IMS (WAFER)



RED OX

More Expertise. Less Emissions.

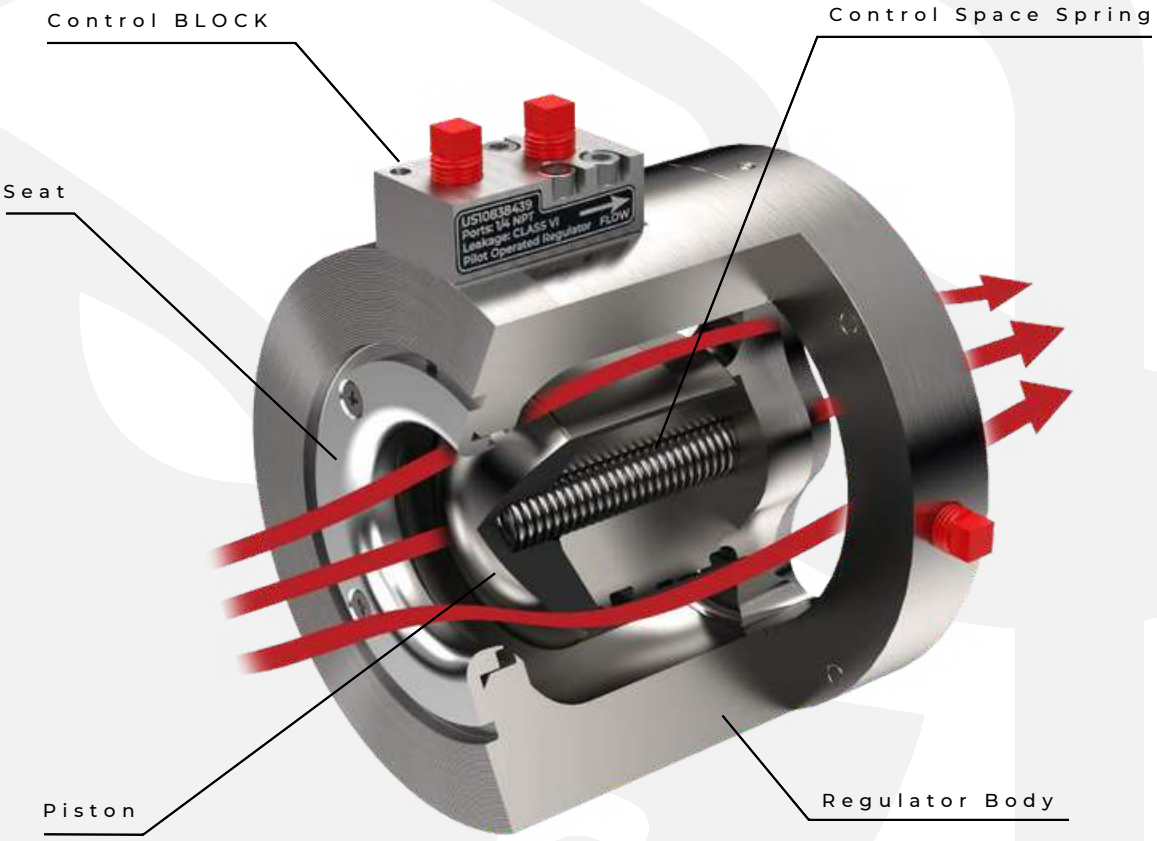
VRG Controls has partnered with Oxford Flow to provide Engineered to provide revolutionary new regulation technologies to meet the needs of today's gas pipelines and natural gas utilities. The Red Ox Regulators brand is the exclusive distributor for USA based natural gas applications. Oxford Flow and Red Ox have "grabbed the bull by the horns" to provide innovative gas regulation solutions that ensure superior performance while exceeding the environmentally friendly demands of the industry.

OXFORD FLOW

VRG CONTROLS

REDOXREGULATORS.COM |

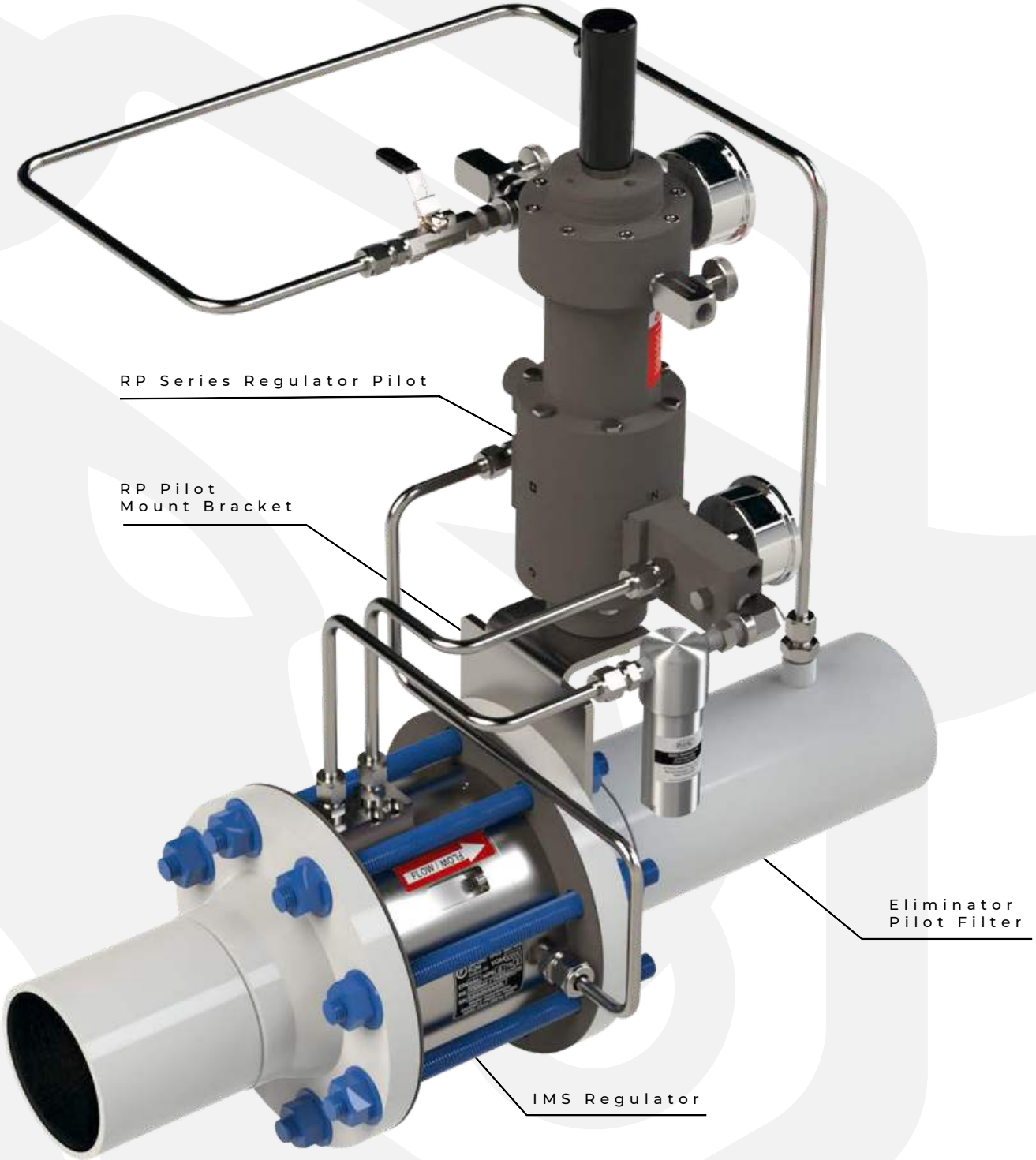
High Performance Gas Control in Compact, Stainless Steel Design



IMS Series Wafer Type Regulator

The IMS Series range offers excellent pressure or flow control for gas distribution, gas transmission, fuel gas control, and various industrial applications. The compact design utilizes the patented piston control system to deliver superior process control in a full stainless steel construction. The unique design employs a single piston instead of a diaphragm, increasing reliability and reducing maintenance costs. The IMS Series is fully tested and proven for use in newer hydrogen applications up to 100% H2 content.

IMS SERIES WAFER TYPE REGULATOR

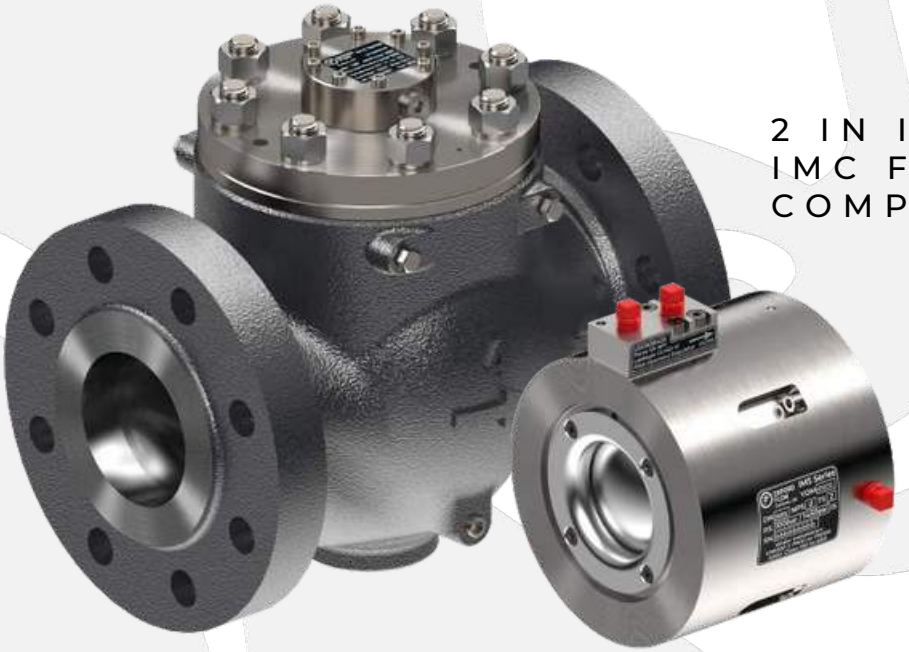


IMS SERIES WAFER TYPE REGULATOR

Benefits & Features:

- Class LeadingHydrogen Ready Product
- Full StainlessSteel Construc tion
- High CapacityTrue Axial Flow Design
- Compact, Lightweight Design
- Piston ControlEliminates Diaphragm
- Protected SeatInsert for Shuto ff Reliability
- Single MovingPart for Minimal Maintenance
- No AtmosphericEmissions
- Bubble-TightShuto ff
- Long Life in Severe Applicaons
- Precision Pressure or Flow Control
- Low Costs Rebuild Kits
- Le Hand / Right Hand Reversible Mount Instrumentaon
-





2 IN IMS VS 2 IN IMC FOR SIZE COMPARISON

Table 1.0 - IMS Series – Key Specifications

Sizes	NPS 2, 3, 4, 6, 8 (DN50 to DN200)
Pressure Classes	150, 300, 600 ANSI
Connections	RFFE Per ASME B16.5
Temperature Range	-20 to 180°F (-29 to 82°C)
Flow Profile	Linear
Leakage	ANSI FCI 70-2: Class VI
Lock Up Class	Bubble Tight
Accuracy Class	±1.0% or better
Instrument Ports	0.250 FNPT / 0.375 BSPP (Loading)
Body Ports	0.250 FNPT (QTY 2 Upstream / QTY 2 Downstream)
Face-Face Dimensions	Per ISA ####

Table 2.0 - IMS Series – Capacities & Sizing Data:

	Kv	Kg	Cv	Cg
2in	36	1238	42	1177
3in	88	2891	101	2749
4in	140	4682	161	4451
6in	277	9506	320	9036
8in	418	14745	483	14016

Table 3.0 - IMs Series / 600 ANSI RFFE – Key Dimensions:

Nominal Diameter	Cartridge Diameter (A)	Face-Face (B)	Height (C)	Weight[1]
2 in (DN50)	4.1 in (105 mm)	3.4 in (86.5 mm)	8.7 in (222 mm)	17 Lbs (7.9 kg)
3 in (DN75)	5.4 in (136.5 mm)	4.1 in (104 mm)	9.4 in (240 mm)	26 Lbs (12 kg)
4 in (DN100)	6.4 in (163 mm)	5.2 in (133 mm)	10 in (255 mm)	40 Lbs (18.2 kg)
6 in (DN150)	8.6 in (218 mm)	6.9 in (175 mm)	11 in (280 mm)	79 Lbs (36 kg)
8 in (DN200)	10.8 in (274 mm)	8.1 in (205 mm)	12.2 in (310 mm)	145 Lbs (66 kg)

N otes:

1. Weight does not include control instrumentation or other accessories.

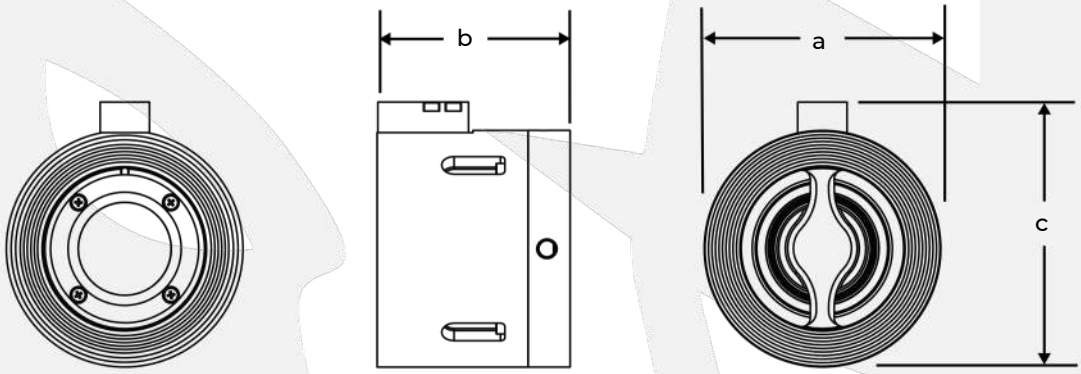


Table 4.0 - IMs Series - Standard Materials of Construction:

Component	Material
Body	316L SS
Cap	316L SS
Manifold	316L SS
Trim	316L SS
Fittings	316L SS
Seat[1]	Viton (FKM) / Buna-N (BN)
Static Seals[1]	Viton (FKM) / Buna-N (BN)
Piston Seal[1]	Viton (FKM) / Buna-N (BN)

Notes:

1. Alternate materials available upon request.

COMPATIBLE CONTROL DEVICES



VRG RP-SN-CS

Regulator Pilots: VRG Controls RP-SN-CS Regulator Pilots are the perfect complement to Red Ox Regulators for the most demanding pressure control applications. The CS Closed Spring sensing chamber protects the Control Spring from aggressive environments and ensures optimum pressure control accuracy in installations like power plants, industrial gas feeds and pipeline applications. Available Setpoint Ranges: 3.0 1500 psig (21 10,342 kPA)



VRG RP-SN-OS

Regulator Pilots: VRG Controls RP-SN-OS Regulator Pilots are well suited for use with Red Ox Regulators for high performance pressure control applications. The OS Open Spring design provides high performance in a moderate cost platform and ensures very good pressure control accuracy in installations like gas utility and pipeline applications. Available Setpoint Ranges: 9.0 700 psig (62 4826 kPA) power supply. The unit can lock last loading pressure upon loss of signal or power supply.



Oxford Flow PRX2 Pilots

Oxford Flow's PRX2 Pressure Reducing Pilots are well suited for use with Red Ox Regulators for cost-e ective pressure control applications. The PRX2 design features 100% 316 Stainless Steel Construction in a moderate cost platform and ensures "good" pressure control accuracy in installations like gas utility applications. Available Setpoint Ranges:
XX – 600 psig (XX – XXX kPA)



RCV Research Control Valves

The Model RCV research Control Valve is a pneumatically operated control valve that is used in conjunction with Red Ox Regulators to provide control of a variety of processes. The RCV is typically used for ow control, remote electronic control, or "droopless" pressure control. The RCV is available in "fail open" or "fail closed" con gurations.



ERCV Electronic Research Control Valves

The Model ERCV research Control Valve is a electrically operated control valve that is used in conjunction with Red Ox Regulators to provide control of a variety of processes. The RCV is typically used for electronic ow or pressure control. The RCV is typically controlled via 4-20 mA command signal with 12 VDC or 115 VAC power supply. The unit can "lock" last loading pressure upon loss of signal or power supply.

COMPATIBLE ACCESSORIES







ESC Electronic Setpoint ControL

The module provides remote setpoint adjustment capability when paired with VRG Controls' RP Series Regulator Pilots. ESC modules may be powered with 120 or 24 VDC Power. 4-20 mA analog or 24 VDC discrete command signal will raise / lower pressure setpoint. In event of loss of command signal or power, the ESC will render the RP pilot to "lock" at last pressure setpoint, thereby maintaining control of the process. The ESC features an easy pushbutton programming and 4-20 mA feedback of ESC motor

Eliminator Pilot Filters

The Eliminator Pilot Filter provides 20 µ ltration of pilot inlet gas to ensure reliable operation of your Red Ox control devices. The Eliminator features 316 Stainless Steel construction in a compact design with 0.250 FNPT inlet, outlet and drain connections. The standard sintered polyethylene lter element can easily be changed inline.

FD Filter Dryer Assemblies

The FD Series of Filter assemblies provide high capacity, long-life 10 µ ltration. The FD Series features a heavy duty, high pressure carbon steel construction with 0.250 FNPT inlet, outlet and drain connections. Various lter/dryer media lters are available to remove entrained moisture, gas odorant and trace sulfur.



Supply Gas Heaters

Supply Gas Heaters provide a robust amount of self-contained heat to ensure reliable operation of Control Devices without the need for constant electrical power. Supply Gas Heaters are pre-piped in a compact, durable stainless steel enclosure that includes an explosion proof catalytic heater, heat exchanger core, and low pressure supply gas heaters. Startup voltages available in 12 VDC or 120 VAC.

NAJ Noise Attenuating Jackets

NAJ Series Noise Attenuating Jackets provide excellent acoustic noise reduction when paired with Red Ox Regulators. Noise attenuation can typically be reduced between 12-25 dBA when applied to aggressive regulation applications. The NAJ o ers a cost-e ective solution during design stage or retro t to existing "problem" facilities. NAJ Jackets are equipped with easy removal and reinstallation without special tools or material.

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