

Specification

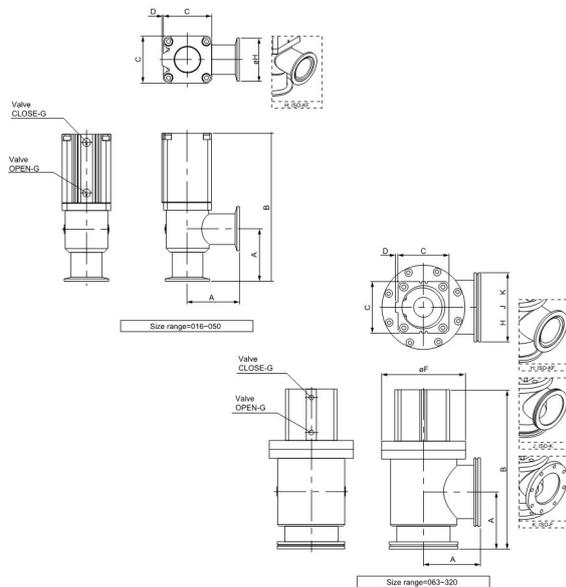
| VLSP series | | | Vacuum Angle Valve / Double Acting | | | | | | | | | | |
|--|-----------------------------|----|--|------|----|-----|-----|------------------|-----|-------|-------|-------|-------|
| | | | O-Ring STEM seal (S: FKM/Standards) | | | | | | | | | | |
| Valve port | SIZE | | 16 | 25 | 40 | 50 | 63 | 80 | 100 | 160 | 200 | 250 | 320 |
| Flange Standards | ISO-KF | KF | ● | ● | ● | ● | ● | ● | ● | ● | × | × | × |
| | ISO-K | KQ | × | × | × | × | ● | ● | ● | ● | × | × | × |
| | ISO-F | KC | × | × | × | × | ● | ● | ● | ● | ● | ● | ● |
| Valve Actuating type | | | Double acting cylinder | | | | | | | | | | |
| Fluid | | | Vacuum in an inert gas system | | | | | | | | | | |
| Operating temperature °C | | | ≤120 | | | | | | | | | | |
| Operating pressure Pa (Abs) | | | 1×10 ⁻⁵ – to atmospheric pressure | | | | | | | | | | |
| Conductance L / s ^(Note 1) | | | 7 | 14 | 42 | 95 | 150 | 250 | 520 | 1,430 | 3,180 | 5,150 | 6,480 |
| Leakage Pa·m ³ /s | Inside | | Standard material (FKM) 1.0×10 ⁻¹⁰ at room temperature (excluding gas permeation) | | | | | | | | | | |
| | Outside | | Standard material (FKM) 1.0×10 ⁻¹¹ at room temperature (excluding gas permeation) | | | | | | | | | | |
| Main material | | | Body: SUS304, Bellows: [SUS316L / AM350] Main parts: SUS304, AL-6061, FKM [Standard seal] | | | | | | | | | | |
| Operating pressure MPa (G) | | | 0.4-0.7 | | | | | | | | | | |
| Operation Port Port Size | | | PT 1/8" [Rc1/8"] | | | | | PT 3/8" [Rc3/8"] | | | | | |
| Compressed air consumption (at 0.5MPa) | cc (mL) ^(Note 2) | | 22.5 | 22.5 | 45 | 100 | 185 | 110 | 400 | 940 | 1,490 | 2,700 | 6,000 |
| Open stroke | | | 14 | 14 | 18 | 25 | 30 | 35 | 40 | 60 | 95 | 110 | 150 |
| Seal distance (A-Value) | | | | 50 | 65 | 70 | 88 | 90 | 108 | 138 | 178 | 208 | 250 |

(Note 1) Conductance is represented by "molecular flow" of elbow of the same dimension. (Note 2) One stroke condition. (Open & Close)

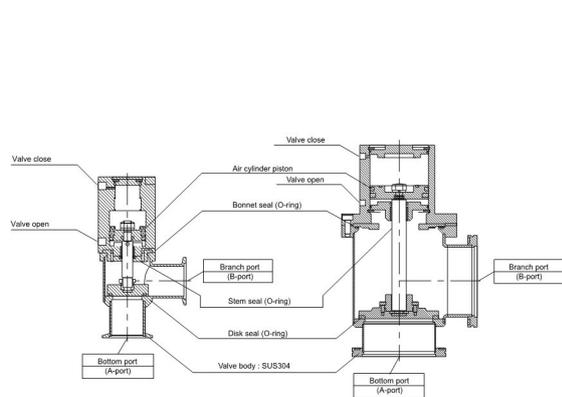
External dimension table

| SIZE | 16 | 25 | 40 | 50 | 63 | 80 | 100 | 160 | 200 | 250 | 320 |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| A | 40 | 50 | 65 | 70 | 88 | 90 | 108 | 138 | 178 | 208 | 250 |
| B | 138.5 | 146.5 | 184 | 205 | 244 | 257.5 | 302.5 | 415 | 520.5 | 611 | 737 |
| C | 48 | 48 | 60 | 69 | 77 | 77 | 98 | 117 | 117 | 142 | 178 |
| D | 3 | 3 | 2 | 2 | 5 | 5 | 5 | 6.5 | 6.5 | 11 | 10 |
| F | - | - | - | - | Ø119 | Ø119 | Ø159 | Ø208 | Ø258 | Ø318 | Ø410 |
| G | PT 1/8" | PT 3/8" | PT 3/8" | PT 3/8" | PT 3/8" |
| H | Ø30 | Ø40 | Ø55 | Ø75 | Ø95 | Ø114 | Ø134 | Ø190 | - | - | - |
| J | - | - | - | - | Ø95 | Ø110 | Ø130 | Ø180 | Ø240 | Ø290 | Ø370 |
| K | - | - | - | - | Ø130 | Ø145 | Ø165 | Ø225 | Ø285 | Ø335 | Ø425 |

Dimensional drawing



Internal detail



How to Order

Valve **V(A)B(C)** - ① ② - ③ - ④ - ⑤ ⑥ - (⑦)

Model VLAP - □□□ □□-□□ - □ - □□

| | | | | | | | | | | | | | | |
|---|----------------|---|---|---|---|-----|------------------------------------|----------|---|-----|-----|-----|-----|-----|
| Series | Body shape | V(L)B(C) | L | L-type(Angle valve) 304SS Body | | | | | | | | | | |
| | | V(Y)B(C) | Y | Y-type(Inline valve) 304SS Body | | | | | | | | | | |
| | Stem Seal | V(A)A(C) | A | 316L Bellows STEM Seal | | | | | | | | | | |
| | | V(A)B(C) | B | AM350 Bellows STEM Seal | | | | | | | | | | |
| | | V(A)S(C) | S | O-Ring STEM Seal | | | | | | | | | | |
| | Operation type | V(A)P | P | Double Acting (Pneumatic) | | | | | | | | | | |
| | | V(A)S | S | Single Acting (N.C.) | | | | | | | | | | |
| | | V(A)M | M | Manual operation | | | | | | | | | | |
| | | V(A)Q | Q | Double Acting, w/Heater (Pneumatic) | | | | | | | | | | |
| | | V(A)R | R | Single Acting, w/Heater (N.C.) | | | | | | | | | | |
| | | V(A)H | H | Double Acting, Heating model(Pneumatic) | | | | | | | | | | |
| | | V(A)K | K | Double Acting, Heating model, w/Heater(Pneumatic) | | | | | | | | | | |
| | | V(L)D | D | Double Acting, w/Soft start bypass valve(Pneumatic) | | | | | | | | | | |
| | | V(L)T | T | Single Acting, w/Soft start bypass valve(N.C.) | | | | | | | | | | |
| V(L)X | | X | Single Acting, w/Soft start integrated valve(N.C.) | | | | | | | | | | | |
| Port flange | Valve size | ① | □□□ | 016 | 025 | 040 | 050 | 063 | 080 | 100 | 160 | 200 | 250 | 320 |
| | Flange Spec. | ② | □□ Specific | KF KQ | | KC | | | CF | | JF | | | |
| Seal material (Disc, Bonnet, Stem) | ③ (Note 1) | □□ | N1 ED S1 FS R1 R2 R3 P1 P2 U1 | | FKM NBR EPDM VMQ FFKM Chemraz® Chemraz® Chemraz® Kalrez® Kalrez® ULTIC ARMOR® | | SS592 SS630 SSE38 4079 9100 UA4640 | | Im case of FFKM (FS), please specify a separate material. | | | | | |
| | | | None E S W | | Rear Right Left Same Direction | | | | | | | | | |
| | | | | | | | | | | | | | | |
| CDA port position | ④ (Note 2) | □ Branch port Lower part | | | | | | | | | | | | |
| | | | ⑤ | □ | 0 | 1 | | | | 2 | | | | |
| Sensor | ⑥ | □ | None | | 1 EA | | | | 2 EA | | | | | |
| | | | C N P H | | W8H(TPC) W9HN(TPC) W9HP(TPC) D-*****[SMC] | | | | | | | | | |
| Solenoid or Heater Mounting | ⑦ | (G) or (W) | G: Mounting Solenoid valve(Applicable Model) / W:Heater exclude (Not installed) | | | | | | | | | | | |
| Valve | (Note 3) | VLAP- / VLBP- / VLAS- / VLBS- / VLAD- / VLBD- / VLAT- / VLSP- / VLSS- / VLBT- / VYAP- / VYAS- / VYBP- / VYBS- / VYSP- / VYSS- | | | | | | | | | | | | |
| Modified special | () | ※Please consult our technical department. | | | | | | | | | | | | |
| w/Solenoid Valve Spec. | size range | 016 | 025 | 040 | 050 | 063 | 080 | 100 | 160 | 200 | 250 | 320 | | |
| Single acting | [V(A)S] | RDV412-5DZ-01 | | | RDS301-5DZ-01A | | | (Note 4) | Not Available | | | | | |
| Double acting | [V(A)P] | DS2120-5HZ-01 | | | | | RDS5120-5DZ-03 | | | | | | | |
| Solenoid valve maker: TPC / Electric power: DC24V | | | | | | | | | | | | | | |
| w/Heater Spec. | size range | 016 | 025 | 040 | 050 | 063 | 080 | 100 | 160 | 200 | 250 | 320 | | |
| Type: Silicon Rubber Heater | | 25W | 25W | 30W | 45W | 70W | 90W | 150W | Not Available | | | | | |
| Temperature Max.: Amb.~150°C / TC.sensor control: K-Type / Electric power: AC220V | | | | | | | | | | | | | | |

(Note 1) For standard products, use sealing material of vacuum secretion as a FKM (flammable O-ring).

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(Note 2) Applies only to the double and single operating valves (except VABM-series)

(Note 3) Specifications that are partially changed in standards or standards other than standard products can be specially designed to meet the customer's needs, so please consult with them.

(Note 4) Solenoid valve specification: RDS301-5DZ-02A