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Oxford Valves OV-DAFR-600 Series

Dial-a-Flow Regulators for Calibration Gas and Handheld Gas Detector Applications

Product Overview

The Oxford Valves **OV-DAFR-600 Series** is a range of Dial-a-Flow regulators designed for calibration gases, handheld gas detectors, bump testing, portable calibration gas cylinders, and gas delivery applications requiring selectable preset flow rates.

Dial-a-Flow regulators use a single-stage design and provide the user with a series of preset constant flow rates. The dial on the top of the regulator is used to manually change the selected flow rate.

The OV-DAFR-600 Series includes C10 and high pressure configurations, brass nickel plated and stainless steel options, selectable flow rate tables, 3/16" barb outlet connections, and gauge options according to model.

What Is a Dial-a-Flow Regulator?

A Dial-a-Flow regulator is a gas regulator that allows the user to manually select from a series of preset flow rates. It is used when one regulator needs to support multiple calibration flow requirements.

Unlike a fixed flow regulator, which is set to one flow rate, a Dial-a-Flow regulator provides several predefined flow positions. This makes it useful for gas detector calibration, bump testing, and service applications where different instruments may require different flow settings.

Series Structure

Series Name: OV-DAFR-600 Series

Product Type: Dial-a-Flow regulators

Model Range: OV-DAFR-601 to OV-DAFR-604

Outlet Connection: 3/16" barb, 4.8 mm

Applications: Calibration gas, handheld gas detectors, bump testing, gas detector calibration, and portable gas cylinder packages

Browse by Regulator Type

C10 Dial-a-Flow Regulators

C10 Dial-a-Flow regulators are designed for cylinders with C10 valve connections. They are suitable for portable calibration gas cylinders and handheld gas detector calibration.

High Pressure Dial-a-Flow Regulators

High pressure Dial-a-Flow regulators are designed for applications requiring a higher maximum inlet pressure and a 1/4" NPT female inlet connection.

Brass Nickel Plated Configurations

Brass nickel plated configurations are generally used for compatible non-reactive gas applications.

Stainless Steel Configurations

Stainless steel configurations are typically selected for reactive gas applications or where stainless steel construction is required.

Applications

Oxford Valves OV-DAFR-600 Series Dial-a-Flow regulators are used in:

- Calibration gas delivery
- Handheld gas detector calibration
- Gas detector bump testing
- Portable calibration gas cylinders
- C10 calibration gas cylinders
- High pressure calibration gas cylinders
- Gas detection service kits

- Laboratory test gas applications
 - Environmental monitoring equipment
 - Industrial safety gas detection systems
 - Marine gas detection calibration
 - Portable gas analysis applications
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Suitable Markets

The OV-DAFR-600 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 Dial-a-Flow regulator design
 - Multiple preset constant flow rate options
 - Manual flow selection using top dial
 - Suitable for calibration gases and handheld gas detectors
 - C10 and high pressure inlet configurations
 - 3/16" barb outlet, 4.8 mm
 - Brass nickel plated and stainless steel options
 - Brass and stainless steel gauge options depending on model
 - Flow rate options available up to 15.0 L/min depending on selected flow table
 - Suitable options for reactive and non-reactive gas applications, depending on material selection
 - Manufactured under ISO 9001 quality processes
 - Oxford Valves branded product range
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Model Comparison Table

Oxford Valves Model	Type	Material Configuration	Maximum Inlet Pressure	Flow Rates	Inlet Connection	Outlet Connection	Gauge	Weight
OV-DAFR-601	C10 Dial-a-Flow regulator	Brass nickel plated configuration	0 to 1200 psig / 83 bar	Refer flow rate table	5/8" x 18UN C10	3/16" barb, 4.8 mm	Brass, 0 to 1500 psig / 103 bar	0.350 kg
OV-DAFR-602	C10 Dial-a-Flow regulator	Stainless steel	0 to 1200 psig / 83 bar	Refer flow rate table	5/8" x 18UN C10	3/16" barb, 4.8 mm	Stainless steel, 0 to 1500 psig / 103 bar	0.380 kg
OV-DAFR-603	High pressure Dial-a-Flow regulator	Brass nickel plated configuration	0 to 3000 psig / 207 bar	Refer flow rate table	1/4" NPT female	3/16" barb, 4.8 mm	Brass, 0 to 3190 psig / 220 bar	0.400 kg
OV-DAFR-604	High pressure Dial-a-Flow regulator	Stainless steel	0 to 3000 psig / 207 bar	Refer flow rate table	1/4" NPT female	3/16" barb, 4.8 mm	Stainless steel, 0 to 3190 psig / 220 bar	0.430 kg

C10 Dial-a-Flow Regulators

OV-DAFR-601

C10 Dial-a-Flow Regulator, Brass Nickel Plated Configuration

The OV-DAFR-601 is a C10 Dial-a-Flow regulator designed for calibration gases and handheld gas detectors. It uses a single-stage design and provides a series of preset constant flow rates selected manually using the top dial.

Specification	Detail
Product type	C10 Dial-a-Flow regulator
Body	Stainless steel
Neck	Aluminium black anodised
Piston	Brass
Seats and seals	Teflon, Viton and Buna-N
Bonnet	Aluminium black anodised
Maximum inlet pressure	0 to 1200 psig / 83 bar
Gas suitability	Brass nickel plated configuration for non-reactive gases
Flow rates	Refer flow rate tables
Inlet connection	5/8" x 18UN C10
Outlet connection	3/16" barb, 4.8 mm
Gauge	Brass, 0 to 1500 psig / 103 bar
Weight	0.350 kg

Typical applications:

C10 calibration gas cylinders, handheld gas detector calibration, gas detector bump testing, service kits, and portable calibration gas systems.

OV-DAFR-602

C10 Dial-a-Flow Regulator, Stainless Steel

The OV-DAFR-602 is a stainless steel C10 Dial-a-Flow regulator designed for calibration gases and handheld gas detectors. It provides multiple preset flow rates and is suitable for applications requiring stainless steel construction.

Specification	Detail
Product type	C10 Dial-a-Flow regulator
Body	Stainless steel
Neck	Stainless steel
Piston	Stainless steel
Seats and seals	Teflon, Viton and Buna-N
Bonnet	Aluminium black anodised
Maximum inlet pressure	0 to 1200 psig / 83 bar
Gas suitability	Stainless steel for reactive gases
Flow rates	Refer flow rate tables

Specification	Detail
Inlet connection	5/8" x 18UN C10
Outlet connection	3/16" barb, 4.8 mm
Gauge	Stainless steel, 0 to 1500 psig / 103 bar
Weight	0.380 kg

Typical applications:

Reactive gas calibration mixtures, C10 calibration gas cylinders, handheld gas detector calibration, gas detector bump testing, and portable calibration systems.

High Pressure Dial-a-Flow Regulators

OV-DAFR-603

High Pressure Dial-a-Flow Regulator, Brass Nickel Plated Configuration

The OV-DAFR-603 is a high pressure Dial-a-Flow regulator designed for calibration gases and handheld gas detectors. It uses a single-stage design and provides selectable preset flow rates using the top dial.

Specification	Detail
Product type	High pressure Dial-a-Flow regulator
Body	Stainless steel
Neck	Aluminium black anodised
Piston	Brass
Seats and seals	Teflon, Viton and Buna-N
Bonnet	Aluminium black anodised
Maximum inlet pressure	0 to 3000 psig / 207 bar
Gas suitability	Brass nickel plated configuration for non-reactive gases
Flow rates	Refer flow rate tables
Inlet connection	1/4" NPT female
Outlet connection	3/16" barb, 4.8 mm
Gauge	Brass, 0 to 3190 psig / 220 bar
Weight	0.400 kg

Typical applications:

High pressure calibration gas cylinders, handheld gas detector calibration, bump testing, gas detection service kits, and portable gas delivery applications.

OV-DAFR-604

High Pressure Dial-a-Flow Regulator, Stainless Steel

The OV-DAFR-604 is a stainless steel high pressure Dial-a-Flow regulator designed for applications requiring stainless steel construction and higher inlet pressure capacity. It provides selectable preset flow rates using the top dial.

Specification	Detail
Product type	High pressure Dial-a-Flow regulator
Body	Stainless steel
Neck	Stainless steel
Piston	Stainless steel
Seats and seals	Teflon, Viton and Buna-N
Bonnet	Aluminium black anodised
Maximum inlet pressure	0 to 3000 psig / 207 bar
Gas suitability	Stainless steel for reactive gases
Flow rates	Refer flow rate tables
Inlet connection	1/4" NPT female
Outlet connection	3/16" barb, 4.8 mm
Gauge	Stainless steel, 0 to 3190 psig / 220 bar
Weight	0.430 kg

Typical applications:

Reactive gas calibration mixtures, high pressure calibration gas cylinders, gas detector calibration, bump testing, and portable gas analysis applications.

Flow Rate Options

The OV-DAFR-600 Series provides selectable preset flow rates. The required flow table should be selected based on the gas detector, calibration adaptor, tubing setup, sampling arrangement, and application requirement.

Flow Rate Table 1

0 – 0.3 – 0.5 – 1.0 – 1.5 – 2.0 – 2.5 – 3.0 – 5.0 – 6.0 – 7.0 – 8.0 L/min

Flow Rate Table 2

0 – 0.15 – 0.3 – 0.5 – 0.75 – 1.0 – 1.25 – 1.5 – 1.75 – 2.0 – 2.5 – 3.0 L/min

Flow Rate Table 3

0 – 0.5 – 1.0 – 1.5 – 2.0 – 2.5 – 3.0 – 5.0 – 6.0 – 7.0 – 10.0 – 15.0 L/min

Inlet Connection Options

The OV-DAFR-600 Series includes the following inlet connection configurations:

- 5/8" x 18UN C10
- 1/4" NPT female

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

Outlet Connection

The OV-DAFR-600 Series uses the following outlet connection:

3/16" barb, 4.8 mm

The outlet connection should be matched with the calibration tubing, instrument connection, or gas delivery setup.

Material Selection Guide

Brass Nickel Plated Configurations

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

Relevant models:

- OV-DAFR-601
- OV-DAFR-603

Stainless Steel Configurations

Stainless steel configurations are typically selected for reactive gas applications or where stainless steel construction is required.

Relevant models:

- OV-DAFR-602
- OV-DAFR-604

Dial-a-Flow vs Vari-Flow Regulators

Regulator Type	How It Works	Typical Use
Dial-a-Flow regulator	Uses a dial to select from preset flow rates	Calibration gas applications requiring manual flow selection
Vari-Flow regulator	Provides multiple preset flow options using a manual selector	Applications requiring selectable flow settings
Fixed flow regulator	Delivers one preset constant flow rate	Standard calibration kits and repeatable bump testing
Demand flow regulator	Supplies gas only when the instrument demands flow	Pump-based gas detectors and sampling instruments

Dial-a-Flow regulators are useful when one regulator needs to support multiple flow settings for different gas detectors, calibration caps, tubing arrangements, or test procedures.

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 selected for reactive gas applications.

- Teflon, Viton, and Buna-N sealing materials should be checked against the gas mixture and operating conditions.
 - Final regulator selection should be based on the complete gas mixture and application.
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Safety Notes

Dial-a-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
- Required flow range
- Gas compatibility
- Regulator material
- Seat and seal material
- Outlet connection
- Gauge requirement
- Calibration procedure
- Instrument requirement

Do not use any Dial-a-Flow regulator outside its specified pressure rating, material compatibility, flow setting, or intended application.

Quality Statement

Oxford Valves supplies the OV-DAFR-600 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

- Dial-a-Flow regulators provide multiple preset flow rate options.

- Flow selection is controlled using the top dial.
- C10 models use a 5/8" x 18UN C10 inlet connection.
- High pressure models use a 1/4" NPT female inlet connection.
- The outlet connection is 3/16" barb, 4.8 mm.
- Maximum inlet pressure depends on model configuration.
- Gas compatibility should be checked before final product selection.
- Pressure ratings must not be exceeded.
- Gauge material and regulator material depend on the selected model.
- Final regulator selection should be based on cylinder connection, gas mixture, inlet pressure, required flow rate, material compatibility, and application.



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