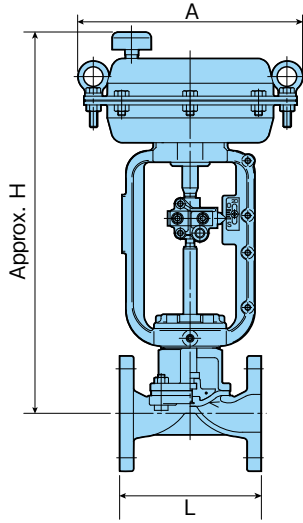


1. Rolling Diaphragm Type: Type BO(BC)3400

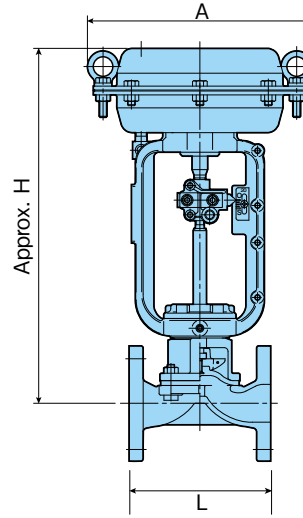
④

Principal Dimensions

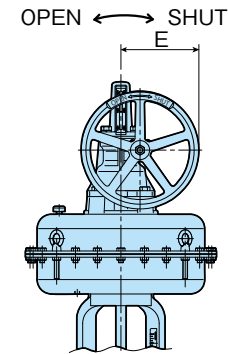
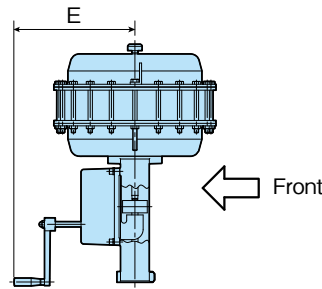
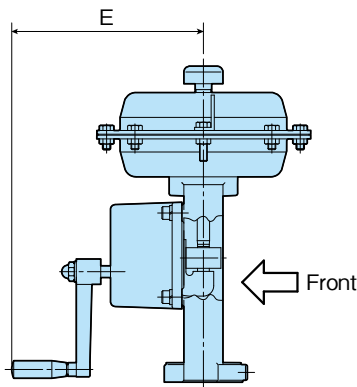
● Reverse acting type: Type BO3400



● Direct acting type: Type BC3400



● With handle



Top handle for 526SLA only

Unit: mm

Nominal Size DN	Face-to-face length L		Actuator Code	Type BO3400					Type BC3400				
	Other than rubber-lined and resin-lined	Rubber-lined and resin-lined		Approx. H	A	E	Mass: Approx. (kg)		Approx. H	A	E	Mass: Approx. (kg)	
							Without handle	With handle				Without handle	With handle
15	102	107	5221LA	404	231	196	12.0	16.0	364	231	196	12.0	16.0
20	118	123		404	231	196	12.5	16.5	364	231	196	12.5	16.5
25	127	132		404	231	196	13.5	17.5	364	231	196	13.5	17.5
40	159	165		416	231	196	15.5	19.5	375	231	196	15.5	19.5
50	191	197	5227LA	514	283	230	21.5	31.5	474	283	230	21.5	31.5
			5235LA	562	283	230	46.5	56.5	522	367	230	46.5	56.5
65	216	222	5227LA	539	283	230	28.0	38.0	499	283	230	28.0	38.0
			5235LA	574	367	230	50.0	60.0	534	367	230	50.0	60.0
80	254	260	5235LA	592	367	230	56.5	66.5	552	367	230	56.5	66.5
			524SLA	702	472	336	84.5	96.5	662	472	336	84.5	96.5
100	305	313	524SLA	699	472	336	94.5	107.0	659	472	336	94.5	107.0
			524LLA	839	472	336	117.0	140.0	799	472	336	117.0	140.0
			526SLA	918(1318)	678	265	222.0	262.0	—	—	—	—	—
125	356	364	524ELA	888	472	336	131.0	154.0	848	472	336	131.0	154.0
			526SLA	910(1310)	678	265	236.0	276.0	910(1310)	678	265	236.0	276.0
150	406	414	524ELA	920	472	336	148.0	—	880	472	336	148.0	—
			526SLA	942(1342)	678	265	253.0	302.0	942(1342)	678	265	253.0	302.0

Dimension H (parentheses) is for actuator code 526SLA with handle.

3

3. Reference Material

① How to Select Valve Size

Valve size is determined by calculating the valve coefficient of volume (Cv value) from the flow rate of a fluid, fluid pressure, differential pressure, specific gravity, etc. and comparing it with the Cv value in the table of the next section.

Generally, the following Cv value calculation formulas are used except for the special correction items:

	$\Delta P < \frac{P_1}{2}$	$\Delta P \geq \frac{P_1}{2}$
Liquid	$C_v = 11.56 V \sqrt{\frac{G}{(P_1 - P_2)}}$	Same as the left
Gas	$C_v = \frac{Q}{2.93} \sqrt{\frac{G(273+t)}{\Delta P(P_1 + P_2)}}$	$C_v = Q \frac{\sqrt{G(273+t)}}{2.538 P_1}$
Vapor	$C_v = \frac{WK}{0.1391 \sqrt{\Delta P(P_1 + P_2)}}$	$C_v = \frac{WK}{0.1205 P_1}$

V : Flow rate of a fluid m³/h

Q : Flow rate of a gas nm³/h
(at 15.6°C, 101.3 kPa·A)

G : Specific gravity of fluid
for liquid, water = 1
for gas, air: 1

P1: Absolute pressure on the primary side kPa·A*

P2: Absolute pressure on the secondary side kPa·A*

t : Temperature of the fluid °C

W: Flow rate of vapor kg/h

K: 1+(0.0013 x degree of superheat °C)

Degree of superheat:

Difference between the saturation temperature to the absolute pressure on the primary side(P1) and the primary side temperature.
In the case of saturation vapor, the degree of superheat reads 0 (zero).

(*A : Absolute pressure = Gauge pressure + 101.3 kPa)

② Valve Stroke and Cv value

● Rolling diaphragm type: Type BO(BC)3400

Nominal Size DN	Stroke (mm)	Main body Diaphragm		Without lining		Rubber-lined	Glass-lined	PFA-lined	PFA-lined ETFE-lined	Ceramic
		Rubber	PTFE	Rubber	PTFE	PTFE	PTFE	59(M)/59(S)	59(2S)/60	PTFE
15	6	4		4.2	4.2	2.3	3	5.9		
20	8	10		8.5	11	7.5	7	10		
25	10	23	15	15	19	10		14		
40	14	46	32	30	40	25		28		
50	20	78	71	57	82	41	54	52		
65	24	106	78	93	99	62	68	63		
80	30	161	166	156	219	104	107	128		
100	40	303	306	194	291	210	161	—		
125	50	355		310	405	230	—	—		
150	60	530		440	585	330	—	—		

* The Cv values of Material code "59(2S)" with DN65 or bigger are same as "59(M)/59(S)".

* The above-mentioned Cv values need to be corrected when using the PTFE diaphragm and the pressure on the primary side is lower than 0.15 MPa. In such a case, please contact us.

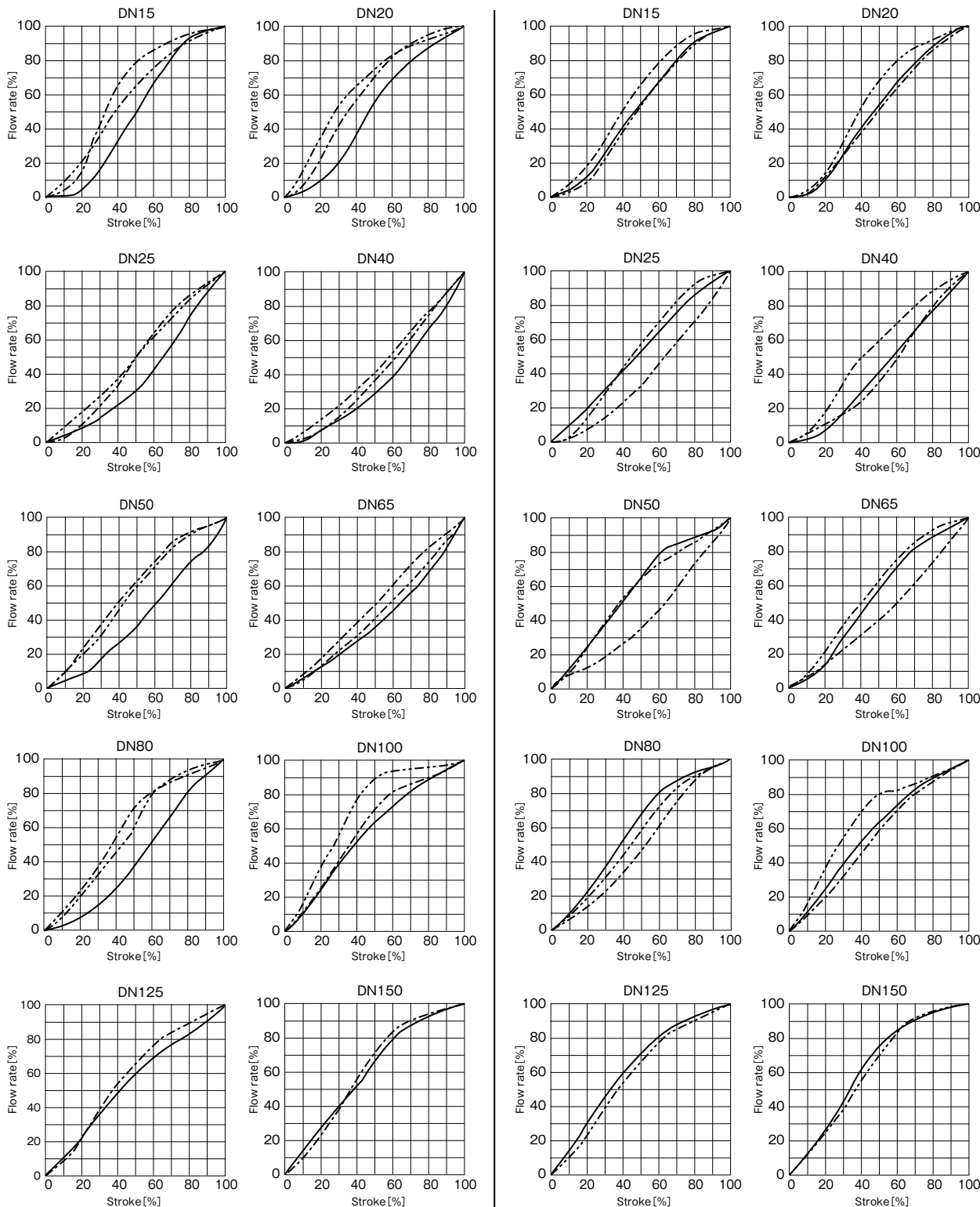
● Piston type: Type HN3400N

Nominal Size DN	Stroke (mm)	Main body without lining	Main body with rubber lining	Main body with glass lining	Main body with PFA lining
150	55	520	435	570	325
200	75	1025	880	1120	800
250	95	1435	1295	1920	1160
300	110	2280	1840	2350	—

3

Specific Flow Rate Characteristics

Rolling Diaphragm Type: Type BO (BC) 3400



————— : Glass-lined main body - PTFE diaphragm
 - - - - - : PFA-lined main body - PTFE diaphragm
 - · - · - · : ETFE-lined main body - PTFE diaphragm

————— : Main body without lining - Rubber diaphragm
 - - - - - : Main body without lining - PTFE diaphragm*1
 - · - · - · : Rubber-lined main body - Rubber (or PTFE) diaphragm

*1. DN125 and 150 have characteristics approximately similar to rubber diaphragm.

· The charts show the specific flow rate characteristics actually observed by this company. In actual service, the flow rate characteristics may vary depending on the pressure, temperature, flow velocity, piping and other condition.
 · Piston type: Type HN3400N, contact our Sales Dept. or local representative for the details.