



**GOYEN** SERIES 4

# PULSE JET VALVES

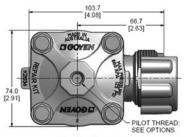
# RCAC20DD4

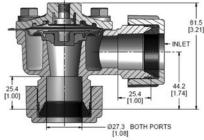
**SERIES PULSE JET VALVES** 



# **DIMENSIONS**

(Dimensions in mm and [inches])





#### **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 filet 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 highperformance engineering thermoplastic Elastomer

### **OPERATION**

Recommended on time range: 50 to 500 ms

**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 (LB)
RCAC20DD4	0.52 (1.14)

# 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	NO. OF	FLOW	PRESSURE	TEMPERATURE RANGE °C (°F)	
MM (IN.)	DIAPH.	KV (CV)	RANGE KPA (PSI)	SHOCKWAVE	VITON SEALS
20 (3/4)	1	14 (17)	30(5) to 860(125)	-40(-40) to 82(179.6)	-29(-20.2) to 232(449.6)

# Examples:

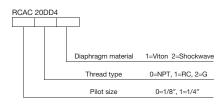
RCAC20DD4012

3/4" dresser nut valve with 1/8" pilot, 3/4" RC port threads,

Shockwave diaphragm.

#### Note

1/8 Pilot available in NPT and RC Thread. 1/4 Pilot is only available in G Thread.



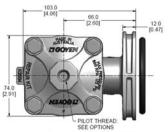
# RCAC20FS4

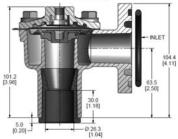
SERIES PULSE JET VALVES

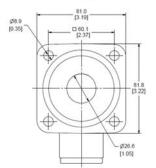


### **DIMENSIONS**

(Dimensions in mm and [inches])







# **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 highperformance engineering thermoplastic Elastomer

### **OPERATION**

Recommended on time range:

50 to 500 ms

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 Com-patibility (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 (LB)
RCAC20FS4	0.51 (1.12)

#### **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	NO. 0F	FLOW	PRESSURE TEMPERATURE RAN		IGE °C (°F)	
'	мм (IN.)	DIAPH.	KV (CV)	RANGE KPA (PSI)	SHOCKWAVE	VITON SEALS	
2	20 (3/4)	1	19 (26)	30(5) to 860(125)	-40(-40) to 82(179.6)	-29(-20.2) to 232(449.6)	

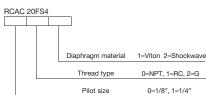
### Examples:

RCAC20FS4012

34" FS valve with 16" pilot, 16" RC pilot port threads, Shockwave diaphragm."

#### Note:

1/8 Pilot available in NPT and RC Thread. 1/4 Pilot is only available in G Thread.



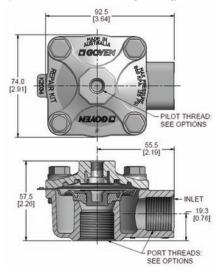
# RCAC20T4

SERIES PULSE JET VALVES



#### **DIMENSIONS**

(Dimensions in mm and [inches])



# **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 highperformance engineering thermoplastic Elastomer

## **OPERATION**

Recommended on time range: 50 to 500 ms

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 (LB)
RCAC20T4	0.31 (0.68)

# **MAINTENANCE KITS**

MODEL	NITRILE	SHOCKWAVE	VITON
Diaphragm Kit			
RCAC20T4	N/A	K2034	K2033

# PRODUCT CHARACTERISTICS AND PERFORMANCE

PORT SIZE	NO. 0F	FLOW	PRESSURE	TEMPERATURE RANGE °C (°F)	
MM (IN.)	DIAPH.	KV (CV)	RANGE KPA (PSI)	SHOCKWAVE	VITON SEALS
20 (3/4)	1	14 (17)	30(5) to 860(125)	-40(-40) to 82(179.6)	-29(-20.2) to 232(449.6)

# Examples:

RCAC20T4012

34" threaded valve with 1/8" pilot, 34" RC port threads, Shockwave diaphragm.

# Note:

1/8 Pilot available in NPT and RC Thread. 1/4 Pilot is only available in G Thread.



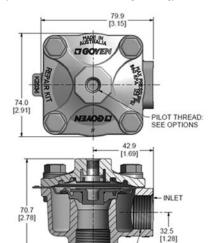
# RCAC20ST4

SERIES PULSE JET VALVES



#### **DIMENSIONS**

(Dimensions in mm and [inches])



#### 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.

PORT THREADS: SEE OPTIONS

# **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 highperformance engineering thermoplastic Elastomer

#### **OPERATION**

Recommended on time range: 50 to 500 ms

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 (LB)
RCAC20ST4	0.30 (0.66)

### **MAINTENANCE KITS**

MODEL	NITRILE	SHOCKWAVE	VITON
Diaphragm Kit			
RCAC20ST4	N/A	K2034	K2033

# PRODUCT CHARACTERISTICS AND PERFORMANCE

PORT SIZE	NO. 0F	FLOW	PRESSURE	TEMPERATURE RA	RANGE °C (°F)	
MM (IN.)	DIAPH.	KV (CV)	RANGE KPA (PSI)	SHOCKWAVE	VITON SEALS	
20 (3/4)	1	14 (17)	30(5) to 860(125)	-40(-40) to 82(179.6)	-29(-20.2) to 232(449.6)	

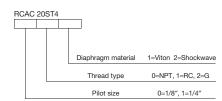
### Examples:

RCAC20ST4012

%" threaded valve with %" pilot, %" RC port threads, Shockwave diaphragm.

#### Note:

1/8 Pilot available in NPT and RC Thread. 1/4 Pilot is only available in G Thread.



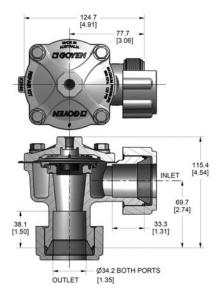
# RCAC25DD4

SERIES PULSE JET VALVES



#### **DIMENSIONS**

(Dimensions in mm and [inches])



### **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 to 500 ms

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 (LB)
RCAC25DD4	0.96 (2.12)

# **MAINTENANCE KITS**

MODEL	NITRILE	SHOCKWAVE	VITON
Diaphragm Kit RCAC25DD4	N/A	K2546	K2551
<b>Dresser Seal Kit</b> RCA25DD	K2508	N/A	K2507

# PRODUCT CHARACTERISTICS AND PERFORMANCE

PORT SIZE	NO. 0F	FLOW	PRESSURE TEMPERATURE RANGE °C (°F)		NGE °C (°F)
MM (IN.)	DIAPH.	KV (CV)	RANGE KPA (PSI)	SHOCKWAVE	VITON SEALS
25 (1)	1	22.5 (26.0	30(5) to 860(125)	-40(-40) to 82(179.6)	-29(-20.2) to 232(449.6)

# Examples:

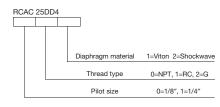
RCAC25DD4012

1" dresser nut valve with 1/8" pilot,

1" RC port threads, Shockwave diaphragm.

#### Note:

1/8 Pilot available in NPT and RC Thread. 1/4 Pilot is only available in G Thread.



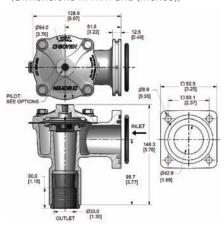
# RCAC25FS4

SERIES PULSE JET VALVES



#### **DIMENSIONS**

(Dimensions in mm and [inches])



# **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 highperformance engineering thermoplastic Elastomer

#### **OPERATION**

Recommended on time range: 50 to 500 ms

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 (LB)
RCAC25FS4	0.85 (1.87)

### **MAINTENANCE KITS**

MODEL	NITRILE	SHOCKWAVE	VITON
Diaphragm Kit RCAC25FS4	N/A	K2546	K2551
FS Outlet Seal RCAC25FS4	G690763	N/A	G690763-2

#### PRODUCT CHARACTERISTICS AND PERFORMANCE

PORT SIZE	NO. 0F			NGE °C (°F)	
MM (IN.)	DIAPH.	KV (CV)	RANGE KPA (PSI)	SHOCKWAVE	VITON SEALS
25 (1)	1	34 (40)	30(5) to 860(125)	-40(-40) to 82(179.6)	-29(-20.2) to 232(449.6)

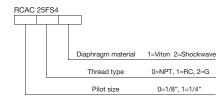
#### Examples:

RCAC25FS4012

1" FS valve with  $\frac{1}{8}$ " pilot,  $\frac{1}{8}$ " RC pilot port threads, Shockwave diaphragm.

#### Note:

1/8 Pilot available in NPT and RC Thread. 1/4 Pilot is only available in G Thread.



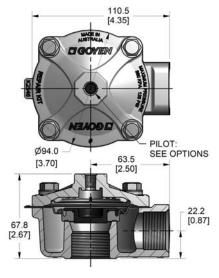
# RCAC25T4

SERIES PULSE JET VALVES



#### **DIMENSIONS**

(Dimensions in mm and [inches])



# **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 highperformance engineering thermoplastic Elastomer

#### **OPERATION**

Recommended on time range: 50 to 500 ms

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 (LB)
RCAC25T4	0.56 (1.23)

# **MAINTENANCE KITS**

MODEL	NITRILE	SHOCKWAVE	VITON		
Diaphragm Kit					
RCAC25T4	N/A	K2546	K2551		

# PRODUCT CHARACTERISTICS AND PERFORMANCE

PORT SIZE	NO. 0F	FLOW	PRESSURE	TEMPERATURE RANGE °C (°F)	
MM (IN.)	DIAPH. KV (CV) RANGE K		RANGE KPA (PSI)	SHOCKWAVE	VITON SEALS
25 (1)	1	24 (27)	30(5) to 860(125)	-40(-40) to 82(179.6)	-29(-20.2) to 232(449.6)

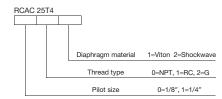
# Examples:

RCAC25T4012

- 1" threaded port valve with 1/8" pilot,
- $1\,^{\prime\prime}$  RC port threads, Shockwave diaphragm.

# Note:

1/8 Pilot available in NPT and RC Thread. 1/4 Pilot is only available in G Thread.



# RCA3DM

# PILOT VALVE OPTIONS FOR INTEGRAL PILOT (CA) APPLICATIONS





# FOR INTEGRAL PILOT (CA) APPLICATIONS:

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.

RCA3DM and RCA3PV are suitable piloting options for all 4 Series valves and the RCA35T diaphragm valve.

# CONSTRUCTION

Encapsulation: PA-6

C-Frame: Mild steel, zinc passivated

Bobbin: PA-6

Insulation class:  $B/130^{\circ}C$ 

IP Rating: IP64

Rating: Non-continuous use only

Clip: Mild steel (mechanically plated)

# **OPERATION**

Recommended on time range: 50 to 500 ms

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.

### **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	RCA 3 D M - 3 0 1
<i>Valve Type</i> RCA – Pilot v	alve – Remote-controlled air
<i>Pilot Size</i> 3 – 1/8" Pipe	thread
Body Style DM – Male in Series 4 RCA	llet, R 1/8″ thread, suits all C valves
<i>Coil Series</i> 3 – Goyen 'Q	 ' coil

# **ORDER CODE AND ELECTRICAL CHARACTERISTICS**

MODEL	CONNECTION TYPE	PROTECTION CLASS	VOLTAGE	POWER
300	DIN 43650A	IP64	200/240 V 50/60 Hz	23.1 VA
301	DIN 43650A	IP64	100/120 V 50/60 Hz	19.8 VA
302	DIN 43650A	IP64	24 V 50/60 Hz	23.1 VA
303	DIN 43650A	IP64	110 V DC	24 W
304	DIN 43650A	IP64	48 V DC	20 W
305	DIN 43650A	IP64	24 V DC	20 W
306	DIN 43650A	IP64	12 V DC	20 W
310	Conduit (M20 $\times$ 1.5)	IP31	200/240 V 50/60 Hz	23.1 VA
311	Conduit (M20 $\times$ 1.5)	IP31	100/120 V 50/60 Hz	19.8 VA
312	Conduit (M20 $\times$ 1.5)	IP31	24 V 50/60 Hz	23.1 VA
313	Conduit (M20 $\times$ 1.5)	IP31	24 V DC	20 W
314	Conduit (M20 $\times$ 1.5)	IP31	12 V DC	20 W
320	Conduit (1/2" NPSC)	IP31	200/240 V 50/60 Hz	23.1 VA
321	Conduit (1/2" NPSC)	IP31	100/120 V 50/60 Hz	19.8 VA
322	Conduit (1/2" NPSC)	IP31	24 V 50/60 Hz	23.1 VA
323	Conduit (1/2" NPSC)	IP31	24 V DC	20 W
324	Conduit (1/2" NPSC)	IP31	12 V DC	20 W

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

# RCA3PV

# PILOT VALVE OPTIONS FOR INTEGRAL PILOT (CA) APPLICATIONS





# FOR INTEGRAL PILOT (CA) APPLICATIONS:

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

RCA3DM and RCA3PV are suitable piloting options for all 4 Series valves and the RCA35T diaphragm valve.

# 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 to 500 ms

Recommended time between pulses: 1 minute or greater

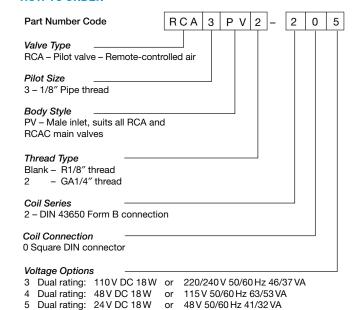
# **CERTIFICATION AND CONFORMITIES**

- 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:

Dual rating: 12 V DC 18 W

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

or

#### **SPARE PARTS:**

No pilot valve overhaul kits are available for the RCA3PV pilot; however, coil kits are available as listed below:

24 V 50/60 Hz 38/31 VA

- $\rm K0203-Dual\ rating:110\ V\ DC\ 18\ W\ or\ 220/240\ V\ 50/60\ Hz\ -kit\ includes\ coil,\ stabilus\ clip\ and\ washer.$
- K0204 Dual rating: 48 V DC 18 W or 115 V 50/60 Hz kit includes coil, stabilus clip and washer.
- K0205 Dual rating: 24 V DC 18 W or 48 V 50/60 Hz kit includes coil, stabilus clip and washer.
- $\rm K0206$  Dual rating: 12 V DC 18 W or 24 V 50/60 Hz kit includes coil, stabilus clip and washer.

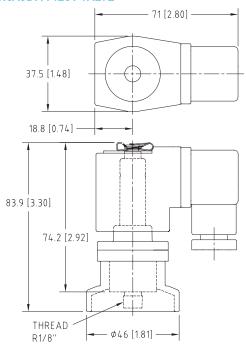
# RCA3DM AND RCA3PV/3PV2

PILOT VALVES

# **DIMENSIONS**

(Dimensions in mm and [inches])

### **RCA3DM PILOT VALVE**



## RCA3PV (%") AND RCA3PV2 (1/4")

