

PART NUMBER						
Example : SI 220 Triton U	2V1	A	/	K	10 b	A/B : V-3/8 F
1	2	3	4	5	6	

1 - Serie & Surface Finish	
SI 220 Triton U	Ra 0,15µm Ep. (6µin Ra)
SI 220 Triton V	Ra 0,25µm Ep. (10µin Ra)
SI 220 Triton S	Ra 0,4µm nonEP (15µin Ra)

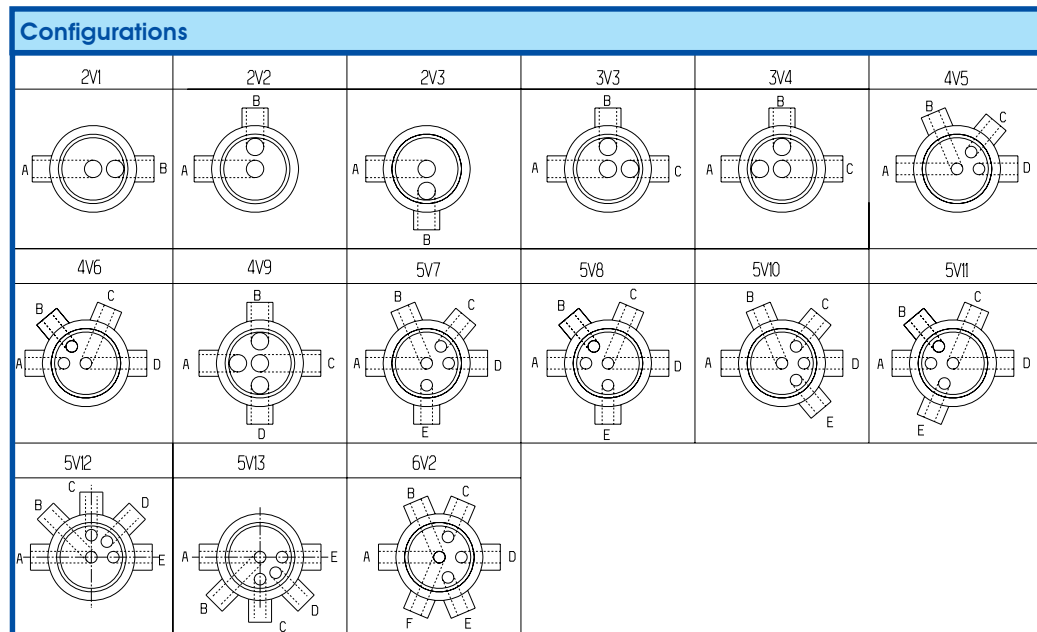
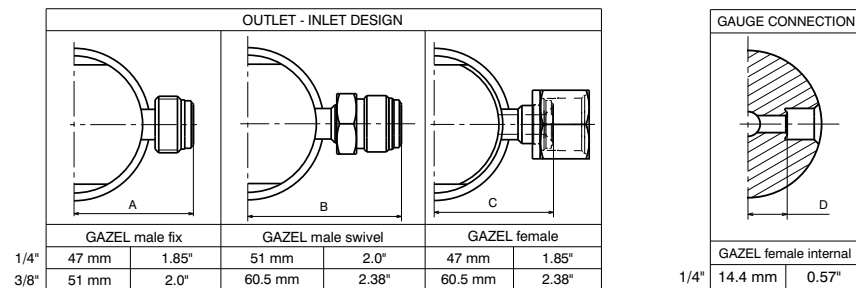
2 - Ports Configurations	
2V1	2 ports in line
See below for other ports configurations	

3 - Body Material (others on request)	
A	AISI 316L, VAR
I	AISI 316L
H	Hastelloy® (on request)

4 - Seat Material	
K	PCTFE (Kel-F®)
P	PVDF (optional)
V	PI (VespeI® optional)

5 - Outlet regulated Pressure	
3b	3 bar - 45 PSI
8b	8 bar - 116 PSI
10b	10 bar - 145 PSI
15b	15 bar - 217 PSI
25b	25 bar - 365 PSI
50b	50 bar - 725 PSI
Note : Inlet Pressure: up to 240 bar (3500 PSI)	

6 - End Connections	
V-1/4 F	GAZEL® 1/4" - Female (face seal)
V-3/8 F	GAZEL® 3/8" - Female (face seal)
V 1/4 M	GAZEL® 1/4" - Male (face seal)
V-3/8 M	GAZEL® 3/8" - Male (face seal)
V-FI	GAZEL® 1/4" - Internal Female (face seal) for gauge connections only



Face Seals are VCR® compatible. VCR® is a registered trade mark of SWAGELOK COMPANY., HASTELLOY® is a registered trade mark of CABOT Corp., Kel-F® is a trademark of 3M company, VespeI® is a registered trade mark of DUPONT

A total component solution, from source to process

SI 220 TRITON
TIED DIAPHRAGM PRESSURE REGULATOR
FOR HP & UHP NF3 AND REACTIVE GAS
APPLICATIONS



220 TRITON



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FEATURE a unique proven design SI 220 TRITON

TECHNICAL DATA

SI 220 TRITON

The **SI 220 TRITON Regulator** was created in response to the industry's need for a **Highflow, High Pressure, Springless, Tied Diaphragm Regulator** for specialty source gas service, i.e. gas cabinets. The design and materials of construction, plus some unique features make it an ideal choice for gas source applications with reactive and hazardous gases the Semiconductor and Allied Industries use.

- Unique features include a special leak test port that enables the diaphragm seal to be outboard leak tested 10^{-9} mbar.l./sec range at high pressure.
- Precise control of the gas discharge with minimum deviation caused by the supply pressure effect.
- Counter balance springs outside the gas stream to ensure the unit functions correctly with downstream vacuum and upstream high pressure
- A unique spherical ball pressure pad to give ultra smooth delivery pressure adjustment
- Choice of delivery pressure: 3, 8, 10, 15, 25 or 50 bar / 45, 116, 145, 217, 365 or 725 psi

Individual Serial number, for full traceability

Ergonomic Design

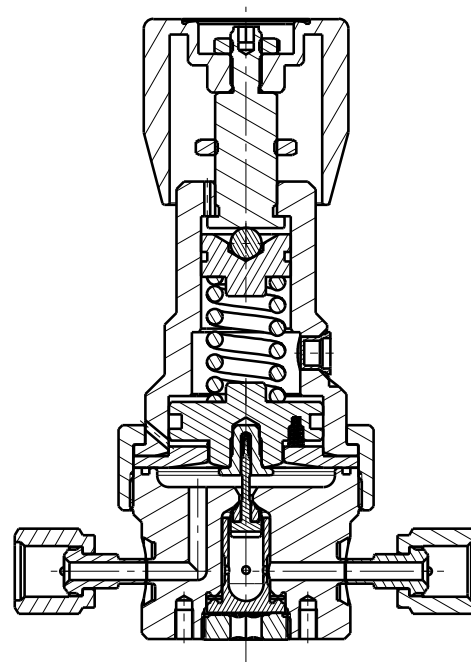
Spherical ball for ultra smooth control

Metal to metal seal to Atmosphere

Sealed bonnet for extra protection

Minimal wetted surfaces for easy purging

Gas specific solutions (Body and Seat Materials)



Assembling, testing & Packaging in cleanroom Cl. 10

Controlled (PC) electropolishing for better corrosion resistance

Springless & threadless for zero particle emission

2,3,4,5 or 6 ports options available

diaphragm counter balance springs

Excellent response at high and low pressures (droop, hysteresis, creep)

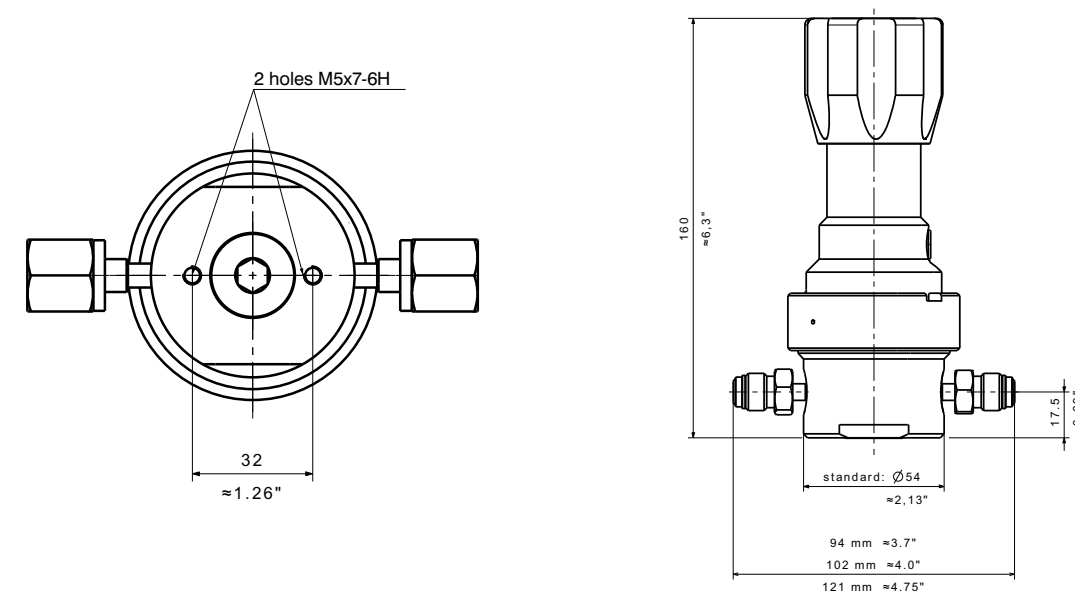
Manufactured to the **THREE STAR PROCESS®**

TECHNICAL DATA	
Fluid Media	Standard, High and Ultra High Purity, corrosive and oxidizing gases (NF3, F2, ...)
Inlet pressure (PCTFE seat)	240 bar (3500 PSI)
Inlet pressure (PVDF seat)	25 bar (365 PSI)
Outlet pressure	3 - 8 - 10 - 15 - 25 - 50 bar (45-116-145-217-365-725 PSI)
Temperature range	-20°C to + 60°C (-2°F to 140°F)
Nominal Flow	90 slpm (N ₂)
Flow Coefficient (C _v)	C _v = 0,1
Certified max. Helium inboard leak rate	1.10^{-9} mbar.l./sec
Certified max. Helium outboard leak rate (at max. pressure)	1.10^{-9} mbar.l./sec
Certified max. Helium across the seat leak rate (at max. pressure)	1.10^{-6} mbar.l./sec
Number of ports	2, 3, 4, 5 or 6

CONSTRUCTION MATERIALS

DIMENSIONS

	Parts	Materials
Wetted parts	Body	AISI 316L, VAR, Hastelloy®
	Diaphragm	Hastelloy®
	Seat	PCTFE (Kel-F®), on request: PI (VespeI®) or PVDF
	Poppet	AISI 316L, on request: Hastelloy®
Non-wetted parts	Bonnet	Chrome Plated Brass
	Handle	Aluminium
	Others	Stainless Steel or others



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