# Product Selection Guide

| A | B | N | 080 | F | S | LO | B | 1 | R00 |
|---|---|---|---|---|---|---|---|---|---|

| | | |
|---|---|---|
| **Version** | R00, R01 ~ RZY, RZZ | |
| **Quantity of sensors** | 1 : 1 Sensor | |
| | 2 : 2 Sensor | |
| **Power Option*** | B : Basic | S : with SPS |
| | P : with PFO | D : with SPS and PFO |
| **Communication Interface** | R2 : RS-232 | R4 : RS-485 |
| | LO : Logic | DN : DeviceNet |
| | PB : Profibus | EN : Ethernet |
| | CC : C -Link | EC : EtherCAT |
| **Body Material** | A : Aluminum | |
| | S : SUS | |
| **Method of contract** | K : ISO-KF | |
| | F : ISO-F | |
| **Flange Size** | 040 : DN40 | 050 : DN50 |
| | 063 : DN63 | 080 : DN80 |
| | 100 : DN100 | 160 : DN160 |
| | 200 : DN200 | 250 : DN250 |
| **Sealing Type** | N : Non-Sealing | |
| | S : Sealing | |
| **Valve Type** | B : Buteterfly | |
| | P : Pendulum | |
| **Valve Model** | A : APC | |

* SPS = 15V DC Sensor Power Supply
PFO = Power Failure Option (Vavle closes or opens automatically at power failure)

## Product List

DN40

DN50

DN63

DN80

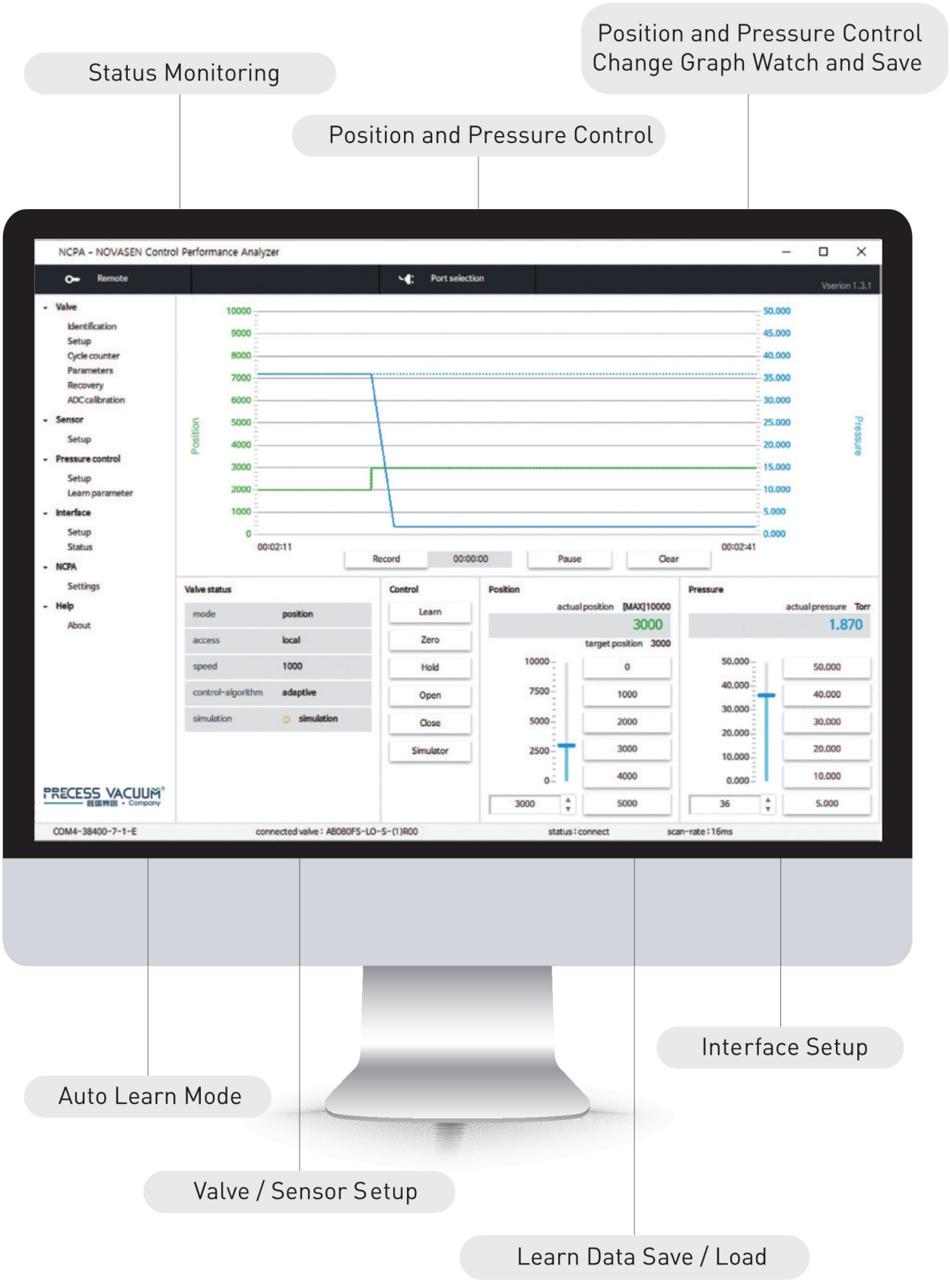
DN100

DN160

DN200

DN250

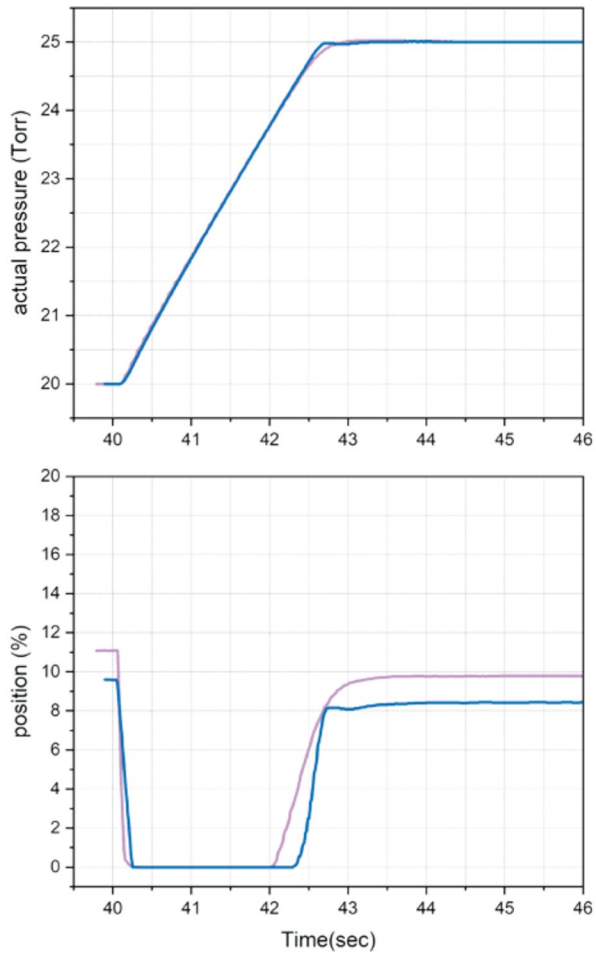
# Setup&Management



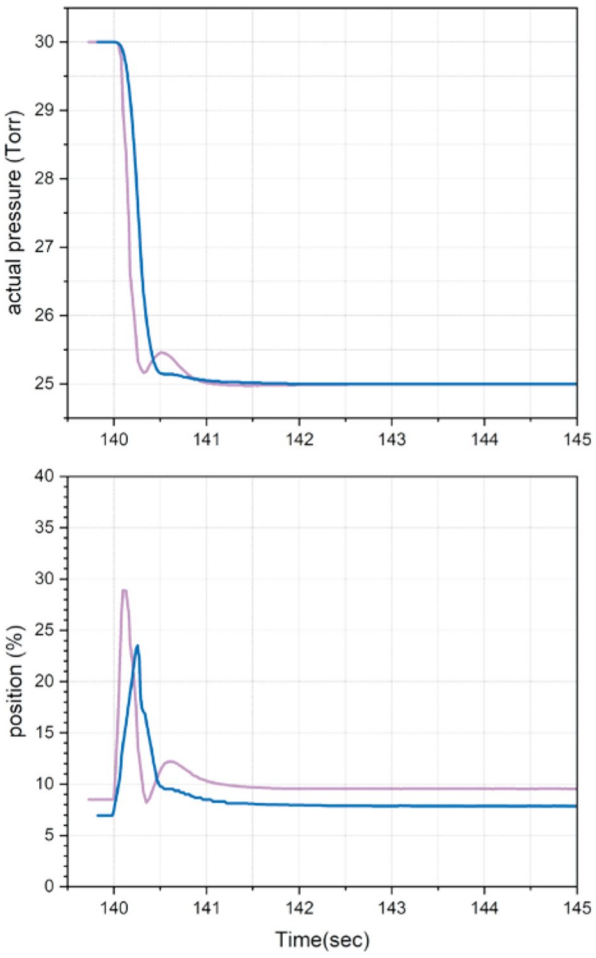
# APC Butterfly Valve

## Control Performance

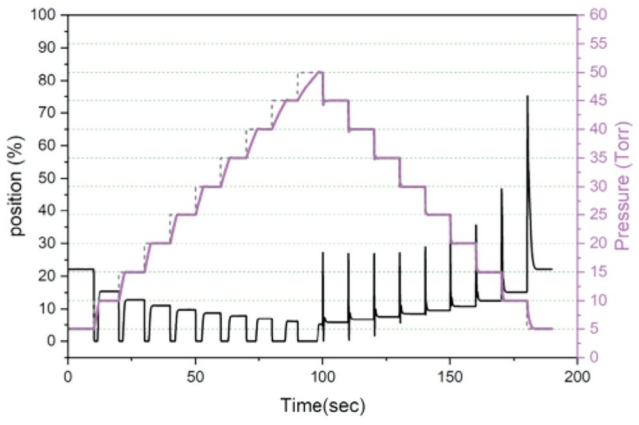
PRECESS
Competitor

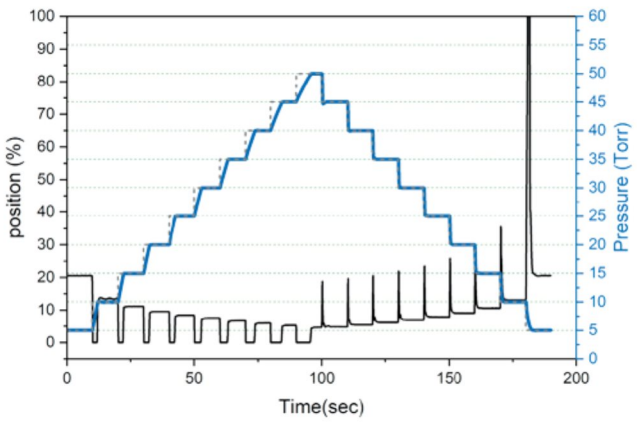



Pressure Up

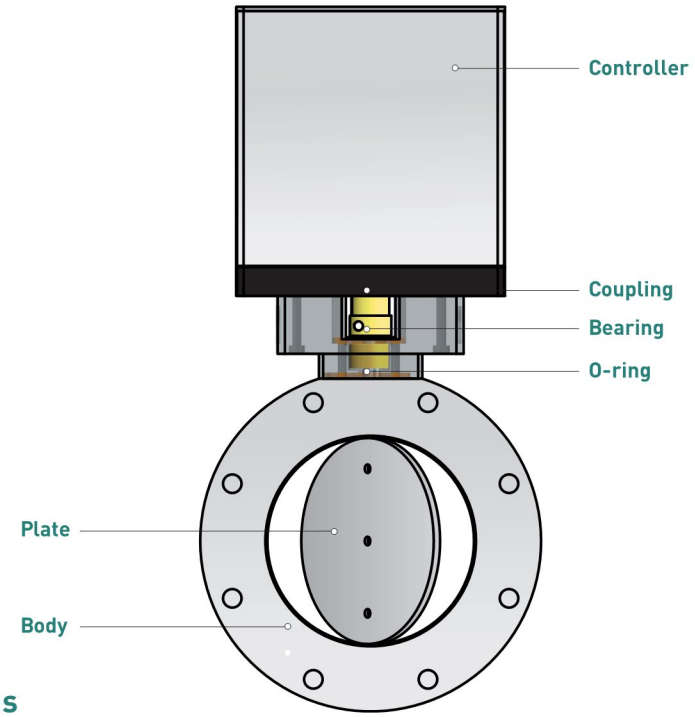



Pressure Down




Control Response

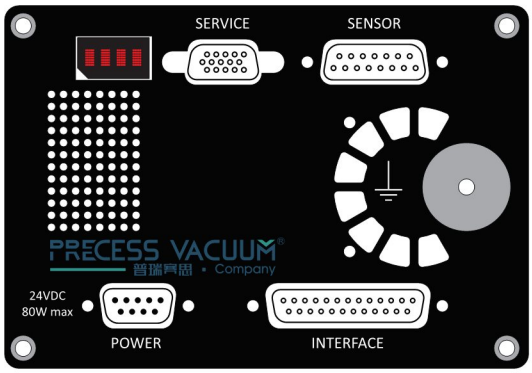



## Product Specifications

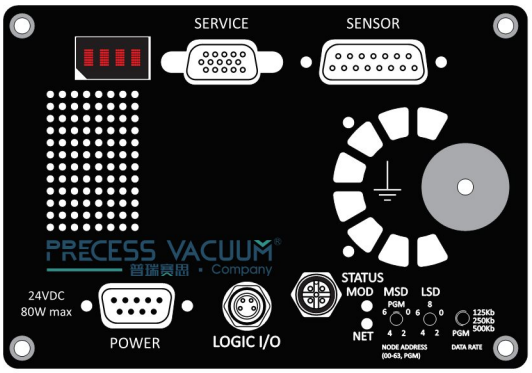
| | |
|---|---|
| Pressure range at 20°C | 1 × $10^{-8}$ mbar to 1.2 bar (abs) |
| Leak rate to outside at 20°C | ＜1 × $10^{-9}$ mbar l/s |
| Cycles until first service | 2,000,000 (unheated and under clean conditions) |
| Admissible operating temperature | +10°C to +150°C |
| Mounting position | Any<br>Control unit for ISO-KF version needs support when mounted on horizontal piping and control unit does not hang. |
| Wetted materials<br>- Body, plate<br>- Shaft<br>- Plate screws | Body, Plate - Stainless steel 304 , aluminum 6061<br>Shaft - Stainless steel 316L<br>Plate screws - Stainless steel 304 |
| - Shaft seal | Viton® (standard). Other materials available on request. Seal materials are v declared on dimensional drawing of specific valve ordering number. |
| - Slide bearing for shaft | iglidur® X |

| | |
|---|---|
| Power input [1] | +24 VDC ( 10%) @ 0.5V pk-pk max.[connector: POWER] |
| Power Consumtion | 80 W max. (operation of valve with max. load) without PFO4) |
| Sensor power supply [2] | +24 VDC / 1500 mA max. [connector: POWER]<br>15 VDC ( 5%) / 667 mA max. [connector:SENSOR] |
| - Input<br>- Output | |
| Sensor input | 0-10 VDC / Ri > 100 kΩ [connector: SENSOR]<br>0.16 mV<br>1 ms |
| - Signal input<br>- ADC resolution<br>- Sampling time | |
| Digital inputs [3] | 24 VDC max. |
| Digital outputs [3] | 70 VDC or 70 V peak max.<br>0.5 ADC or 0.5 A peak max.<br>10 W max. |
| - Input voltage<br>- Input current<br>- Breaking capacity | |
| Ambient temperature | 0 °C to +50 °C max. (< 35 °C recommended) |
| Pressure control accuracy | 5 mV or 0.1% of setpoint, whichever is greater |
| Position resolution / position control capability | 20000 |
| Actuating time — closing | 0.3 s typ. |
| Actuating time — opening | 0.3 s typ. |
| Utilizable valve torque | 2.5 Nm |

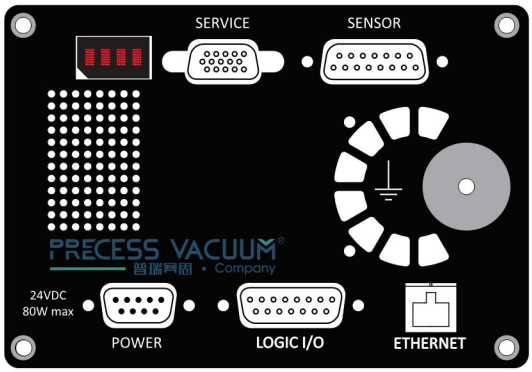
1) Internal overcurrent protection by a PTC device. 2) Refer to chapter «Sensor supply concepts» for details. 3) Refer to chapter «Schematics» for details.



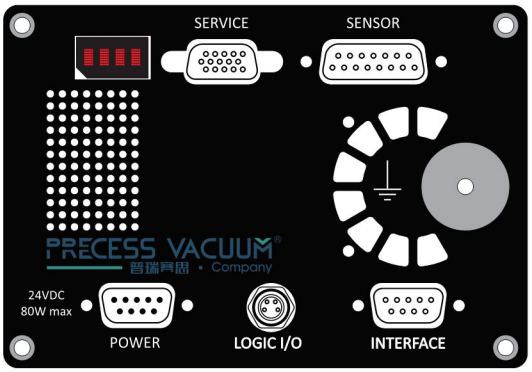

RS232, Logic, RS422, RS485



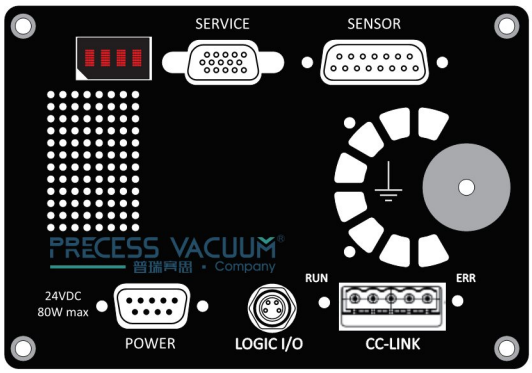

DeviceNet



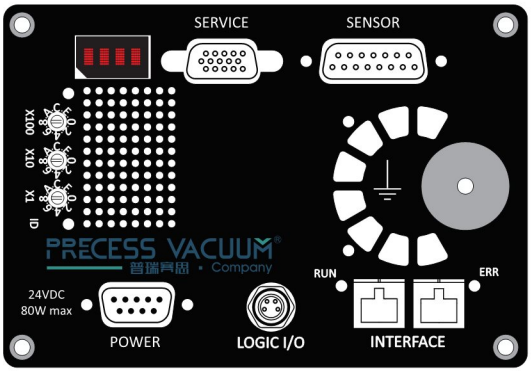

Ethernet




Profibus




CC-Link



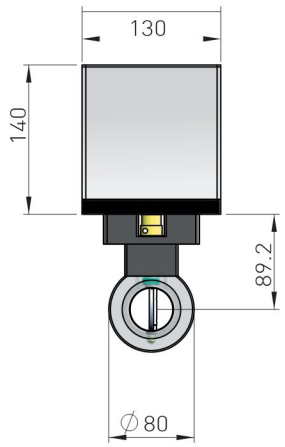

EtherCAT

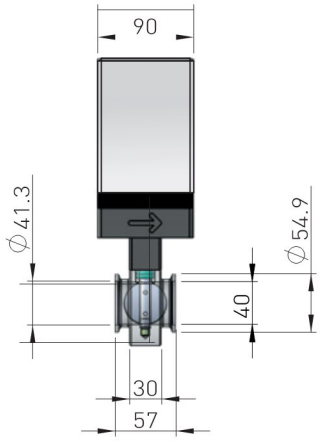
## ELECTRICAL CONNECTIONS

| | CONNECTION | TYPE |
|---|---|---|
| POWER | Power input | DB-9 male |
| SENSOR | Sensor input<br>Sensor power supply | DB-15 female |
| INTERFACE | RS232, Logic, RS422, RS485 | DB-25 female |
| | DeviceNet | Micro-style male |
| | Ethernet | RJ-45 |
| BUS Mudules | Profibus | DB-9 female |
| | CC-Link | 5-pole terminal screw |
| | EtherCAT | RJ-45 x 2 |

# Dimensional Drawing

## DN40



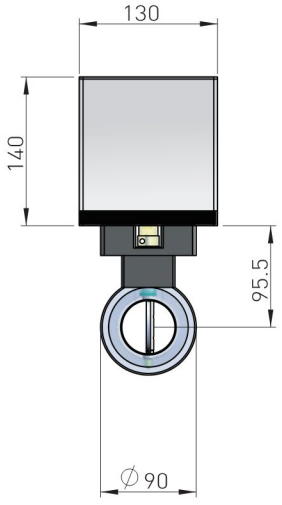



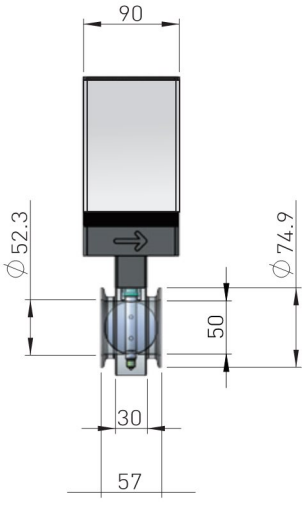

## Product Specification

| DN (nominal I.D.) | | Conductance in open position (molecular flow) | Minimum controllable conductance (molecular flow) | Max. differential pressure | Typical closing / opening time | Weight(approx.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Aluminum | | Stainless steel | |
| mm | inch | ls-1 | ls-1 | mbar | s | kg | lbs | kg | lbs |
| 40 | 1½ | 80 | 0.25 | 1,000 | 0.3 | 2.8 | 6.3 | 3.9 | 8.6 |

# Dimensional Drawing

## DN50



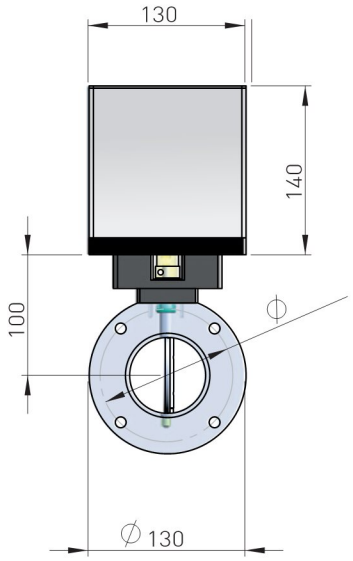



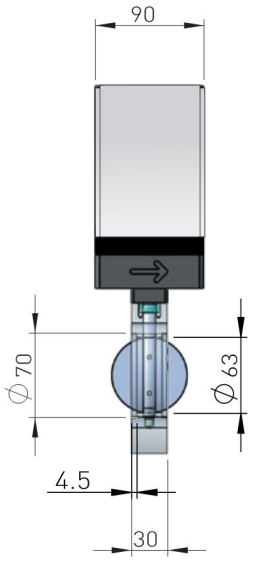

## Product Specification

| DN (nominal I.D.) | | Conductance in open position (molecular flow) | Minimum controllable conductance (molecular flow) | Max. differential pressure | Typical closing / opening time | Weight(approx.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Aluminum | | Stainless steel | |
| mm | inch | ls-1 | ls-1 | mbar | s | kg | lbs | kg | lbs |
| 50 | 2 | 150 | 0.3 | 1,000 | 0.3 | 2.9 | 6.4 | 4.1 | 9.0 |

# Dimensional Drawing

DN63



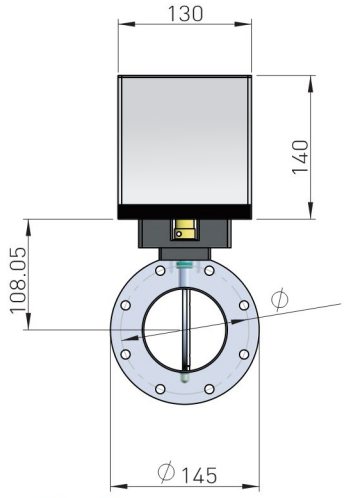



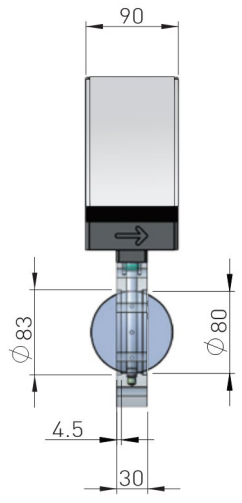

## Product Specification

| DN (nominal I.D.) | | Conductance in open position (molecular flow) | Minimum controllable conductance (molecular flow) | Max. differential pressure | Typical closing / opening time | Weight(approx.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Aluminum | | Stainless steel | |
| mm | inch | ls-1 | ls-1 | mbar | s | kg | lbs | kg | lbs |
| 63 | 2½ | 360 | 0.45 | 1,000 | 0.3 | 3.3 | 7.2 | 5.2 | 11.5 |

# Dimensional Drawing

DN80



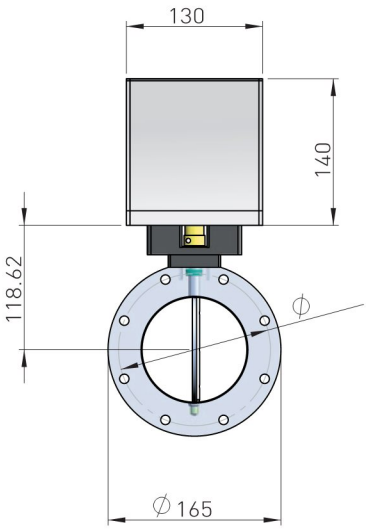



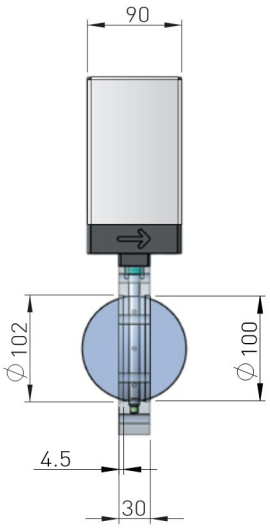

## Product Specification

| DN (nominal I.D.) | | Conductance in open position (molecular flow) | Minimum controllable conductance (molecular flow) | Max. differential pressure | Typical closing / opening time | Weight(approx.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Aluminum | | Stainless steel | |
| mm | inch | ls-1 | ls-1 | mbar | s | kg | lbs | kg | lbs |
| 80 | 3 | 850 | 0.65 | 1,000 | 0.3 | 3.4 | 7.5 | 5.5 | 12.1 |

# Dimensional Drawing

DN100



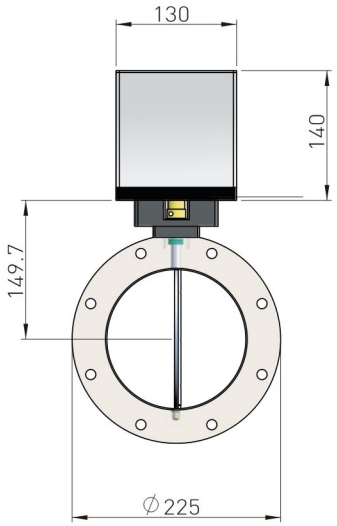



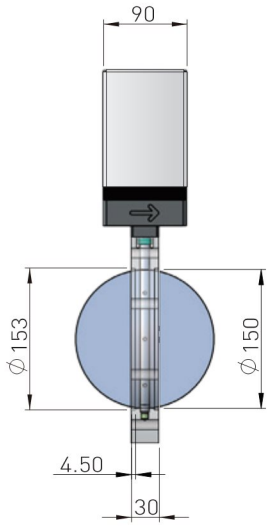

## Product Specification

| DN (nominal I.D.) | | Conductance in open position (molecular flow) | Minimum controllable conductance (molecular flow) | Max. differential pressure | Typical closing / opening time | Weight(approx.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Aluminum | | Stainless steel | |
| mm | inch | ls-1 | ls-1 | mbar | s | kg | lbs | kg | lbs |
| 100 | 4 | 1,400 | 0.85 | 800 | 0.3 | 3.6 | 7.9 | 6.1 | 13.4 |

# Dimensional Drawing

DN160



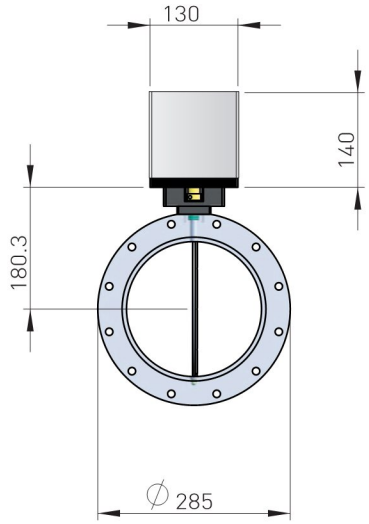



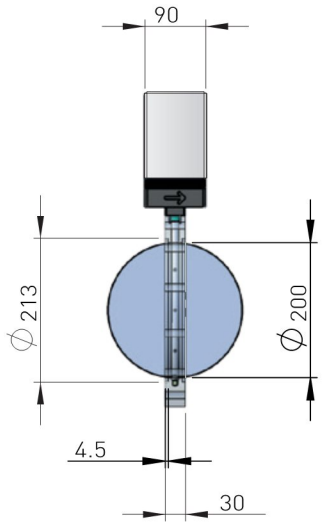

## Product Specification

| DN (nominal I.D.) | | Conductance in open position (molecular flow) | Minimum controllable conductance (molecular flow) | Max. differential pressure | Typical closing / opening time | Weight(approx.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Aluminum | | Stainless steel | |
| mm | inch | ls-1 | ls-1 | mbar | s | kg | lbs | kg | lbs |
| 160 | 6 | 3,800 | 1.7 | 300 | 0.3 | 4.3 | 9.5 | 8.3 | 18.3 |

## Dimensional Drawing

DN200



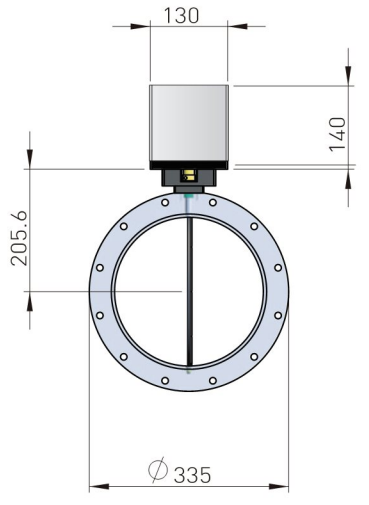



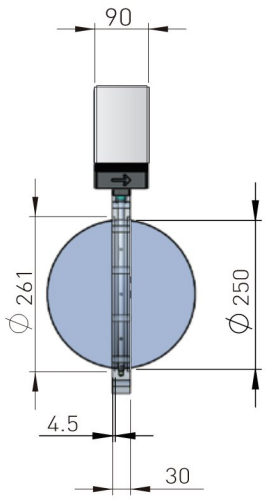

## Product Specification

| DN (nominal I.D.) | | Conductance in open position (molecular flow) | Minimum controllable conductance (molecular flow) | Max. differential pressure | Typical closing / opening time | Weight(approx.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Aluminum | | Stainless steel | |
| mm | inch | ls-1 | ls-1 | mbar | s | kg | lbs | kg | lbs |
| 200 | 8 | 7,800 | 2.8 | 150 | 0.3 | 5.2 | 11.5 | 10.9 | 24.0 |

## Dimensional Drawing

DN250




## Product Specification

| DN (nominal I.D.) | | Conductance in open position (molecular flow) | Minimum controllable conductance (molecular flow) | Max. differential pressure | Typical closing / opening time | Weight(approx.) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Aluminum | | Stainless steel | |
| mm | inch | ls-1 | ls-1 | mbar | s | kg | lbs | kg | lbs |
| 250 | 10 | 15,000 | 5.0 | 100 | 0.3 | 5.9 | 13.0 | 13.0 | 28.7 |