



## *4 Series Pulse Jet Valves*

*Innovative Environmental Solutions*

**tyco** | Flow Control | **Environmental Systems**

## RCAC20DD4 Series Pulse Jet Valves



### Description

High performance diaphragm valve with dresser nut ports. Equipped with 'Shockwave' springless diaphragm, the 4 series valves are available as remote pilot valves and may be converted to an integral pilot using either the RCA3DM or RCA3PV screw-in pilots. Outlet is at 90° to inlet.

### Suitable for

Dust collector applications, in particular for reverse pulse jet filter cleaning and its variations including bag filters, cartridge filters and envelope filters.

### Construction

#### Body and Dresser

**Nuts:** Aluminium (diecast)

**Screws:** 302 Stainless Steel

**Dresser Nut Seals:** Nitrile or Viton

**Diaphragm:** Proprietary high performance engineering thermoplastic Elastomer.

### Operation

**Recommended on time range:** 50-500ms

**Recommended time between pulses:** 1 minute or greater

### Maintenance

Diaphragm and pilot inspection should be conducted annually.

### Approvals

The RCAC20DD4 meets the requirements of the European Electromagnetic Compatibility (EMC) Directive 2004/108/EC and Low Voltage Directive 2006/95/EC, when fitted with the RCA3PV pilot.

**Please Note:** Pipes must be to Schedule 40 outside diameter.

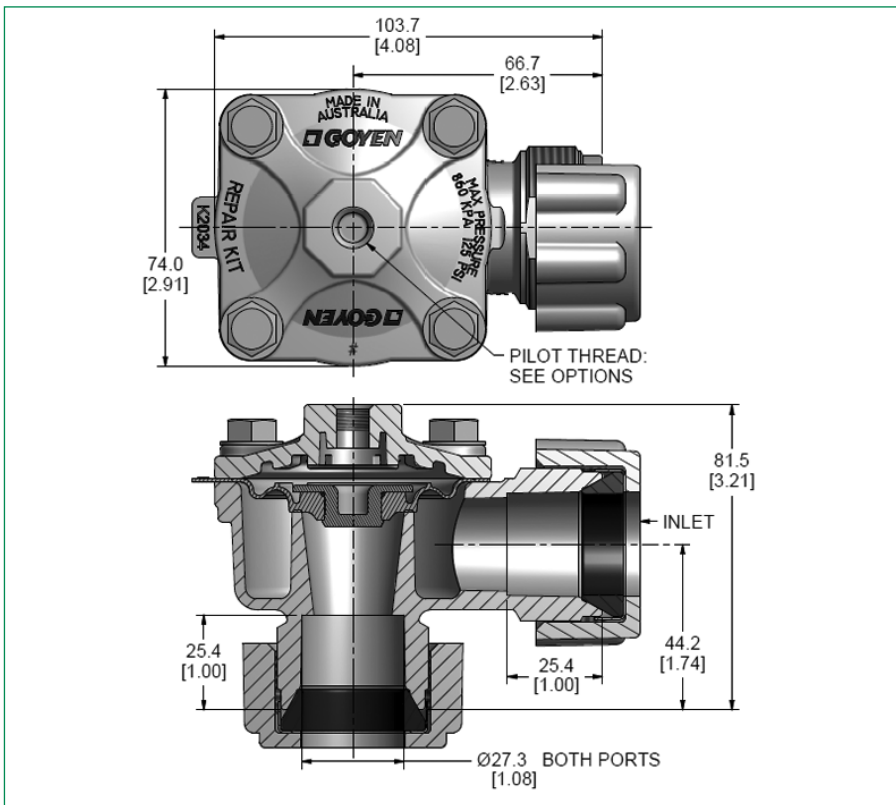
Schedule 40 Size	OD mm	OD Inches
3/4"	26.67	1.05

### Weights

Valve	Kg (lbs)
RCAC20DD4	0.52kg (1.14lbs)

### Dimensions

(Dimensions in mm and [inches])



### Maintenance Kits

Model	Nitrile	Shockwave	Viton
Diaphragm Kit RCAC20DD4	N/A	K2034	K2033
Dresser Seal Kit RCAC20DD4	K2008	N/A	K2009

### Product Characteristics and Performance

Port Size mm (in)	No. of Diaph.	Flow Kv (Cv)	Pressure Range kPA(Psi)	Temperature Range °C (°F)	
				Shockwave	Viton Seals
20 (3/4)	1	14 (17)	30(5) – 860(125)	-40(-40) – 82(179.6)	-29(-20.2) – 232(449.6)

### Order Code



Examples: RCAC20DD4012  
3/4" dresser nut valve with 1/8" pilot, 3/4" RC port threads, Shockwave diaphragm.

Note:  
1/8 Pilot available in NPT & RC Thread  
1/4 Pilot is only available in G Thread

## RCAC20FS4 Series Pulse Jet Valves



### Description

High performance diaphragm valve with a flanged inlet port and slide seal outlet port. Equipped with "Shockwave" springless diaphragm, the 4 series valves are available as remote pilot valves and may be converted to integral pilot using either the RCA3DM or RCA3PV screw in pilots. Outlet is at 90° to inlet. The FS valve range features a larger diameter inlet providing higher performance than the DD, T or ST body styles.

### Suitable for

Dust collector applications, in particular for reverse pulse jet filter cleaning and its variations including bag filters, cartridge filters and envelope filters.

### Construction

#### Body and Dresser

**Nuts:** Aluminium (diecast)

**Screws:** 302 Stainless Steel

**Dresser Nut Seals:** Nitrile or Viton

**Diaphragm:** Proprietary high performance engineering thermoplastic Elastomer

### Operation

#### Recommended on time range:

50-500ms

#### Recommended time

between pulses: 1 minute or greater

### Maintenance

Diaphragm and pilot unit inspection should be conducted annually.

### Approvals

The RCAC20FS4 meets the requirements of the European Electromagnetic Compatibility (EMC). Directive 2004/108/EC and Low Voltage Directive 2006/95/EC, when fitted with the RCA3PV pilot.

**Please Note:** Pipes must be to Schedule 40 outside diameter.

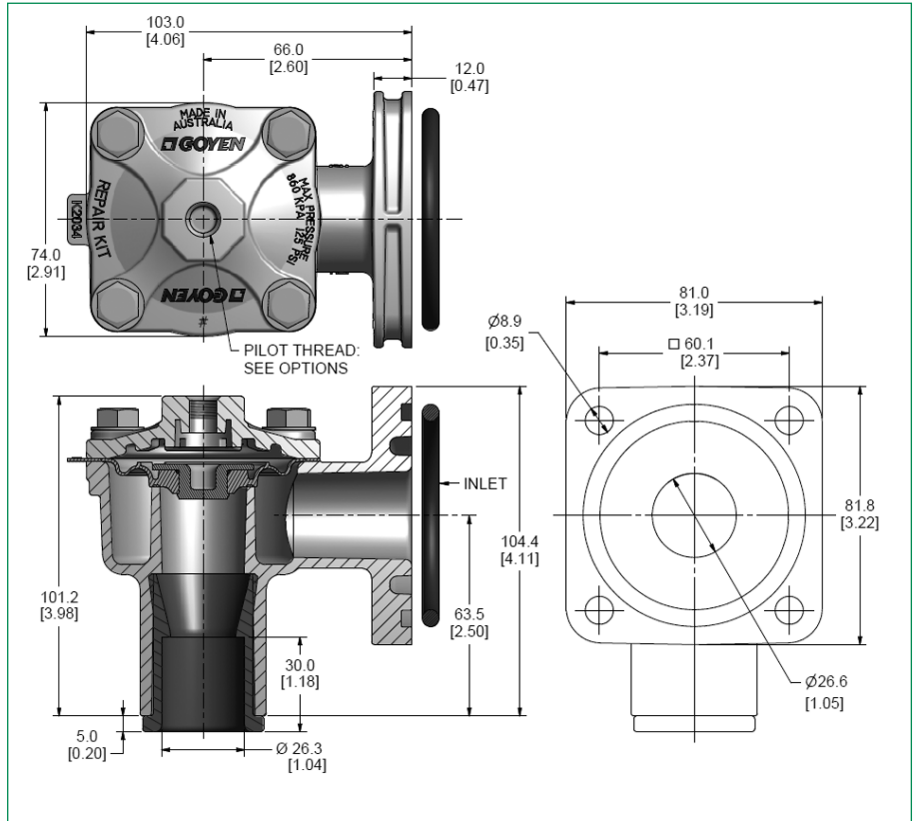
Schedule 40 Size	OD mm	OD Inches
3/4"	26.67	1.05

### Weights

Valve	Kg (lbs)
RCAC20FS4	0.51 (1.12)

### Dimensions

(Dimensions in mm and [inches])



### Maintenance Kits

Model	Nitrile	Shockwave	Viton
Diaphragm Kit			
RCAC20FS4	N/A	K2034	K2033
20FS4 Outlet Seal			
RCAC20FS4	G690338	N/A	G690338-2

### Product Characteristics and Performance

Port Size mm (in)	No. of Diaph.	Flow Kv (Cv)	Pressure Range kPA(Psi)	Temperature Range °C (°F)	
				Shockwave	Viton Seals
20 (3/4)	1	19 (26)	30(5) – 860(125)	-40(-40) – 82(179.6)	-29(-20.2) – 232(449.6)

### Order Code

RCAC 20FS4			
	Diaphragm material	1=Viton 2=Shockwave	
	Thread type	0=NPT, 1=RC, 2=G	
	Pilot size	0=1/8", 1=1/4"	

Examples: RCAC20FS4012  
3/4" FS valve with 1/8" pilot, 1/8" RC pilot port threads, Shockwave diaphragm.

Note:  
1/8 Pilot available in NPT & RC Thread  
1/4 Pilot is only available in G Thread

## RCAC20T4 Series Pulse Jet Valves



### Description

High performance diaphragm valve with threaded ports. Equipped with “Shockwave” springless diaphragm, the 4 series valves are available as remote pilot valves and may be converted to an integral pilot using either the RCA3DM or RCA3PV screw in pilots. Outlet is at 90° to inlet.

### Suitable for

Dust collector applications, in particular for reverse pulse jet filter cleaning and its variations including bag filters, cartridge filters and envelope filters.

### Construction

**Body:** Aluminium (diecast)  
**Screws:** 302 Stainless Steel  
**Seals:** Nitrile or Viton  
**Diaphragm:** Proprietary high performance engineering thermoplastic Elastomer

### Operation

**Recommended on time range:**  
50-500ms  
**Recommended time between pulses:** 1 minute or greater

### Maintenance

Diaphragm and pilot unit inspection should be conducted annually.

### Approvals

The RCAC20T4 meets the requirements of the European Electromagnetic Compatibility (EMC). Directive 2004/108/EC and Low Voltage Directive 2006/95/EC, when fitted with the RCA3PV pilot.

**Please Note:** Pipes must be to Schedule 40 outside diameter.

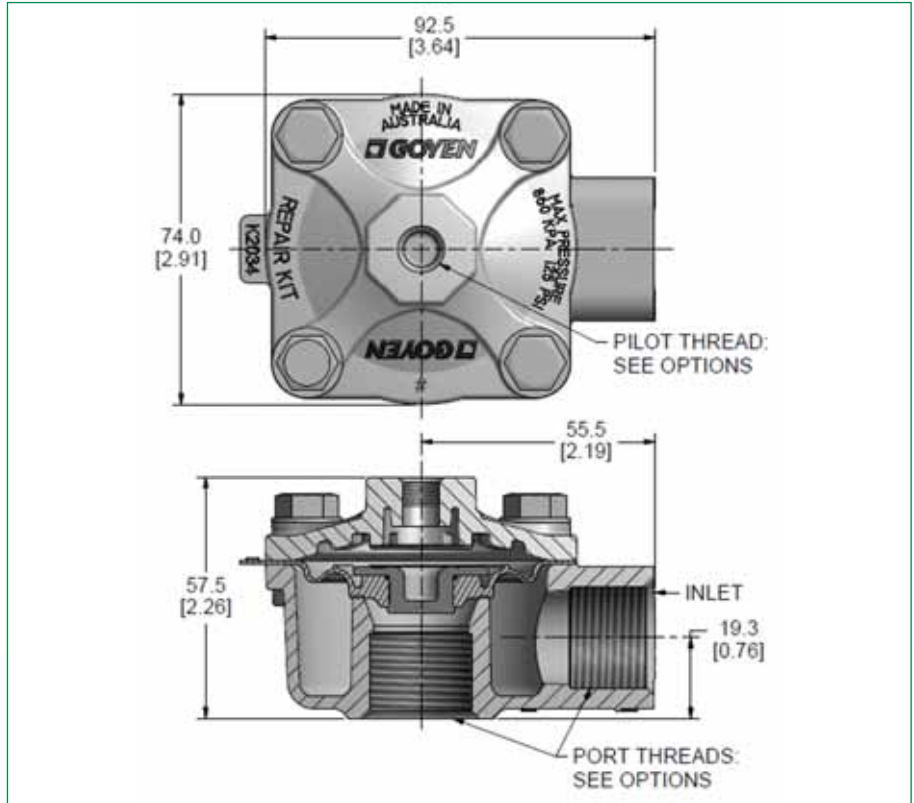
Schedule 40 Size	OD mm	OD Inches
3/4"	26.67	1.05

### Weights

Valve	Kg (lbs)
RCAC20T4	0.31 (0.68)

### Dimensions

(Dimensions in mm and [inches])



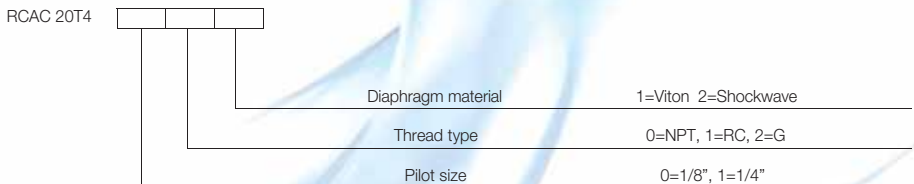
### Maintenance Kits

Model	Nitrile	Shockwave	Viton
Diaphragm Kit			
RCAC20T4	NA	K2034	K2033

### Product Characteristics and Performance

Port Size mm (in)	No. of Diaph.	Flow Kv (Cv)	Pressure Range kPA(Psi)	Temperature Range °C (°F)	
				Shockwave	Viton Seals
20 (3/4)	1	14 (17)	30(5) – 860(125)	-40(-40) – 82(179.6)	-29(-20.2) – 232(449.6)

### Order Code



Examples: RCAC20T4012  
 3/4" threaded valve with 1/8" pilot, 3/4" RC port threads, Shockwave diaphragm.

Note:  
 1/8 Pilot available in NPT & RC Thread  
 1/4 Pilot is only available in G Thread

## RCAC20ST4 Series Pulse Jet Valves



### Description

High performance diaphragm valve with short threaded ports. Equipped with "Shockwave" springless diaphragm, the 4 series valves are available as remote pilot valves and may be converted to an integral pilot using either the RCA3DM or RCA3PV screw in pilots. Outlet is at 90° to inlet.

### Suitable for

Dust collector applications, in particular for reverse pulse jet filter cleaning and its variations including bag filters, cartridge filters and envelope filters.

### Construction

**Body:** Aluminium (diecast)  
**Screws:** 302 Stainless Steel  
**Seals:** Nitrile or Viton  
**Diaphragm:** Proprietary high performance engineering thermoplastic Elastomer

### Operation

**Recommended on time range:**  
50-500ms

**Recommended time between pulses:** 1 minute or greater

### Maintenance

Diaphragm and pilot unit inspection should be conducted annually.

### Approvals

The RCAC20ST4 meet the requirements of the European Electromagnetic Compatibility (EMC). Directive 2004/108/EC and Low Voltage Directive 2006/95/EC, when fitted with the RCA3PV pilot.

**Please Note:** Pipes must be to Schedule 40 outside diameter.

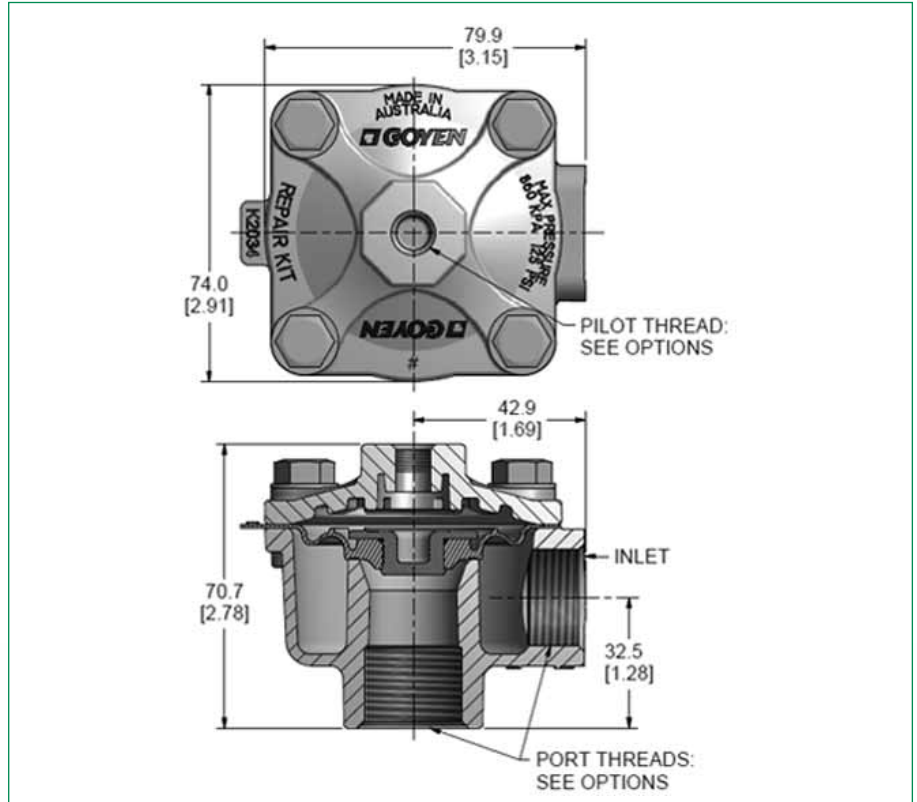
Schedule 40 Size	OD mm	OD Inches
3/4"	26.67	1.05

### Weights

Valve	Kg (lbs)
RCAC20ST4	0.30 (0.66)

### Dimensions

(Dimensions in mm and [inches])



### Maintenance Kits

Model	Nitrile	Shockwave	Viton
Diaphragm Kit			
RCAC20ST4	NA	K2034	K2033

### Product Characteristics and Performance

Port Size mm (in)	No. of Diaph.	Flow Kv (Cv)	Pressure Range kPA(Psi)	Temperature Range °C (°F)	
				Shockwave	Viton Seals
20 (3/4)	1	14 (17)	30(5) – 860(125)	-40(-40) – 82(179.6)	-29(-20.2) – 232(449.6)

### Order Code



Examples: RCAC20ST4012  
3/4" threaded valve with 1/8" pilot, 3/4" RC port threads, Shockwave diaphragm.

Note:  
1/8 Pilot available in NPT & RC Thread  
1/4 Pilot is only available in G Thread

## RCAC25DD4 Series Pulse Jet Valves



### Description

High performance diaphragm valve with dresser nut ports. Equipped with 'Shockwave' springless diaphragm, the 4 series valves are available as remote pilot valves and may be converted to integral pilot using either the RCA3DM or RCA3PV screw in pilots. Outlet is at 90° to inlet.

### Suitable for

Dust collector applications, in particular for reverse pulse jet filter cleaning and its variations including bag filters, cartridge filters and envelope filters.

### Construction

#### Body and Dresser

**Nuts:** Aluminium (diecast)

**Screws:** 302 Stainless Steel

**Dresser Nut Seals:** Nitrile or Viton

**Diaphragm:** High performance engineering thermoplastic elastomer.

### Operation

**Recommended on time range:** 50-500ms

**Recommended time between pulses:** 1 minute or greater

### Maintenance

Diaphragm and pilot inspection should be conducted annually.

### Approvals

The RCAC25DD4 meets the requirements of the European Electromagnetic Compatibility (EMC). Directive 2004/108/EC and Low Voltage Directive 2006/95/EC, when fitted with the RCA3PV pilot.

**Please Note:** Pipes must be to Schedule 40 outside diameter.

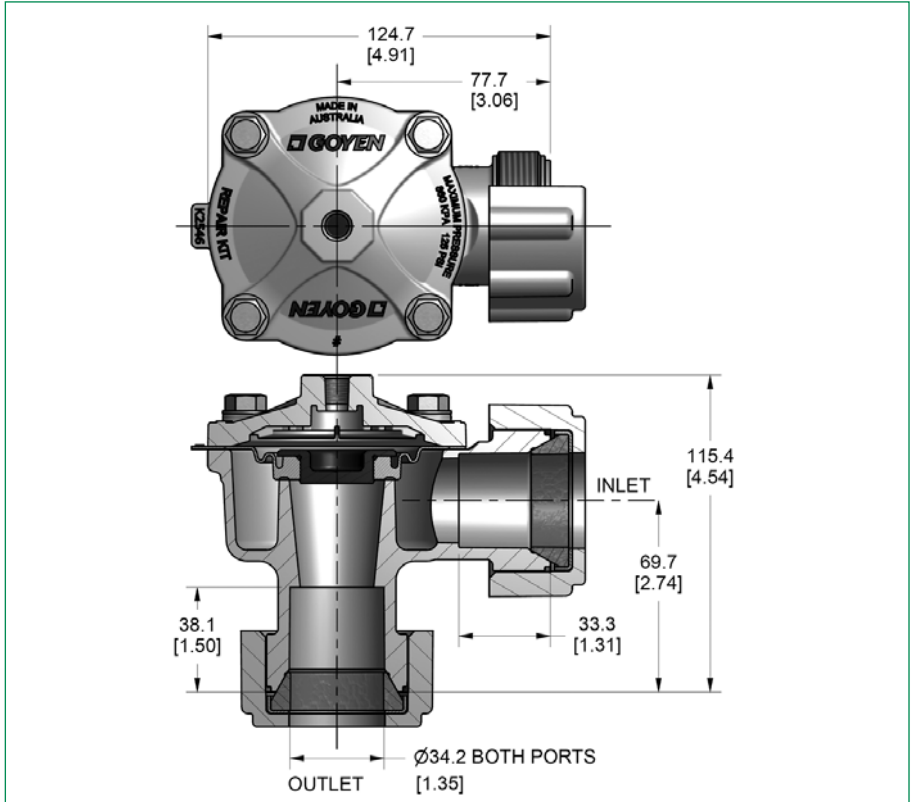
Schedule 40 Size	OD mm	OD Inches
1"	33.4	1.315

### Weights

Valve	Kg (lbs)
RCAC25DD4	0.96 (2.12)

### Dimensions

(Dimensions in mm and [inches])



### Maintenance Kits

Model	Nitrile	Shockwave	Viton
Diaphragm Kit RCAC25DD4	NA	K2546	K2551
Dresser Seal Kit CA/RCA25DD	K2508	NA	K2507

### Product Characteristics and Performance

Port Size mm (in)	No. of Diaph.	Flow Kv (Cv)	Pressure Range kPA(Psi)	Temperature Range °C (°F)	
				Shockwave	Viton Seals
25 (1)	1	22.5 (26.0)	30(5) – 860(125)	-40(-40) – 82(179.6)	-29(-20.2) – 232(449.6)

### Order Code

RCAC 25DD4			
	Diaphragm material	1=Viton 2=Shockwave	
	Thread type	0=NPT, 1=RC, 2=G	
	Pilot size	0=1/8", 1=1/4"	

Examples: RCAC25DD4012

1" dresser nut valve with 1/8" pilot, 1" RC port threads, Shockwave diaphragm.

Note:

1/8 Pilot available in NPT & RC Thread

1/4 Pilot is only available in G Thread

## RCAC25FS4 Series Pulse Jet Valves



### Description

High performance diaphragm valve with a flanged inlet port and slide seal outlet port. Equipped with 'Shockwave' springless diaphragm, the 4 series valves are available as remote pilot valves and may be converted to integral pilot using either the RCA3DM or RCA3PV screw in pilots. Outlet is at 90° to inlet. The FS valve range features a larger diameter inlet providing higher performance than the DD or T body styles.

### Suitable for

Dust collector applications, in particular for reverse pulse jet filter cleaning and its variations including bag filters, cartridge filters and envelope filters.

### Construction

- Body:** Aluminium (diecast)
- Screws:** 302 Stainless Steel
- Seals:** Nitrile or Viton
- Diaphragm:** Proprietary high performance engineering thermoplastic Elastomer

### Operation

- Recommended on time range:** 50-500ms
- Recommended time between pulses:** 1 minute or greater

### Maintenance

Diaphragm and pilot unit inspection should be conducted annually.

### Approvals

The RCAC25FS4 meets the requirements of the European Electromagnetic Compatibility (EMC). Directive 2004/108/EC and Low Voltage Directive 2006/95/EC, when fitted with the RCA3PV pilot.

**Please Note:** Pipes must be to Schedule 40 outside diameter.

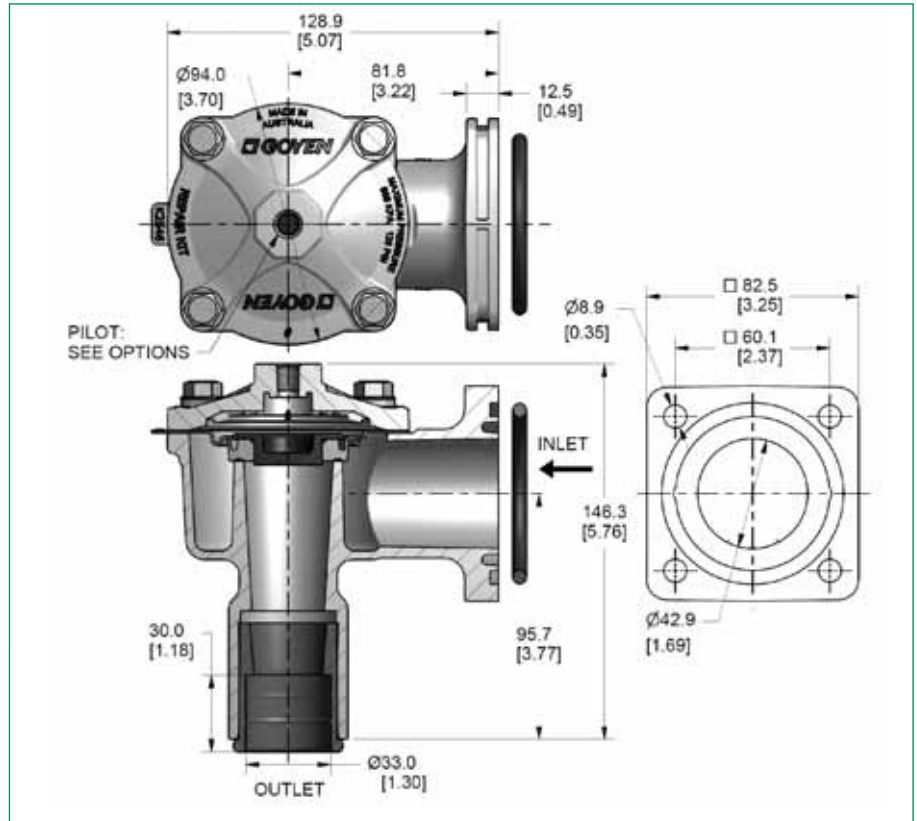
Schedule 40 Size	OD mm	OD Inches
1"	33.4	1.315

### Weights

Valve	Kg (lbs)
RCAC25FS4	0.85 (1.87)

### Dimensions

(Dimensions in mm and [inches])



### Maintenance Kits

Model	Nitrile	Shockwave	Viton
Diaphragm Kit RCAC25FS4	NA	K2546	K2551
FS Outlet Seal RCAC25FS4	G690763	N/A	G690763-2

### Product Characteristics and Performance

Port Size mm (in)	No. of Diaph.	Flow Kv (Cv)	Pressure Range kPA(Psi)	Temperature Range °C (°F)	
				Shockwave	Viton Seals
25 (1)	1	34 (40)	30(5) – 860(125)	-40(-40) – 82(179.6)	-29(-20.2) – 232(449.6)

### Order Code

RCAC 25FS4			
	Diaphragm material	1=Viton 2=Shockwave	
	Thread type	0=NPT, 1=RC, 2=G	
	Pilot size	0=1/8", 1=1/4"	

Examples: RCAC25FS4012  
1" FS valve with 1/8" pilot, 1/8" RC pilot port threads, Shockwave diaphragm.

Note:  
1/8 Pilot available in NPT & RC Thread  
1/4 Pilot is only available in G Thread

## RCAC25T4 Series Pulse Jet Valves



### Description

High performance diaphragm valve with threaded ports. Equipped with “Shockwave” springless diaphragm, the 4 series valves are available as remote pilot valves and may be converted to integral pilot using either the RCA3DM or RCA3PV screw in pilots. Outlet is at 90° to inlet.

### Suitable for

Dust collector applications, in particular for reverse pulse jet filter cleaning and its variations including bag filters, cartridge filters and envelope filters.

### Construction

**Body:** Aluminium (diecast)  
**Screws:** 302 Stainless Steel  
**Seals:** Nitrile or Viton  
**Diaphragm:** Proprietary high performance engineering thermoplastic Elastomer

### Operation

**Recommended on time range:** 50-500ms

**Recommended time between pulses:** 1 minute or greater

### Maintenance

Diaphragm and pilot unit inspection should be conducted annually.

### Approvals

The RCAC25T4 meets the requirements of the European Electromagnetic Compatibility (EMC). Directive 2004/108/EC and Low Voltage Directive 2006/95/EC, when fitted with the RCA3PV pilot.

**Please Note:** Pipes must be to Schedule 40 outside diameter.

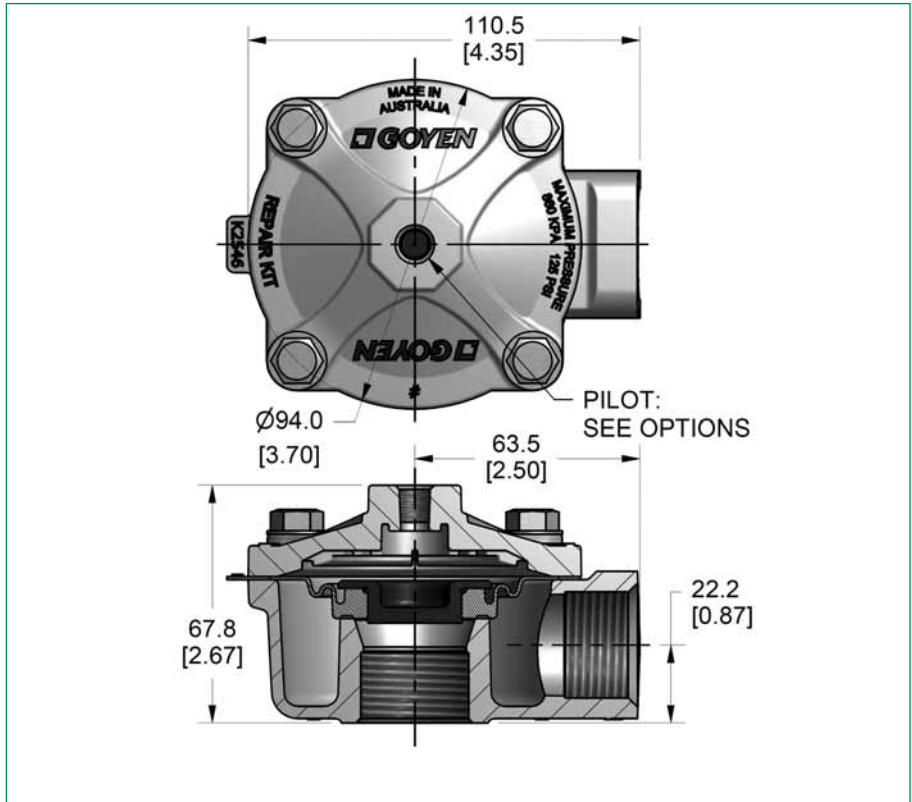
Schedule 40 Size	OD mm	OD Inches
1"	33.4	1.315

### Weights

Valve	Kg (lbs)
RCAC25T4	0.56 (1.23)

### Dimensions

(Dimensions in mm and [inches])



### Maintenance Kits

Model	Nitrile	Shockwave	Viton
Diaphragm Kit RCAC25T4	NA	K2546	K2551

### Product Characteristics and Performance

Port Size mm (in)	No. of Diaph.	Flow Kv (Cv)	Pressure Range kPA(Psi)	Temperature Range °C (°F)	
				Shockwave	Viton Seals
25 (1)	1	24 (27)	30(5) – 860(125)	-40(-40) – 82(179.6)	-29(-20.2) – 232(449.6)

### Order Code

RCAC 25T4	Diaphragm material	1=Viton 2=Shockwave
	Thread type	0=NPT, 1=RC, 2=G
	Pilot size	0=1/8", 1=1/4"

Examples: RCAC25T4012  
 1" threaded port valve with 1/8" pilot, 1" RC port threads, Shockwave diaphragm.

Note:  
 1/8 Pilot available in NPT & RC Thread  
 1/4 Pilot is only available in G Thread



## Goyen Series 4 Pilot Valve Options for Integral Pilot (CA) Applications



### RCA3DM Pilot Valve

#### Description

The RCA3DM is a pilot valve with an integral silencer and dust shroud which mounts directly (screw in) to the 4 series valve cover. The Dimensional diagrams can be found on Page 11 of this brochure.

#### Construction

**Encapsulation:** PA-6

**C-Frame:** Mild steel zinc nickel plated

**Bobbin:** PA-6

**IP Rating:** IP64

**Insulation class:** B/130°C

**Rating:** Non-continuous use only

**Clip:** Mild steel (mechanically plated)

#### Operation

**Recommended on time range:** 50-500ms

**Recommended time between pulses:** 1 minute or greater

#### Certification and Conformities

- C-Tick
- EMC (89/336/CE)
- LV
- CSA

#### Spare Parts:

K0380 – Kit includes Nitrile replacement seal, armature, spring and ferrule.

K0384 – Kit includes Viton replacement seal, armature, spring and ferrule.

Please refer to page 3 of the Pilot valves and Nema 4 Enclosures brochure for replacement coil options.

#### Product Performance

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

#### How to Order

Part Code

RCA3DM - 301

Valve Type

RCA - Pilot valve - Remote controlled air

Pilot Size

3 - 1/8" Pipe Thread

Body Style

DM - Male inlet, R 1/8" thread, suits all Series 4 RCAC valves

Coil Series

3 - Goyen 'Q' coil

#### Order Code and Electrical Characteristics

Model	Connection Type	Protection Class	Voltage	Power
300	DIN 43650A	IP64	200/240V 50/60Hz	23.1 VA
301	DIN 43650A	IP64	100/120V 50/60Hz	19.8 VA
302	DIN 43650A	IP64	24V 50/60 Hz	23.1 VA
303	DIN 43650A	IP64	110VDC	24 W
304	DIN 43650A	IP64	48VDC	20 W
305	DIN 43650A	IP64	24VDC	20 W
306	DIN 43650A	IP64	12VDC	20 W
310	Conduit (M20x1.5)	IP31	200/240V 50/60Hz	23.1 VA
311	Conduit (M20x1.5)	IP31	100/120V 50/60Hz	19.8 VA
312	Conduit (M20x1.5)	IP31	24V 50/60 Hz	23.1 VA
313	Conduit (M20x1.5)	IP31	24VDC	20 W
314	Conduit (M20x1.5)	IP31	12VDC	20 W
320	Conduit (1/2" NPSC)	IP31	200/240V 50/60Hz	23.1 VA
321	Conduit (1/2" NPSC)	IP31	100/120V 50/60Hz	19.8 VA
322	Conduit (1/2" NPSC)	IP31	24V 50/60 Hz	23.1 VA
323	Conduit (1/2" NPSC)	IP31	24VDC	20 W
324	Conduit (1/2" NPSC)	IP31	12VDC	20 W

For Remote Pilot (RCA) Applications,

Please refer to the Pilot Valves and Nema 4 Enclosures brochure.

## Goyen Series 4 Pilot Valve Options for Integral Pilot (CA) Applications



### RCA3PV and RCA3PV2 Pilot Valves

#### Description

The RCA3PV pilot is another option for integral pilot (CA) applications. The RCA3PV pilot is a screw in pilot available in 1/8" (RCA3PV) and 1/4" (RCA3PV2) port sizing. The Dimensional diagrams can be found on Page 11 of this brochure.

#### Construction

- Encapsulation:** PA-6
- C-Frame:** Mild steel zinc nickel plated
- Bobbin:** PA-6
- Insulation class:** F/155°C
- IP Rating:** IP65
- Rating:** Non-continuous use only
- Clip:** Mild steel (mechanically plated)

#### Operation

- Recommended on time range:** 50-500ms
- Recommended time between pulses:** 1 minute or greater

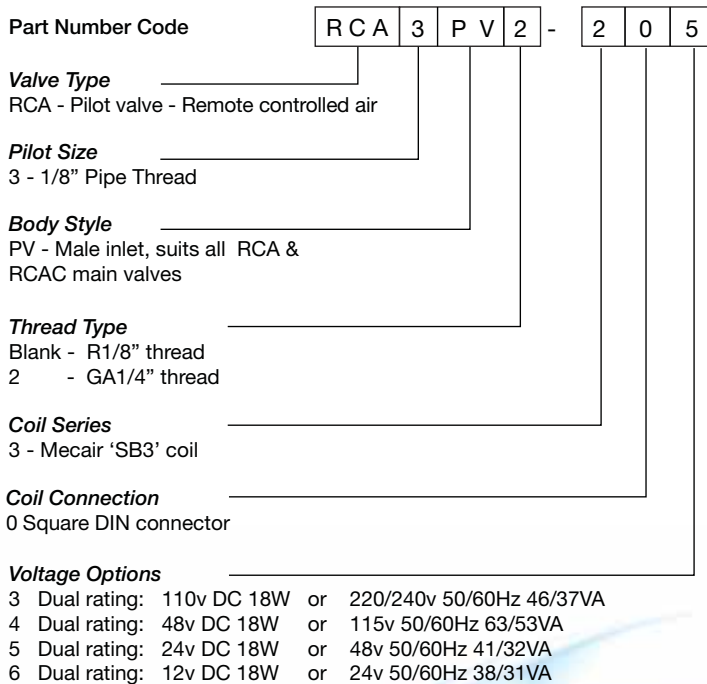
#### Certification and Conformities

- EMC (89/336/CE)
- LV

#### Product Performance

Flow	Maximum Working Pressure	Minimum Working Pressure	Temperature Min	Temperature Max	Fluid Media
0.28 Cv	860 kPa	0 kPa	-40°C	82°C	Air or
0.24 Kv	125 psi	0 psi	-40°F	180°F	inert gas

#### How to Order



**For Remote Pilot (RCA) Applications, Please refer to the Pilot Valves and Nema 4 Enclosures brochure.**

#### Spare Parts:

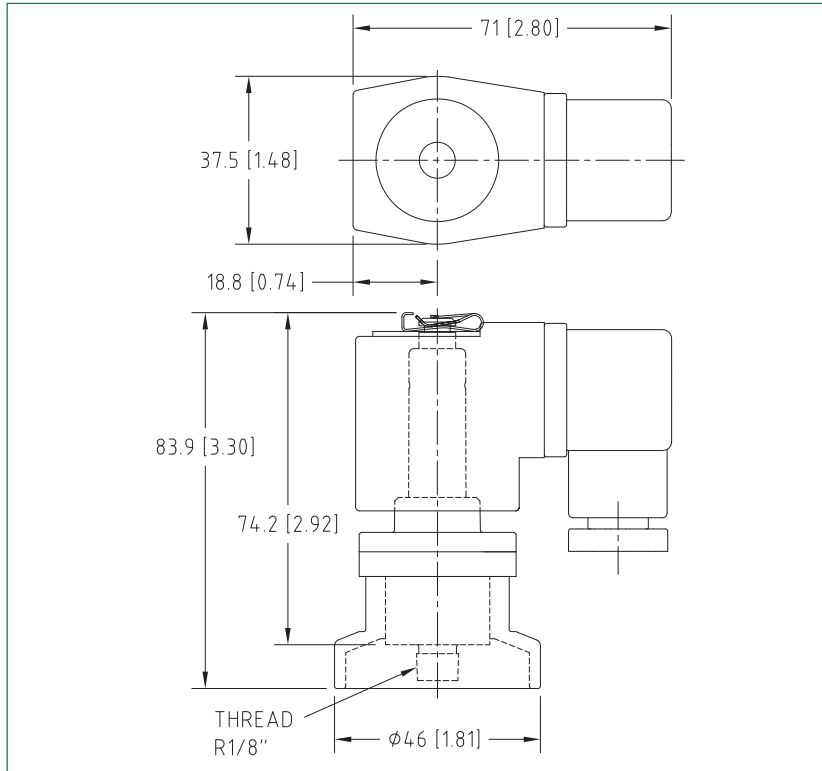
- No pilot valve overhaul kits are available for the RCA3PV pilot. However, coil kits are available as listed below:
- K0203 - Dual rating: 110v DC 18W or 220/240v 50/60Hz. Kit includes coil, stabilus clip and washer.
  - K0204 - Dual rating: 48VDC 18W or 115v 50/60Hz. Kit includes coil, stabilus clip and washer.
  - K0205 - Dual rating: 24v DC 18W or 48v 50/60Hz. Kit includes coil, stabilus clip and washer.
  - K0206 - Dual rating: 12v DC 18W or 24v 50/60Hz. Kit includes coil, stabilus clip and washer.

## RCA3DM and RCA3PV/3PV2 Pilot Valves

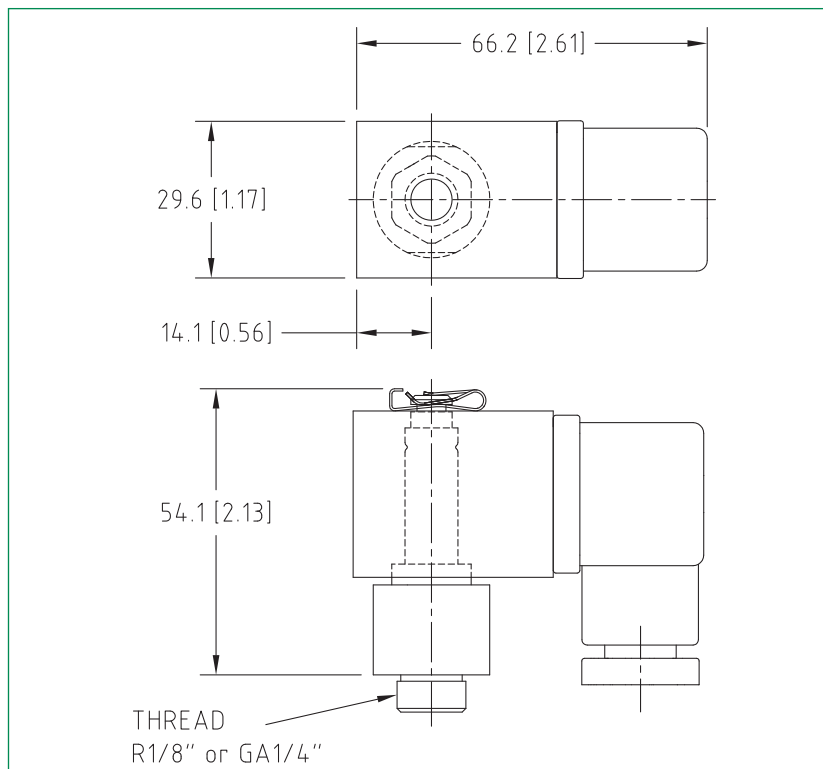
### Dimensions

(Dimensions in mm and [inches])

#### RCA3DM Pilot Valve



#### RCA3PV (1/8") and RCA3PV2 (1/4")





#### Australia

Head Office  
Goyen Controls Co Pty Ltd  
268 Milperra Road  
Milperra, NSW 2214

Telephone: 1800 805 372  
Facsimile: 1300 658 799

Queensland  
Telephone: 1800 805 372  
Facsimile: 1300 658 799

Victoria  
Telephone: 1800 805 372  
Facsimile: 1300 658 799

South Australia  
Telephone: 1800 805 372  
Facsimile: 1300 658 799

Western Australia  
Telephone: 1800 805 372  
Facsimile: 1300 658 799

#### Asia

Goyen Controls Co Pty Ltd  
Shanghai Representative Office  
1209 Greenland Business Centre  
1258 Yu Yuan Road  
Shanghai PC200050  
CHINA

Telephone: +86 21 5239 8810  
Facsimile: +86 21 5239 8812

Goyen Controls Co Pty Ltd  
73-M Jalan Mega Mendung  
Kompleks Bandar OUG  
58200 Kuala Lumpur MALAYSIA

Telephone: +60 37 987 6839  
Facsimile: +60 37 987 7839

Office: Singapore  
Tel/Facsimile: +65 6457 4549

#### USA

Goyen Valve Corporation  
1195 Airport Road  
Lakewood  
New Jersey 08701  
USA

Telephone: +1 732 364 7800  
Facsimile: +1 732 364 1356

#### Europe

Goyen Controls Co UK Ltd  
Unit 3B Beechwood  
Chineham Business Park  
Basingstoke, Hampshire, RG24 8WA  
UNITED KINGDOM

Telephone: +44 1256 817 800  
Facsimile: +44 1256 843 164

Tyco Umwelttechnik GmbH  
Im Petersfeld 6  
D-65624 Altendiez  
GERMANY

Telephone: +49 6432 95299 0  
Facsimile: +49 6432 95299 24

Mecair S.r.l.  
Via per Cinisello 97  
20054 Nova Milanese  
Milano,  
ITALY

Telephone: +39 0362 3751  
Facsimile: +39 0362 367279