WOODWARD

Product Manual 26741
(Revision B, 4/2016)
Original Instructions

Flow Divider Valve (FDV)

ECCN Classification: EAR99

Installation and Operation Manual

General Precautions

Read this entire manual and all other publications pertaining to the work to be performed before installing, operating, or servicing this equipment.

Practice all plant and safety instructions and precautions.

Failure to follow instructions can cause personal injury and/or property damage.

Revisions

This publication may have been revised or updated since this copy was produced. To verify that you have the latest revision, check manual *26455*, *Customer Publication Cross Reference and Revision Status & Distribution Restrictions*, on the *publications page* of the Woodward website:

www.woodward.com/publications

The latest version of most publications is available on the *publications page*. If your publication is not there, please contact your customer service representative to get the latest copy.

Proper Use

Any unauthorized modifications to or use of this equipment outside its specified mechanical, electrical, or other operating limits may cause personal injury and/or property damage, including damage to the equipment. Any such unauthorized modifications: (i) constitute "misuse" and/or "negligence" within the meaning of the product warranty thereby excluding warranty coverage for any resulting damage, and (ii) invalidate product certifications or listings.

Translated Publications

If the cover of this publication states "Translation of the Original Instructions" please note:

The original source of this publication may have been updated since this translation was made. Be sure to check manual *26455*, *Customer Publication Cross Reference and Revision Status & Distribution Restrictions*, to verify whether this translation is up to date. Out-of-date translations are marked with ⚠. Always compare with the original for technical specifications and for proper and safe installation and operation procedures.

Revisions—Changes in this publication since the last revision are indicated by a black line alongside the text.

Manual 26741

Contents

Illustrations and Tables

ECCN Classification: EAR99

Warnings and Notices

Important Definitions

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

- **DANGER** - Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- **WARNING** - Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION** - Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE** - Indicates a hazard that could result in property damage only (including damage to the control).
- **IMPORTANT** - Designates an operating tip or maintenance suggestion.

WARNING

Overspeed / Overtemperature / Overpressure

The engine, turbine, or other type of prime mover should be equipped with an overspeed shutdown device to protect against runaway or damage to the prime mover with possible personal injury, loss of life, or property damage.

The overspeed shutdown device must be totally independent of the prime mover control system. An overtemperature or overpressure shutdown device may also be needed for safety, as appropriate.

WARNING

Personal Protective Equipment

The products described in this publication may present risks that could lead to personal injury, loss of life, or property damage. Always wear the appropriate personal protective equipment (PPE) for the job at hand. Equipment that should be considered includes but is not limited to:

- **Eye Protection**
- **Hearing Protection**
- **Hard Hat**
- **Gloves**
- **Safety Boots**
- **Respirator**

Always read the proper Material Safety Data Sheet (MSDS) for any working fluid(s) and comply with recommended safety equipment.

WARNING

Start-up

Be prepared to make an emergency shutdown when starting the engine, turbine, or other type of prime mover, to protect against runaway or overspeed with possible personal injury, loss of life, or property damage.

Regulatory Compliance

European Compliance for CE Marking:
(only on item # 9905-3001)

Pressure Equipment Directive: Directive 97/23/EC (until July 18th, 2016) and 2014/68/EU (from July 19th, 2016) on the harmonisation of the laws of the Member States relating to the making available on the market of pressure equipment, PED Category II
PED Module H - Full Quality Assurance,
CE-0041-PED-H-WDI 001-16-USA, Bureau Veritas UK Ltd (0041)

Other European Compliance:
Compliance with the following European Directives or standards does not qualify this product for application of the CE Marking:

ATEX – Potentially Explosive Atmospheres Directive: Exempt from the ATEX Directive 94/9/EC and 2014/34/EU as non-electrical equipment bearing no potential ignition sources per EN 13463-1.

Machinery Directive: Compliant as partly completed machinery with Directive 2006/42/EC of the European Parliament and the Council of 17 May 2006 on machinery.

Special Conditions for Safe Use

The surface temperature of this valve approaches the maximum temperature of the applied process media. It is the responsibility of the user to ensure that the external environment contains no hazardous gases capable of ignition in the range of the process media temperatures.

Compliance with the Machinery Directive 2006/42/EC noise measurement and mitigation requirements is the responsibility of the manufacturer of the machinery into which this product is incorporated.

WARNING

External fire protection is not provided in the scope of this product. It is the responsibility of the user to satisfy any applicable requirements for their system.

Fire Safety

Chapter 1.
General Information

General Description

The Flow Divider Valve (FDV) is designed for use with an industrial gas turbine engine. During liquid fuel operation, the FDV receives metered fuel from an upstream system and distributes it to the turbine in eight equal flow streams. The fuel system upstream of the FDV is typically comprised of a high-pressure positive-displacement pump, liquid fuel metering valve, shut-off valve, vent valve, etc.

The following basic functions are provided within the FDV assembly:

- Distributes metered flow between the eight discharge flow paths within the specified flow-tolerance limits over the specified ranges of liquid fuel flows, pressures, and temperatures.
- Creates a pressure drop such that the discharge flows to the downstream injection nozzles do not vary beyond defined limits due to anticipated variations in nozzle elevations or effective restriction areas.
- Serves as a check valve to prohibit reverse flow of combustion products through the liquid fuel lines during gas operation.
- Provides a port to drain the discharge lines to the fuel nozzles in a timely manner either by gravity or residual CDP after shutting off liquid fuel from the metering valve.

Description of Operation

The FDV is located in the liquid fuel system between the fuel metering valve and the fuel nozzles. The FDV receives metered fuel flow from the LQ50 and splits it into eight flow streams. The FDV's primary purpose is to split the fuel evenly between all eight ports in spite of differing nozzle heights and line restrictions. Without such a device, fuel flow would be greater to the nozzles located toward the bottom of the turbine, especially at low flows where the nozzles offer almost no restriction.

Figure 1-1 is an operational schematic of the FDV. Figure 1-1a shows the piston in the closed position where fuel flow is zero, while Figure 1-1b shows the piston in the fully open position at maximum flow.

The FDV contains a spring-loaded piston running in a close-clearance metering sleeve. The schematic in Figure 1-1a shows two of the eight port passages in the metering sleeve.

Fuel enters from a single inlet on the left. In the closed position, the piston is seated against an elastomer seal which serves as a check valve, prohibiting flow in the opposite direction. As fuel pressure rises to approximately 110 kPa (16 psig), the piston begins moving to the right against spring force, opening the leading edges of all eight ports simultaneously. Fuel is passed across the eight ports and channeled to the individual fuel lines leading to the nozzles in the combustor.

Referring again to Figure 1-1, as metered fuel flow increases, the piston continues moving against spring force to the right, opening a greater area in each sleeve port and allowing more fuel to flow to the nozzles.

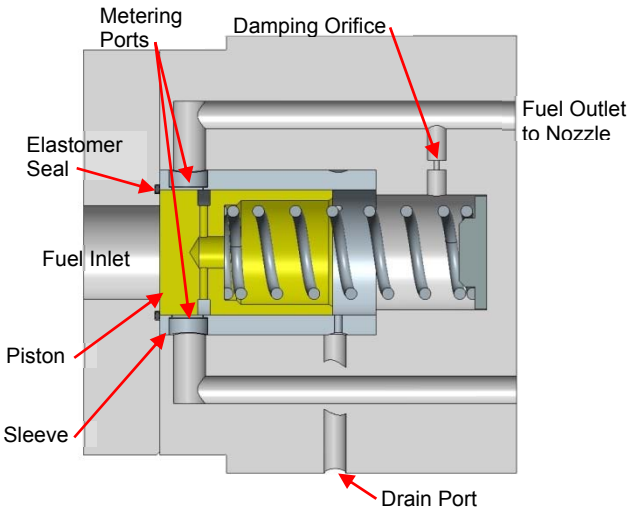

Figure 1-1a. FDV with Piston in Closed Position

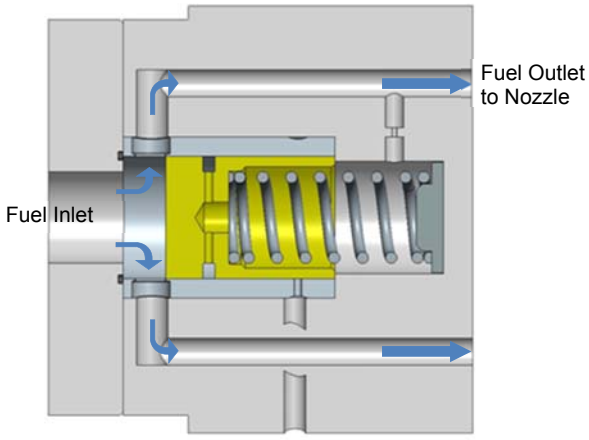

Figure 1-1b. FDV with Piston in Open Position

The discharge passage from the port shown at the top of Figure 1-1a is different from the other seven in that it contains a passage with a damping orifice to the cavity behind the piston. This provides reference pressure so that the total pressure differential across the piston is the same as the pressure drop across the triangular port in the metering sleeve. A damping orifice keeps the piston from setting up an unstable oscillation during fast transients.

At approximately 70% flow, the piston has traveled its full stroke and is seated against the stop (as in Figure 1-1b). The ports are fully open, and flow across each orifice from 70% to 100% is merely a function of pressure drop across the fully open ports.

The FDV has a drain port that drains the discharge lines to the nozzles when fuel flow to the valve is shut off and the valve inlet is vented to ambient pressure. With the piston in the closed position (as shown in Figure 1-1a), fuel is free to drain from the lines, through drillings in the piston, through drillings in the sleeve, and out the drain port. Gravity plus any remaining combustion air pressure will force the residual liquid fuel and water in the lines to drain through the flow divider. The FDV drains from its centerline and therefore any lines below the FDV centerline may not be completely drained. Install the FDV with the drain fitting at the lowest point to assure that potential water freezing does not cause the valve to stick.

During normal operation on liquid fuel (as shown in Figure 1-1b), the drain passages through the piston and sleeve are blocked. Even though the direct drain path is blocked, there can be leakage from the drain. If the external drain valve fails open, there will be substantial leakage out of this drain.

The FDV is designed with the capability of operating at turbine pressure without the liquid system being operational. That is, the flow divider, in its zero-flow position with the piston resting against the elastomer seal, is capable of a 3992 kPa (579 psid) delta pressure (discharge minus inlet pressure, i.e., reverse pressure). When the turbine is running on gas fuel, there is no flow through the flow divider valve and the inlet pressure is ambient.

When a dual-fuel turbine is running on gaseous fuel, the liquid fuel circuit is shut off, and a separate gaseous fuel system delivers fuel to the gas nozzles in the combustor.

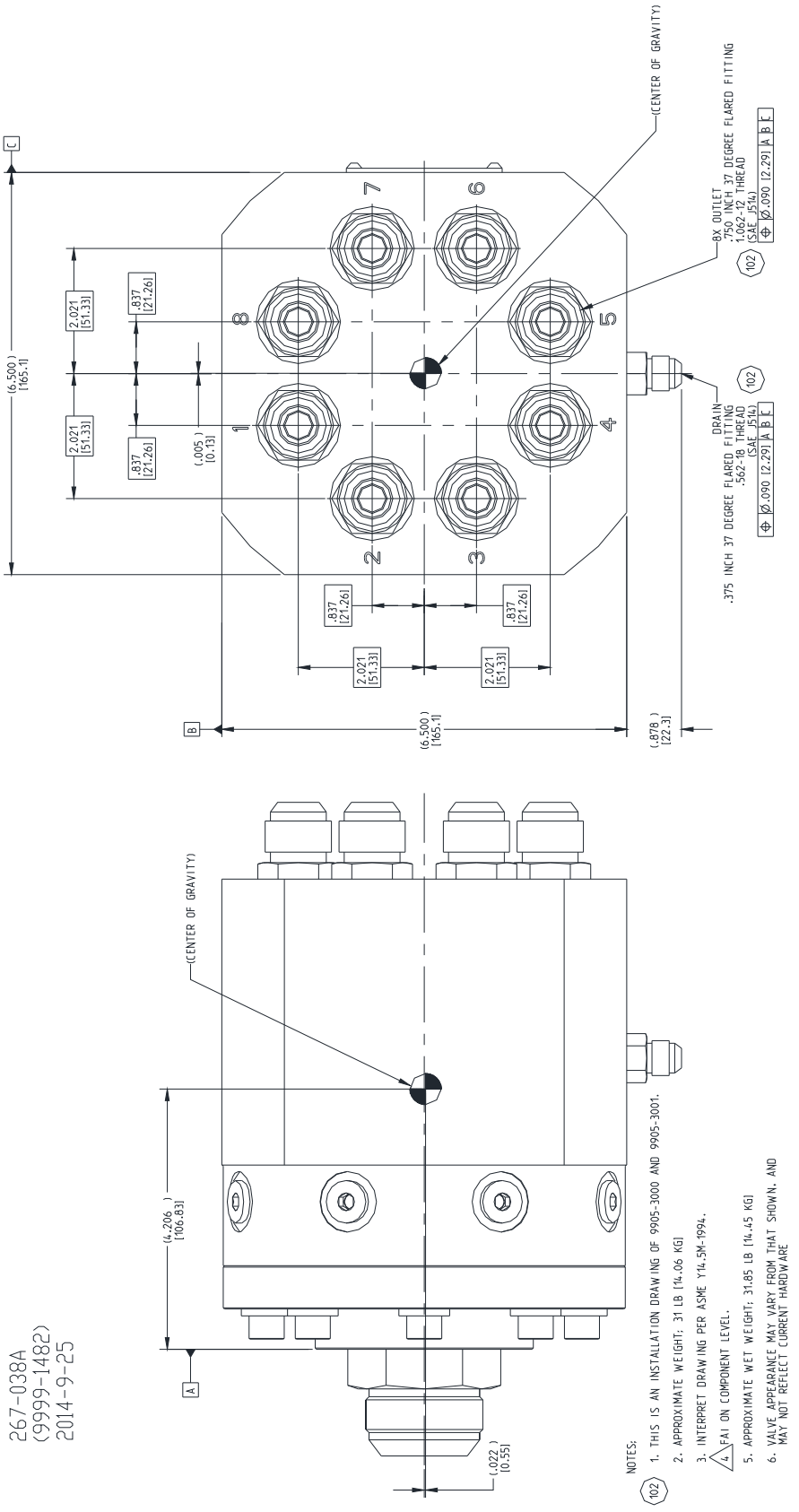

Figure 1-2a. Installation Diagram

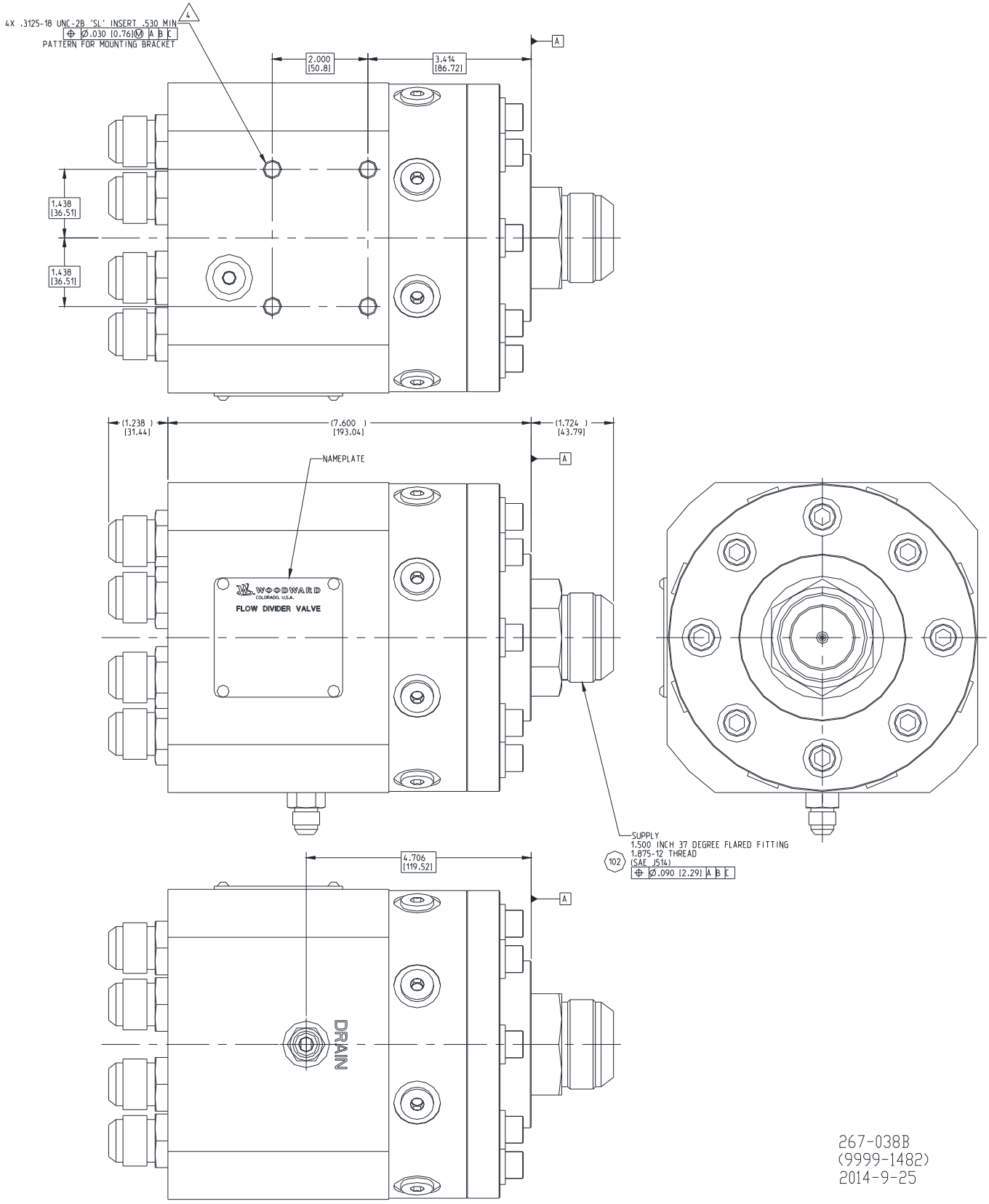

Figure 1-2b. Installation Diagram

Chapter 2.
Specifications

Functional Characteristic	Design Range
Fluid Types	Most types of diesels, kerosenes, gasolines, heavy and light distillates, gas turbine fuels and fuel oils that conform to international standards for utility, marine, and aviation gas turbine service. Water or De-mineralized water (PH must be between 6 and 9)
Fluid Viscosity	.75 – 12.0 cSt
Fluid Cleanliness	Fluid must be filtered to limit particulate size to 20 µm or smaller. Sediment must be limited to 0.1% by volume. Total particulate concentration must be limited to 2.64 mg per liter.
Design Liquid Fuel Pressure	0 to 5.9 MPa (0 to 857 psig)
Maximum Liquid Fuel Pressure	8.3 MPa max (1200 psig max)
Liquid Fuel Temperature	–18 to +71 °C (0 to 160 °F)
Design Gaseous Fuel Pressure	0 to 4.3 MPa (0 to 625 psig)
Maximum Gaseous Fuel Pressure	5.9 MPa max (850 psig max)
Gaseous Fuel Temperature	–18 to +116 °C max (0 to 240 °F max)
Ambient Temperature	Item 9905-3000: –10 to +60 °C (–23 to +140 °F) Item 9905-3001: –40 to +60 °C (–40 to +140 °F)
Minimum Fuel Flow (Liquid Fuel .81 Sg)	238 kg/h (525 pph)
Starting Fuel Flow (Liquid Fuel .81 Sg)	295 kg/h (650 pph)
Pressure Drop @ Starting Fuel Flow (Liquid Fuel .81 Sg)	117 to 152 kPa (16.9 to 22 psid)
Design Max Fuel Flow (Liquid Fuel . 81 Sg)	15907 kg/h (35070 pph)
Pressure Drop @ Design Max Fuel Flow (Liquid Fuel .81 Sg)	373 kPa max (54 psid max)
Maximum Fuel Flow (Liquid Fuel .81 Sg)	17 499 kg/h (38 577 pph)
Pressure Drop @ Maximum Fuel Flow	448 kPa (65 psid)
Proof Pressure	12.4 MPa (1800 psig)
Burst Pressure	16.5 MPa (2400 psig)
Seal Rating (reverse direction)	Class IV per FCI 70-2
Dry Weight (with fittings)	14 kg (31 lb)
Wet Weight	14.5 kg (31.9 lb)
Supply Connection	1.5 inch 37 degree flare per SAE J 514
Discharge Connections	0.75 inch 37 degree flare per SAE J 514
Drain Connection	0.375 inch 37 degree flare per SAE J 514

Chapter 3.
Installation

Unpacking

Use care when unpacking the FDV. Abuse can damage seals, installation surfaces, and fluid fittings. Notify the shipper and Woodward if damage is found.

NOTICE

The FDV may be lifted and moved by hand. Refer to the Specifications section for the dry and wet weight.

Power Requirements: None

Installation

The FDV should be mounted off-turbine and be located beneath the turbine but as close to the turbine as possible to minimize the volume of fuel between the valve and the fuel injection nozzles. A 4-bolt mounting pad is provided on the FDV as detailed in the installation diagram in Figure 1-2. See engine arrangement drawing for mounting and connection details.

⚠WARNING

Personal Injury

HEARING PROTECTION—Due to typical noise levels in turbine (or engine) environments, hearing protection should be worn when working on or around the FDV.

⚠WARNING

Personal Injury

SURFACE TEMPERATURES—The surface of this product can become hot enough or cold enough to be a hazard. Use protective gear for product handling in these circumstances. Temperature ratings are included in the specification section of this manual.

⚠WARNING

Explosion Safety

MAX SURFACE TEMPERATURE AS A RESULT OF PROCESS MEDIA
The surface temperature of the FDV approaches the maximum temperature of the applied process media. It is the responsibility of the user to ensure that the external environment contains no hazardous gases capable of ignition in the range of the process media temperatures.

Chapter 4.
Maintenance and Overhaul

Per Woodward Product Maintenance Recommendations (dated 10 May 2012), the flow divider valves should be returned to a Woodward distributor or authorized service facility for overhaul at a recommended period of 3 years or 24 000 hours of operation, or at a maximum of 6 years or 50 000 hours of operation. No maintenance or repair of this device by the end user is recommended or authorized.

Chapter 5.
Product Support and Service Options

Product Support Options

If you are experiencing problems with the installation, or unsatisfactory performance of a Woodward product, the following options are available:

- Consult the troubleshooting guide in the manual.
- Contact the manufacturer or packager of your system.
- Contact the Woodward Full Service Distributor serving your area.
- Contact Woodward technical assistance (see "How to Contact Woodward" later in this chapter) and discuss your problem. In many cases, your problem can be resolved over the phone. If not, you can select which course of action to pursue based on the available services listed in this chapter.

OEM or Packager Support: Many Woodward controls and control devices are installed into the equipment system and programmed by an Original Equipment Manufacturer (OEM) or Equipment Packager at their factory. In some cases, the programming is password-protected by the OEM or packager, and they are the best source for product service and support. Warranty service for Woodward products shipped with an equipment system should also be handled through the OEM or Packager. Please review your equipment system documentation for details.

Woodward Business Partner Support: Woodward works with and supports a global network of independent business partners whose mission is to serve the users of Woodward controls, as described here:

- A **Full Service Distributor** has the primary responsibility for sales, service, system integration solutions, technical desk support, and aftermarket marketing of standard Woodward products within a specific geographic area and market segment.
- An **Authorized Independent Service Facility (AISF)** provides authorized service that includes repairs, repair parts, and warranty service on Woodward's behalf. Service (not new unit sales) is an AISF's primary mission.
- A **Recognized Turbine Retrofitter (RTR)** is an independent company that does both steam and gas turbine control retrofits and upgrades globally, and can provide the full line of Woodward systems and components for the retrofits and overhauls, long term service contracts, emergency repairs, etc.

A current list of Woodward Business Partners is available at **www.woodward.com/directory**.

Product Service Options

The following factory options for servicing Woodward products are available through your local Full-Service Distributor or the OEM or Packager of the equipment system, based on the standard Woodward Product and Service Warranty (5-01-1205) that is in effect at the time the product is originally shipped from Woodward or a service is performed:

- Replacement/Exchange (24-hour service)
- Flat Rate Repair
- Flat Rate Remanufacture

Replacement/Exchange: Replacement/Exchange is a premium program designed for the user who is in need of immediate service. It allows you to request and receive a like-new replacement unit in minimum time (usually within 24 hours of the request), providing a suitable unit is available at the time of the request, thereby minimizing costly downtime. This is a flat-rate program and includes the full standard Woodward product warranty (Woodward Product and Service Warranty 5-01-1205).

This option allows you to call your Full-Service Distributor in the event of an unexpected outage, or in advance of a scheduled outage, to request a replacement control unit. If the unit is available at the time of the call, it can usually be shipped out within 24 hours. You replace your field control unit with the like-new replacement and return the field unit to the Full-Service Distributor.

Charges for the Replacement/Exchange service are based on a flat rate plus shipping expenses. You are invoiced the flat rate replacement/exchange charge plus a core charge at the time the replacement unit is shipped. If the core (field unit) is returned within 60 days, a credit for the core charge will be issued.

Flat Rate Repair: Flat Rate Repair is available for the majority of standard products in the field. This program offers you repair service for your products with the advantage of knowing in advance what the cost will be. All repair work carries the standard Woodward service warranty (Woodward Product and Service Warranty 5-01-1205) on replaced parts and labor.

Flat Rate Remanufacture: Flat Rate Remanufacture is very similar to the Flat Rate Repair option with the exception that the unit will be returned to you in "like-new" condition and carry with it the full standard Woodward product warranty (Woodward Product and Service Warranty 5-01-1205). This option is applicable to mechanical products only.

Returning Equipment for Repair

If a control (or any part of an electronic control) is to be returned for repair, please contact your Full-Service Distributor in advance to obtain Return Authorization and shipping instructions.

When shipping the item(s), attach a tag with the following information:
- Return authorization number;
- Name and location where the control is installed;
- Name and phone number of contact person;
- Complete Woodward part number(s) and serial number(s);
- Description of the problem;
- Instructions describing the desired type of repair.

Packing a Control

Use the following materials when returning a complete control:
- Protective caps on any connectors;
- Antistatic protective bags on all electronic modules;
- Packing materials that will not damage the surface of the unit;
- At least 100 mm (4 inches) of tightly packed, industry-approved packing material;
- A packing carton with double walls;
- A strong tape around the outside of the carton for increased strength.

NOTICE

To prevent damage to electronic components caused by improper handling, read and observe the precautions in Woodward manual 82715, *Guide for Handling and Protection of Electronic Controls, Printed Circuit Boards, and Modules*.

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Replacement Parts

When ordering replacement parts for controls, include the following information:

- The part number(s) (XXXX-XXXX) that is on the enclosure nameplate;
- The unit serial number, which is also on the nameplate.

Engineering Services

Woodward offers various Engineering Services for our products. For these services, you can contact us by telephone, by email, or through the Woodward website.

- Technical Support
- Product Training
- Field Service

Technical Support is available from your equipment system supplier, your local Full-Service Distributor, or from many of Woodward's worldwide locations, depending upon the product and application. This service can assist you with technical questions or problem solving during the normal business hours of the Woodward location you contact. Emergency assistance is also available during non-business hours by phoning Woodward and stating the urgency of your problem.

Product Training is available as standard classes at many of our worldwide locations. We also offer customized classes, which can be tailored to your needs and can be held at one of our locations or at your site. This training, conducted by experienced personnel, will assure that you will be able to maintain system reliability and availability.

Field Service engineering on-site support is available, depending on the product and location, from many of our worldwide locations or from one of our Full-Service Distributors. The field engineers are experienced both on Woodward products as well as on much of the non-Woodward equipment with which our products interface.

For information on these services, please contact us via telephone, email us, or use our website: **www.woodward.com**.

Contacting Woodward's Support Organization

For the name of your nearest Woodward Full-Service Distributor or service facility, please consult our worldwide directory at **www.woodward.com/directory**, which also contains the most current product support and contact information.

You can also contact the Woodward Customer Service Department at one of the following Woodward facilities to obtain the address and phone number of the nearest facility at which you can obtain information and service.

Products Used in Electrical Power Systems

Facility	Phone Number
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
Germany:	
Kempen	+49 (0) 21 52 14 51
Stuttgart	+49 (711) 78954-510
India	+91 (124) 4399500
Japan	+81 (43) 213-2191
Korea	+82 (51) 636-7080
Poland	+48 12 295 13 00
United States	+1 (970) 482-5811

Products Used in Engine Systems

Facility	Phone Number
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
Germany	+49 (711) 78954-510
India	+91 (124) 4399500
Japan	+81 (43) 213-2191
Korea	+82 (51) 636-7080
The Netherlands	+31 (23) 5661111
United States	+1 (970) 482-5811

Products Used in Industrial Turbomachinery Systems

Facility	Phone Number
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
India	+91 (124) 4399500
Japan	+81 (43) 213-2191
Korea	+82 (51) 636-7080
The Netherlands	+31 (23) 5661111
Poland	+48 12 295 13 00
United States	+1 (970) 482-5811

Technical Assistance

If you need to contact technical assistance, you will need to provide the following information. Please write it down here before contacting the Engine OEM, the Packager, a Woodward Business Partner, or the Woodward factory:

General

Your Name _____

Site Location _____

Phone Number _____

Fax Number

Prime Mover Information

Manufacturer _____

Turbine Model Number _____

Type of Fuel (gas, steam, etc.) _____

Power Output Rating _____

Application (power generation, marine, etc.)

Control/Governor Information

Control/Governor #1

Woodward Part Number & Rev. Letter _____

Control Description or Governor Type _____

Serial Number

Control/Governor #2

Woodward Part Number & Rev. Letter _____

Control Description or Governor Type _____

Serial Number

Control/Governor #3

Woodward Part Number & Rev. Letter _____

Control Description or Governor Type _____

Serial Number

Symptoms

Description _____

_____

If you have an electronic or programmable control, please have the adjustment setting positions or the menu settings written down and with you at the time of the call.

Revision History

Changes in Revision B—

- Updated European Compliance Section
- Replaced DOC and DOI

Changes in Revision A—

- Updated Chapter 2 Specifications table to call out "Liquid Fuel .81 Sg" in three places

Declarations

EU DECLARATION OF CONFORMITY

EU DoC No.:	00456-04-EU-02-02
Manufacturer's Name:	WOODWARD INC.
Manufacturer's Contact Address:	1041 Woodward Way Fort Collins, CO 80524 USA
Model Name(s)/Number(s):	Flow Divider Valve (FDV) 9905-3001
The object of the declaration described above is in conformity with the following relevant Union harmonization legislation:	Directive 97/23/EC (until July 18th, 2016) and Directive 2014/68/EU (from July 19th, 2016) on the harmonisation of the laws of the Member States relating to the making available on the market of pressure equipment PED Category II
Applicable Standards:	ASME Boiler and Pressure Vessel Code VIII, Div. 2, Part 5(2013)
Conformity Assessment:	PED Module H – Full Quality Assurance, CE-0041-PED-H-WDI 001-16-USA, Bureau Veritas UK Ltd (0041) Parklands, 825a Wilmslow Road, Didsbury, M20 2RE Manchester

This declaration of conformity is issued under the sole responsibility of the manufacturer
We, the undersigned, hereby declare that the equipment specified above conforms to the above Directive(s).

MANUFACTURER

Signature

Christopher Perkins
Full Name

Engineering Manager
Position

Woodward, Fort Collins, CO, USA
Place

24-MAR-2016
Date

5-09-1183 Rev 24

DECLARATION OF INCORPORATION
Of Partly Completed Machinery
2006/42/EC

File name:	00456-04-EU-02-01
Manufacturer's Name:	WOODWARD INC.
Manufacturer's Address:	1041 Woodward Way Fort Collins, CO, USA, 80524
Model Names:	Flow Divider Valve – FDV, 9905-3001
This product complies, where applicable, with the following Essential Requirements of Annex I:	1.1, 1.3,1.5, 1.6, 1.7
Applicable Standards:	EN 12100:2010

The relevant technical documentation is compiled in accordance with part B of Annex VII. Woodward shall transmit relevant information if required by a reasoned request by the national authorities. The method of transmittal shall be agreed upon by the applicable parties.

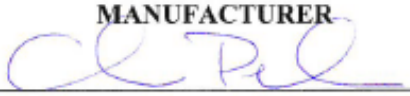
The person authorized to compile the technical documentation:

Name: Dominik Kania, Managing Director
Address: Woodward Poland Sp. z o.o., ul. Skarbowa 32, 32-005 Niepolomice, Poland

This product must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of this Directive, where appropriate.

The undersigned hereby declares, on behalf of Woodward Governor Company of Loveland and Fort Collins, Colorado that the above referenced product is in conformity with Directive 2006/42/EC as partly completed machinery:

MANUFACTURER



Signature

Christopher Perkins
Full Name

Engineering Manager
Position

Woodward Inc., Fort Collins, CO, USA
Place

24-MAR-2016
Date

Document: 5-09-1182 (rev. 16) **PAGE** 1 of 1

We appreciate your comments about the content of our publications.

Send comments to: icinfo@woodward.com

Please reference publication 26741B.

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1000 East Drake Road, Fort Collins CO 80525, USA
Phone +1 (970) 482-5811

Email and Website—www.woodward.com

Woodward has company-owned plants, subsidiaries, and branches, as well as authorized distributors and other authorized service and sales facilities throughout the world.

Complete address / phone / fax / email information for all locations is available on our website.