

GAMMA UHV PUMPS AND ACCESSORIES

Capture pumping technologies create high vacuum (HV) and ultra-high vacuum (UHV) environments for a variety of applications, ranging from portable mass spectrometers to large scale particle accelerators. They can create the highest possible vacuum at an economical cost.

Edwards offers a range of Ion Pumps, Titanium Sublimation Pumps, Non-Evaporable Getter Pumps and accessories exclusively through Gamma Vacuum.



PRODUCT FEATURES

MECHANICAL VIBRATION ELIMINATED

Capture pumps have no moving parts. Vibration from moving parts and electrical noise is eliminated.

HIGH RADIATION TOLERANCE

Capture pumps are built with radiation tolerant materials in excess of 10^8 Gray. Connectors and cables are also built with radiation tolerant materials for years of continuous operation.

HIGH TEMPERATURE TOLERANCE

Without any special consideration, capture pumps can be baked to 250 °C. Removing the magnets allows for hotter bakes up to 450 °C. Long hot bakes are critical to every UHV system.

REGULAR MAINTENANCE ELIMINATED

Capture pumps require virtually no maintenance and avoid costly vacuum events because they are sealed from atmosphere, saving time, money and resources.

LOW INITIAL AND OPERATIONAL COSTS

Initial cost is typically less than comparable specifications of other types of vacuum pumps. They use minimal or no power for years of low cost operation..

Ordering information

Ion pumps and integrated TSP/NEG:

Ion pump	Element	Flange	Feedthrough	Heater	Integrated TSP/NEG
5S 5 ls ⁻¹	CV Conventional diode	2V Vertical DN40	SC 10kV SAFECONN	N None	N None
10S 10 ls ⁻¹	DI Noble diode	2H Horizontal DN40	OP Perkin Elmer	1 110V	TSP TSP single filament (S)
25S 20 ls ⁻¹	CX Diode XHV	2D Double DN40	OV Old Varian	2 208-240V	N0 50 ls ⁻¹ NEG (S)
45S 40 ls ⁻¹	DX Noble diode XHV	4V Vertical DN63	VR Varian StarCell®		N1 100 ls ⁻¹ NEG (S)
75S 75 ls ⁻¹	TR Triode	4D DN63/DN40	FI Fisher Interlock		N2 200 ls ⁻¹ NEG (S)
100L 100 ls ⁻¹		6S Single DN100			N3 300 ls ⁻¹ NEG (S)
200L 200 ls ⁻¹		62 DN100/DN40			TSPC TSP with cryoshroud (L)
300L 300 ls ⁻¹		6D Double DN100			TSPA TSP with ambient shroud (L)
		8S Single DN160			NG 400 ls ⁻¹ NEG (L)
		8D Double DN160			

Technical data

	Units	5S	10S	25S	45S	75S	100L	200L	300L
Pumping speed		4-5	8-10	15-20	30-40	40-75	80-100	160-200	240-300
PORT OPTION									
DN40 (2.75") ⁽¹⁾		2V	2H	2V, 2H or 2D		2V or 2D			
DN63 (4.5") ⁽²⁾				4V or 4D					
DN100 (6") ⁽³⁾						6S or 62	6S, 6D		
DN160 (8") ⁽⁴⁾								8S, 8D	8S, 8D
ELEMENT CHOICE									
TiTan CV (Diode)		•	•	•	•	•	•	•	•
TiTan DI (Noble Diode)		•	•	•	•	•	•	•	•
TiTan CVX (Diode XHV)				•	•	•	•	•	•
TiTan DIX (Noble Diode XHV)				•	•	•	•	•	•
TiTan TR (Triode)				•	•	•	•	•	•
FEEDTHROUGH CHOICE									
SC 10kV SAFECONN		•	•	•	•	•	•	•	•
OP Perkin Elmer				•	•	•	•	•	•
OV Old Varian			•	•	•	•	•	•	•
VR Varian StarCell®				•	•	•	•	•	•
FI Fisher Interlock			•	•	•	•	•	•	•
Internal heater option		•	•	•	•	•	•	•	•
Internal TSP/NEG option ⁽⁵⁾				•	•	•	•	•	•
Weight	kg (lbs)	2.3 (5)	6 (13)	9 (20)	16 (34)	22 (48)	29 (65)	50 (112)	66 (145)
Shipping weight	kg (lbs)	2.8 (6)	8 (17)	11 (24)	18 (39)	25 (55)	47 (105)	69 (152)	89 (195)
Ultimate pressure	mbar	<1 x 10 ⁻¹¹							
Starting pressure	mbar	<1 x 10 ⁻³							
Lifetime (hrs at 1 x 10 ⁻⁶ mbar)	hours	Diode/Noble Diode 50,000; Triode 80,000							
Operating bake temp	°C	200	250						
Maximum bake temp ⁽⁶⁾	°C	450							
Dimensions (L x W x D)	mm	106 x 85 x 81	200 x 153 x 79	202 x 125 x 130	209 x 251 x 130	277 x 242 x 130	326 x 128 x 252	325 x 413 x 233	325 x 413 x 337

(1) 2V = 2" top port; 2H = 2" side port; 2D = double ports (top and side)

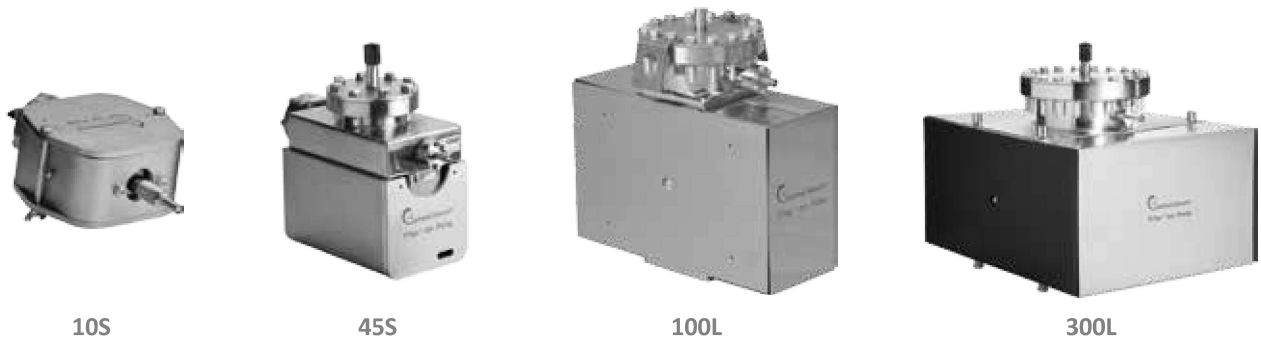
(2) 4V = 4" top port; 4D = 4" top port and 2" side port

(3) 6S = single 6" port; 62 = 6" top port and 2" side port; 6D = double 6" ports (top and bottom)

(4) 8S = single 8" port; 8D = double 8" ports (top and bottom)

(5) Extra side or bottom port required

(6) Magnets removed



10S

45S

100L

300L