

Agilent UHV All Metal Valves - Series 54

Data sheet

Agilent Valves by **VAT**

Thank you for choosing Agilent Valves by VAT. With the combination of these two well-known names in the Vacuum industry, we are confident that you will find Agilent Valves by VAT to meet your most demanding vacuum control needs.

The valves are manually operated with a standard Hex wrench, so no Torque Wrench is required. Thanks to the "hard-on-hard" metal seals, these valves can be operated thousands of times before requiring maintenance.



Leak rate: valve body, valve seat	$< 1 \cdot 10^{-10}$ mbar ls ⁻¹
Pressure range	XHV to 2 bar (abs)
Differential pressure on the gate	≤ 2 bar
Differential pressure at opening	≤ 1 bar ¹⁾
Lifetime	≥ 1000 cycles
Bake-out temperature²⁾	≤ 300 °C open and closed
Heating and cooling rate	≤ 60 °C h ⁻¹
Material: valve body, mechanism, bellows	AISI 316L (1.4404, 1.4435)
Seal: bonnet, plate	metal
Feedthrough	bellows
Mounting orientation	any
Valve position indication	visual (mechanical)
Conductance (molecular flow)	NW 16: 5 ls ⁻¹ / NW 40: 50 ls ⁻¹
Closing force	closes at a mechanical stop
Weight: NW 16 / 40	kg (lbs) 0.4 (0.9) / 1.9 (4.2)

¹⁾ > 1 bar with reduced number of cycles

²⁾ Maximum values: depending on operating conditions and sealing materials



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Features

Body material: stainless steel

FLEX VATRING configuration:
see below

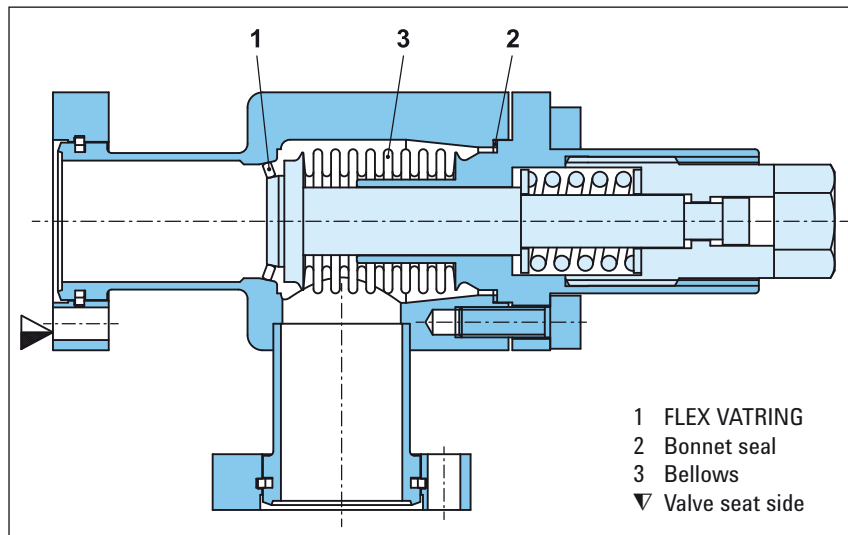
Sealing surfaces are only elastically deformed

Convenient operation with a standard hexagon wrench – no torque wrench required

High conductance

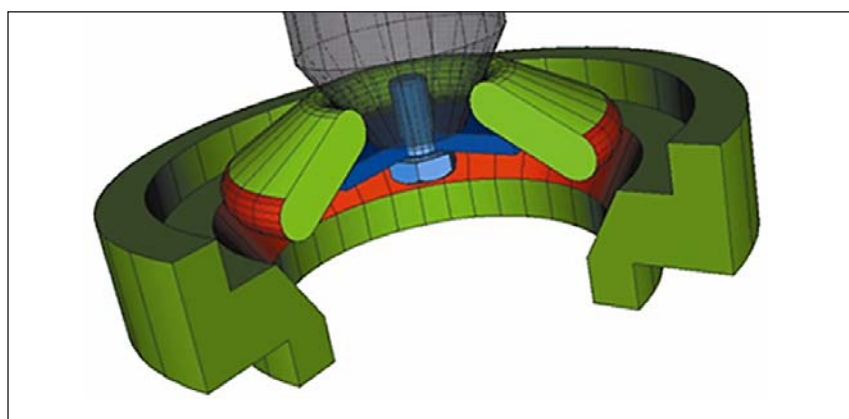
FLEX VATRING exchangeable twice

Functional principle

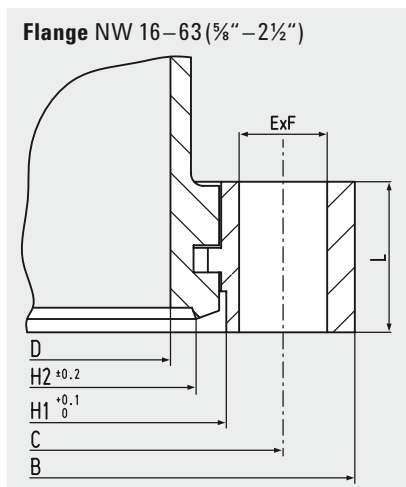
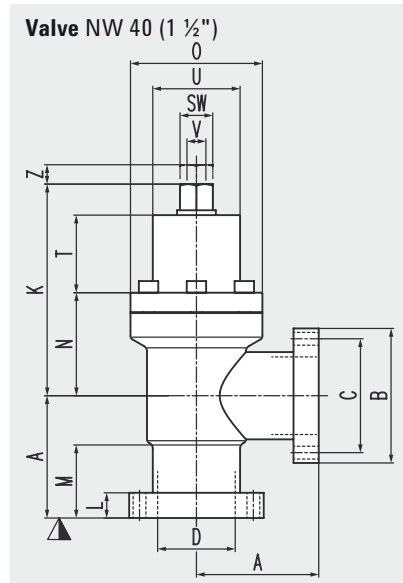
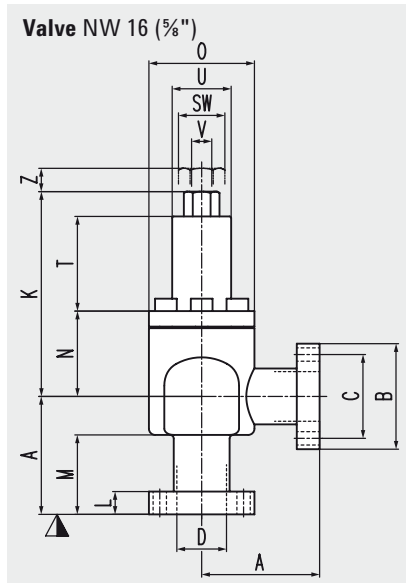


FLEX VATRING

This dynamic, all-metal sealing system is characterized by consistent sealing and closing forces. It enables achieving high sealing forces with comparably low axial forces. The seal mating surfaces are in stainless steel, and deformed elastically only. The FLEX VATRING system is suitable for extreme UHV. It may be baked to 300 °C in open and closed position and reaches a lifetime of > 1 000 cycles if operated under clean conditions.



Dimensions



▼ Valve seat side

DN	mm inch	16 5/8	40 1 1/2
A	mm inch	38 1.50	63 2.48
B	mm inch	34 1.34	69.35 2.73
C	mm inch	27 1.06	58.70 2.31
D	mm inch	16 0.63	40 1.57
E x F	mm inch	6 x 4.30 6 x 0.17	6 x 6.60 6 x 0.26
H1	mm inch	21.40 0.84	48.30 1.90
H2	mm inch	18.50 0.73	42 1.65
K	mm inch	66 2.60	109.10 4.30
L	mm inch	7.35 0.29	13 0.51
M	mm inch	25.60 1.01	37.60 1.48
N	mm inch	27.50 1.08	53.10 2.09
O	mm inch	34 1.34	68 2.68
SW	mm inch	10 0.39	17 0.67
T	mm inch	30.50 1.20	40 1.57
U	mm inch	19 0.75	45 1.77
V	mm inch	6.35 0.25	9.53 0.38
Z	mm inch	8.50 0.33	20 0.79

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Ordering information

Description UHV All Metal Valves	Part Number
Valve, 3/4 Metal/Mini CFF	X3202-60097
Valve, All-Metal, 1-1/2in, RT-Angle	X3202-60098

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