



Pilot valve enclosures suitable for use in hazardous certified environments. These enclosures are designed and tested to contain both flame and the ignition of dust and gas clouds and any accumulated layers of dust.

### 3-6VFD Combination Flame and Explosion Proof Pilot Valve Enclosures

Diecast aluminium enclosure with explosion proof (Ex-e) and flame proof (Ex-d) protection suitable for use in hazardous areas, available optionally with anti-condensation heater.

In Canada and Europe Goyen offers enclosures that meet the requirements of both flame proof and explosion proof type designs simultaneously. This has the advantage of simplifying assembly designs when using the Goyen enclosures.

#### Suitable for

NEC500 Division 1, NEC505 Zone 1 and ATEX Zone 20 and 21 (II Cat 2G & 2D equipment) hazardous environments, for piloting Goyen diaphragm valves.

#### Construction

<b>Body:</b>	Al 2011-T3
<b>Pilot body:</b>	Al 2011-T3
<b>Ferrule:</b>	AISI 302 SS
<b>Armature:</b>	430FR SS
<b>Seals:</b>	Nitrile
<b>Screws:</b>	AISI 302 SS
<b>Clips:</b>	Plated mild steel

#### Maintenance

Annual maintenance of serviceable parts is recommended. Serviceable items are the pilot armature, armature spring, pilot valve body o-ring. The same model Goyen coil may also replace damaged coils. All other items are non-serviceable. Goyen recommend that appropriately qualified personnel conduct all maintenance activities. Certification of maintenance staff and facilities may be required under some certification schemes. Inappropriate service invalidates the product certifications.



#### Operation

<b>Recommended on time:</b>	50 - 150ms
<b>On time range:</b>	50 - 500ms
<b>Recommended time between pulses:</b>	1 minute or more, if maximum on time is used.

#### Pilot Performance

<b>Flow:</b>	0.27 Kv/0.32 Cv
<b>Maximum Working Pressure:</b>	860 kPa/125 psi
<b>Minimum Working Pressure:</b>	0 kPa/0 psi
<b>Minimum Temperature:</b>	-40°C/-40°F
<b>Maximum Temperature:</b>	82°C/-180°F
<b>Fluid Media:</b>	Air or inert gas

## Restrictions

This product's hazardous areas certifications are valid only for product that has not been modified since leaving the factory. Modifications made to the enclosure such as the fitment of additional gaskets, the addition or removal of pilot valves and coils, changes in markings, or physical modifications made to the enclosure itself will invalidate the product certifications. Only activities described in 'Installation' and 'Maintenance' may be conducted without affecting the certification of the product.

## Installation

**WARNING:** Ensure that power is isolated from the system prior to installing or opening this product. Where a heater kit is installed, ensure that the heater has been de-energised for a minimum of 5 minutes prior to opening the enclosure. Ensure that the enclosure is properly assembled with all flange screws fully tightened (minimum 10Nm (7.4 ft.lbs)) prior to applying power in a hazardous area.

## Mounting

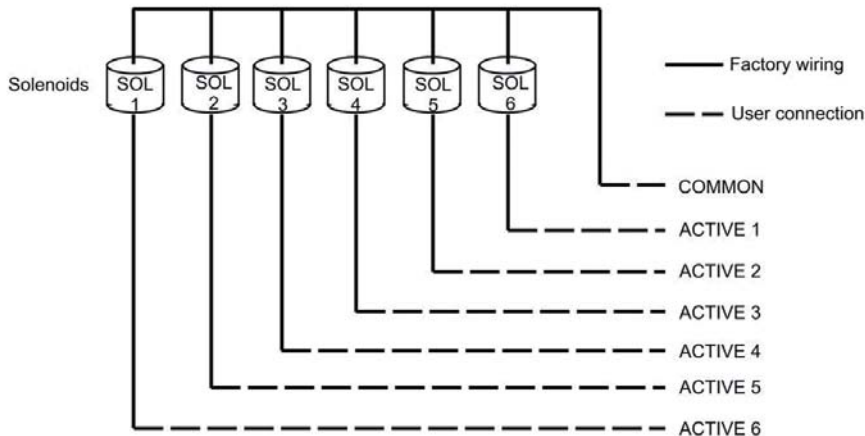
Enclosures should be mounted in a horizontal position, where the pilot valves and solenoid assemblies are in the preferred vertical orientation.

## Threads

Pilot valve inlet and exhaust outlets are offered in both 1/8" BSPP (Rp) and NPT. The enclosure base has one conduit entry with either M25 or 3/4" NPT thread.

## Electrical connections

Refer to diagram below. The included Goyen QT2 solenoids are provided with screw/spade terminals. These solenoids are neutrally linked at the factory for customer convenience.



## Pneumatic connections

These pilot valves are connected to the dust collector reverse pulse jet valves using metric 4mm tubing (ID 0.157") or imperial 1/4" tubing (ID 0.162") and maximum length of 1.5m (4.9 ft).

## Solenoid Performance

Voltage	Inrush Current mA	Hold Current mA	Power
220/240 50/60 Hz	148/143	105/94	23.1 VA
100/120 50/60 Hz	234/255	180/152	19.8 VA
24 VDC	873	873	20 W

## Product Certifications and Markings

### CSA

*Without heater kit fitted\**

LR26709

Class I

Group D

Nema 7

Class II

Groups E, F and G

Nema 9

Temp Code T4

*\* Heater kit is not certified for use with this enclosure*

### ATEX

*Without heater kit fitted*

Ex II 2GD

CE 0518

EEx d IIB T6/T3

IP6X T85°C/T192°C

(T192°C WITH HEATER FITTED)

SIRA 02ATEX1408

DATE XX/XX/XX

## Product warning labels

### CSA

CAUTION: open circuit before removing cover

ATTENTION: ouvrir le circuit avant d'enlever le couvercle

WARNING: more than one live circuit. see diagram.

AVERTISSEMENT: cet équipement renferme plusieurs circuits sous tension. voir le schema

### ATEX

Warning do not open whilst energised, do not open when explosive atmosphere is present. Use cables rated at 135°C when anti-condensation heater is installed.

## Anti-Condensation Heater Elements

According to model specification number, this enclosure type may be factory fitted with a heater element to assist in the prevention of condensation within the enclosure.

### Heater ratings

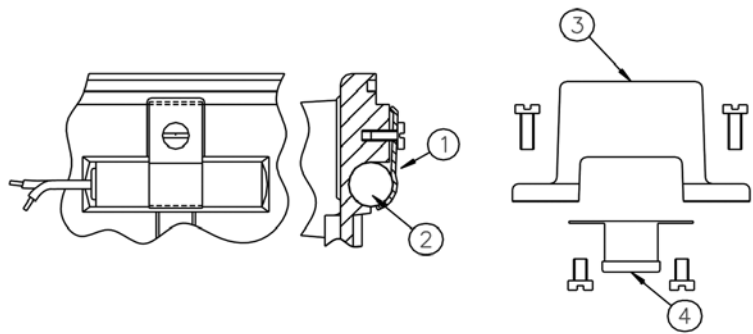
Voltage	Watts
24VDC	48
110/120VAC	100
220/240VAC	100

Note that heater voltage matches solenoid voltages.

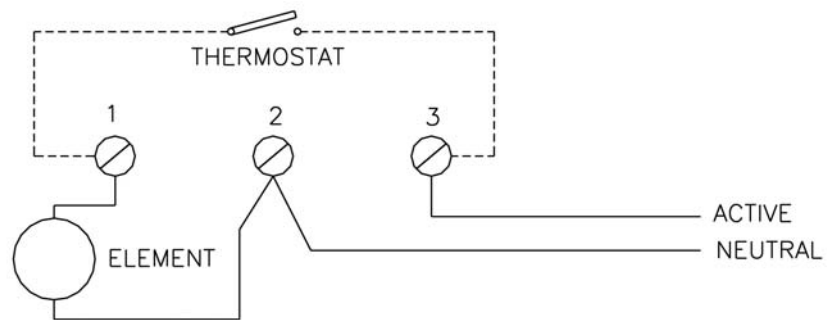
### Spare Parts

- K0380:** Single armature kit. includes spring, armature and o-ring
- G604490:** Flange gasket

### Heater terminal block connections



1. Heater retaining clip
2. Heater element
3. Wiring terminal block
4. Thermostat element



### Order Codes

Each individual enclosure configuration is controlled under a unique specification number in accordance with the product's Certification. The list below only represents a portion of the legally configurable Goyen 3-6V ranges. Please contact your Goyen representative if you require a configuration not represented here.

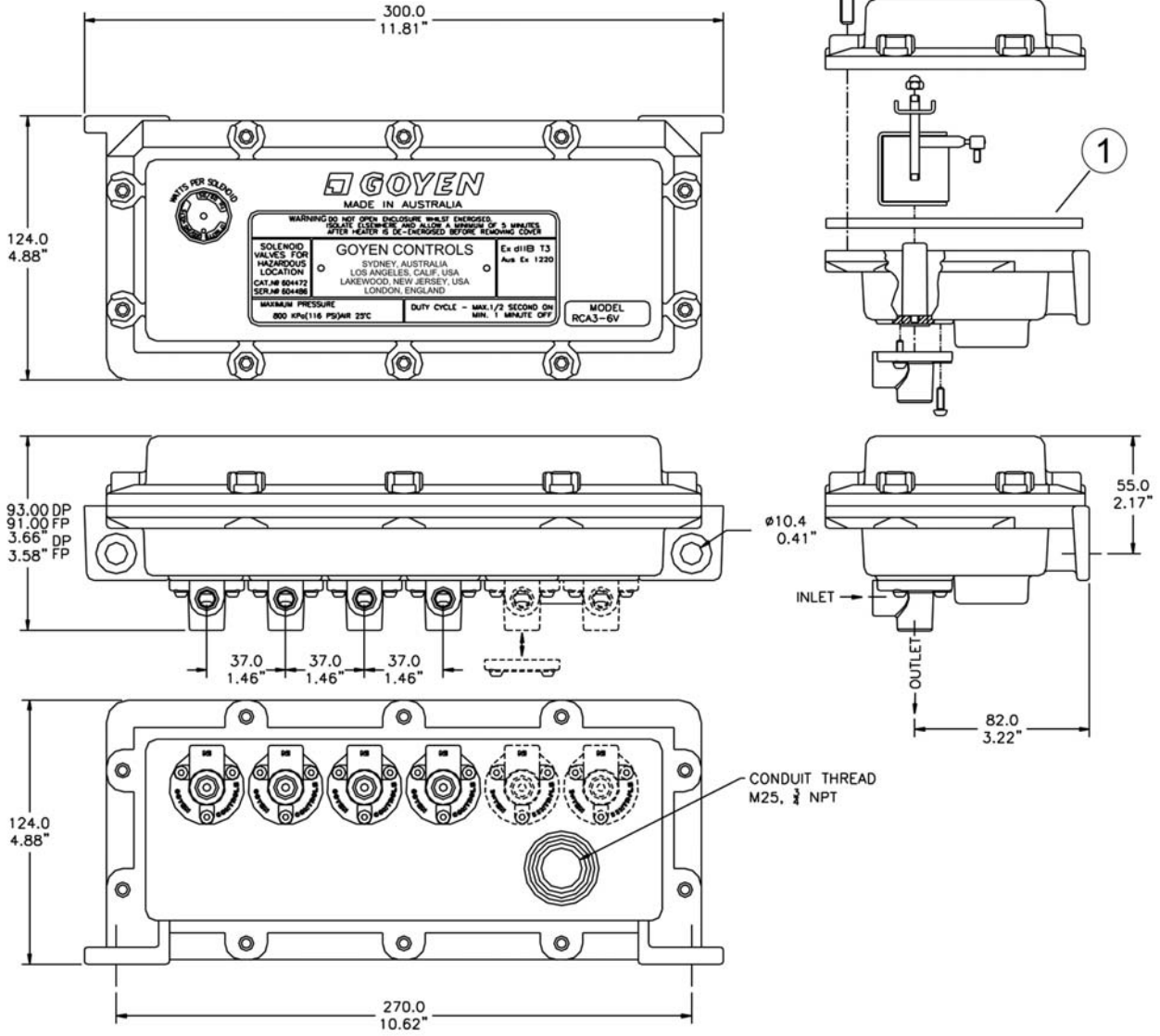
Spec. No* UL Cert.	Pilots	Voltage	Pilot Fitted Heater	Conduit Thread (NPT)	Thread (NPT)	Spec. No* ATEX Cert.	Pilots	Voltage	Fitted Heater	Pilot Thread	Conduit Thread
4T4/2766*	4	100/120VAC	No	1/8"	3/4"	4T6/3427	4	100/120VAC	No	Rp 1/8	M25
4T4/2780*	4	220/240VAC	No	1/8"	3/4"	4T6/3428	4	220/240VAC	No	Rp 1/8	M25
4T4/2781*	4	24VDC	No	1/8"	3/4"	4T6/3429	4	24VDC	No	Rp 1/8	M25
4T4/2846*	4	100/120VAC	No	1/8"	3/4"	5T6/3430	5	100/120VAC	No	Rp 1/8	M25
4T4/3228*	4	100/120VAC	No	1/8"	3/4"	5T6/3431	5	220/240Vac	No	Rp 1/8	M25
5T4/2767*	5	100/120VAC	No	1/8"	3/4"	5T3/3438	5	220/240Vac	Yes	Rp 1/8	M25
5T4/2783*	5	220/240VAC	No	1/8"	3/4"	5T6/3432	5	24VAC	No	Rp 1/8	M25
5T4/2784*	5	24VDC	No	1/8"	3/4"	5T3/3437	5	24VAC	Yes	Rp 1/8	M25
6T4/2768*	6	100/120VAC	No	1/8"	3/4"	6T6/3433	6	100/120VAC	No	Rp 1/8	M25
6T4/2786*	6	220/240VAC	No	1/8"	3/4"	6T6/3434	6	220/240VAC	No	Rp 1/8	M25
6T4/2787*	6	24VDC	No	1/8"	3/4"	6T6/3442	6	220/240VAC	Yes	Rp 1/8	M25
6T4/2845*	6	100/120VAC	No	1/8"	3/4"	6T6/3435	6	24VDC	No	Rp 1/8	M25
6T4/3229*	6	100/120VAC	No	1/8"	3/4"						

Notes: (1) Heater kit not available for CSA 3-6VFD enclosures. (2) These enclosures are dual rated Ex-d and Ex-e.

Please Note: When ordering, add the enclosure number to the beginning of the specification number, e.g. **3-6VFD4T4/2766**.

\*No Goyen label on product.

## Dimensions (in mm (inches))



## Weight

Mass = 2.24 Kg + 0.08 Kg per fitted pilot  
(4.94 lbs + 0.18 lbs per fitted pilot)