

HFR900W Series

Welded High Flow Regulator



Parker Hannifin Corporation's Veriflo Division presents the HFR900W Regulator. The HFR900W is designed and engineered for the control of high purity, corrosive, toxic, flammable, and inert gases, at a high flow rate and low inlet pressure.



features

- ▶ “VeriClean”, Veriflo’s custom low sulfur high purity 316L Stainless Steel™ enhances electropolishing, welding and corrosion resistance.
- ▶ Internally Electropolished.
- ▶ Connections are welded to the regulator body by autogenous butt welding. This process eliminates small cavities that could create long-term “virtual leaks” and affect the purity of the process gas.
- ▶ The HFR900W was designed to withstand an internal vacuum without distortion of the diaphragm or deterioration of the seat and seal.
- ▶ The low leakage rates of the HFR900W Series eliminates the back diffusion of atmospheric contamination into the system.

materials of construction

Wetted

Body “VeriClean”, Veriflo’s high purity type 316L Stainless Steel
Diaphragm 316L Stainless Steel
Seat 316L Stainless Steel
Seal Teflon® and Viton® or optional Teflon® and Kalrez®

Non-Wetted

Cap Nickel Plated Brass
Knob (Black) ABS Plastic

operating conditions

Maximum supply pressure:

HFR90()WV 500 psig (35 barg)
HFR90()WK 200 psig (14 barg)
Outlet Pressure 1-30 psig (2 barg)
2-75 psig (5 barg)
5-150 psig (10 barg)
Temperature -40°F to 150°F (-40°C to 66°C)

functional performance

Design burst pressure:

90()WV 1500 psig (105 barg)
90()WK 600 psig (41 barg)

Design Proof pressure:

90()WV 750 psig (51 barg)
90()WK 300 psig (21 barg)

Flow capacity $C_v = .85$
(SEMI Flow Coefficient Test #F-32-0998)

Design Leak Rate:

Outboard 2×10^{-8} scc/sec He
Inboard 2×10^{-9} scc/sec He

Supply pressure effect:

4 psig per 100 psig (.3 per 7 barg)

standard configurations

3/8", 1/2" Tube Stub
1/2" Parker Face Seal Fittings
1/4", 1/2" Parker A-Lok Compression Fittings

See Regulator Porting Guide of other available options.

internal volume

2.33 cu in (38 cc)

surface finishes

Standard Ra 15 - 20 micro-inch
(.38 - .5 micro meter) or less

approximate weight

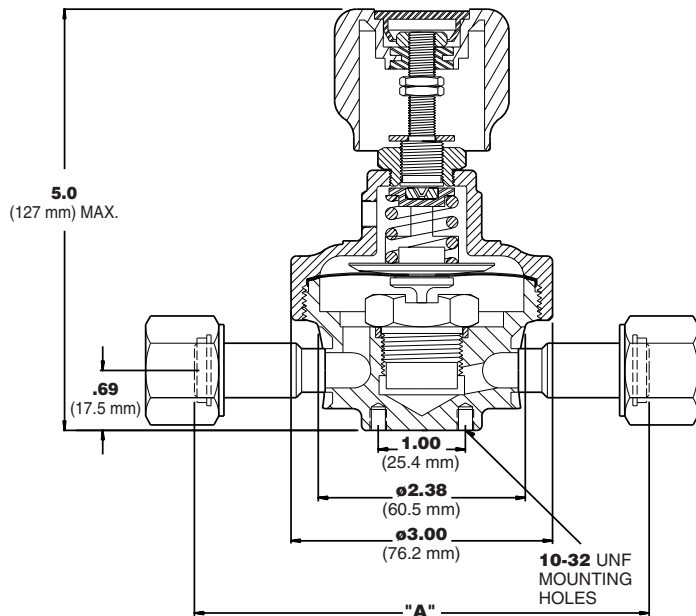
2.5 lbs. (1.2 kg)

Catalog: 4508
LitPN: 25000182
Revision: A • 10/03

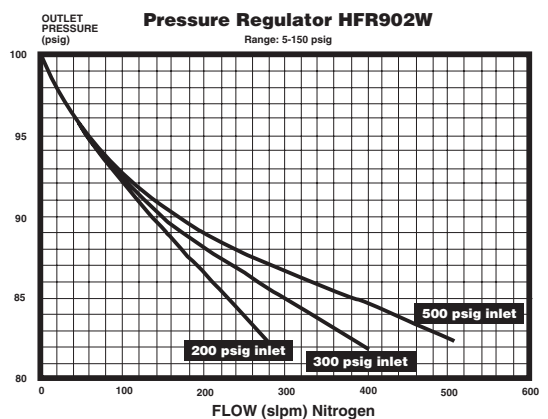
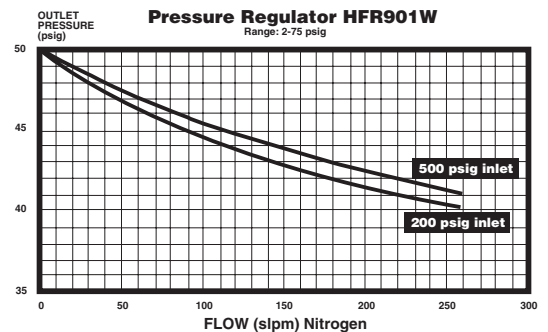
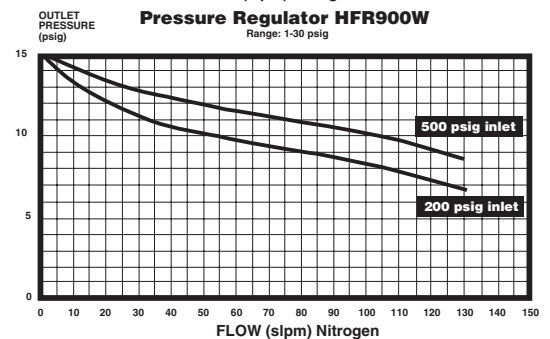
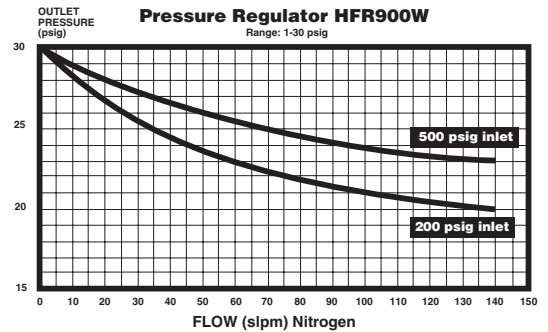


HFR900W Series

Cross Sectional Drawing



Flow Curves



Connection Chart

Connection Size inlet & outlet	"A"	
	inch	mm
1/4" TS	3.76	95.50
3/8" TS	5.00	127.00
1/2" TS	5.00	127.00
1/4" FS	4.30	109.00
1/2" FS	5.20	133.00
1/2" Compression Fittings	4.78	121.40

Ordering Information

HFR900 W 4P 03 6 FS8 FMMF V PM

BASIC SERIES

HFR900 = 1-30 psig
HFR901 = 2-75 psig
HFR902 = 5-150 psig

MATERIALS

W = Welded 316L Stainless Steel

PORTING

2P = 2 Ports
3P = 3 Ports
4P = 4 Ports
4PB = 4 Ports

REGULATOR OUTLET GAUGE

03 = 0-30 psig
01 = 0-100 psig
2 = 0-200 psig
X = No Gauge

* Compression fittings are welded and inclusive of nuts and ferrules.

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Kalrez® and Teflon® are registered trademarks of DuPont Company.

OPTIONAL FEATURES

PM = Panel Mount
R = Relief Valve

SEAL MATERIAL

K = Kalrez® (200 psig max)
V = Viton® (500 psig max)

PORT CONFIGURATION

M = Male
F = Female
I = Internal Face Seal
(1/4" Gauge Port Only)

PORT STYLE

FS = 1/4" Face Seal
FS8 = 1/2" Face Seal
TS = 1/4" Tube Stub
TS6 = 3/8" Tube Stub
TS8 = 1/2" Tube Stub
8T = 1/2" Compression Fittings*

REGULATOR INLET GAUGE

4 = 0-400 psig
6 = 0-600 psig
X = No Gauge