DRA300 SERIES

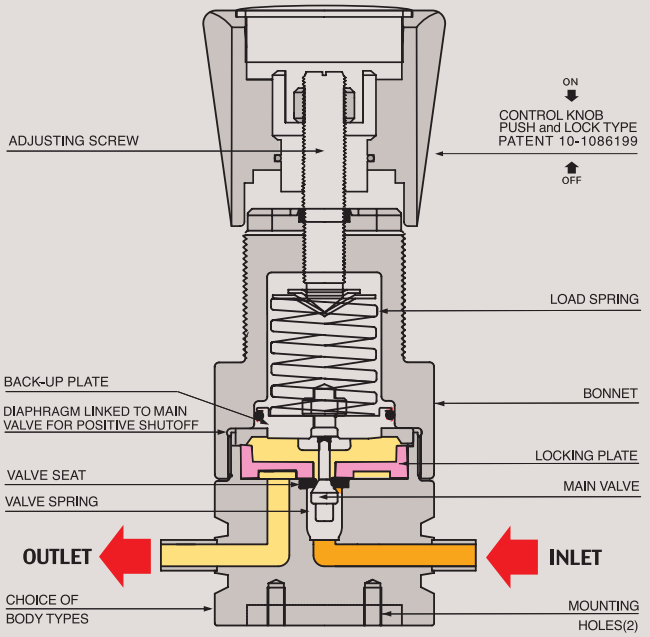
UHP SPRINGLESS TIED-DIAPHRAGM LOW PRESSURE VCR TYPE

DRA300
SERIES

This is revision by Jan of 2018

DRA300 SERIES

FUNCTIONAL SCHEMATIC



DRA300(Tied type)

UHP Springless Tied Diaphragm Low Pressure VCR type (1/4″ 3/8″ 1/2″ 3/4″)

DRA 300 Series is an Springless tied-diaphragm type UHP low pressure reducing regulator with surface finishes to B.A. 25Ra, E.P. 10Ra, or E.P. 5Ra microinch and applicable for gas cabinet for semiconductor manufacturing, specialty gases, valve manifold boxes, and research labs, etc. Inlet pressures are 3,600psig (250bar) or 600psig (42bar) and outlet pressures are from 5psig (0.3bar) up to 250psig (17bar).

With DRASTAR' s patented (patent #1086199) "push and lock type handle", you can operate it easily and stably; "locking" by pushing down the handle will prevent any slight change of pre-set pressure value, which could possibly be caused by any vibration from gas pipeline or ambient applications and the other way "unlocking" by pulling it back enables you to adjust the pressure value freely again.

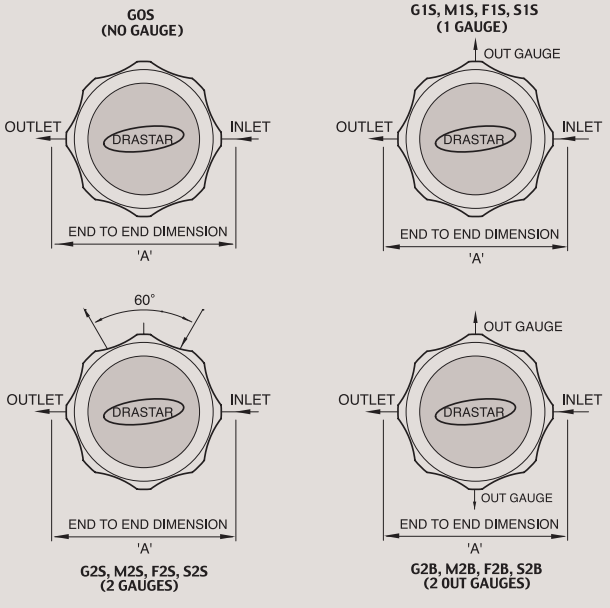
Features and Applications

- Springless type VCR regulator: By adopting the "flat- wave-shaped ring spring" (DRASTAR patent #10-1191514) instead of conventional spring, particle generation by spring itself due to fatigue from long-time use can be kept down
- To use more suitably for corrosive gas applications, 316L VAR (double melt VAR) available as optional
- Tied-diaphragm design for positive shut-off and protecting the rupture of diaphragm
- Surfaces finishes to B.A. 25Ra, E.P. 10 Ra or E.P. 5 Ra microinch
- Push and lock type handle (DRASTAR patent #10-1086199) mounted
- Threadless type: enhanced particle prevention by adopting the locking-plate seal system (DRASTAR patent #10-1086199)
- All works of welding, assembly, test and cleaning are performed in class 100 and class 10 clean-rooms
- Design proof pressure: 150% of maximum rated
- Applicable for Semiconductor manufacturing gas line, toxic gases, pyrophoric gases, and high corrosive gases.

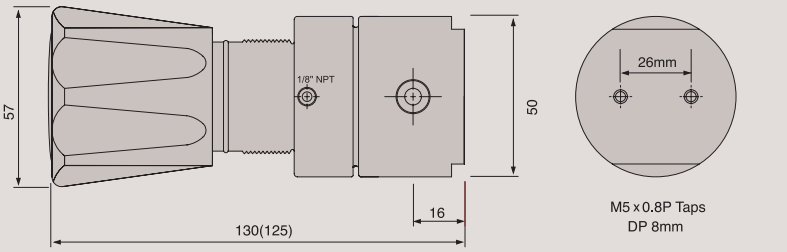
Each product is manufactured taking into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe, effective, precise and smooth way and prolong its life time, you are recommended to use the actual pressure within the range of 25% ~ 75% of its rated pressure.

INSTALLATION DIMENSIONS

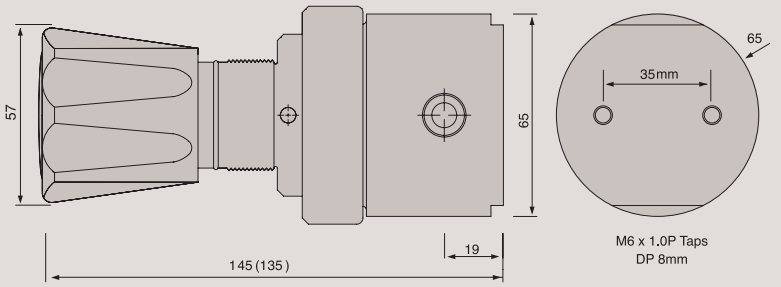
■ GAUGE PORT OPTIONS



1/4″ & 3/8″



1/2″ & 3/4″



ORDERING INFORMATION

DRA300 - A 025 S - H P S - 4MS - G0S

BASIS SERIES

BODY MATERIAL & SURFACE FINISH
A = 316L, B.A ····· 25Ra
B = 316L, E.P. ····· 10Ra
C = 316L, E.P. (P.E.P) ····· 5Ra
D = 316L, E.P. VAR ····· 10Ra
E = 316L, E.P. VAR(P.E.P) ····· 5Ra

B.A.= Brigth Annealed., E.P.= Electropolished.

OUTLET PRESSURE RANGE
025 = 1-25psi (.1-1.7bar)
050 = 1-50psi (.1-3.5bar)
100 = 1-100psi (.1-7bar)
250 = 1-250psi (.2-17bar)

DIAPHRAGM MATERIAL
S = STS 316L
H = Hastelloy-C

MAX. INLET PRESSURE
H = 3600psi(250bar)
L = 600psi(42bar)

SEAT MATERIAL
P = PCTFE
T = Teflon
V = Vespel

GAUGE PORTS OPTIONS

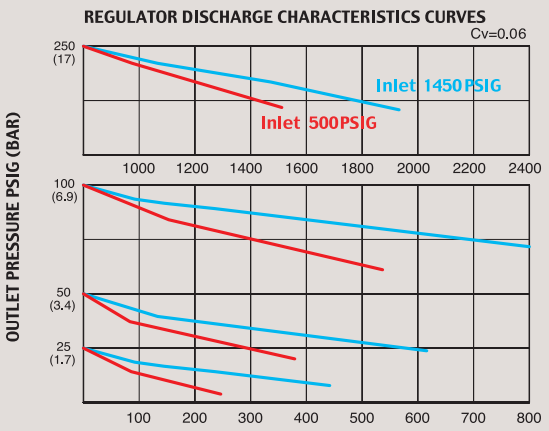
G0S = None	0	F1S = 1/4″ Femle Sw.	1
G1S = 1/4″ H.P.I.C	1	F2S = 1/4″ Femle Sw.	2
G2S = 1/4″ H.P.I.C	2	F2B = 1/4″ Femle Sw.	2
G2B = 1/4″ H.P.I.C	2	S1S = 1/4″ Fixed Male	1
M1S = 1/4″ Male Sw.	1	S2S = 1/4″ Fixed Male	2
M2S = 1/4″ Male Sw.	2	S2B = 1/4″ Fixed Male	2
M2B = 1/4″ Male Sw.	2		

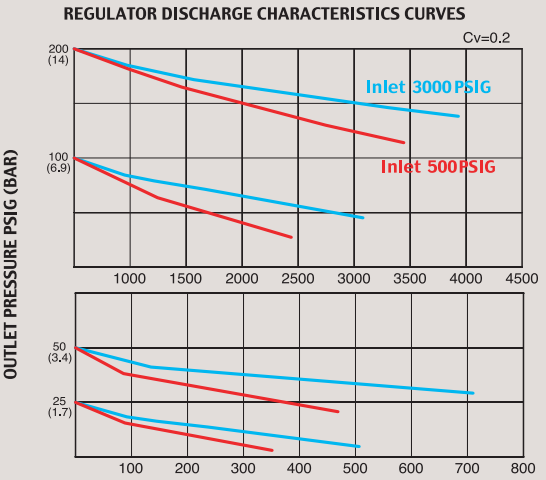
INLET / OUTLET PORTS SIZE & Type "A" ±1.5mm

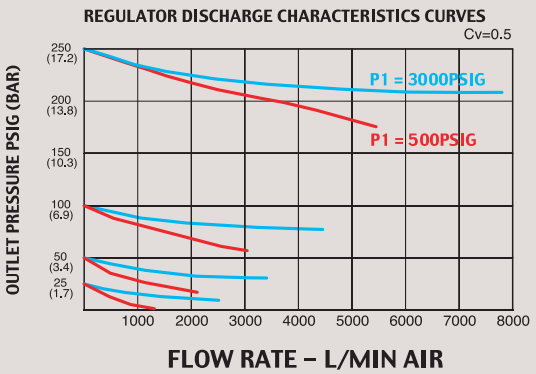
4HP = 1/4″ H.P.I.C	
4MS & 4FS = 1/4″ Male, Femail Swivel	94mm
4ML & 4FL = 1/4″ Male, Femail Swivel	114.00mm
8MS & 8FS = 3/8″ Male, Swivel	120.00mm
8ML & 8FL = 3/8″ Male, Femail Swivel	120.00mm
2MS & 2FS = 1/2″ Male, Femail Swivel	140.00mm
2ML & 2FL = 1/2″ Male, Femail Swivel	180.00mm
3MS & 3FS = 3/4″ Male, Femail Swivel	160.00mm
3ML & 3FL = 3/4″ Male, Femail Swivel	000mm
IMF = In Port Male / Out Port Female	000mm
IFM = In Port Female / Out Port Male	000mm
4TS = 1/4″ Tube Stubs	94.00mm
3TS = 3/4″ Tube Stubs	160.00mm

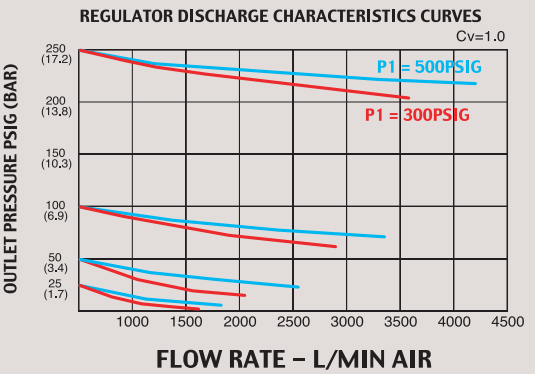
FLOW CAPACITY
S = Cv 0.06 Standard (Inlet 3000psi) (1/4″)
O = Cv 0.2 Optional (Inlet 500psi) (1/4″)
S = Cv 0.2 Standard (3/8″)
S = Cv 0.5 Standard (1/2″)
O = Cv 1.0 Optional (1/2″)
S = Cv 1.2 Standard (3/4″)

FLOW CHART

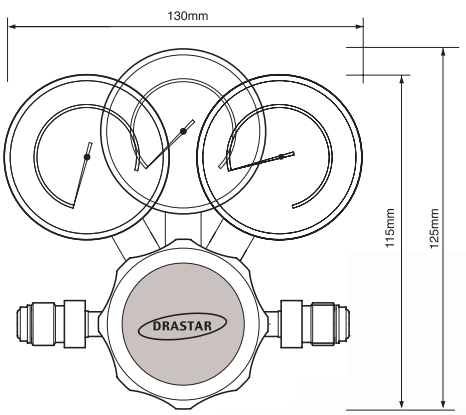


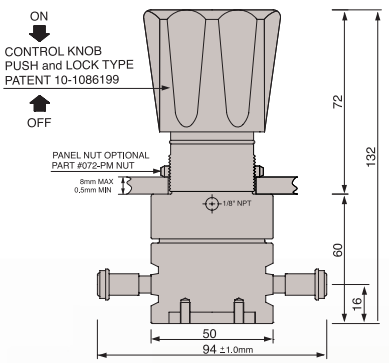




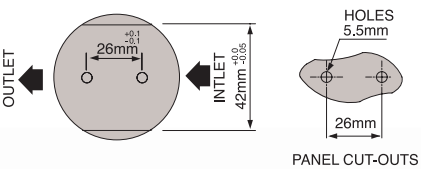


DRA300 Series 1/4″ & 3/8″

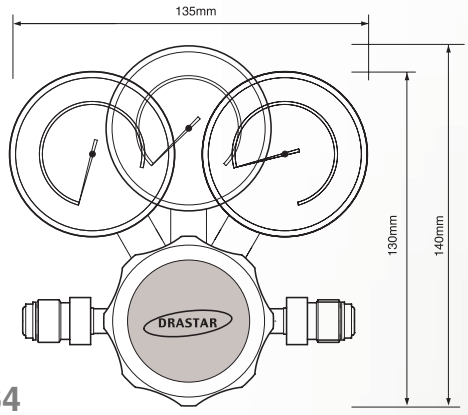


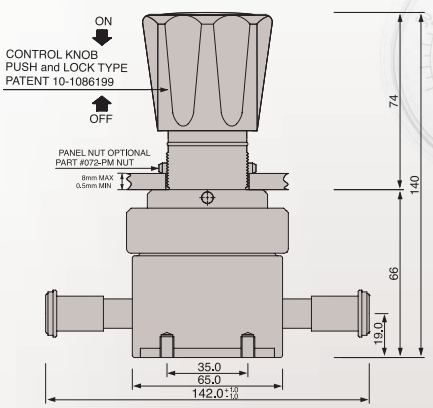


For 1/4" 4MS and 4FS Model 94mm
For 1/4" 4ML and 4FL Model 000mm
For 3/8" 8MS and 8FS Model 120mm
For 3/8" 8ML and 8FL Model 000mm



DRA300 Series 1/2″ & 3/4″





For 1/2" Model 2MS and 2FS 142mm
For 1/2" Model 2ML and 2FL 180mm
For 3/4" Model 3MS and 3FS 160mm
For 3/4" Model 3ML and 3FL 000mm