

Agilent UHV All Metal Valves - Series 54

Data sheet



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 operated thousands of times before requiring maintenance.



Leak rate: valve body, valve seat	<1·10 ⁻¹⁰ mbar Is ⁻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 temperature ²⁾	≤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 16:51s ⁻¹ / NW 40:501s ⁻¹	
Closing force	closes at a mechanical stop	
Weight: NW 16 / 40 kg (lbs)	0.4 (0.9) / 1.9 (4.2)	
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^{1) &}gt;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

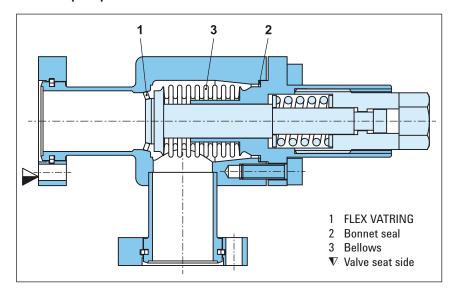
Sealing surfaces are only elastically deformed

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

High conductance

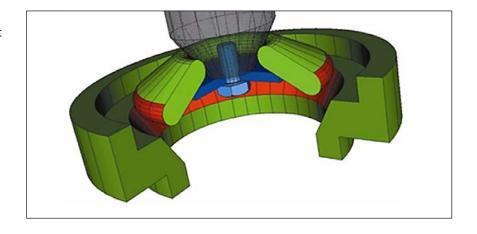
FLEX VATRING exchangeable twice

Functional principle

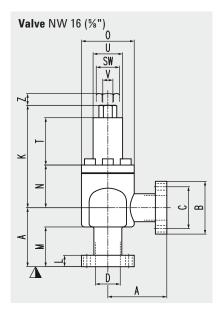


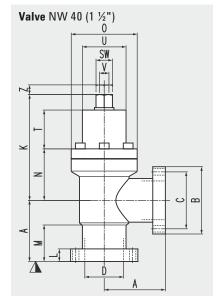
FLEX VATRING

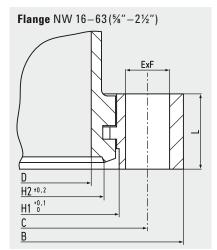
This dynamic, all-metal sealing system is characterized by consistent sealing and closing forces. It enables achieving high sealing forces with comparably low axial forces. The seal mating surfaces are in stainless steel, and deformed elastically only. The FLEX VATRING system is suitable for extreme 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







 ${f \nabla}$ Valve seat side

	mm	16	40
DN	inch	5/8	1 ½
А	mm	38	63
	inch	1.50	2.48
В	mm	34	69.35
	inch	1.34	2.73
С	mm	27	58.70
	inch	1.06	2.31
D	mm	16	40
	inch	0.63	1.57
E×F	mm	6 x 4.30	6 x 6.60
	inch	6 x 0.17	6 x 0.26
H1	mm	21.40	48.30
	inch	0.84	1.90
H2	mm	18.50	42
	inch	0.73	1.65
K	mm	66	109.10
.,	inch	2.60	4.30
L	mm	7.35	13
	inch	0.29	0.51
M	mm	25.60	37.60
	inch	1.01	1.48
N	mm	27.50	53.10
	inch	1.08	2.09
0	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
		8.50	
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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