	19.4	17.6	27	—	—	—
1 0 0	102	230	229	305	236	249	175	450	450	—	—	—	—	—	—	—	—	—	—	30.5	27.2	35.6	—	—	—
1 2 5	127	290	356	381	287	296	260	650	800	345	345	190	230	77	90.5	300	460	56	56	71	84	83	102	—	—
1 5 0	152	330	394	403	330	346	280	650	800	365	365	190	230	77	90.5	300	460	72	69	98	98	95	129	—	—
2 0 0	203	400	457	502	412	418	350	800	1100	435	455	230	260	90.5	121.0	460	460	110	106	120	147	143	172	—	—
2 5 0	250	450	533	568	485	—	—	—	—	485	550	260	350	121	191	460	580	—	—	—	230	215	—	—	—
3 0 0	300	600	610	648	575	—	—	—	—	560	560	350	350	191	191	580	580	—	—	—	360	320	—	—	—
3 5 0	335	700	686	762	628	—	—	—	—	585	585	350	350	191	191	580	580	—	—	—	440	345	—	—	—
4 0 0	380	800	762	838	—	—	—	—	—	820	825	350	—	191	191	580	580	—	—	—	—	—	—	—	—
4 5 0	430	864	864	—	—	—	—	—	—	895	—	350	—	191	—	580	—	—	—	—	—	—	—	—	—
5 0 0	480	914	914	—	—	—	—	—	—	920	—	350	—	191	—	600	—	—	—	—	—	—	—	—	—

○ E200N (Reduced port)



Unit : mm

Nominal size DN	d	d1	L		D1	Lever operated		Gear operated					Approx. Weight (kg)					
			Cast steel	Stainless cast steel Ductile		H	E1	H1	G	F	E	Lever operated		Gear operated				
			J10K		Cast iron							Stainless steel	Cast iron	Stainless steel				
			CL125	CL150														
1 0 0	102	76	230	229	194	145	350	—	—	—	—	—	—	—	26.8	25.0	—	—
1 2 5	127	102	250	254	236	175	450	—	—	—	—	—	—	—	38.5	36.0	—	—
1 5 0	152	127	270	267	287	260	650	345	190	77	300	55.5	54.5	81	80	—	—	
2 0 0	203	152	290	292	330	280	650	365	190	77	300	84.5	81.5	108	105	—	—	
2 5 0	254	203	330	330	412	350	800	435	230	90.5	460	121.5	117.5	150	145	—	—	

■ Jacketed Type E Ball Valve (E100JNB, E200JNB)

● Standard Specification

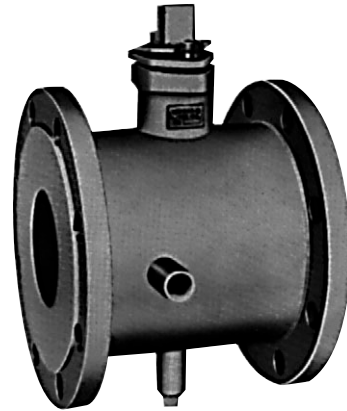
- Nominal Size : Full port (E100JNB) DN20~200
Reduced Port (E200JNB) DN100~200
- Connection : Flange
JIS10K RF, 20K RF
ANSI CL150 RF, CL300 RF
The flange size is slightly larger than the valve nominal size.
(Please see the boundary dimension table.)

- Body material : Stainless steel (SCS13, SCS14, SCS16)
- Parts materials : Please see the standard configuration table.

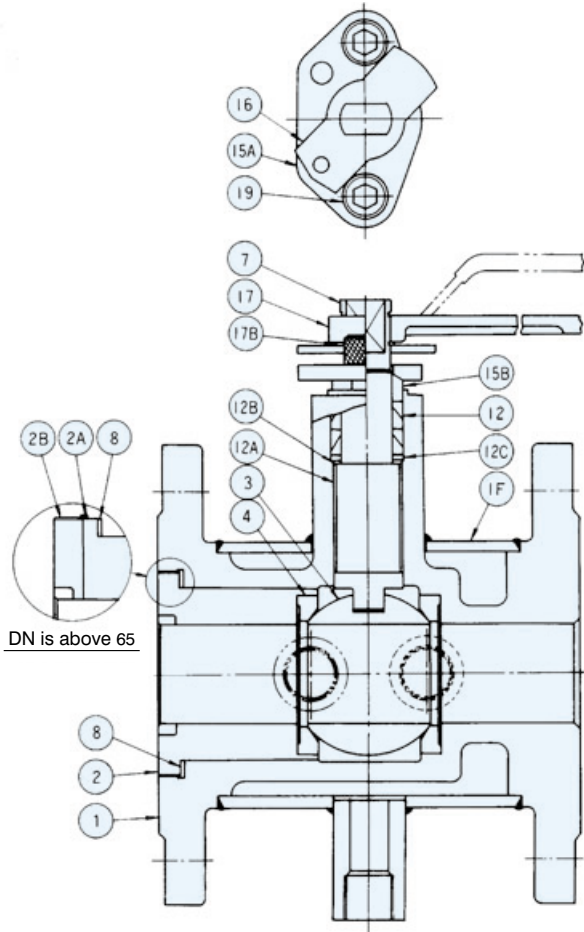
- Jacket :

Allowable Pressure	1MPa
Allowable Temperature	250°C
Inlet	2-Rp (pipe thread)
Outlet (bottom plug)	1-Rp (pipe thread)

- Please contact us for customer specific valves.



● Standard configuration

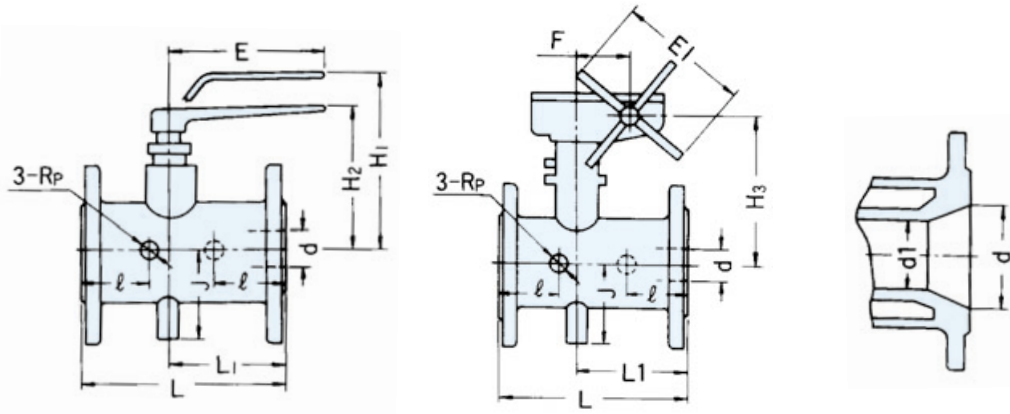


Code		E107JNB E207JNB	E112JNB E212JNB	E113JNB E213JNB
1	Body	SCS13	SCS14	SCS16
1F	Jacket Cover	STKM or SGP		
2	Insert	SUS304 or SCS13	SUS316 or SCS14	SUS316L or SCS16
2A	Insert	SUS304 or SCS13	SUS316 or SCS14	SUS316L or SCS16
2B	Insert Stopper	SUS304 or SCS13	SUS316 or SCS14	SUS316L or SCS16
3	Ball	SCS13 ①	SCS14 ①	SCS16 ①
4	Seat	NTF, NCF, CFM, and others		
6	Stem	SUS304	SUS316	SUS316L
8	Gasket	PTFE or Reinforced PTFE		
12	Packing	PTFE		
12A	Bearing	PTFE or Reinforced PTFE		
12B	Thrust bearing	Reinforced PTFE		
12C	Bearing raceway	SUS304	SUS316	SUS316L
15A	Gland follower	SUS304 ②		
15B	Gland Ring	SUS304		
16	Stopper	SUS304		
17	Handle	SS400 ③		
17B	Snap ring	SUS304		
19	Hex bolt	SUS304		

Note : ① DN is below 125: SUS304
 ② DN is above 125 : SCS13
 ③ DN is between 65 and 100 : S20C
 DN is between 125 and 200 : FCD400 + STK50
 The nominal size is for E100JNB.

■ Jacketed Type E Ball Valve (E100JNB, E200JNB)

● Boundary dimension



○ E100JNB (Full port)

Unit : mm

Nominal size DN	d	L	L1	ℓ	J	Rp	Lever operated			Gear operated			Connection flange Nominal size	Approx. weight	
							H1	H2	E	H3	E1	F		Lever type	Gear type
							10K CL150	10K CL150							
2 0	19	117	58.5	—	78	1/2	132	—	130	—	—	40	9.2	—	
2 5	25	127	63.5	—	87.5	1/2	140	—	160	—	—	50	11.3	—	
4 0	38	165	82.5	60	97	1/2	160	—	230	—	—	65	13.6	—	
5 0	51	178	93	65	105	1/2	166	—	230	—	—	80	14.5	—	
6 5	64	190	100	65	117.5	1/2	—	187	350	—	—	100	22	—	
8 0	76	203	108	70	128.5	1/2	—	197	350	—	—	125	30	—	
1 0 0	102	229	119	75	146	1/2	—	210	450	316	240	62.5	150	45	56
1 2 5	127	267	152	80	176	3/4	—	305	650	390	300	77	200	68	95
1 5 0	152	292	152	85	201	3/4	—	325	800	410	300	77	250	96	122
2 0 0	203	330	165	90	242	3/4	—	390	1100	475	460	90.5	350	133	170

○ E200JNB (Reduced port)

Unit : mm

Nominal size DN	d	d1	L	ℓ	J	Rp	Lever operated		Gear operated			Connection flange Nominal size	Approx. weight	
							H2	E	H3	E1	F		Lever type	Gear type
							10K CL150	10K CL150						
1 0 0	102	76	229	70	128.5	1/2	197	350	—	—	—	125	29	—
1 2 5	127	102	254	75	146	1/2	210	450	316	240	62.5	150	43	54
1 5 0	152	127	267	80	176	3/4	305	650	390	300	77	200	66	93
2 0 0	203	152	292	85	201	3/4	325	800	410	300	77	250	91	117

