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Oxford Valves OV-FFR-300 Series

Fixed Flow Regulators for Calibration Gas and Gas Detection Applications

Product Overview

The Oxford Valves **OV-FFR-300 Series** is a range of fixed flow regulators designed to deliver a preset constant flow rate from calibration gas cylinders and portable gas packages.

Fixed flow regulators are commonly used with calibration gases, handheld gas detectors, bump testing equipment, gas analysis instruments, and portable test gas systems. They provide a controlled outlet flow without the need for continuous manual adjustment during use.

The OV-FFR-300 Series includes CGA600, C10, high pressure, mini, brass nickel plated, stainless steel, hose barb outlet, NPT outlet, and compression fitting outlet configurations.

What Is a Fixed Flow Regulator?

A fixed flow regulator is a gas pressure and flow control device designed to deliver gas at a preset flow rate. Unlike adjustable flow regulators, a fixed flow regulator is normally configured to deliver one required flow rate for the application.

Fixed flow regulators are widely used for calibration gas applications because many gas detectors and calibration systems require a stable and repeatable flow rate during bump testing, calibration, and instrument verification.

Series Structure

Series Name: OV-FFR-300 Series

Product Type: Fixed flow regulators

Model Range: OV-FFR-301 to OV-FFR-311

Flow Range: Fixed as per customer requirement, 0.1 to 8.0 L/min

Applications: Calibration gas, gas detection, handheld gas detectors, gas analysis, bump testing, and portable gas cylinder packages

Browse by Regulator Type

CGA600 Fixed Flow Regulators

CGA600 fixed flow regulators are used with compatible CGA600 disposable or portable calibration gas cylinders. They are suitable for many calibration gas and handheld gas detector applications.

C10 Fixed Flow Regulators

C10 fixed flow regulators are designed for C10 valve cylinder connections commonly used on portable calibration gas cylinders. They are used with 17L and 34L cylinders for gas detector calibration and bump testing applications.

High Pressure Fixed Flow Regulators

High pressure fixed flow regulators are designed for higher inlet pressure applications and can be connected with suitable CGA, DIN, or BS cylinder connections depending on configuration.

Mini Fixed Flow Regulators

Mini fixed flow regulators provide a compact and economical regulator option. The mini version does not include a pressure gauge or on/off knob.

Compression Fitting Outlet Regulators

Compression fitting outlet regulators are designed for applications where a 1/8" compression fitting outlet is required instead of a hose barb or NPT outlet.

Applications

Oxford Valves OV-FFR-300 Series fixed flow regulators are used in:

- Calibration gas delivery

- Gas detector bump testing
 - Handheld gas detector calibration
 - Portable calibration gas cylinders
 - Disposable calibration gas cylinders
 - Refillable calibration gas cylinders
 - Gas analysis instruments
 - Laboratory gas testing
 - Environmental monitoring equipment
 - Industrial safety gas detection systems
 - Marine gas detection calibration
 - Process gas analysis applications
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Suitable Markets

The OV-FFR-300 Series is suitable for:

- Calibration gas suppliers
 - Gas detection equipment suppliers
 - Gas detector calibration service providers
 - Specialty gas companies
 - Industrial gas companies
 - Environmental monitoring companies
 - Laboratories and analytical instrument users
 - Marine safety suppliers
 - Oil, gas, petrochemical, and refinery safety teams
 - Gas cylinder package suppliers
 - International distributors and technical buyers
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Key Features

- Single-stage fixed flow regulator design
- Preset constant flow rate
- Flow available as per customer requirement from 0.1 to 8.0 L/min
- CGA600 and C10 inlet configurations
- High pressure options available
- Mini economical configuration available
- Hose barb, NPT male, and compression fitting outlet options
- Brass nickel plated and stainless steel configurations

- Suitable options for non-reactive and reactive gas applications, depending on material selection
- Outlet pressure options including 30 psig / 2.1 bar and 60 psig / 4.1 bar
- Gauge and no-gauge configurations available
- Manufactured under ISO 9001 quality processes
- Oxford Valves branded product range

Model Comparison Table

Oxford Valves Model	Type	Material Configuration	Maximum Inlet Pressure	Inlet Connection	Outlet Connection	Outlet Pressure	Gauge	Weight
OV-FFR-301	CGA60 0 fixed flow regulator	Brass nickel plated	0 to 600 psig / 40 bar	1" x 20 UNF CGA60	3/16" barb, 4.8 mm	30 psig / 2.1 bar	Brass, 0 to 600 psig / 40 bar	0.330 kg
OV-FFR-302	C10 fixed flow regulator	Brass nickel plated configuration	0 to 1200 psig / 83 bar	5/8" x 18UN C10	3/16" barb, 4.8 mm	60 psig / 4.1 bar	Brass, 0 to 1500 psig / 103 bar	0.300 kg
OV-FFR-303	C10 fixed flow regulator	Stainless steel	0 to 1200 psig / 83 bar	5/8" x 18UN C10	3/16" barb, 4.8 mm	60 psig / 4.1 bar	Stainless steel, 0 to 1500 psig / 103 bar	0.280 kg
OV-FFR-304	High pressure fixed flow regulator	Brass nickel plated configuration	0 to 3000 psig / 207 bar	1/4" NPT female	3/16" barb, 4.8 mm	60 psig / 4.1 bar	Stainless steel, 0 to 3180 psig / 220 bar	0.350 kg
OV-FFR-305	High pressure fixed flow regulator	Stainless steel	0 to 3000 psig / 207 bar	1/4" NPT female	3/16" barb, 4.8 mm	60 psig / 4.1 bar	Stainless steel, 0 to 3180 psig /	0.350 kg

Oxford Valves Model	Type	Material Configuration	Maximum Inlet Pressure	Inlet Connection	Outlet Connection	Outlet Pressure	Gauge	Weight
	or						220 bar	
OV- FFR- 306	C10 fixed flow regulator, 120 bar	Brass nickel plated configuration	0 to 1740 psig / 120 bar	5/8" x 18UN C10	3/16" barb, 4.8 mm	60 psig / 4.1 bar	Stainless steel, 0 to 3000 psig / 220 bar	0.300 kg
OV- FFR- 307	C10 fixed flow regulator, 120 bar	Stainless steel	0 to 1740 psig / 120 bar	5/8" x 18UN C10	3/16" barb, 4.8 mm	60 psig / 4.1 bar	Stainless steel, 0 to 3000 psig / 220 bar	0.280 kg
OV- FFR- 308	C10 fixed flow regulator with NPT outlet	Brass nickel plated configuration	0 to 1200 psig / 83 bar	5/8" x 18UN C10	1/8" NPT male	60 psig / 4.1 bar	Brass, 0 to 1200 psig / 103 bar	0.300 kg
OV- FFR- 309	Mini CGA60 0 fixed flow regulator	Brass nickel plated configuration	0 to 600 psig / 41 bar	CGA60 0, 1" x 20 UN	3/16" hose barb	60 psig / 4.1 bar	No gauge	0.230 kg
OV- FFR- 310	C10 fixed flow regulator with compression outlet	Brass nickel plated configuration	0 to 1200 psig / 83 bar	5/8" x 18UN C10	1/8" compression fitting	60 psig / 4.1 bar	0 to 1500 psig / 103 bar	0.266 kg
OV- FFR- 311	C10 fixed flow	Stainless steel	0 to 1200 psig /	5/8" x 18UN C10	1/8" compression	60 psig / 4.1 bar	Stainless steel, 0	0.258 kg

Oxford Valves Model	Type	Material Configuration	Maximum Inlet Pressure	Inlet Connection	Outlet Connection	Outlet Pressure	Gauge	Weight
	regulator or with compression outlet		83 bar		fitting		to 1200 psig / 103 bar	

CGA600 Fixed Flow Regulators

OV-FFR-301

CGA600 Fixed Flow Regulator, Brass Nickel Plated

The OV-FFR-301 is a CGA600 fixed flow regulator using a single-stage design to provide a preset constant flow rate. It is designed for use with compatible 17L and 34L calibration gas cylinders and is suitable for calibration gases and handheld gas detector applications.

Specification	Detail
Product type	CGA600 fixed flow regulator
Body	Brass nickel plated
Cap	Brass nickel plated
Piston	Brass
Seats and seals	Teflon, Viton and Buna-N
Washer	Buna-N
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 600 psig / 40 bar
Gas suitability	Brass nickel plated configuration for non-reactive gases
Inlet connection	1" x 20 UNF CGA600
Outlet connection	3/16" barb, 4.8 mm
Outlet pressure	30 psig / 2.1 bar
Gauge	Brass, 0 to 600 psig / 40 bar
Weight	0.330 kg

Typical applications:

Calibration gas cylinders, handheld gas detector calibration, bump testing, and portable calibration gas systems.

OV-FFR-309

Mini CGA600 Fixed Flow Regulator, Brass Nickel Plated

The OV-FFR-309 is a mini CGA600 fixed flow regulator designed as a compact and economical option for calibration gas and handheld gas detector applications. This design does not include a pressure gauge or on/off knob.

Specification	Detail
Product type	Mini CGA600 fixed flow regulator
Body	Brass
Cap	Brass nickel plated
Piston	Brass
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 600 psig / 41 bar
Gas suitability	Brass nickel plated configuration for non-reactive gases
Inlet connection	CGA600, 1" x 20 UN
Outlet connection	3/16" hose barb
Outlet pressure	60 psig / 4.1 bar
Gauge	No gauge
Weight	0.230 kg

Typical applications:

Economical calibration gas delivery, handheld gas detector calibration, portable test gas cylinders, and bump testing applications.

C10 Fixed Flow Regulators

OV-FFR-302

C10 Fixed Flow Regulator, Brass Nickel Plated

The OV-FFR-302 is a C10 fixed flow regulator using a single-stage design to deliver a preset constant flow rate. It is designed for use with 17L and 34L cylinders and is suitable for calibration gases and handheld gas detectors.

Specification	Detail
Product type	C10 fixed flow regulator
Body	Stainless steel
Cap	Brass nickel plated
Piston	Brass
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 1200 psig / 83 bar
Gas suitability	Brass nickel plated configuration for non-reactive gases
Inlet connection	5/8" x 18UN C10
Outlet connection	3/16" barb, 4.8 mm
Outlet pressure	60 psig / 4.1 bar
Gauge	Brass, 0 to 1500 psig / 103 bar
Weight	0.300 kg

Typical applications:

C10 calibration gas cylinders, handheld gas detector calibration, bump testing, and portable gas delivery.

OV-FFR-303

C10 Fixed Flow Regulator, Stainless Steel

The OV-FFR-303 is a stainless steel C10 fixed flow regulator designed to provide a preset constant flow rate from compatible calibration gas cylinders. It is suitable for applications where stainless steel construction is required.

Specification	Detail
Product type	C10 fixed flow regulator
Body	Stainless steel

Specification	Detail
Cap	Stainless steel
Piston	Stainless steel
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 1200 psig / 83 bar
Gas suitability	Stainless steel for reactive gases
Inlet connection	5/8" x 18UN C10
Outlet connection	3/16" barb, 4.8 mm
Outlet pressure	60 psig / 4.1 bar
Gauge	Stainless steel, 0 to 1500 psig / 103 bar
Weight	0.280 kg

Typical applications:

Reactive gas calibration mixtures, C10 calibration gas cylinders, gas detection calibration, and handheld gas detector applications.

OV-FFR-306

C10 Fixed Flow Regulator, Brass Nickel Plated, 120 bar

The OV-FFR-306 is a C10 fixed flow regulator with a 120 bar maximum inlet pressure rating. It uses a single-stage design and is intended for calibration gases and handheld gas detector applications requiring a higher inlet pressure configuration.

Specification	Detail
Product type	C10 fixed flow regulator, 120 bar
Body	Stainless steel
Cap	Brass nickel plated
Piston	Brass
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 1740 psig / 120 bar
Gas suitability	Brass nickel plated configuration for non-reactive gases
Inlet connection	5/8" x 18UN C10
Outlet connection	3/16" barb, 4.8 mm

Specification	Detail
Outlet pressure	60 psig / 4.1 bar
Gauge	Stainless steel, 0 to 3000 psig / 220 bar
Weight	0.300 kg

Typical applications:

Higher pressure C10 calibration gas cylinders, bump testing, handheld gas detector calibration, and portable gas systems.

OV-FFR-307

C10 Fixed Flow Regulator, Stainless Steel, 120 bar

The OV-FFR-307 is a stainless steel C10 fixed flow regulator with a 120 bar maximum inlet pressure rating. It is designed for applications requiring stainless steel construction and a preset constant flow rate.

Specification	Detail
Product type	C10 fixed flow regulator, 120 bar
Body	Stainless steel
Cap	Stainless steel
Piston	Stainless steel
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 1740 psig / 120 bar
Gas suitability	Stainless steel for reactive gases
Inlet connection	5/8" x 18UN C10
Outlet connection	3/16" barb, 4.8 mm
Outlet pressure	60 psig / 4.1 bar
Gauge	Stainless steel, 0 to 3000 psig / 220 bar
Weight	0.280 kg

Typical applications:

Reactive gas calibration mixtures, higher pressure C10 cylinders, gas detection calibration, and portable calibration gas systems.

OV-FFR-308

C10 Fixed Flow Regulator with 1/8" NPT Male Outlet, Brass Nickel Plated

The OV-FFR-308 is a C10 fixed flow regulator with a 1/8" NPT male outlet. It is designed to deliver a preset constant flow rate for calibration gas and handheld gas detector applications where an NPT outlet connection is required.

Specification	Detail
Product type	C10 fixed flow regulator with NPT outlet
Body	Stainless steel
Cap	Brass nickel plated
Piston	Brass
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 1200 psig / 83 bar
Gas suitability	Brass nickel plated configuration for non-reactive gases
Inlet connection	5/8" x 18UN C10
Outlet connection	1/8" NPT male
Outlet pressure	60 psig / 4.1 bar
Gauge	Brass, 0 to 1200 psig / 103 bar
Weight	0.300 kg

Typical applications:

C10 calibration gas cylinders, gas detector calibration, test gas systems, and applications requiring a 1/8" NPT male outlet.

High Pressure Fixed Flow Regulators

OV-FFR-304

High Pressure Fixed Flow Regulator, Brass Nickel Plated

The OV-FFR-304 is a high pressure fixed flow regulator using a single-stage design to deliver a preset constant flow rate. It can be connected with suitable CGA, DIN, or BS

cylinder connections depending on configuration and is used for calibration gases and handheld gas applications.

Specification	Detail
Product type	High pressure fixed flow regulator
Body	Stainless steel
Cap	Brass nickel plated
Piston	Brass
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 3000 psig / 207 bar
Gas suitability	Brass nickel plated configuration for non-reactive gases
Inlet connection	1/4" NPT female
Outlet connection	3/16" barb, 4.8 mm
Outlet pressure	60 psig / 4.1 bar
Gauge	Stainless steel, 0 to 3180 psig / 220 bar
Weight	0.350 kg

Typical applications:

High pressure calibration gas cylinders, industrial gas calibration, gas detector calibration, and portable gas systems using suitable cylinder connections.

OV-FFR-305

High Pressure Fixed Flow Regulator, Stainless Steel

The OV-FFR-305 is a stainless steel high pressure fixed flow regulator for applications requiring stainless steel construction and a preset constant flow rate. It is suitable for compatible calibration gas and handheld gas applications.

Specification	Detail
Product type	High pressure fixed flow regulator
Body	Stainless steel
Cap	Stainless steel
Piston	Stainless steel
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min

Specification	Detail
Maximum inlet pressure	0 to 3000 psig / 207 bar
Gas suitability	Stainless steel for reactive gases
Inlet connection	1/4" NPT female
Outlet connection	3/16" barb, 4.8 mm
Outlet pressure	60 psig / 4.1 bar
Gauge	Stainless steel, 0 to 3180 psig / 220 bar
Weight	0.350 kg

Typical applications:

Reactive gas calibration, high pressure calibration gas cylinders, process gas analysis, gas detection calibration, and laboratory gas applications.

Compression Fitting Outlet Fixed Flow Regulators

OV-FFR-310

C10 Fixed Flow Regulator with 1/8" Compression Fitting Outlet, Brass Nickel Plated

The OV-FFR-310 is a C10 fixed flow regulator with a 1/8" compression fitting outlet. It is designed for calibration gases and handheld gas detectors where a compression fitting outlet is required instead of a hose barb.

Specification	Detail
Product type	C10 fixed flow regulator with compression fitting outlet
Body	Stainless steel
Cap	Brass nickel plated
Piston	Brass
Compression fittings	Stainless steel
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 1200 psig / 83 bar
Gas suitability	Brass nickel plated configuration for non-reactive gases

Specification	Detail
Inlet connection	5/8" x 18UN C10
Outlet connection	1/8" compression fitting
Outlet pressure	60 psig / 4.1 bar
Gauge	0 to 1500 psig / 103 bar
Weight	0.266 kg

Typical applications:

C10 calibration gas cylinders, gas analysis systems, handheld gas detector calibration, and applications requiring 1/8" compression fitting outlet.

OV-FFR-311

C10 Fixed Flow Regulator with 1/8" Compression Fitting Outlet, Stainless Steel

The OV-FFR-311 is a stainless steel C10 fixed flow regulator with a 1/8" compression fitting outlet. It is designed for applications requiring stainless steel construction and a compression fitting outlet connection.

Specification	Detail
Product type	C10 fixed flow regulator with compression fitting outlet
Body	Stainless steel
Cap	Stainless steel
Piston	Stainless steel
Seats and seals	Teflon, Viton
Flow	Fixed as per customer requirement, 0.1 to 8.0 L/min
Maximum inlet pressure	0 to 1200 psig / 83 bar
Gas suitability	Stainless steel for reactive gases
Inlet connection	5/8" x 18UN C10
Outlet connection	1/8" compression fitting
Outlet pressure	60 psig / 4.1 bar
Gauge	Stainless steel, 0 to 1200 psig / 103 bar
Weight	0.258 kg

Typical applications:

Reactive gas calibration, C10 calibration gas cylinders, gas analysis applications, and handheld gas detector calibration requiring a compression fitting outlet.

Flow Rate Options

The OV-FFR-300 Series is supplied with a fixed flow rate according to customer requirement.

Available fixed flow range:

0.1 to 8.0 L/min

The correct flow rate should be selected based on the gas detector, calibration adaptor, sampling setup, tubing arrangement, instrument requirement, and application conditions.

Inlet Connection Options

The OV-FFR-300 Series includes the following inlet connection configurations:

- 1" x 20 UNF CGA600
- CGA600, 1" x 20 UN
- 5/8" x 18UN C10
- 1/4" NPT female

The inlet connection must match the cylinder valve or gas package connection.

Outlet Connection Options

The OV-FFR-300 Series includes the following outlet connection configurations:

- 3/16" barb, 4.8 mm
- 3/16" hose barb
- 1/8" NPT male
- 1/8" compression fitting

The outlet connection should be selected based on the calibration tubing, instrument adaptor, flow path, or sampling system.

Material Selection Guide

Brass Nickel Plated Configurations

Brass nickel plated configurations are generally used for compatible non-reactive gases. They are commonly selected for standard calibration gas and handheld gas detector applications where the gas mixture is compatible.

Stainless Steel Configurations

Stainless steel configurations are used where stainless steel construction is required, including many reactive gas applications. Final material compatibility should be checked against the gas mixture and service conditions.

Gas Compatibility Notes

Gas compatibility depends on the gas mixture, concentration, moisture content, regulator material, seat and seal material, pressure, temperature, and service conditions.

As a general guide:

- Brass nickel plated configurations are generally used for compatible non-reactive gases.
- Stainless steel configurations are typically selected for reactive gas applications.
- Teflon, Viton, Buna-N, and other listed sealing materials should be checked against the gas mixture and operating conditions.
- Final selection should be based on the complete gas mixture and application.

Safety Notes

Fixed flow regulators are pressure control components and must be selected, installed, used, and maintained by trained personnel.

The correct regulator should be selected based on:

- Cylinder connection
- Maximum inlet pressure
- Outlet pressure
- Required fixed flow rate
- Gas compatibility

- Regulator material
- Seat and seal material
- Outlet connection
- Gauge requirement
- Application and instrument requirement

Do not use any fixed flow regulator outside its specified pressure rating, flow specification, material compatibility, or intended application.

Quality Statement

Oxford Valves supplies the OV-FFR-300 Series as part of its branded range of precision gas valves and regulators.

Products are manufactured under ISO 9001 quality processes and are intended for calibration gas, specialty gas, industrial gas, gas detection, and portable cylinder applications.

Technical Notes

- Flow is fixed as per customer requirement from 0.1 to 8.0 L/min.
- Outlet pressure depends on model configuration.
- Inlet connection must match the cylinder valve or cylinder package.
- Outlet connection must match the calibration tubing, adaptor, or gas delivery system.
- Gas compatibility should be checked before final product selection.
- Pressure ratings must not be exceeded.
- Gauge material and pressure range depend on the selected model.
- Final regulator selection should be based on the cylinder, gas mixture, pressure, flow requirement, outlet connection, and application.



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