

## SECUVAC® Valves

### Safety Valves for Rotary Vacuum Pumps

SECUVAC valves are vacuum safety valves which combine a high-vacuum isolation valve with an air inlet valve.

#### Features

Leak rate of valve body less than  $10^{-7}$  mbar ltr/sec.

Leak rate of valve seat less than  $10^{-5}$  mbar ltr/sec.

Close immediately on power failure

Negligible suck-back of air

Opens only after intake line is evacuated

Specially designed for connection to rotary vacuum pumps without a built-in airing/isolation valve (anti-suckback valve), SECUVAC valves are opened electromagnetically, but close due to the pressure difference between atmospheric pressure and vacuum.

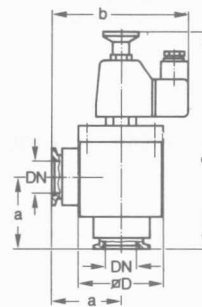
One SECUVAC valve performs the functions of two valves, i.e. a rapidly closing vacuum valve for isolating the vacuum chamber (and/or high vacuum pump) from the rotary vacuum pump (backing pump) and an air inlet valve for venting the valve body and thus the rotary pump (backing pump). Because isolation and venting follow at a predetermined time interval (brought about by means of devices built into the valve), the amount of air drawn into the vacuum chamber is less than  $1 \times 10^{-3}$  mbar ltr per  $\text{cm}^2$  of the valve plate surface area. On opening the valve, the pressure rise in the fore-vacuum line of standard pump system comprising of high vacuum and backing pumps, does not exceed the critical backing pressure of the high vacuum. By connecting the drive motor of the backing pump and the solenoid valve of the SECUVAC valve in parallel, the vacuum chamber and the high vacuum pump are protected from an inrush of air on power failure and the backing pump is vented. The SECUVAC is a right-angle valve. Conductance and corner dimension across the valve correspond to those for pipe bends of the same nominal width (DN).



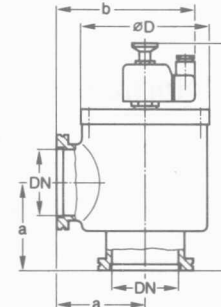
SECUVAC valve with KF flanges



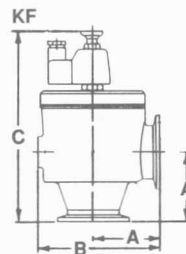
SECUVAC valve with ISO-K flanges



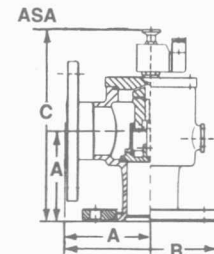
KF 16, 25, 40



ISO-K 63, 100



KF50



3", 4" ASA

#### Applications

As vacuum-securing isolation valves between backing pump and vacuum chamber or high vacuum pump — for protecting the vacuum chamber from inrush of air when the backing pump stops due to a power failure or switch-off.

#### Materials

Valve body  
DN 16 KF to DN 40 KF: aluminum.  
DN 63 ISO-K and DN 100 ISO-K:  
light-metal casting.  
3 in. and 4 in. ASA: Carbon Steel  
Casting

Gaskets  
DN 16 KF to DN 40 KF: Viton.  
DN 63 ISO-K and DN 100 ISO-K: Buna-N.  
3 in. and 4 in. ASA: Buna-N

### Dimensional Data

Item	a	b	c	d
DN16KF	1 <sup>19</sup> / <sub>32</sub> (40)	3 <sup>15</sup> / <sub>32</sub> (88)	6 <sup>1</sup> / <sub>16</sub> (154)	1 <sup>7</sup> / <sub>8</sub> (36)
DN25KF	1 <sup>31</sup> / <sub>32</sub> (50)	3 <sup>7</sup> / <sub>8</sub> (98)	5 <sup>31</sup> / <sub>32</sub> (151)	2 <sup>3</sup> / <sub>8</sub> (60)
DN40KF	2 <sup>9</sup> / <sub>16</sub> (65)	4 <sup>15</sup> / <sub>32</sub> (113)	6 <sup>13</sup> / <sub>16</sub> (173)	3 <sup>5</sup> / <sub>8</sub> (80)
DN50KF	2 <sup>3</sup> / <sub>4</sub> (70)	5 <sup>5</sup> / <sub>16</sub> (135)	7 <sup>3</sup> / <sub>4</sub> (201)	-
DN63-ISO-K	3 <sup>15</sup> / <sub>32</sub> (88)	6 (152)	8 <sup>29</sup> / <sub>32</sub> (226)	5 <sup>1</sup> / <sub>16</sub> (128)
DN100-ISO-K	4 <sup>1</sup> / <sub>4</sub> (108)	7 <sup>5</sup> / <sub>8</sub> (193)	10 <sup>7</sup> / <sub>16</sub> (265)	6 <sup>25</sup> / <sub>32</sub> (172)
3" ASA	4 <sup>3</sup> / <sub>4</sub> (120)	7 <sup>1</sup> / <sub>2</sub> (190)	10 <sup>1</sup> / <sub>4</sub> (260)	-
4" ASA	5 <sup>7</sup> / <sub>8</sub> (151)	9 <sup>1</sup> / <sub>2</sub> (241)	12 <sup>3</sup> / <sub>16</sub> (310)	-

### Ordering Information

Model	DN16KF	DN25KF	DN40KF	KF50	DN63-ISO-K	DN100ISO-K	3" ASA	4"ASA
SECUVAC valve - Cat No.								
220/240 V, 50/60 Hz	28311	28312	28313	27305	28315	28316-	-	-
110/115 V, 50/60 Hz	28311-1	28312-1	28313-1	27305-1	283 15-1	28316-1	27277-M	27280-M
Explosion proof					27277-M-EX		27280-M-EX	