

**Manual 26809 (Revision E, 09/2022)**  
**TecJet™ 50 Plus / TecJet™ 50 Plus Precision Flow**

This document contains the following information:

- Where to obtain the complete TecJet 50 Plus technical manual
- Important Definitions
- Regulatory Compliance and Declarations
- Contacting Woodward or a Woodward Channel Partner



See Manual 26219 for complete installation, operation, maintenance, and certification information. Publications can be found on our website at [www.woodward.com/publications](http://www.woodward.com/publications).

### 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**

##### **Lockout/Tagout LOTO**

Ensure that personnel are fully trained on LOTO procedures prior to attempting to replace or service equipment on a “live” running engine. All safety protective systems (overspeed, over temperature, overpressure, etc.) must be in proper operational condition prior to the start or operation of a running engine. Personnel should be equipped with appropriate personal protective equipment to minimize the potential for injury due to release of hot hydraulic fluids, exposure to hot surfaces and/or moving parts, or any moving parts that may be activated and are located in the area of control of the unit.

#### **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.



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.



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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.



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.

## NOTICE

To prevent damage to a control system that uses an alternator or battery-charging device, make sure the charging device is turned off before disconnecting the battery from the system.

## 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*.

## Product Replacement

**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 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.

**Flat Rate Repair:** Flat Rate Repair is available for many of the standard mechanical products and some of the electronic 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.

**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. 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 number;
- name and phone number of contact person;
- description of the problem;
- name and location where the control is installed;
- complete Woodward part number(s) and serial number(s);
- instructions describing the desired type of repair.

## Contacting Woodward's Support Organization

For the name of your nearest Woodward Full-Service Distributor or service facility, please consult our worldwide directory published at [www.woodward.com/directory](http://www.woodward.com/directory).

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

<u>Facility</u>	<u>Phone Number</u>
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 (129) 4097100
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

<u>Facility</u>	<u>Phone Number</u>
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
Germany	+49 (711) 78954-510
India	+91 (129) 4097100
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

<u>Facility</u>	<u>Phone Number</u>
Brazil	+55 (19) 3708 4800
China	+86 (512) 6762 6727
India	+91 (129) 4097100
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

# Regulatory Compliance & Declarations

## European Compliance for CE Marking:

These listings apply to stationary industrial markets only and are limited only to those units bearing the CE Marking.

**EMC Directive:** Declared to Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to electromagnetic compatibility (EMC).

## Other European Compliance:

Compliance with the following European Directives or Standards does not qualify this product for application of the CE marking:

**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.

**Pressure Equipment Directive:** Compliant as "SEP" per Article 4.3 to Pressure Equipment Directive 2014/68/EU on the harmonisation of the laws of the Member States relating to the making available on the market of pressure equipment

**RoHS Directive:** Restriction of Hazardous Substances 2011/65/EU:  
This product is intended to be sold and used only as equipment which is specifically designed, and is to be installed, as part of another type of equipment that is excluded or does not fall within the scope of this Directive, which can fulfil its function only if it is part of that equipment, and which can be replaced only by the same specifically designed equipment and therefore fulfills the requirements stated in Art.2.4(c) and as such is excluded from the scope of the Directive.

Restriction of Hazardous Substances 2011/65/EU:  
This product is intended to be sold and used only as repair, updating, or upgrading of EEE (as defined in Article 3(27) of the Directive) that either was excluded from the scope of the Directive at the time of placing on the market (as defined in Article 4.4(e)) or which benefited from an exemption, and which was placed on the market before that exemption expired (per Article 4.4(f)).

## United Kingdom Compliance for UKCA Marking:

These listings are limited only to those units bearing the UKCA Marking.

**EMC:** S.I. 2016 No. 1091: Electromagnetic Compatibility Regulations 2016 and all applicable amendments.

## Other UKCA Compliance:

Compliance with the following UKCA regulations or standards does not qualify this product for application of the UKCA Marking:

**Machinery:** S.I. 2008 No. 1597: Supply of Machinery (Safety) Regulations 2008

**Pressure Equipment (Safety) Regulations 2016:** S.I. 2016 No. 1105: Compliant to sound engineering practice per Regulation 8

**Hazardous Substances and Packaging:** S.I. 2020 No. 1647: The Hazardous Substances and Packaging (Legislative Functions and Amendments) (EU Exit) Regulations 2020

This product is intended to be sold and used only as equipment which is specifically designed, and is to be installed, as part of another type of equipment that is excluded or does not fall within the scope of this Regulation, which can fulfil its function only if it is part of that equipment, and which can be replaced only by the same specifically designed equipment and therefore fulfills the requirements stated in Part 2 of Schedule 1 clause 16 and as such is excluded from the scope of the Regulation.

This product is intended to be sold and used only as repair, updating or upgrading of EEE (as defined in part 3 of schedule 1) that either was excluded from the scope of the Directive at the time of placing on the market (as defined in Schedule 1, part 2) or which benefited from an exemption, and which was placed on the market before that exemption expired (per schedule 1 part 3).

## North American Compliance:

**CSA:** CSA Certified for Class I, Division 2, Groups A, B, C, D, T3 at 85 °C ambient for use in Canada and the United States  
Certificate 1167451  
Type 3R Enclosure Rainproof

This product is certified as a component for use in other equipment. The final combination is subject to acceptance by CSA International or local inspection.

The TecJet 110 is suitable for use in Class I, Division 2, Groups A, B, C, and D per CSA for Canada and US, or non-hazardous location only.

### Special Conditions for Safe Use

The TecJet 110 wiring must be in accordance with North American Class I, Division 2, or European or other international Zone 2, Category 3 wiring methods as applicable, and in accordance with the authority having jurisdiction.

Field wiring must be suitable for at least 85° C.

Connect ground terminal of TecJet 110 to earth ground.

The Ingress Protection rating of the control depends on the use of proper mating connectors. Refer to the Installation section of Manual 26219 for information on the proper mating connectors for use with this control.

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**

**EXPLOSION HAZARD—Do not remove covers or connect/disconnect electrical connectors unless power has been switched off or the area is known to be non-hazardous.**

**Substitution of components may impair suitability for Class I, Division 2 or Zone 2.**

**Do not clean equipment unless the area is known to be non-hazardous.**



### **AVERTISSEMENT**

**RISQUE D'EXPLOSION—Ne pas enlever les couvercles, ni raccorder / débrancher les prises électriques, sans vous en assurez auparavant que le système a bien été mis hors tension; ou que vous vous situez bien dans une zone non explosive.**

**La substitution de composants peut rendre ce matériel inacceptable pour les emplacements de Classe I, Division 2 ou Zone 2.**

**Ne pas nettoyer l'équipement à moins de se trouver dans un emplacement non dangereux.**



### **WARNING**

**Due to the hazardous location listing associated with this product, proper wire type and wiring practices are critical to operation.**

### **NOTICE**

**Do not connect any cable grounds to “instrument ground”, “control ground”, or any non-earth ground system. Make all required electrical connections based on the wiring diagram in Manual 26219.**

## EU DECLARATION OF CONFORMITY

**EU DoC No.:** 00244-04-EU-02-02.DOCX  
**Manufacturer's Name:** WOODWARD, INC.  
**Manufacturer's Contact Address:** 1041 Woodward Way  
Fort Collins, CO 80524 USA  
**Model Name(s)/Number(s):** TecJet 50 Plus, TecJet 85, TecJet 110, High Pressure TecJet  
**The object of the declaration described above is in conformity with the following relevant Union harmonization legislation:** Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of the laws of the Member States relating to electromagnetic compatibility (EMC)

**Applicable Standards:**  
**EMC** EN 61000-6-4:2007/A1:2011 : Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments  
EN 61000-6-2:2005/AC:2005; Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

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**

Annette Lynch  
\_\_\_\_\_  
**Full Name**

Engineering Manager  
\_\_\_\_\_  
**Position**

Woodward, Fort Collins, CO, USA  
\_\_\_\_\_  
**Place**

16-JUN-2022  
\_\_\_\_\_  
**Date**

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

**File name:** 00244-04-EU-02-03  
**Manufacturer's Name:** WOODWARD INC.  
**Manufacturer's Address:** 1041 Woodward Way  
Fort Collins, CO 80524 USA

**Model Names:** TecJet 50 Plus, TecJet 85, TecJet 110, High Pressure TecJet

**This product complies, where applicable, with the following Essential Requirements of Annex I:** 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7

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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.

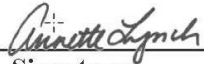
The person authorized to compile the technical documentation:

**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 Inc. 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**

\_\_\_\_\_  
Annette Lynch  
**Full Name**

\_\_\_\_\_  
Engineering Manager  
**Position**

\_\_\_\_\_  
Woodward Inc., Fort Collins, CO, USA  
**Place**

\_\_\_\_\_  
16-JUN-2022  
**Date**

**Document:** 5-09-1182 (rev. 21)

## UKCA DECLARATION OF CONFORMITY

**UKCA DoC No.:** 00244-EU-UKCA-02-01

**Manufacturer's Name:** WOODWARD INC.

**Manufacturer's Contact Address:** 1041 Woodward Way  
Fort Collins, CO 80524 USA

**Model Name(s)/Number(s):** TecJet 50 Plus, TecJet 85, TecJet 110, High Pressure TecJet

**The object of this Declaration is in full conformity with the following UK Statutory Instruments (and their amendments):**

S.I. 2016 No. 1091	Electromagnetic Compatibility Regulations 2016
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**The Object of this Declaration is in conformity with the applicable requirements of the following designated standards and technical specifications.**

EN 61000-6-4:2007, EN 61000-6-4:2007/A1:2011	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
EN 61000-6-2:2005, EN 61000-6-2:2005/AC:2005	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

**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 Regulation(s).**

**MANUFACTURER**

  
\_\_\_\_\_  
**Signature**

**Annette Lynch**  
\_\_\_\_\_  
**Full Name**

**Engineering Manager**  
\_\_\_\_\_  
**Position**

**Woodward, Fort Collins, CO, USA**  
\_\_\_\_\_  
**Place**

**16-JUN-2022**  
\_\_\_\_\_  
**Date**

**DECLARATION OF INCORPORATION  
Of Partly Completed Machinery  
S.I. 2008 No. 1597**

**File name:** 00244-EU-UKCA-02-02  
**Manufacturer's Name:** WOODWARD INC.  
**Manufacturer's Address:** 1041 Woodward Way  
Fort Collins, CO 80524 USA

**Model Names:** TecJet 50 Plus, TecJet 85, TecJet 110, High Pressure TecJet

**This product complies, where  
applicable, with the following  
Essential Requirements of Annex I:** 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7

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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:** Andy Marshall, General Manager at Woodward Prestwick  
**Address:** 5 Shawfarm Road, Prestwick, Ayrshire, Scotland, United Kingdom KA9 2TR

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 Inc. of Loveland and Fort Collins, Colorado that the above referenced product is in conformity with Regulation S.I. 2008 No. 1597 as partly completed machinery:

**MANUFACTURER**

Signature	
Full Name	Annette Lynch
Position	Engineering Manager
Place	Woodward Inc., Fort Collins, CO, USA
Date	16-JUN-2022



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**WOODWARD**

PO Box 1519, Fort Collins CO 80522-1519, USA  
1041 Woodward Way, Fort Collins CO 80524, USA  
Phone +1 (970) 482-5811  
Email and Website—[www.woodward.com](http://www.woodward.com)