

Goyen RCAC25DD4

Reverse Pulse Jet Pulse Valve



RCAC25DD4 Series

INTRODUCING....

Application

The extremely rapid response, and very high flow rate delivered by the RCAC25DD4 diaphragm valve makes this product especially suitable for reverse pulse jet filter cleaning.

This high performance valve may be used for new dust collector builds or to replace existing 1" valves in a dust collector refurbishment.



Application

Typical examples:

- fabric filters
- pleated filters
- Panel filters
- Manufacturing
- Power generation
- Mining
- Resources
- Steel and cement

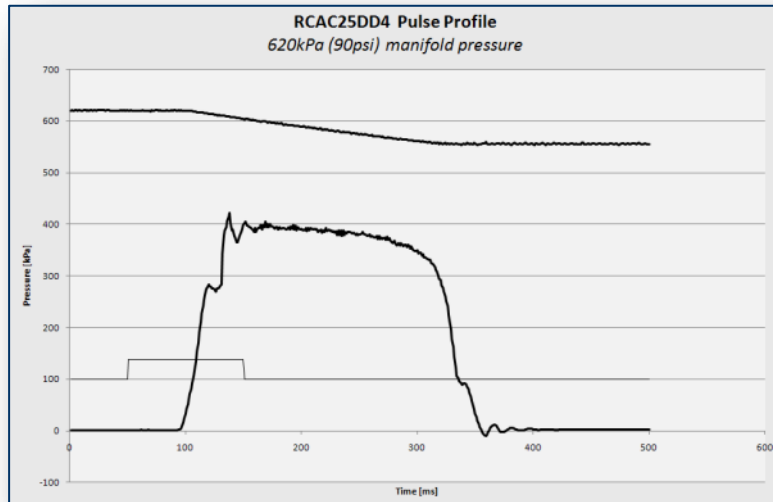


RCAC25DD4 Series

FEATURES

Better pulse cleaning than ever!

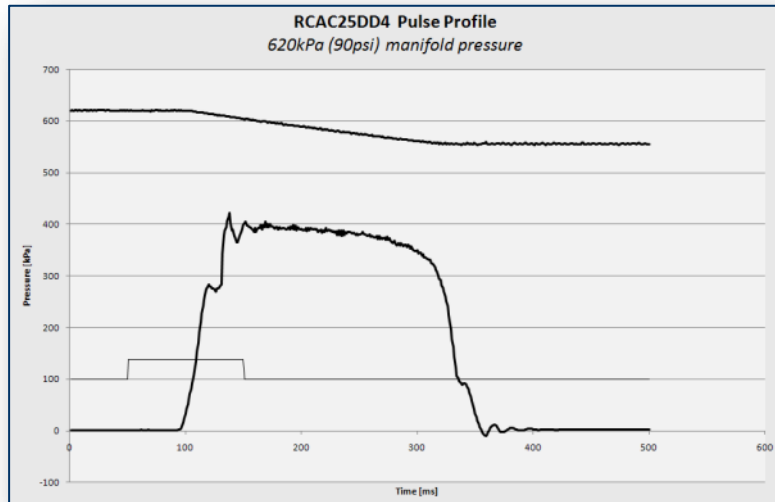
Very high flow delivery



- $C_v = 26.0$
- $K_v = 22.5$
- Best in class from 0.3 Bar (4.4 psi) to 8.6 Bar (125 psi).
- Cleans more filter area per valve than before.

Better control of air usage!

Very fast open and closing response



- Responds to electrical signals as short as 50ms.
- Consistent fast response to closing.
- Excellent control of compressed air usage.

No more spring failures!

Shockwave diaphragm



No spring failures!

1 Million Cycles guaranteed!

- Integrated spring.
- Proprietary engineering thermoplastic elastomer blend for consistent performance throughout the temperature and pressure range.
- Environmentally endurance tested at the extremes.

Rapid installation means less cost!

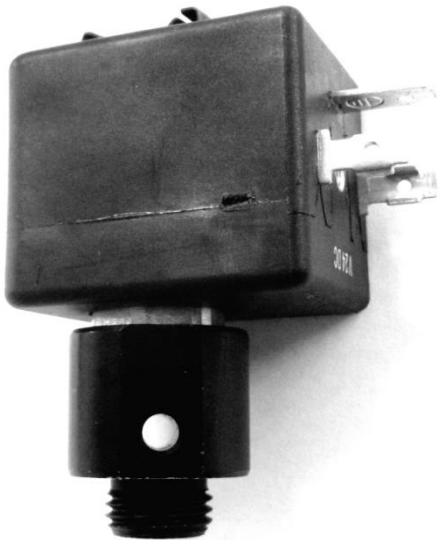
Dresser nut couplings



- The classic Goyen dresser nut coupling design.
- Nitrile or viton seals.
- Rapid connect and disconnect from manifolds and blowtubes.
- No tools required!

2-in-1: Integral or remote solenoid.

Accepts the integral solenoid module



- Using the PV Series pilot, the RCAC25DD4 can be directly piloted.
- Convert quickly between integral or remote pilot configurations according to customer needs.

Which repair kit? No problem!

Integral kit markings



- The 4 Series valve is marked with the appropriate diaphragm replacement kit part number.
- No more searching catalogues or calling to find the right kit. Simple!

RCAC25DD4

QUALITY



Quality starts with Design...

**Designed
to
perform!**

**100%
pressure &
leak tested.**

**Performance
tested across
pressure range**

**15% higher peak pressure than
RCA25DD.**

QUALITY

**Consistent pulse profile, regardless of
pressure.**

**ISO9001
Design &
Manufacture**

**Environmentally
Tested at
-40°C to 82°C
(Shockwave)**

**Made in
Australia**

... And then includes execution.

**World class manufacturing facility,
Quality Systems certified and audited
to international standards for design
and manufacture.**

**Each valve fully checked for operation
and sealing performance.**

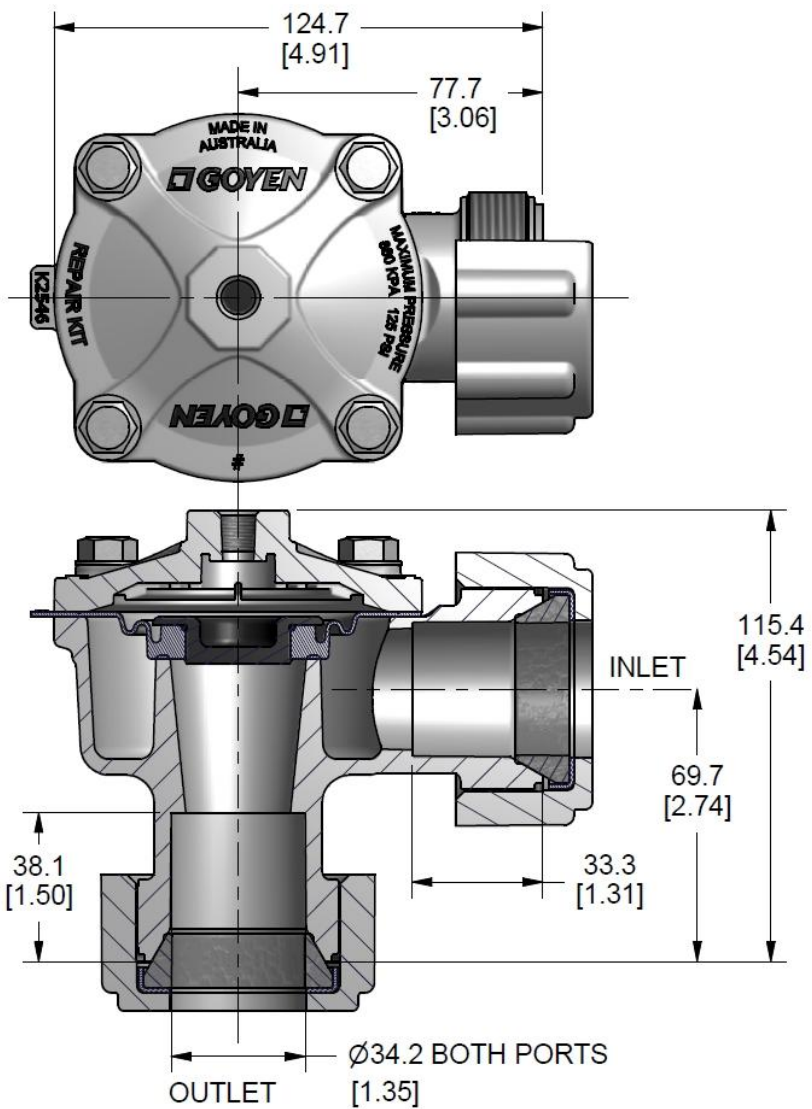


RCAC25DD4

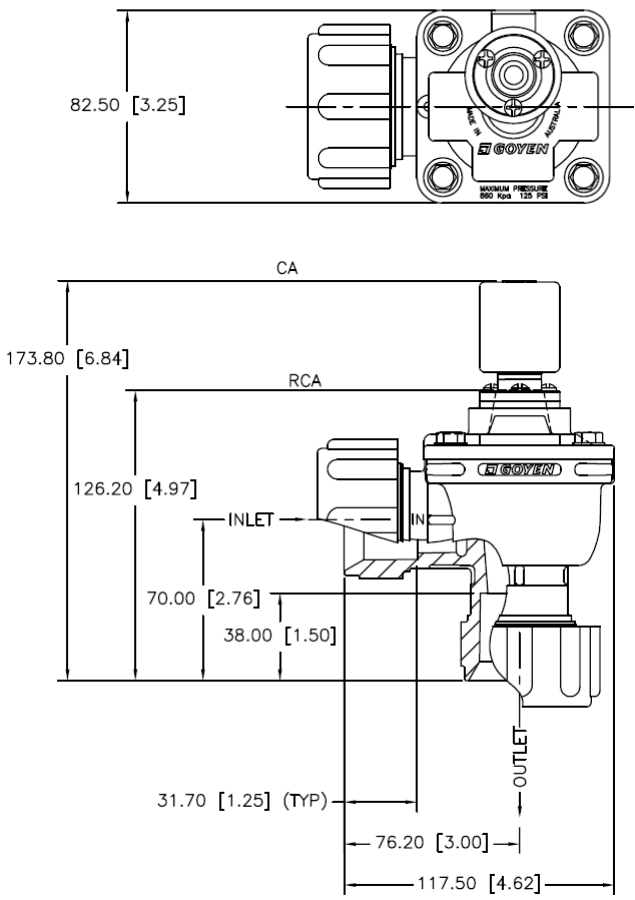
DIMENSIONS

RCAC25DD4:

Dimensions in mm [inches]

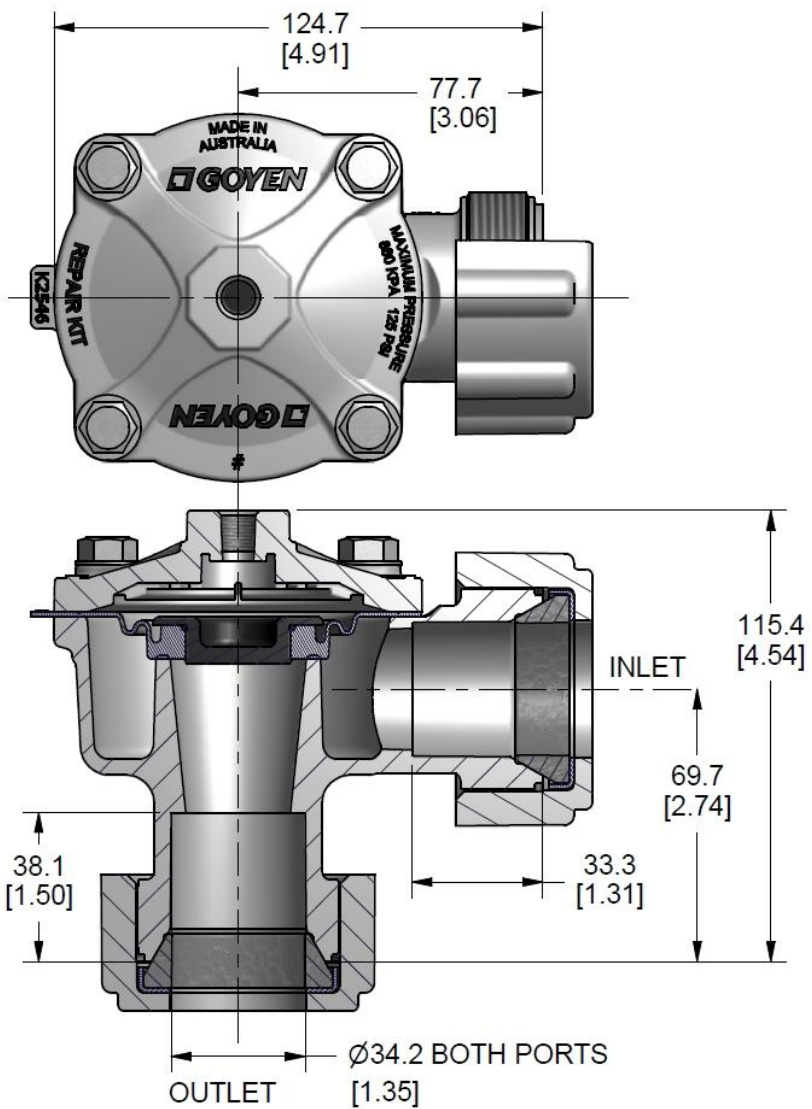


Comparison to RCA25DD:

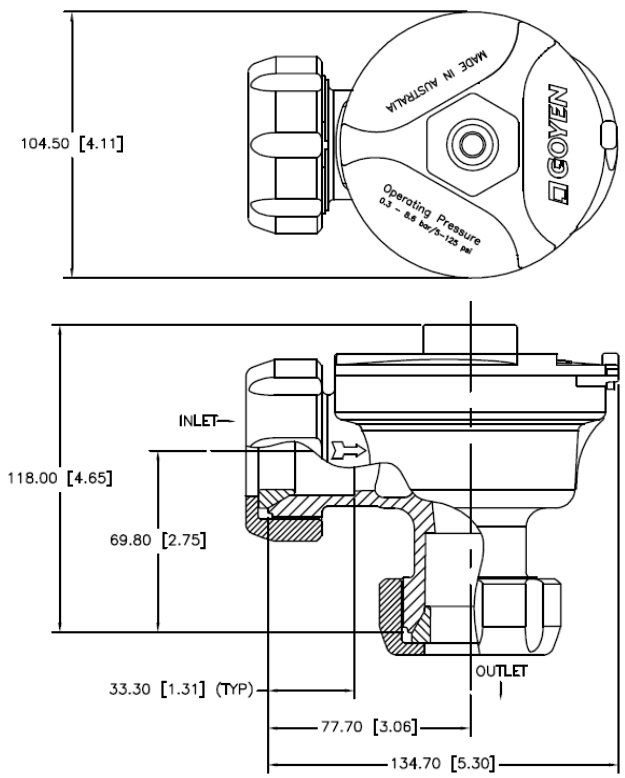


RCAC25DD4:

Dimensions in mm [inches]



Comparison to RCAC25DD3:



RCAC25DD4 Series

INSTALLATION REQUIREMENTS

Mechanical install requirements

	Metric	US/Imperial
<i>Minimum centres between valves</i>	95 mm	3.740"
<i>Pipe dimensions (external diameter)</i>	33.40 mm <i>Nominal 1" ANS Sched 40 pipe</i>	1.315" <i>Nominal 1" ANS Sched 40 pipe</i>
<u>Note</u> <i>Restraint of blowpipes.</i>	<i>Dresser nut couplings are not intended as the sole restraint of blowtubes. Blowtubes must be seperately secured in place.</i>	
<u>Note</u> <i>Insertion of blowpipes.</i>	<i>Blowpipes must be fully inserted until it is in contact with the pipe stop inside the outlet of the RCAC25DD4 valve.</i>	

Pneumatic install requirements

	Metric	US/Imperial
<i>Supply compressed air pressure range</i>	0.3 to 8.6 Bar	4.35 to 124.7 PSI
<i>Compressed air temperature (Shockwave diaphragms)</i>	-40°C to 82°C	-40°F to 180°F
<i>Compressed air temperature (Viton diaphragms)</i>	-40°C to 232°C	-40°F to 450°F
<i>Media type</i>	<i>Air or inert gases only.</i>	
<i>Remote pilot connections</i>	<i>Minimum pilot tube bore: 4mm (0.16") Maximum length: 2m (79")</i>	

RCAC25DD4 Series

APPROVALS

Approvals



European Directive (CE)

Under the treaty of establishing the European Economic Community, the council of European Communities adopted into law a series of directives to harmonize technical standards.

The RCAC25DD4 series valves are controlled by

Council	Directive #
Machinery	89/392/EEC
PED	97/23/EC

When used in combination with Goyen or Mecair solenoids, these valves are also controlled by

Council	Directive #
EMC	89/336/EEC
Low Voltage	72/23/EEC

The Goyen RCAC25DD4 and its compatible Goyen or Mecair solenoid pilots comply with these directives, and bears the CE approval mark on the solenoid and/or valve cover.

Approvals



Underwriters Laboratories

Goyen solenoid pilots are approved to the following UL and CSA standards, and may be used in conjunction with the RCAC25DD4 series valves:

UL:

UL429, "Electrically operated valves."

CSA:

Standard C22.2 No. 139, "Electrically operated valves."



**Canadian Standards
Association**

Approvals

Hazardous areas



The Goyen RCAC25DD4 series may be used with any of the Goyen or Mecair remote pilot enclosures.

These enclosures include products with UL, CSA, and ATEX certifications to meet the applications of

CSA:

Class I, Group D

Class II, Groups E, F, G

UL:

Class I, Group D

Class II, Groups E, F, G

ATEX:

II 2 G D (Ex d IIB T3 Gb)

II 2 G D (Ex d IIB T6 Gb)

Please refer to the Goyen or Mecair literature for further information on these enclosures.

RCAC25DD4 Series

PERFORMANCE

Performance

Test conditions:

Tank pressure: 620 kPa (90 PSI)

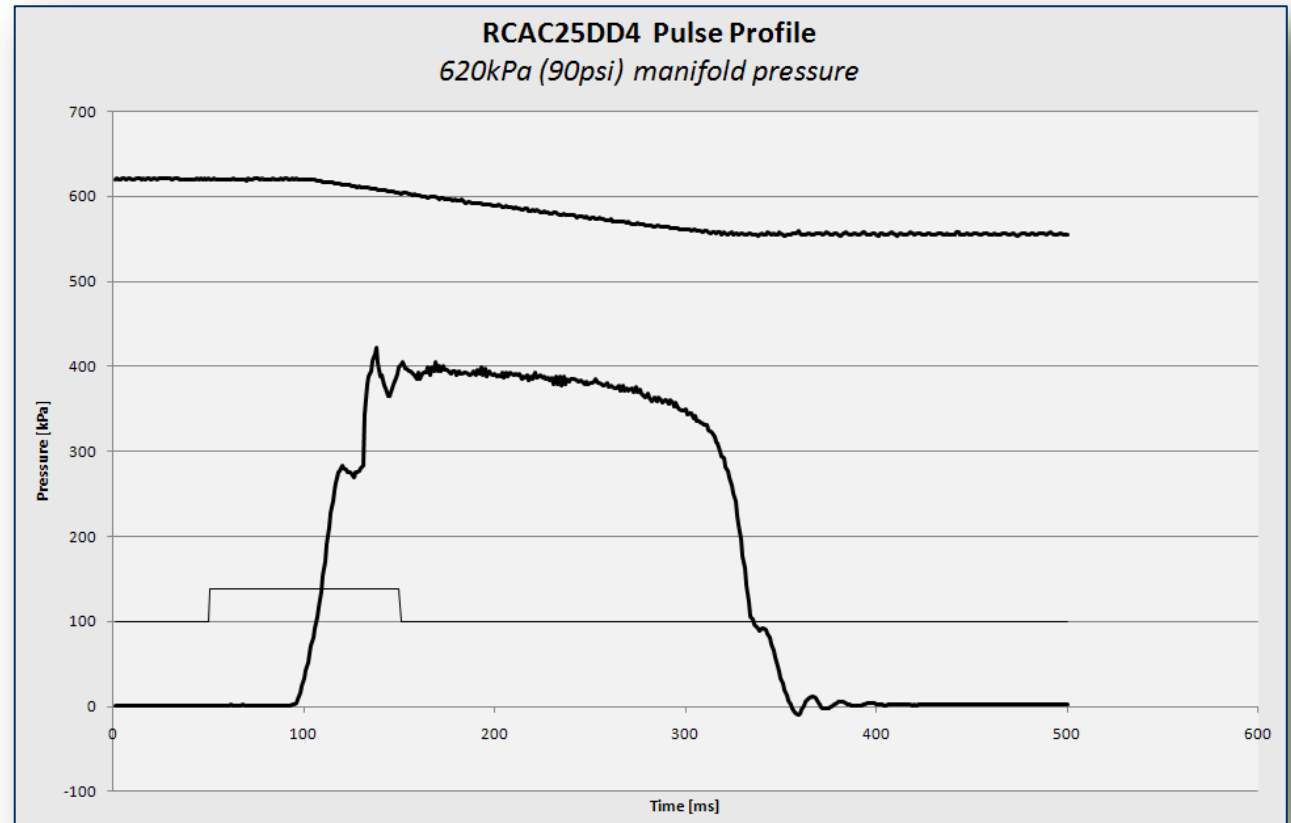
Electrical signal: 100ms

Pilot type: Remote

Blowtube: 1" Schedule 40 pipe

Blowtube design: 16 x 6.4mm holes
($A_n/A_p = 0.93$)

Tank size: 197L (6.96 cuft)



Key Performance Comparisons

All valves are tested under the same conditions:

Tank pressure: 620 kPa (90 PSI)

Electrical signal: 100ms

Pilot type: Remote

Blowtube: 1" Schedule 40 pipe

Blowtube design: 16 x 6.4mm holes
($A_n/A_p = 0.93$)

Tank size: 197L (6.96 cuft)

	25DD4	Asco R353	Dwyer RDCV25C	Rotex 1"	Turb FDP25
Cv	26.0	19.3	21.1	21.8	20.3
Kv	22.5	16.6	18.2	18.8	17.4
Peak blowtube pressure (kPa, static)	412	338	378	374	355
Peak blowtube pressure (PSI, static)	59.8	49.0	54.8	54.3	51.5

Peak pressure is maximum static pressure recorded in the blowtube, during the pulse.

Peak static pressures are directly related to filter cleaning flows delivered from the blowtube for any given blowtube configuration.

Higher peak pressures therefore lead to stronger cleaning flows, and potential efficiency improvements in compressed air supply pressures.

Cv/Kv

All valves are tested under the same conditions:

Tank pressure: 620 kPa (90 PSI)

Electrical signal: 100ms

Pilot type: Remote

Blowtube: 1" Schedule 40 pipe

Blowtube design: 16 x 6.4mm holes
($A_n/A_p = 0.93$)

Tank size: 197L (6.96 cuft)

	25DD4	Asco R353	Dwyer RDCV25C	Rotex 1"	Turb FDP25
Cv	26.0	19.3	21.1	21.8	20.3
Kv	22.5	16.6	18.2	18.8	17.4
Peak blowtube pressure (kPa, static)	412	338	378	374	355
Peak blowtube pressure (PSI, static)	59.8	49.0	54.8	54.3	51.5

High peak pressures are a consequence of high valve flow rate delivery. The high flow rates are directly linked to the filter area that can be cleaned for any given valve.

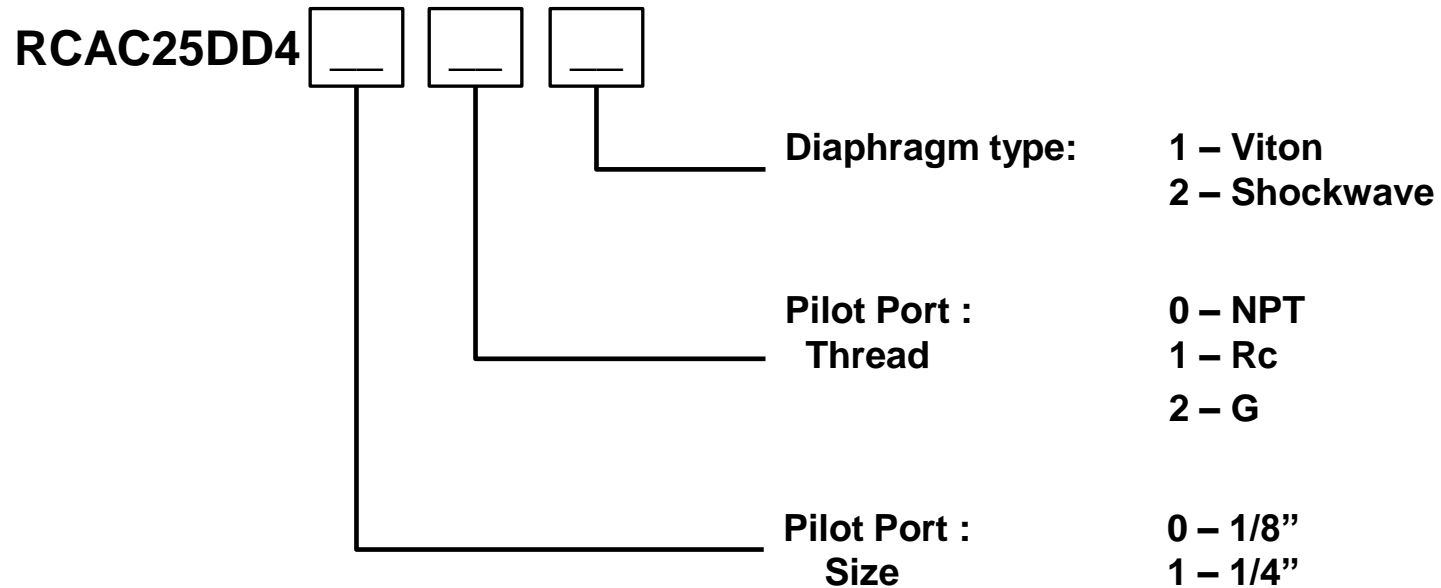
In this case the Goyen 25DD4 has the capacity to clean 22.8% more filter area than the ASCO 1" at the same tank pressures.

An alternative way to consider this is that the Goyen 25DD4 can produce the same cleaning as the ASCO 1" at 22.8% less cleaning pressure (70 psi instead of 90 psi).

RCAC25DD4 Series

HOW TO ORDER

Part numbers are easy!



The '4' means this is a fourth generation pulse jet valve.

RCAC25DD4 Series

SERVICING

Repair kit details

Diaphragm replacement kit numbers are marked on the diaphragm, visible before disassembly.



Repair kit type	Repair kit #
Shockwave diaphragm	K2546
Viton diaphragm <i>(includes spring)</i>	K2551
DD seals (nitrile) <i>(2 x seals, 2 x nuts, 2 x retainer)</i>	K2508
DD seals (viton) <i>(2 x seals, 2 x nuts, 2 x retainer)</i>	K2507

Shockwave assembly



Viton assembly



Goyen RCAC25DD4

Reverse Pulse Jet Pulse Valve

