

UCV[®]HMS

SERIES

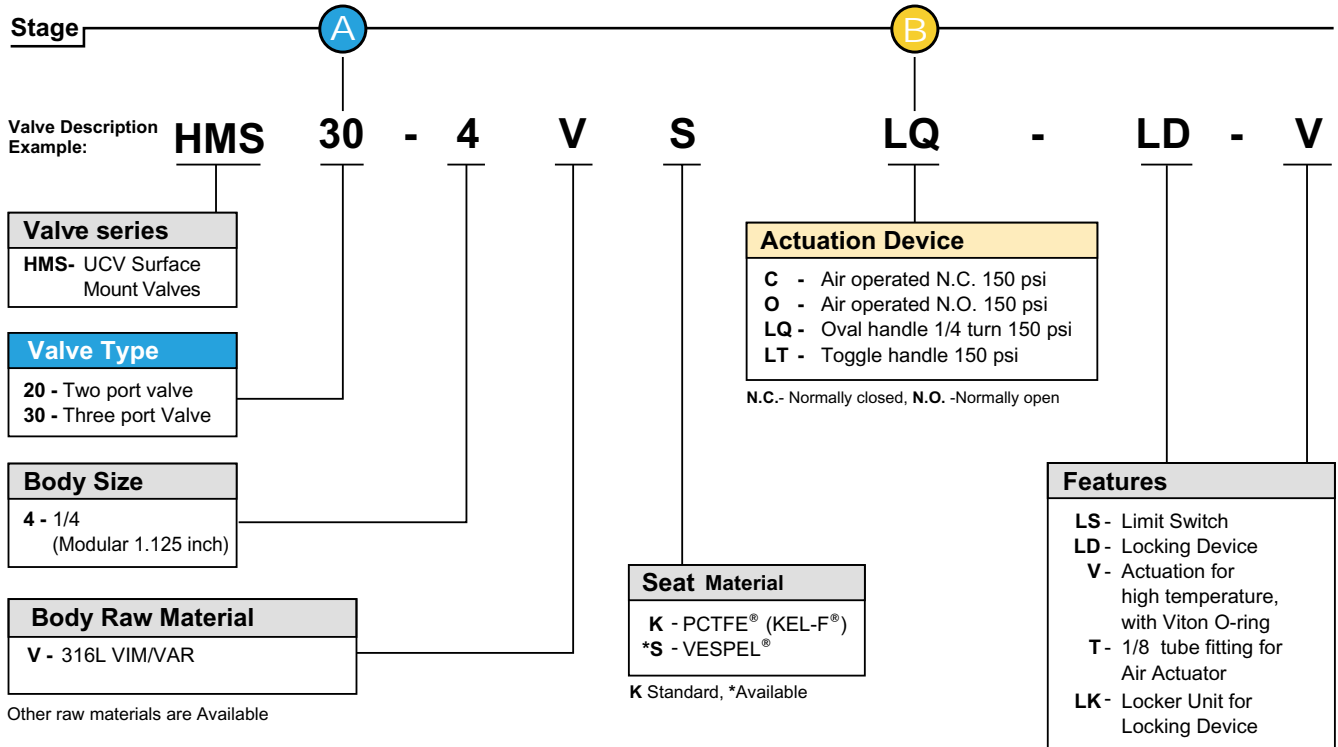
HAM-LET ULTRA CLEAN SURFACE MOUNT VALVES



FOR MODULAR GAS DELIVERY
SYSTEMS 1.125 INCH

ORDERING INFORMATION FOR SURFACE MOUNT VALVE

Your Safety is important to us, please ensure proper reference to our latest catalogue



Ordering Examples

	HMS30 - 4VSLQ - LD - V		HMS20 - 4VKC	
Valve Type - stage A	30	Surface Mounted Valve - Three Port	20	Surface Mounted Valve - Two Port
Body size	4	1/4" (Modular 1.125 inch)	4	1/4" (Modular 1.125 inch)
Body material	V	316L VIM/VAR	V	316L VIM/VAR
Seat material	S	VESPEL [®]	K	PCTFE [®] (KEL-F [®])
Actuation device -stage B	LQ	Oval Handle 1/4 turn 150 psi	C	Air operated N.C. 150 psi
Features	LD V	Locking Device Actuation Device for high temperature With Viton O-ring		

The HMS Series Specifications

Material

Ham-Let UCV HMS series meets and complies with the chemical composition and the mechanical properties of stainless steel 316L according to ASTM A276 specification. The material is manufactured by VIM/VAR process.

Chemical Composition

The body material of the UCV HMS series valves complies with SEMI F20 - Sulfur content is lower or equal to 0.01 percent.

Mechanical Size

Ham-Let UCV HMS series meets and complies with ASME Y14.5

and Interface Specification for 1.125 Inch Chemical Delivery Component, comply with Applied Material Specification PART NO. 0251-01727 REV:002

Surface Roughness

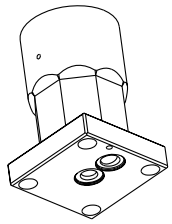
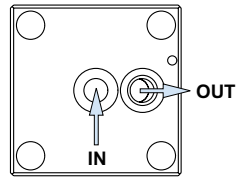
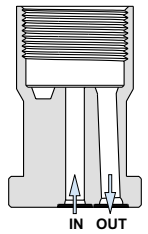
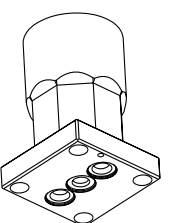
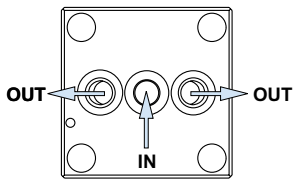
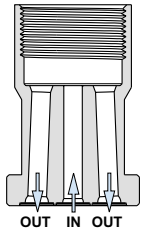
All wetted parts have an average surface roughness (Ra ave) of 5 microinch Ra, and maximum surface roughness (Ra max) of 10 microinch Ra, complying with ISO 4288.

Sealing Surface Hardness

Ham-Let UCV HMS valves substrate sealing surfaces have a hardness of minimum 300 Vickers and comply with ISO 6507


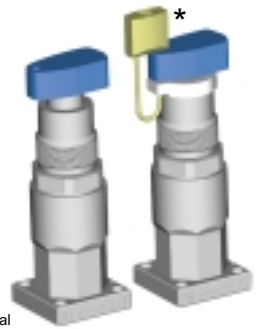

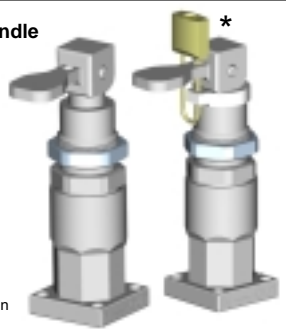
Two stages for ordering Surface Mount Valves **A** **B**

Stage **A** Valve Type

	Flow Direction Body View	Schematic flow chart	Flow Direction
HMS20 Two port valve			
HMS30 Three port valve			

IN - defined as a port connected to the region below the valve seat. OUT - defined as a port connected to the region above the valve seat.

Stage **B** Actuation Device

Actuation Type	Actuation Mode	Description	Actuation Type	Actuation Mode	Description
Pneumatic	C	Normally closed 150 psi  * Blue Actuation Cap indicate Normally closed	Manual	LQ	Oval Handle 1/4 turn 150 psi  * The Actuation device for manual valve does not include: locking device and locker unit as standard
	O	Normally Open 150 psi  * Red Actuation Cap indicate Normally Open		LT	Toggle handle 150 psi  * The Actuation device for manual valve does not include: locking device and locker unit as standard

Material of Construction

Item No.	PART No.	MATERIAL
1	Body	Stainless steel, 316L Vim/Var
2	Seat	PCTFE [®] , *Vespel [®]
3	Seat holder	Stainless steel, 316L Vim/Var
4	Diaphragm	Ni-Co Alloy
5	Actuation Device	Manual A6061T6 Pneumatic A6061T6

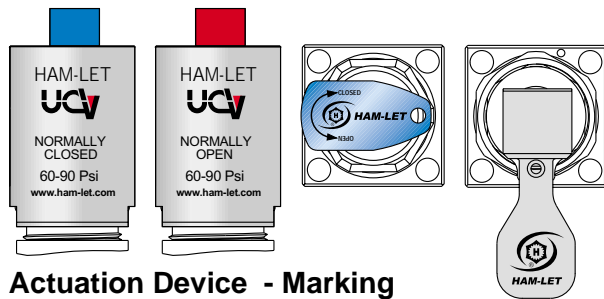
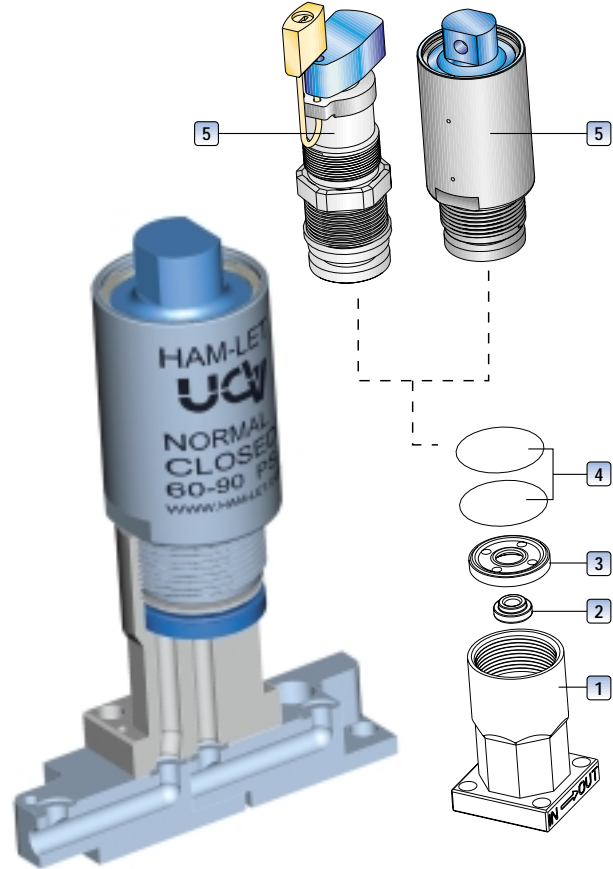
UCV HMS Specifications

Structure	Direct seal metal diaphragm valve without seal packing, manually and pneumatically operated
Item pressure - Low pressure	Vacuum to 150 PSI (10 bar)
Operating Temperature:	
Standard	14 to 140°F, -10 to 60°C (PCTFE [®] Seat)
Available	14 to 302°F, -10 to 150°C *(Vespel [®] Seat)
Leakage:	
Inboard Leakage	† 1x10 ⁻⁹ atm cc He/sec
Outboard Leakage	† 1x10 ⁻⁹ atm cc He/sec
Across the seat Leakage	† 1x10 ⁻⁹ atm cc He/sec
Particles	No particles detected above 0.1 m.
Cv value	0.3
Surface finish Ra (Ave)-Standard	5 in
Actuator air supply (Pneumatic)	60 to 90 psig (4 to 6 bar)
Air Connection (Pneumatic)	Thread 10-32 UNF

* Used with Viton O-ring for actuation device

Cleaning and Packaging of Valves

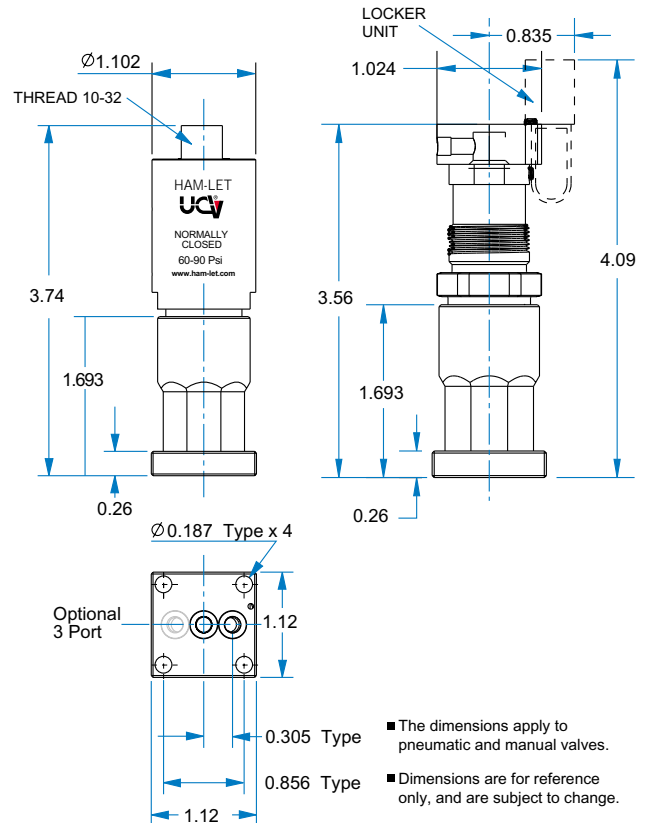
Ham-Let UCV valves are assembled, inspected, tested and packaged in a class 10 clean room. The process begins with multi-step cleaning. Each valve is individually assembled. The valves are submitted to pressure testing, tests for functionality and finally a helium leak test. Approved valves receive a unique serial number and they are then packaged with ultra pure nitrogen.



Actuation Device - Marking

Select the right component for safety's sake

The total design of the system must be taken into consideration when selecting components in order to ensure that your Ham-Let products provide safe, trouble-free operation. It is the responsibility of the system designer and the user to consider the compatibility of the materials, of the components and system, the function of the component, appropriate rating, and to ensure proper installation, operation and maintenance.



■ The dimensions apply to pneumatic and manual valves.
 ■ Dimensions are for reference only, and are subject to change.
 ■ Dimensions are in inches.