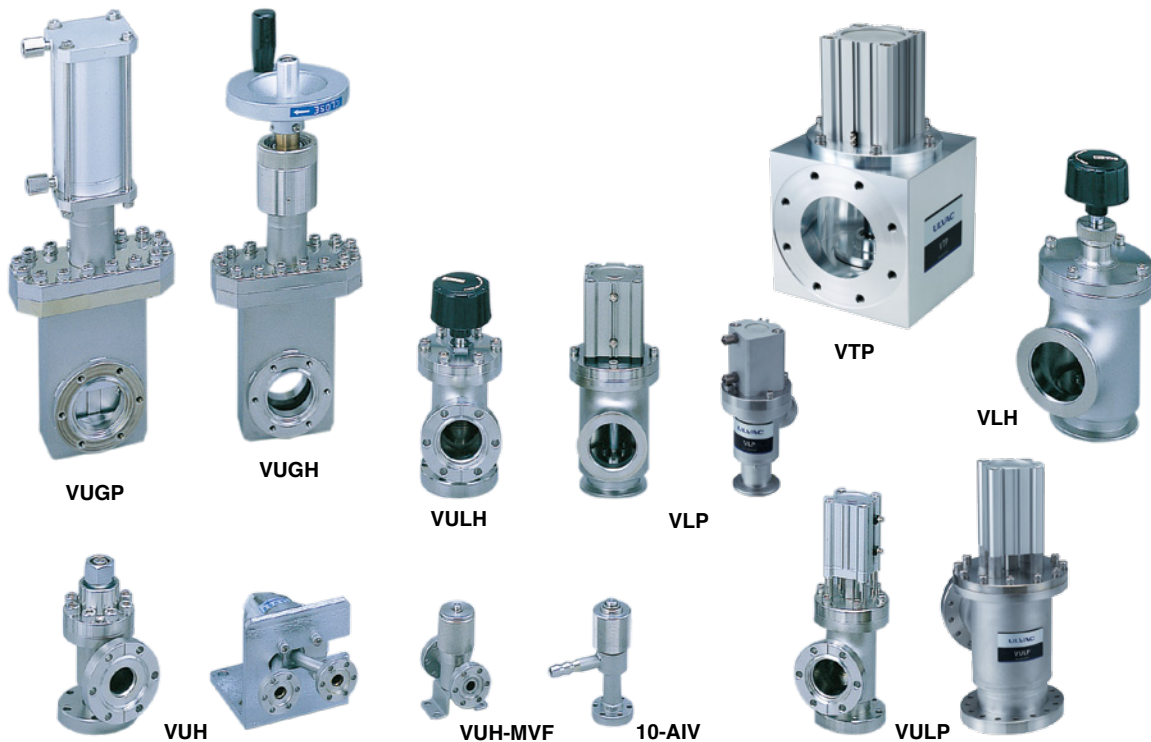


Vacuum Valve Series

ULVAC, Inc.'s vacuum valve employs the vacuum technology of the vacuum specialized manufacturer accumulated through many years of experience.

Please use ULVAC, Inc.'s vacuum valve, including L type valve and gate valve, which is compatible with all atmospheric pressure to ultra high vacuum ranges and conditions.



Features

- **Highly reliable**
Designed to exhibit maximum exhaust rate of the vacuum pump having large conductance upon disk opening and less leak rate.
- **Various lineups**
Includes L (angle) type valve, gate type valve, variable leak type valve.
Applicable in all vacuum conditions from atmospheric pressure to ultra high vacuum.
Main body material types are SS (soft steel), stainless steel, aluminum.
Valves connection flange are vacuum flange, quick coupling flange, CF (UFC) flange and so on.
Disk seal materials are nitrile rubber, fluorine rubber, metal and polyimide resin.
With these lineups, various proposals are possible that matches with the customer needs.
- **Two operating types**
Manually driven and compressed air driven.
- **Reverse pressure specification**
100A or less are compatible as standard. (Reverse pressure differential: within 0.1MPa)
compatibility 150A or more are compatible as option
- **Baking out, customizing, and so on**

Applications

- vacuum exhaust line for sputter apparatus and evaporation apparatus
- vacuum exhaust line for various heat processing furnace
- vacuum exhaust line for vacuum drying equipment and freeze-drying equipment
- vacuum exhaust line for leak tester
- vacuum exhaust line for various other vacuum equipment

Specifications

| Series *1 | Applicable pressure range | | | | | Valve type | Drive method *2 | Main unit material | Axis seal method | Bonnet seal material | Disk seal material | Maximum bakeout temperature (°C, °F) *3 | Reverse pressure (pressure differential: 0.1MPa) compatibility *4 |
|------------|---------------------------|-----------------------|----------------------------|----------------------------|--|---------------------|-----------------|------------------------|------------------|----------------------|--------------------|---|---|
| | Atmospheric pressure | 10 ⁻⁵ Pa | 10 ⁻⁷ Pa | 10 ⁻⁹ Pa | | | | | | | | | |
| | | 10 ⁻⁷ Torr | 7.5x10 ⁻¹⁰ Torr | 7.5x10 ⁻¹¹ Torr | | | | | | | | | |
| | | 10 ⁻⁷ mbar | 10 ⁻⁹ mbar | 10 ⁻¹¹ mbar | | | | | | | | | |
| VLH-U | [Pressure Range] | | | | | L model valve | H | SS400 + nickel plating | O-ring | Nitrile rubber | Nitrile rubber | 60, 140 | ○ |
| VLH-U□S | [Pressure Range] | | | | | L model valve | H | SUS304 | O-ring | Flourine rubber | Flourine rubber | 120, 248 | ○ |
| VLP-U□ | [Pressure Range] | | | | | L model valve | P | SS400 + nickel plating | O-ring | Nitrile rubber | Nitrile rubber | 60, 140 | ○ |
| VLP-U□S | [Pressure Range] | | | | | L model valve | P | SUS304 | O-ring | Flourine rubber | Flourine rubber | 120, 248 | ○ |
| VLP-U□A | [Pressure Range] | | | | | L model valve | P | Aluminum alloy | O-ring | Flourine rubber | Flourine rubber | 120, 248 | ○ |
| VTP-U□A | [Pressure Range] | | | | | T model valve | P | Aluminum alloy | O-ring | Flourine rubber | Flourine rubber | 120, 248 | ○ |
| VLH-US-□KF | [Pressure Range] | | | | | L model valve | H | SUS304 | O-ring | Flourine rubber | Flourine rubber | 120, 248 | ○ |
| VLP-US-□KF | [Pressure Range] | | | | | L model valve | P | SUS304 | O-ring | Flourine rubber | Flourine rubber | 120, 248 | ○ |
| VAH-U□ | [Pressure Range] | | | | | Gate model valve | H | Aluminum alloy | O-ring | Nitrile rubber | Nitrile rubber | 60, 140 | ○ |
| VAP-U□ | [Pressure Range] | | | | | Gate model valve | P | Aluminum alloy | O-ring | Nitrile rubber | Nitrile rubber | 60, 140 | ○ |
| VFR-□ | [Pressure Range] | | | | | Pendulum valve | P | Aluminum casting | O-ring | Flourine rubber | Flourine rubber | 120, 248 | ○ |
| VULH-□F | [Pressure Range] | | | | | L model valve | H | SUS304 | Bellows | Flourine rubber | Flourine rubber | 150, 302 | ○ |
| VULH-□KF | [Pressure Range] | | | | | L model valve | H | SUS304 | Bellows | Flourine rubber | Flourine rubber | 150, 302 | ○ |
| VULP-□F | [Pressure Range] | | | | | L model valve | P | SUS304 | Bellows | Flourine rubber | Flourine rubber | 150, 302 | ○ |
| VULP-□KF | [Pressure Range] | | | | | L model valve | P | SUS304 | Bellows | Flourine rubber | Flourine rubber | 150, 302 | ○ |
| VUGH-□F | [Pressure Range] | | | | | Gate model valve | H | SUS304 | Bellows | Flourine rubber | Flourine rubber | 150, 302 | ○ |
| VUGP-□F | [Pressure Range] | | | | | Gate model valve | P | SUS304 | Bellows | Flourine rubber | Flourine rubber | 150, 302 | ○ |
| 10AIV | [Pressure Range] | | | | | Leak valve | H | SUS304 | O-ring | Flourine rubber | Flourine rubber | 150, 302 | ○ |
| VULH-□CM | [Pressure Range] | | | | | L model valve | H | SUS304 | Bellows | Metal | Flourine rubber | 150, 302 (200, 392) | ○ |
| VULP-□CM | [Pressure Range] | | | | | L model valve | P | SUS304 | Bellows | Metal | Flourine rubber | 150, 302 (200, 392) | ○ |
| VUGH-□CS | [Pressure Range] | | | | | Gate model valve | H | SUS304 | Bellows | Metal | Flourine rubber | 150, 302 (200, 392) | ○ |
| VUGP-□CS | [Pressure Range] | | | | | Gate model valve | P | SUS304 | Bellows | Metal | Flourine rubber | 150, 302 (200, 392) | ○ |
| VUH | [Pressure Range] | | | | | Other | H | SUS304 | Bellows | Metal | Metal | 200, 392 (250, 482) | ○ |
| VUH-MVF | [Pressure Range] | | | | | Other | H | SUS304 | Bellows | Welded structure | Polyimide resin | 200, 392 | ○ |
| VLV-3D | [Pressure Range] | | | | | Variable leak valve | H | SUS304 | Bellows | Welded structure | Metal | 150, 302 | ○ |

*1 □: A(mm) or B(inch)

*2 H: Manual, P: Compressed air drive

*3 (): Valve closed. Cylinder part should less than 60°C (140°F)

*4 VUGP-200,250: Incompatible with reverse pressure. (Vacuum/high vacuum valve compatible are 100A or less. More than 6B are compatible as an option.)

Connection Method

| Flange Model | Vacuum flange | | | | | | | | | | | | | | | | | Flange coupling | | | | UFC flange *1 | | | | | | | | other |
|--------------|---------------|----|-------|----|-------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----------------|----|-------|----|---------------|-----|-------|-------|-----|-----|-----|-----|-------|
| | VF | | | | | | | | | | | | | | | | | NW (KF) | | | | 034 | 070 | 070 | 114 | 152 | 203 | 253 | 306 | |
| A (mm) | 20 | 25 | 40 | 50 | 65 | 80 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 500 | 550 | 900 | 1300 | 16 | 25 | 40 | 50 | 10 | 25 | 40 | 65 | 100 | 150 | 200 | 250 | |
| B (inch) | 3/4 | 1 | 1 1/2 | 2 | 2 1/2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 20 | 22 | 36 | 52 | 3/4 | 1 | 1 1/2 | 2 | 3/8 | 1 | 1 1/2 | 2 1/2 | 4 | 6 | 8 | 10 | |
| VLH-U□ | ◆ | ◆ | ◆ | ◆ | | ◆ | ◆ | ◆ | ◇ | ◇ | | | | | | | | | | | | | | | | | | | | |
| VLH-U□S | ◆ | ◆ | ◆ | ◆ | | ◆ | ◆ | ◇ | ◇ | ◇ | | | | | | | | | | | | | | | | | | | | |
| VLP-U□ | ◆ | ◆ | ◆ | ◆ | | ◆ | ◆ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | | | | | | | | | | | | | |
| VLP-U□S | ◆ | ◆ | ◆ | ◆ | | ◆ | ◆ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | | | | | | | | | | | | | |
| VLP-U□A | | | | | | ◇ | ◇ | ◇ | | | | | | | | | | | | | | | | | | | | | | |
| VTP-U□A | | | | | | ◇ | ◇ | ◇ | | | | | | | | | | | | | | | | | | | | | | |
| VLH-US-□KF | | | | | | | | | | | | | | | | | | | ◆ | ◆ | ◆ | | | | | | | | | |
| VLP-US-□KF | | | | | | | | | | | | | | | | | | | ◆ | ◆ | ◆ | | | | | | | | | |
| VAH-U□ | | | | | | | ◇ | ◇ | | | | | | | | | | | | | | | | | | | | | | |
| VAP-U□ | | | | | | | ◇ | ◇ | | | | | | | | | | | | | | | | | | | | | | |
| VFR-□ | | | | | | | | | | | | | ◇ | ◇ | | | | | | | | | | | | | | | | |
| VULH-□F | | ◆ | ◆ | | ◆ | | ◆ | ◇ | ◇ | | | | | | | | | | ◆ | ◆ | ◆ | | | | | | | | | |
| VULH-□KF | | | | | | | | | | | | | | | | | | | ◆ | ◆ | ◆ | | | | | | | | | |
| VULP-□F | | ◆ | ◆ | | ◆ | | ◆ | ◇ | ◇ | | | | | | | | | | ◆ | ◆ | ◆ | | | | | | | | | |
| VULP-□KF | | | | | | | | | | | | | | | | | | | ◆ | ◆ | ◆ | | | | | | | | | |
| VUGH-□F | | | ◆ | | ◆ | | ◆ | ◇ | ◇ | | | | | | | | | | | | | | | | | | | | | |
| VUGP-□F | | | ◆ | | ◆ | | ◆ | ◇ | ◇ | | | | | | | | | | | | | | | | | | | | | |
| 10AIV | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | ◆ |
| VULH-□CM | | | | | | | | | | | | | | | | | | | | | | ◆ | ◆ | ◆ | ◆ | ◆ | ◇ | ◇ | ◇ | |
| VULP-□CM | | | | | | | | | | | | | | | | | | | | | | ◆ | ◆ | ◆ | ◆ | ◆ | ◇ | ◇ | ◇ | |
| VUGH-□CS | | | | | | | | | | | | | | | | | | | | | | | ◆ | ◆ | ◆ | ◆ | ◆ | ◇ | ◇ | ◇ |
| VUGP-□CS | | | | | | | | | | | | | | | | | | | | | | | | ◆ | ◆ | ◆ | ◆ | ◇ | ◇ | ◇ |
| VUH | | | | | | | | | | | | | | | | | | | | | | ◆ | ◆ | ◆ | ◇ | | | | | |
| VLV-3D | | | | | | | | | | | | | | | | | | | | | | ◆ | | | | | | | | |

◆: Standard stock

◇: Made to order

*1 UFC are ULVAC standard stainless steel knife-edge metal seal flanges.

Vacuum Valve

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