

# NDV SANITARY VALVES





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## Products for Dead Spaces

Self-Drain Valve  
Type-F



DN8-100

Sampling Valve  
Type-P



DN8-100

3-Way Valve  
Type-K



DN8-80

Tank Bottom Valve  
Type-T



DN15-100

Product List

○: Standard ☆: Option —: Not Applied

# Bio-Clean Diaphragm Valve Series

|                                         |             | Standard 2-Way Valves |         |                      |                       | Valves for Dead Spaces |                   |                             |                |                      | Special Valves*** |              |            |
|-----------------------------------------|-------------|-----------------------|---------|----------------------|-----------------------|------------------------|-------------------|-----------------------------|----------------|----------------------|-------------------|--------------|------------|
|                                         |             | Stainless Steel Body  |         | Lined Body           |                       | Self-Drain             |                   |                             | Sampling Valve | 3-Way Valve          | Tank Bottom Valve | Branch Valve |            |
|                                         |             | B414                  | B413    | B459 (2S)/(S)        | B459 (M)              | B460 (S)               | B414 (F)          | B413 (F)                    | B459 (F)       | B414 (P)             | B414 (K)          | B414 (T)     | B414 (A-L) |
| Simplified Code                         |             | SUS316L Forged        |         | SCS16 Precision Cast | SCS16 Precision Cast  | SCS13 +PFA Lining      | FCD-S +PFA Lining | SUS316L Forged+ ETFE Lining | SUS316L Forged | SCS16 Precision Cast | SCS13 +PFA Lining | SUS316L      | SUS316L    |
| Main Body Material                      |             | DN 8-100              | DN 8-50 | DN 15-80             | DN 15-100             | DN 25-65               | DN 8-50           | DN 65-100                   | DN 15-50       | DN 15-50             | DN 15-100         | DN 15-50     | DN 25-50   |
| Standard Nominal Size Range*            |             | ○                     | ○       | —**                  | —                     | —                      | ○                 | —                           | —              | ○                    | —                 | —            | —          |
| Connection Standard                     | ISSC        | ○                     | ○       | —**                  | —                     | —                      | ○                 | —                           | —              | ○                    | —                 | —            | —          |
|                                         | JT          | ☆                     | ☆       | —                    | —                     | —                      | —                 | ☆                           | —              | —                    | —                 | —            | —          |
|                                         | J10KFF (RF) | ☆                     | ☆       | ○                    | ○                     | —                      | —                 | ☆                           | ○              | ☆                    | ☆                 | ☆            | ☆          |
|                                         | ISSU        | ☆                     | —       | —                    | —                     | —                      | —                 | ☆                           | —              | ☆                    | —                 | —            | —          |
| Main Body Surface Finish Classification | B1          | ☆                     | ○       | —                    | —                     | —                      | —                 | ☆                           | —              | —                    | —                 | —            | —          |
|                                         | B2          | ○                     | —       | —                    | —                     | —                      | —                 | —                           | —              | —                    | —                 | —            | —          |
|                                         | B3          | ☆                     | —       | ☆                    | Painted Outer Surface | ☆                      | ☆                 | ☆                           | ☆              | ☆                    | ☆                 | ☆            | ☆          |
|                                         | B4          | —                     | —       | ☆                    | Surface (white)       | ☆                      | ☆                 | —                           | ☆              | —                    | —                 | —            | —          |
| Diaphragm                               | E1          | ☆                     | —       | —                    | —                     | —                      | —                 | —                           | —              | —                    | —                 | —            | —          |
|                                         | E2          | ☆                     | —       | —                    | —                     | —                      | —                 | —                           | —              | —                    | —                 | —            | —          |
| Diaphragm                               | TX/CE       | —                     | —       | —                    | —                     | —                      | —                 | —                           | —              | —                    | —                 | —            | —          |
|                                         | TX/CX       | —                     | —       | —                    | —                     | —                      | —                 | —                           | —              | —                    | —                 | —            | —          |
| Operation Type                          | Manual      | ○                     | ○       | ○                    | ○                     | ○                      | ○                 | ○                           | ○              | ○                    | ○                 | ○            | ○          |
|                                         |             | ☆                     | ☆       | ☆                    | ☆                     | ☆                      | ☆                 | ☆                           | ☆              | ☆                    | ☆                 | ☆            |            |
|                                         | Auto        | ○                     | ○       | ○                    | ○                     | ○                      | ○                 | ○                           | ○              | ○                    | ○                 | ○            | ○          |
|                                         |             | ☆                     | ☆       | ☆                    | ☆                     | ☆                      | ☆                 | ☆                           | ☆              | ☆                    | ☆                 | ☆            | ☆          |

\* Please contact us for a possibility of producing a product other than the standard. \*\* With a manufacturing record of special clamp type. Please contact us for details. \*\*\* Other than this, specific orders for special valves and related products are welcome.

Please contact our sales dept. or local representative for materials and nominal sizes other than those listed in this table.

# 2

Bio-Clean Diaphragm Valve Series

## Products for Dead Spaces

### 2-1. Self-Drain Valves: Type-F

- ① Features of Products
- ② Valve Specifications

### 2-2. Sampling Valves: Type-P

- ① Features of Products
- ② Valve Specifications
- ③ Major Dimensions

### 2-3. 3-Way Valves: Type-K

- ① Features of Products
- ② Valve Specifications
- ③ Major Dimensions

### 2-4. Tank Bottom Valves: Type-T

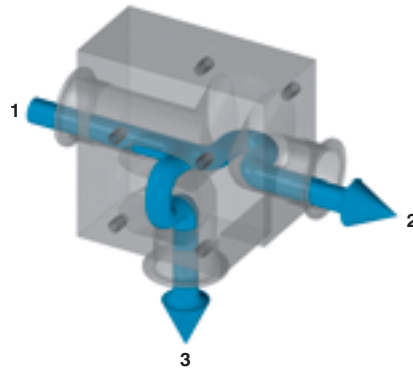
- ① Features of Products
- ② Valve Specifications
- ③ Major Dimensions



## 2-3. 3-Way Valves: Type-K

### 1 Features of Products

- Direct installation in a pipeline, compact and a structure with no residual fluid in valve.
- A wide range of application, such as branching, merging (mixing), introduction of washing water and sterilization steam, and discharge.



| Valve A | Valve B | Connected Ports         | Port No. Diagram |
|---------|---------|-------------------------|------------------|
| Open    | Close   | 1 - 2                   |                  |
| Open    | Open    | 1 - 2<br>1 - 3<br>2 - 3 |                  |
| Close   | Open    | 1 - 3                   |                  |
| Close   | Close   | —                       |                  |

### 2 Valve Specifications

#### Standard Specifications

##### Manufactured Main Bodies

|                           |                                                                                       |
|---------------------------|---------------------------------------------------------------------------------------|
| <b>Main Body Material</b> | SUS316L                                                                               |
| <b>Nominal Size (DN)</b>  | Combination of main pipe and valve • Standard: 15–50 (other range supplied as option) |
| <b>Operation Type</b>     | Manual operation and pneumatic operation are applicable.                              |

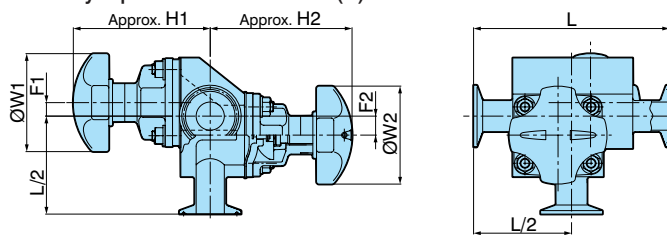
#### Other Specifications

- Main body surface finish classifications, diaphragm specifications, etc., are in accordance with the standard specifications. (Ref. page 10–11)
- Interchangeability with those units for standard main bodies allows the common use with the actuators for manually operated valves and pneumatically operated ON-OFF valves.
- Please contact us for PFA coated main bodies (special clamp connection).

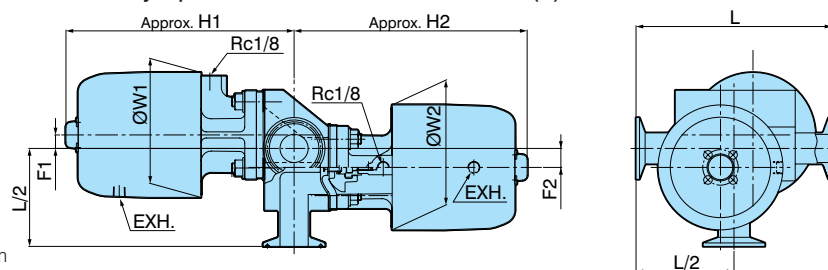
### 3 Major Dimensions (reference)

A typical example is shown with the combination of various nominal sizes and actuators. Please contact us for combinations other than the table below.

#### Manually Operated Valve: B414 (K) N



#### Pneumatically Operated ON-OFF Valve: BPO1414 (K) NB



Unit: mm

| Main Pipe × Valve DN (S) | L   | F1   | F2   | Manually Operated Valve (B400N) |            |     |     | Pneumatically Operated ON-OFF Valve (BPO) |            |     |             |            |     |
|--------------------------|-----|------|------|---------------------------------|------------|-----|-----|-------------------------------------------|------------|-----|-------------|------------|-----|
|                          |     |      |      | Approx. H1                      | Approx. H2 | W1  | W2  | Actuator: A                               | Approx. H1 | W1  | Actuator: B | Approx. H2 | W2  |
| 15 × 15 (1S × 1S)        | 130 | 5.7  | 11.8 | 103                             | 103        | 70  | 70  | 07                                        | 156        | 87  | 07          | 156        | 87  |
| 25 × 15 (1S × 1S)        | 160 | 11.0 | 14.5 | 112                             | 109        | 80  | 70  | 09                                        | 186        | 102 | 07          | 162        | 87  |
| 25 × 25 (1S × 1S)        | 160 | 11.0 | 15.5 | 112                             | 116        | 80  | 80  | 09                                        | 186        | 102 | 09          | 190        | 102 |
| 40 × 15 (1.5S × 1S)      | 200 | 14.7 | 20.9 | 142                             | 114        | 100 | 70  | 12                                        | 207        | 138 | 07          | 167        | 87  |
| 40 × 25 (1.5S × 1S)      | 200 | 14.7 | 21.9 | 142                             | 125        | 100 | 80  | 12                                        | 207        | 138 | 09          | 199        | 102 |
| 40 × 40 (1.5S × 1.5S)    | 200 | 14.7 | 21.9 | 145                             | 147        | 100 | 100 | 12                                        | 209        | 138 | 12          | 211        | 138 |
| 50 × 15 (2S × 1S)        | 230 | 14.0 | 26.9 | 154                             | 117        | 125 | 70  | 16                                        | 246        | 183 | 07          | 170        | 87  |
| 50 × 25 (2S × 1S)        | 230 | 14.0 | 27.9 | 154                             | 130        | 125 | 80  | 16                                        | 246        | 183 | 09          | 204        | 102 |
| 50 × 40 (2S × 1.5)       | 230 | 14.0 | 27.9 | 154                             | 155        | 125 | 100 | 16                                        | 246        | 183 | 12          | 220        | 138 |
| 50 × 50 (2S × 2S)        | 230 | 14.0 | 28.4 | 154                             | 164        | 125 | 125 | 16                                        | 246        | 183 | 16          | 256        | 183 |