UNILOK

www.unilok.com

ULTRA-HIGH PURITY REGULATOR

Best Engineering For You

UNILOK WAS ESTABLISHED IN 1984.

We have distinguished ourselves in the design and manufacturing of a high performance "Twin Ferrule Compression Tube Fittings" and "Instrumentation Valves"range.
UNILOK has been able to capitalize on our expert knowledge, oriented towards the new expectations of customers worldwide in the industrial, petro-chemical, offshore, ship building, power plant and environmental industries.
Due to our outstanding capacity for innovation and our policy of investment in Research and Development as well as Quality Control.
Our well-trained staff are dedicated to providing our customers with the very best service possible, and this service is backed up by our Performance Guarantee.
Systematic Control is fully committed to utilizing the latest technology and information advancements to provide our customers with maximum support.

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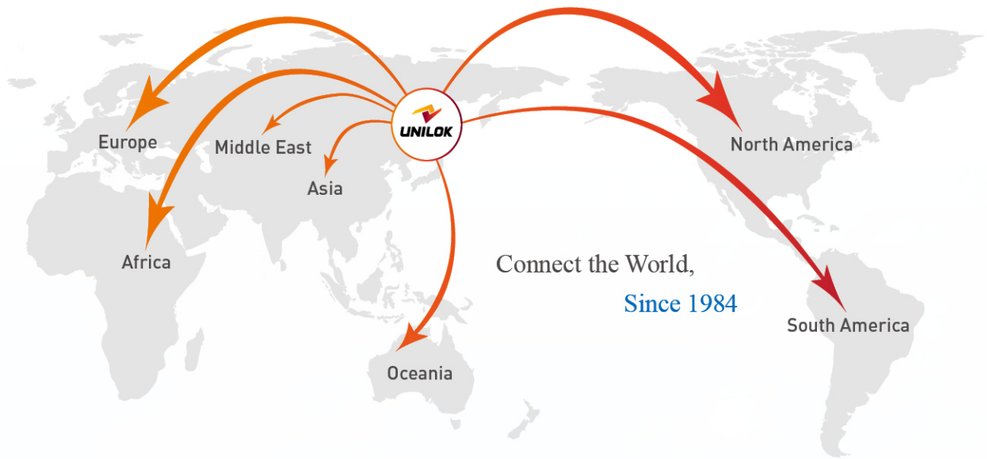


Quality

All UNILOK fittings and valves are manufactured with all critical dimensions to exacting tolerances, precise production processes, and strict quality control.
Also, UNILOK products are widely used in severe applications requiring zero leakage in both gas or liquids systems.
We are also aware that punctual delivery is a major factor in order to complete projects.

Engineering Excellence

To support the required flexibility, production standards and quality control.
UNILOK operates a separate unit to support customer's needs for advanced engineering and fast changes inline with stable and reliable production disciplines.
To assist our customers with their designs, 2D and 3D CAD drawings are available online.

Customer Service

We will continue to do our best in order to meet the customer's requirements with both quality and service as we have done in the past.

RC01 Series

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	600 or 3500 psig (41.4 or 241 bar)
Outlet Pressure Range	30, 60, 100, 150 and 250 psig (2.1, 4.1, 6.9, 10.3 and 17.3 bar)
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40℉~140℉)
Vespel® Seat	-40~177℃ (-40℉~350℉)

Flow Capacity

3500 psig / 241 bar	0.06 Cv
600 psig / 41.4 bar	0.15 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec

Media Contact Materials

Body	316L Stainless Steel
Diaphragm	316L Stainless Steel or Hastelloy®
Seat	PCTFE (Optional Vespel®)
Spring	316L Stainless Steel or Hastelloy®
Poppet, Retainer	316L Stainless Steel

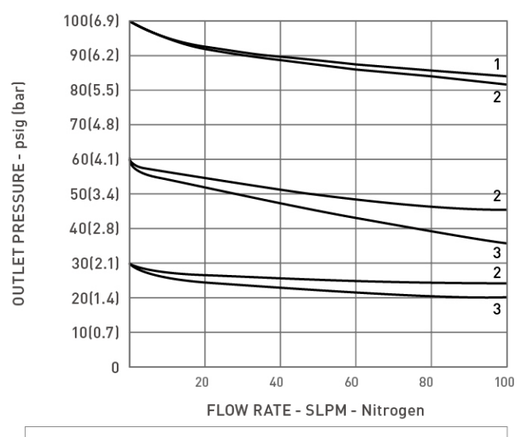
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- The RC01 series provides excellent stability of set pressure with accuracy, sensitivity.
- Metal to metal diaphragm seals provide enhanced leak integrity
- Optimum performance and cleanliness at a great value
- Low internal volume
- Adjustable stop to limit outlet pressure
- All performed in class 100 and class 10 clean rooms

Flow Chart



1.P_1=200 psig(13.8bar) 2.P_1=150(10.3bar) 3.P_1=100(6.9bar)

How To Order

RC01	C	-	04F	-	22	2	3	-	4			
Regulator Type	Connection Type		Connection Size		Inlet / Outlet Pressure	Gauge Port Option	Outlet Gauge		Body Material	Surface Finish	Trim Material	Seat Material

Regulator Type	
RC01	UHP Regulator

Connection Type	
C-*M	Male UCR Swivel
C-*F	Female UCR Swivel
WB-*T	Tube Butt Weld
U-*T	UNILOK Tube Fitting

Connection Size	
04	1/4 inch

Maximum Inlet Pressure	
1	3500 psig / 241 bar
2	600 psig / 41.4 bar

Outlet Pressure Range	
0	1~30 psig / 0.1~2.1 bar
1	1~60 psig / 0.1~4.1 bar
2	1~100 psig / 0.1~6.9 bar
3	1~150 psig / 0.1~10.3 bar
4	1~250 psig / 0.1~17.2 bar

Gauge Port Option	
None	None (Fig. A)
1	1/4" Internal UCR (Fig. B)
2	1/4" Internal UCR (Fig. C)
3	1/4" Internal UCR (Fig. D)
4	1/4" Male Swivel (Fig. B)
5	1/4" Male Swivel (Fig. C)
6	1/4" Male Swivel (Fig. D)
7	1/4" Female Swivel (Fig. B)
8	1/4" Female Swivel (Fig. C)
9	1/4" Female Swivel (Fig. D)

Outlet Gauge	
None	No Gauge
0	0~30 psig
1	0~60 psig
2	0~100 psig
3	0~160 psig
4	0~200 psig
5	0~300 psig

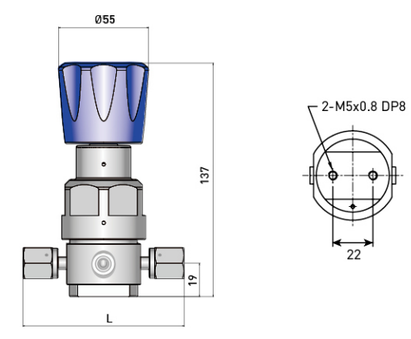
Body Material	
2	316L VAR Stainless Steel
4	316L Stainless Steel

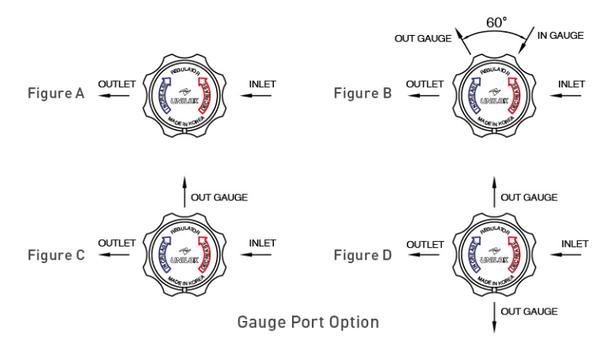
Internal Surface Finish	
None	EP – Electro Polished
BA	BA

Trim Material	
None	316 SS
H	Hastelloy®

Seat Material	
None	PCTFE
V	Vespel®

Ordering Information & Dimensions





Part Number		End Connection		Dimensions(mm)
		Inlet	Outlet	L ± 1
RC01	U-04T	1/4" UNILOK Tube Fitting		95
	C-04M-	1/4" Male UCR Swivel		94
	C-04F-	1/4" Female UCR Swivel		94
	WB-04T-	1/4" Tube Butt Weld		76.2

Dimensions are for reference only and are subject to change without prior notice.

RC02 Series

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	600 or 3500 psig (41.4 or 241 bar)
Outlet Pressure Range	30, 60, 100, 150 psig (2.1, 4.1, 6.9, 10.3 bar)
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40℉~140℉)
Vespel® Seat	-40~177℃ (-40℉~350℉)

Flow Capacity

Flow Capacity	0.5 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec

Media Contact Materials

Body	316L Stainless Steel
Diaphragm	316L Stainless Steel or Hastelloy®
Seat	PCTFE (Optional Vespel®)
Spring	316 Stainless Steel or Hastelloy®
Poppet, Retainer	316L Stainless Steel

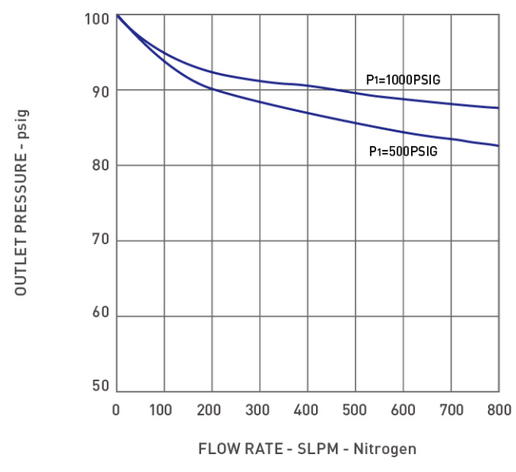
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- RC02 series provides excellent stability of set pressure with accuracy, sensitivity.
- Metal to metal diaphragm seals provide enhanced leak integrity
- Optimum performance and cleanliness at a great value
- Low internal volume
- Adjustable stop to limit outlet pressure
- All performed in class 100 and class 10 clean rooms

Flow Chart



How To Order

RC02	C	-	08F	-	22	2	3	-	4			
Regulator Type	Connection Type		Connection Size		Inlet /Outlet Pressure	Gauge Port Option	Outlet Gauge		Body Material	Surface Finish	Trim Material	Seat Material

Regulator Type	
RC02	UHP Regulator

Connection Type	
C-*M	Male UCR Swivel
C-*F	Female UCR Swivel
WB-*T	Tube Butt Weld
U-*T	UNILOK Tube Fitting

Connection Size	
06	3/8 inch
08	1/2 inch

Maximum Inlet Pressure	
1	3500 psig / 241bar
2	1000 psig / 68.9 bar
3	600 psig / 41.4 bar

Outlet Pressure Range	
0	1~30 psig / 0.1~2.1 bar
1	1~60 psig / 0.1~4.1 bar
2	1~100 psig / 0.1~6.9 bar
3	1~150 psig / 0.1~10.3 bar

Gauge Port Option	
None	None (Fig. A)
1	1/4" Internal UCR (Fig. B)
2	1/4" Internal UCR (Fig. C)
3	1/4" Internal UCR (Fig. D)
4	1/4" Male Swivel (Fig. B)
5	1/4" Male Swivel (Fig. C)
6	1/4" Male Swivel (Fig. D)
7	1/4" Female Swivel (Fig. B)
8	1/4" Female Swivel (Fig. C)
9	1/4" Female Swivel (Fig. D)

Outlet Gauge	
None	No Gauge
0	0~30 psig
1	0~60 psig
2	0~100 psig
3	0~160 psig
4	0~200 psig

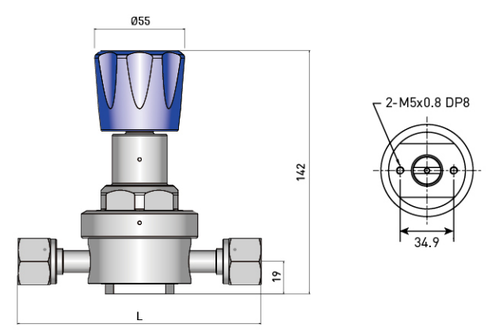
Body Material	
2	316L VAR Stainless Steel
4	316L Stainless Steel

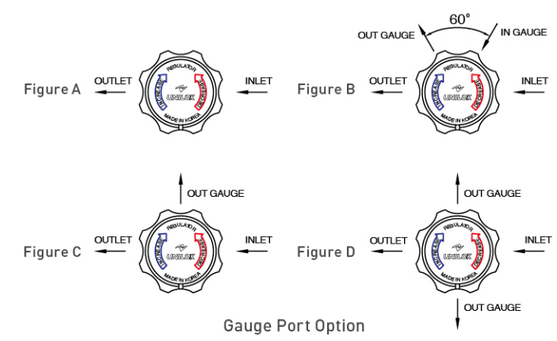
Internal Surface Finish	
None	EP – Electro Polished
BA	BA

Trim Material	
None	316 SS
H	Hastelloy®

Seat Material	
None	PCTFE
V	Vespel®

Ordering Information & Dimensions





Part Number		End Connection		Dimensions(mm)
		Inlet	Outlet	L ± 1
RC02	U-06T	3/8" UNILOK Tube Fitting		116.4
	U-08T	1/2" UNILOK Tube Fitting		116.4
	C-08M-	1/2" Male UCR Swivel		142
	C-08F-	1/2" Female UCR Swivel		142
	WB-06T-	3/8" Tube Butt Weld		94
	WB-08T-	1/2" Tube Butt Weld		94

Dimensions are for reference only and are subject to change without prior notice.

RCT01 Series

Tied Diaphragm

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	600 or 3500 psig (41.4 or 241 bar)
Outlet Pressure Range	30, 60, 100 psig (2.1, 4.1, 6.9 bar)
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40℉~140℉)
Vespel® Seat	-40~177℃ (-40℉~350℉)

Flow Capacity

3500 psig / 241 bar	0.06 Cv
600 psig / 41.4 bar	0.15 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec He

Media Contact Materials

Body	316L VAR Stainless Steel
Diaphragm	316L Stainless Steel or Hastelloy®
Seat	PCTFE (Optional Vespel®)
Poppet	316L Stainless Steel or Hastelloy®
Rear Seal	316L Stainless Steel

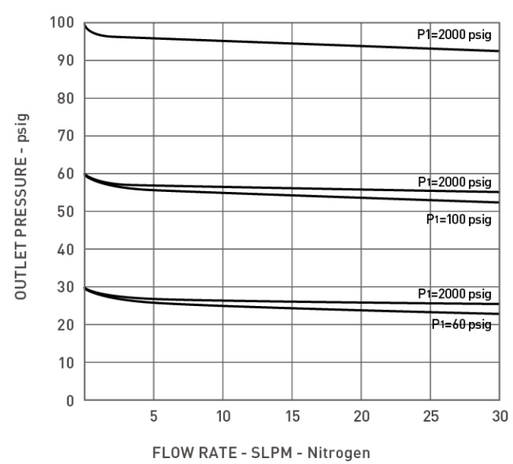
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- The RCT01 series ultra high purity, tied diaphragm pressure reducing regulator provides excellent stability of set pressure with accuracy, sensitivity.
- Internal springless and threadless design and low internal volume minimizes particles
- Metal to metal diaphragm seals provide enhanced leak integrity
- Positive shutoff seal reduces creep
- Optimum performance and cleanliness at a great value
- All performed in class 100 and class 10 clean rooms

Flow Chart



How To Order

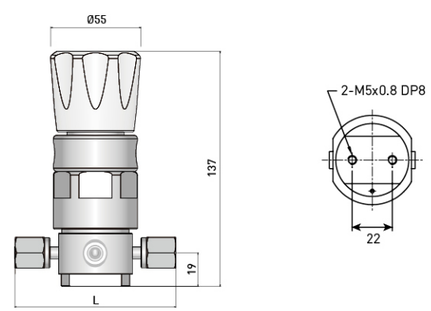
RCT01	C	-	04F	-	22	2	3	-	2			
Regulator Type	Connection Type		Connection Size		Inlet /Outlet Pressure	Gauge Port Option	Outlet Gauge		Body Material	Surface Finish	Trim Material	Seat Material

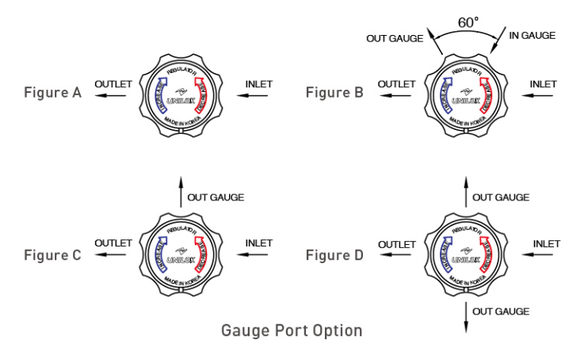
Regulator Type	
RCT01	UHP Regulator
Connection Type	
C-*M	Male UCR Swivel
C-*F	Female UCR Swivel
WB-*T	Tube Butt Weld
Connection Size	
04	1/4 inch
Maximum Inlet Pressure	
1	3500 psig / 241bar
2	600 psig / 41.4 bar

Outlet Pressure Range	
0	1~30 psig / 0.1~2.1 bar
1	1~60 psig / 0.1~4.1 bar
2	1~100 psig / 0.1~6.9 bar
Gauge Port Option	
None	None (Fig. A)
1	1/4" Internal UCR (Fig. B)
2	1/4" Internal UCR (Fig. C)
3	1/4" Internal UCR (Fig. D)
4	1/4" Male Swivel (Fig. B)
5	1/4" Male Swivel (Fig. C)
6	1/4" Male Swivel (Fig. D)
7	1/4" Female Swivel (Fig. B)
8	1/4" Female Swivel (Fig. C)
9	1/4" Female Swivel (Fig. D)

Outlet Gauge	
None	No Gauge
0	0~30 psig
1	0~60 psig
2	0~100 psig
3	0~160 psig
Body Material	
2	316L VAR Stainless Steel
Internal Surface Finish	
None	EP – Electro Polished
BA	BA
Trim Material	
None	316 SS
H	Hastelloy®
Seat Material	
None	PCTFE
V	Vespel®

Ordering Information & Dimensions





Gauge Port Option

Part Number		End Connection		Dimensions(mm)
		Inlet	Outlet	L ± 1
RCT01	C-04M-	1/4" Male UCR Swivel		94
	C-04F-	1/4" Female UCR Swivel		94
	WB-04T-	1/4" Tube Butt Weld		76.2

Dimensions are for reference only and are subject to change without prior notice.

RCT02 Series

Tied Diaphragm

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	600, 1000, 3500 psig (41.4, 69.0, 241 bar)
Outlet Pressure Range	30, 60, 100, 150 psig (2.1, 4.1, 6.9, 10.3 bar)
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40˚F~140˚F)
Vespel® Seat	-40~177℃ (-40˚F~350˚F)

Flow Capacity

Flow Capacity	0.5 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec

Media Contact Materials

Body	316L VAR Stainless Steel
Diaphragm	316L Stainless Steel or Hastelloy®
Seat	PCTFE (Optional Vespel®)
Poppet	316L Stainless Steel or Hastelloy®
Rear Seal	316L Stainless Steel

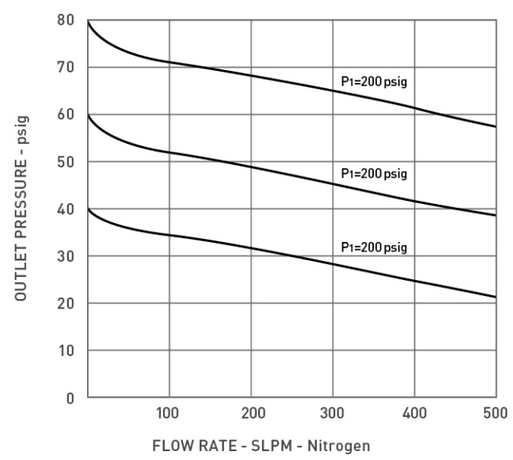
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- The RCT02 series ultra high purity, tied diaphragm pressure reducing regulator provides excellent stability of set pressure with accuracy, sensitivity.
- Internal springless and threadless design and low internal volume minimizes particles
- Metal to metal diaphragm seals provide enhanced leak integrity
- Positive shutoff seal reduces creep
- Optimum performance and cleanliness at a great value
- All performed in class 100 and class 10 clean rooms

Flow Chart



How To Order

RCT02	C	-	08F	-	32	2	3	-	2			
Regulator Type	Connection Type		Connection Size		Inlet/Outlet Pressure	Gauge Port Option	Outlet Gauge		Body Material	Surface Finish	Trim Material	Seat Material

Regulator Type	
RCT02	UHP Regulator

Connection Type	
C-*M	Male UCR Swivel
C-*F	Female UCR Swivel
WB-*T	Tube Butt Weld
U-*T	UNILOK Tube Fitting

Connection Size	
06	3/8 inch
08	1/2 inch

Maximum Inlet Pressure	
1	3500 psig / 241 bar
2	2200 psig / 151.7 bar
3	1000 psig / 68.9 bar
4	600 psig / 41.4 bar

Outlet Pressure Range	
0	1~30 psig / 0.1~2.1 bar
1	1~60 psig / 0.1~4.1 bar
2	1~100 psig / 0.1~6.9 bar
3	1~130 psig / 0.1~8.9 bar
4	1~150 psig / 0.1~10.3 bar

Gauge Port Option	
None	None (Fig. A)
1	1/4" Internal UCR (Fig. B)
2	1/4" Internal UCR (Fig. C)
3	1/4" Internal UCR (Fig. D)
4	1/4" Male Swivel (Fig. B)
5	1/4" Male Swivel (Fig. C)
6	1/4" Male Swivel (Fig. D)
7	1/4" Female Swivel (Fig. B)
8	1/4" Female Swivel (Fig. C)
9	1/4" Female Swivel (Fig. D)

Outlet Gauge	
None	No Gauge
0	0~30 psig
1	0~60 psig
2	0~100 psig
3	0~160 psig
4	0~200 psig

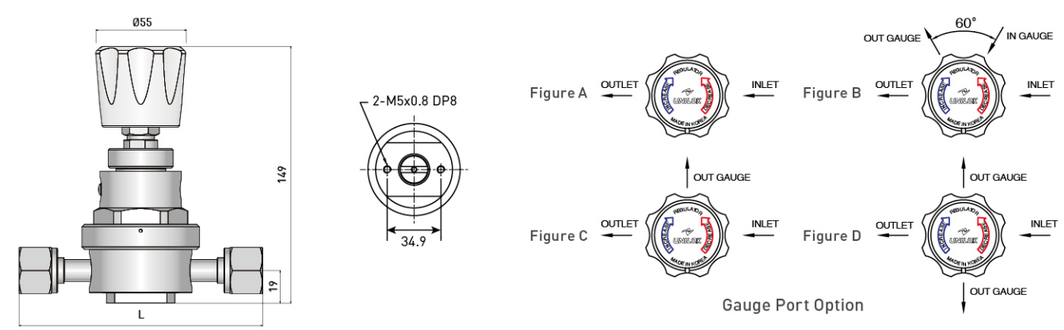
Body Material	
2	316L VAR Stainless Steel

Internal Surface Finish	
None	EP – Electro Polished
BA	BA

Trim Material	
None	316 SS
H	Hastelloy®

Seat Material	
None	PCTFE
V	Vespel®

Ordering Information & Dimensions



Part Number		End Connection		Dimensions(mm)
		Inlet	Outlet	L ± 1
RCT02	U-06T	3/8" UNILOK Tube Fitting		163
	U-08T	1/2" UNILOK Tube Fitting		152.4
	C-08M-	1/2" Male UCR Swivel		142
	C-08F-	1/2" Female UCR Swivel		142
	WB-06T-	3/8" Tube Butt Weld		94
	WB-08T-	1/2" Tube Butt Weld		94

Dimensions are for reference only and are subject to change without prior notice.

RCM3 Series

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	500 psig (34.5 bar)
Outlet Pressure Range	30, 60, 100 psig (2.1, 4.1, 6.9 bar)
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40℉~140℉)
Vespel® Seat	-40~177℃ (-40℉~350℉)

Flow Capacity

Flow Capacity	0.1 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec

Media Contact Materials

Body	316L Stainless Steel
Diaphragm	Hastelloy®
Seat	PCTFE
Poppet	316 Stainless Steel or Hastelloy®
Rear Seal	316L Stainless Steel

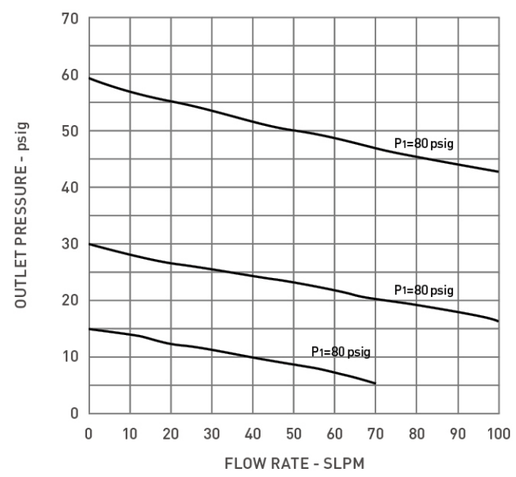
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- The RCM3 series ultra high purity, pressure reducing regulator provides precise performance and repeatability
- Compact size
- Low internal volume
- Metal to metal diaphragm seals provide enhanced leak integrity
- Optimum performance and cleanliness at a great value
- All performed in class 100 and class 10 clean rooms

Flow Chart



How To Order

RCM3	C	-	04F	-	11	1	1	-	2		
Regulator Type	Connection Type		Connection Size		Inlet /Outlet Pressure	Gauge Port Option	Outlet Gauge		Body Material	Surface Finish	Trim Material

Regulator Type	
RCM3	UHP Regulator

Connection Type	
C-*M	Male UCR Swivel
C-*F	Female UCR Swivel
WB-*T	Tube Butt Weld

Connection Size	
04	1/4 inch

Maximum Inlet Pressure	
1	500 psig / 34.5 bar

Outlet Pressure Range	
0	1~30 psig / 0.1~2.1 bar
1	1~60 psig / 0.1~4.1 bar
2	1~100 psig / 0.1~6.9 bar

Gauge Port Option	
None	None (Fig. A)
1	1/4" Male Swivel (Fig. B)
2	1/4" Female Swivel (Fig. B)

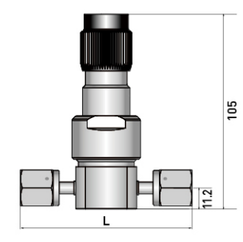
Outlet Gauge	
None	No Gauge
0	0~30 psig
1	0~60 psig
2	0~100 psig
3	0~150 psig

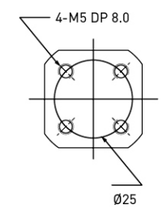
Body Material	
2	316L VAR Stainless Steel
4	316L Stainless Steel

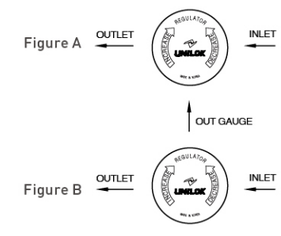
Internal Surface Finish	
None	EP – Electro Polished
BA	BA

Trim Material	
None	316 SS
H	Hastelloy®

Ordering Information & Dimensions





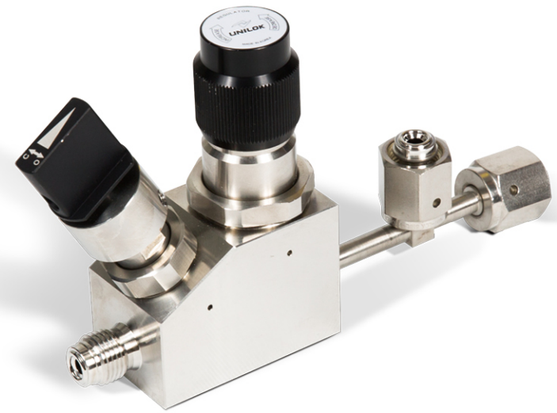


Gauge Port Option

Part Number		End Connection		Dimensions(mm)
		Inlet	Outlet	L ± 1
RCM3	C-04M-	1/4" Male UCR Swivel		73.8
	C-04F-	1/4" Female UCR Swivel		70.6
	WB-04T-	1/4" Tube Butt Weld		57.0

Dimensions are for reference only and are subject to change without prior notice.

RCB Series



Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	120, 150 psig (8.3, 10.3 bar)
Outlet Pressure Range	30, 60, 100 psig (2.1, 4.1, 6.9 bar)
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40℉~140℉)
Vespel® Seat	-40~177℃ (-40℉~350℉)

Flow Capacity

Flow Capacity	0.06 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec He

Media Contact Materials

Body	316L Stainless Steel
Diaphragm regulator	Hastelloy®
Diaphragm Valve	Elgiloy®
Seat	PCTFE
Poppet	Hastelloy®

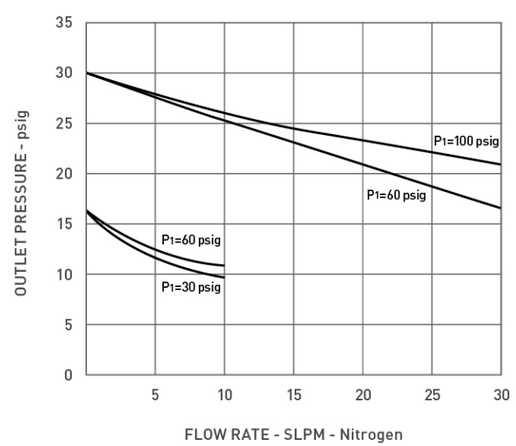
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- The RCB series ultra high purity, pressure reducing regulator and Diaphragm Valve mounted in a single body construction
- Compact size
- Low internal volume
- Metal to metal diaphragm seals provide enhanced leak integrity
- Optimum performance and cleanliness at a great value
- All performed in class 100 and class 10 clean rooms

Flow Chart



How To Order

RCB	C	–	04MF	–	11	1	1	–	2	
Regulator Type	Connection Type		Connection Size		Inlet /Outlet Pressure	Gauge Port Option	Outlet Gauge		Body Material	Surface Finish

Regulator Type	
RCB	UHP Regulator

Valve Type	
1	Manual valve, in regulator
2	Manual valve, out regulator
3	Pneumatic valve, in regulator
4	Pneumatic valve, out regulator
5	LOTO valve, in regulator
6	LOTO valve, out regulator

Connection Type	
C-*M	Male UCR
C-*F	Female UCR
WB-*T	Tube Butt Weld

Connection Size	
04	1/4 inch

Maximum Inlet Pressure	
1	150 psig / 10.3 bar

Outlet Pressure Range	
0	1~30 psig / 0.1~2.1 bar
1	1~60 psig / 0.1~4.1 bar
2	1~100 psig / 0.1~6.9 bar

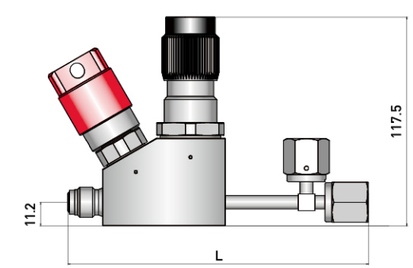
Gauge Port Option	
None	None (Fig. A)
1	1/4" Male Swivel
2	1/4" Female Swivel

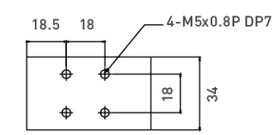
Outlet Gauge	
None	No Gauge
0	0~30 psig
1	0~60 psig
2	0~100 psig
3	0~160 psig

Body Material	
2	316L VAR Stainless Steel
4	316L Stainless Steel

Internal Surface Finish	
None	EP – Electro Polished
BA	BA

Ordering Information & Dimensions





Part Number		End Connection		Dimensions(mm)
		Inlet	Outlet	L ± 1
RCB*	C-04M-	1/4" Male UCR		152.4
	C-04F-	1/4" Female UCR		152.4

Dimensions are for reference only and are subject to change without prior notice.

RCI Series

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	150 psig (10.3 bar)
Outlet Pressure Range	30, 60, 100 psig (2.1, 4.1, 6.9 bar)
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40℉~140℉)
Vespel® Seat	-40~177℃ (-40℉~350℉)

Flow Capacity

Flow Capacity	0.06 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec He

Media Contact Materials

Body	316L VAR Stainless Steel
Diaphragm	Hastelloy®
Seat	PCTFE
Poppet	Hastelloy®

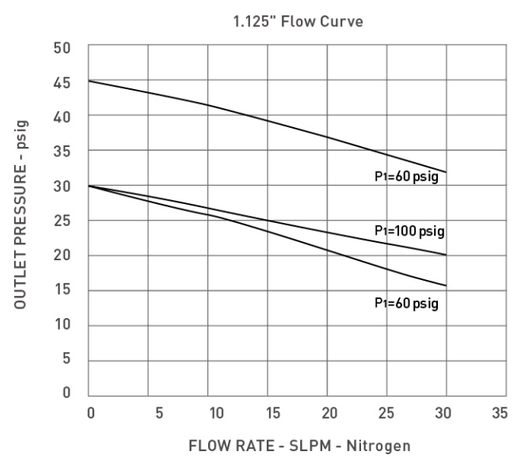
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- The RCI series ultra high purity, tied diaphragm pressure reducing regulator provides excellent stability of set pressure with accuracy, sensitivity.
- Internal springless and threadless design and low internal volume minimizes particles
- Compact size
- Positive shutoff seal reduces creep
- Metal to metal diaphragm seals provide enhanced leak integrity
- Optimum performance and cleanliness at a great value
- All performed in class 100 and class 10 clean rooms

Flow Chart



How To Order

RCI	C	-	11W	-	11	-	2	
Regulator Type	Connection Type		Connection Size		Inlet / Outlet Pressure		Body Material	Surface Finish

Regulator Type	
RCI	UHP Regulator

Connection Type	
C-*W	W-Seal
C-*C	C-Seal

Connection Size	
11	1.125"
15	1.5"

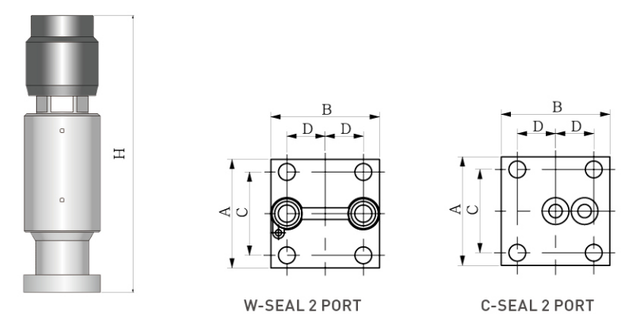
Maximum Inlet Pressure	
1	150 psig / 10.3 bar

Outlet Pressure Range	
0	1~30 psig / 0.1~2.1 bar
1	1~60 psig / 0.1~4.1 bar
2	1~100 psig / 0.1~6.9 bar

Body Material	
2	316L VAR Stainless Steel

Maximum Inlet Pressure	
None	EP – Electro Polished
BA	BA

Ordering Information & Dimensions



Part Number		End Connection		A	B	C	D	H
		Inlet	Outlet					
RCI	C-11W-	1.125" W-Seal		28.6	28.6	21.8	10.0	117.5
	C-11C-	1.125" C-Seal		28.6	28.6	21.8	10.9	117.5
	C-15W-	1.5" W-Seal		39.0	39.0	30.0	13.0	119.0
	C-15C-	1.5" C-Seal		39.0	39.0	30.2	15.5	119.0

Dimensions are for reference only and are subject to change without prior notice.

RCV2 Series

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	300, 600, 1000, 3500 psig (41.4, 69.0, 241 bar)
Outlet Pressure Range	-30 in Hg-15 psig, 3-30, 3-60, 4-100, 4-150 psig
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40℉~140℉)
Vespel® Seat	-40~177℃ (-40℉~350℉)

Flow Capacity

Flow Capacity	0.5 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec He

Media Contact Materials

Body	316L Stainless Steel
Diaphragm	316L Stainless Steel or Hastelloy
Seat	PCTFE (Optional Vespel®)
Poppet	316 Stainless Steel or Hastelloy®
Rear Seal	316L Stainless Steel

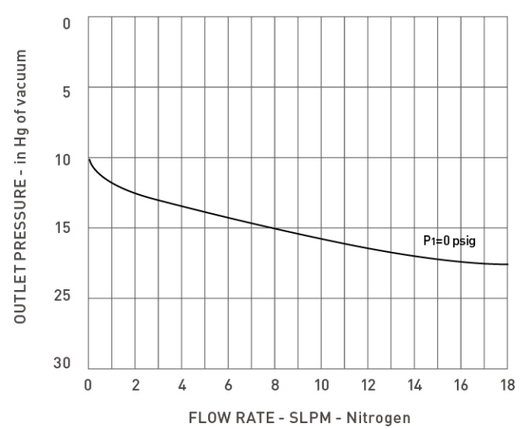
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- The RCV2 series ultra high purity, non-tied diaphragm pressure reducing regulator provides excellent stability of set pressure with accuracy.
- Internal threadless design and low internal volume
- Negative pressure range model is available
- Metal to metal diaphragm seals provide enhanced leak integrity
- Optimum performance and cleanliness at a great value
- All performed in class 100 and class 10 clean rooms

Flow Chart



How To Order

RCV2	C	-	08F	-	40	2	0	-	2			
Regulator Type	Connection Type		Connection Size		Inlet / Outlet Pressure	Gauge Port Option	Outlet Gauge		Body Material	Surface Finish	Trim Material	Seat Material

Regulator Type	
RCV2	UHP Regulator

Connection Type	
C-*M	Male UCR Swivel
C-*F	Female UCR Swivel
WB-*T	Tube Butt Weld

Connection Size	
06	3/8 inch
08	1/2 inch

Maximum Inlet Pressure	
1	3500 psig / 241 bar
2	1000 psig / 69.0 bar
3	600 psig / 41.4 bar
4	300 psig / 20.7 bar

Outlet Pressure Range	
0	-30 in Hg~15psig / -30 in Hg~1.0 bar
1	3~30 psig / 0.2~2.1 bar
2	3~60 psig / 0.2~4.1 bar
3	4~100 psig / 0.3~6.9 bar
4	4~150 psig / 0.3~10.3 bar

Gauge Port Option	
None	None (Fig. A)
1	1/4" Internal UCR (Fig. B)
2	1/4" Internal UCR (Fig. C)
3	1/4" Internal UCR (Fig. D)
4	1/4" Male Swivel (Fig. B)
5	1/4" Male Swivel (Fig. C)
6	1/4" Male Swivel (Fig. D)
7	1/4" Female Swivel (Fig. B)
8	1/4" Female Swivel (Fig. C)
9	1/4" Female Swivel (Fig. D)

Outlet Gauge	
None	No Gauge
0	-30 inHg~30 psig
1	0~60 psig
2	0~100 psig
3	0~160 psig
4	0~200 psig

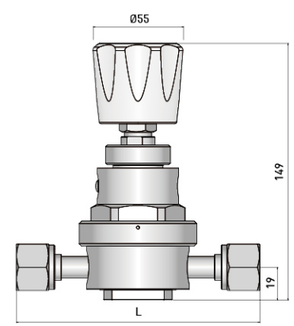
Body Material	
2	316L VAR Stainless Steel
4	316L Stainless Steel

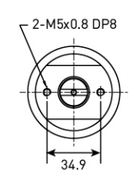
Internal Surface Finish	
None	EP – Electro Polished
BA	BA

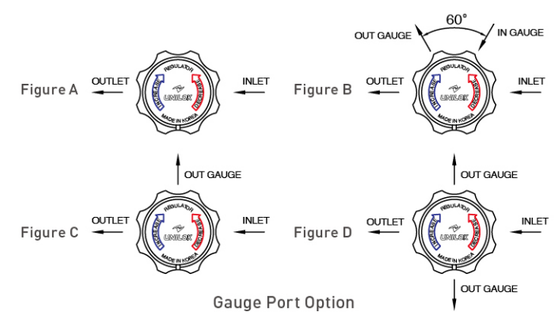
Trim Material	
None	316 SS
H	Hastelloy®

Seat Material	
None	PCTFE
V	Vespel®

Ordering Information & Dimensions







Part Number		End Connection		Dimensions(mm)
		Inlet	Outlet	L ± 1
RCV2	C-08M-	1/2" Male UCR Swivel		142
	C-08F-	1/2" Female UCR Swivel		142
	WB-06T-	3/8" Tube Butt Weld		94
	WB-08T-	1/2" Tube Butt Weld		94

Dimensions are for reference only and are subject to change without prior notice.

RCTS1 Series

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	600 or 3500 psig (41.4 or 241 bar)
Outlet Pressure Range	30, 60, 100, 150 psig (2.1, 4.1, 6.9, 10.3 bar)
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40℉~140℉)
Vespel® Seat	-40~177℃ (-40℉~350℉)

Flow Capacity

3500 psig / 241 bar	0.06 Cv
600 psig / 41.4 bar	0.15 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec He

Media Contact Materials

Body	316L Stainless Steel
Diaphragm	316L Stainless Steel or Hastelloy®
Seat	PCTFE (Optional Vespel®)
Poppet	316 Stainless Steel or Hastelloy®
Retainer	316L Stainless Steel

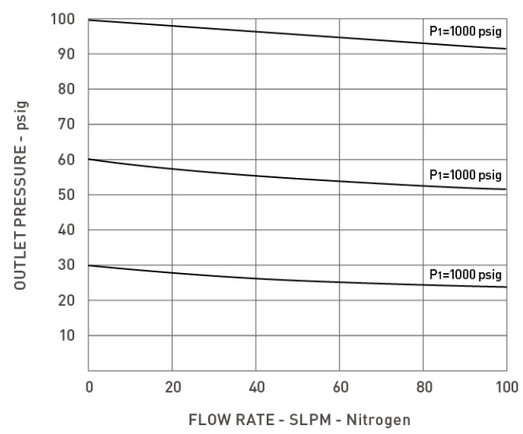
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- The RCTS1 series ultra high purity, tied diaphragm pressure reducing regulator provides excellent stability of set pressure with accuracy, sensitivity.
- Low internal volume
- Metal to metal diaphragm seals provide enhanced leak integrity
- Positive shutoff seal reduces creep
- Optimum performance and cleanliness at a great value
- All performed in class 100 and class 10 clean rooms

Flow Chart



How To Order

RCTS1	C	-	04F	-	22	2	3	-	2			
Regulator Type	Connection Type		Connection Size		Inlet / Outlet Pressure	Gauge Port Option	Outlet Gauge		Body Material	Surface Finish	Trim Material	Seat Material

Regulator Type	
RCTS1	UHP Regulator

Connection Type	
C-*M	Male UCR Swivel
C-*F	Female UCR Swivel
WB-*T	Tube Butt Weld

Connection Size	
04	1/4 inch

Maximum Inlet Pressure	
1	3500 psig / 241bar
2	600 psig / 41.4 bar

Outlet Pressure Range	
0	1~30 psig / 0.1~2.1 bar
1	1~60 psig / 0.1~4.1 bar
2	1~100 psig / 0.1~6.9 bar
3	1~150 psig / 0.1~10.3 bar

Gauge Port Option	
None	None (Fig. A)
1	1/4" Internal UCR (Fig. B)
2	1/4" Internal UCR (Fig. C)
3	1/4" Internal UCR (Fig. D)
4	1/4" Male Swivel (Fig. B)
5	1/4" Male Swivel (Fig. C)
6	1/4" Male Swivel (Fig. D)
7	1/4" Female Swivel (Fig. B)
8	1/4" Female Swivel (Fig. C)
9	1/4" Female Swivel (Fig. D)

Outlet Gauge	
None	No Gauge
0	0~30 psig
1	0~60 psig
2	0~100 psig
3	0~160 psig
4	0~200 psig

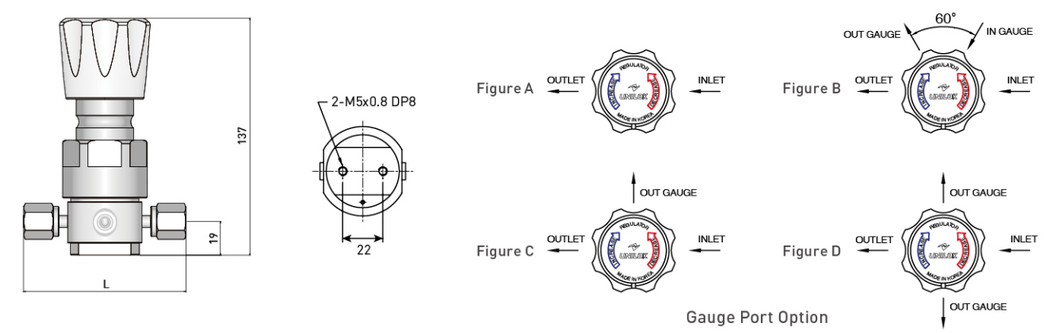
Body Material	
2	316L VAR Stainless Steel
4	316L Stainless Steel

Internal Surface Finish	
None	EP – Electro Polished
BA	BA

Trim Material	
None	316 SS
H	Hastelloy®

Seat Material	
None	PCTFE
V	Vespel®

Ordering Information & Dimensions



Part Number		End Connection		Dimensions(mm)
		Inlet	Outlet	L ± 1
RCTS1	C-04M-	1/4" Male UCR Swivel		94
	C-04F-	1/4" Female UCR Swivel		94
	WB-04T-	1/4" Tube Butt Weld		76.2

Dimensions are for reference only and are subject to change without prior notice.

RCTS2 Series

Specification

Pressure Ratings

Per criteria of ANSI/ASME B31.3

Max. Inlet Pressure	600, 1000, 3500 psig (41.4, 69.0, 241 bar)
Outlet Pressure Range	30, 60, 100, 150 psig (2.1, 4.1, 6.9, 10.3 bar)
Design Proof Pressure	150% of maximum rated

Operating Temperature

PCTFE Seat	-40~60℃ (-40℉~140℉)
Vespel® Seat	-40~177℃ (-40℉~350℉)

Flow Capacity

Flow Capacity	0.5 Cv

Helium Leak Test

Inboard Leak Rate	$1x10^{-9}$ atm cc/sec He

Media Contact Materials

Body	316L Stainless Steel
Diaphragm	316L Stainless Steel or Hastelloy®
Seat	PCTFE (Optional Vespel®)
Poppet	316 Stainless Steel or Hastelloy®
Retainer	316L Stainless Steel

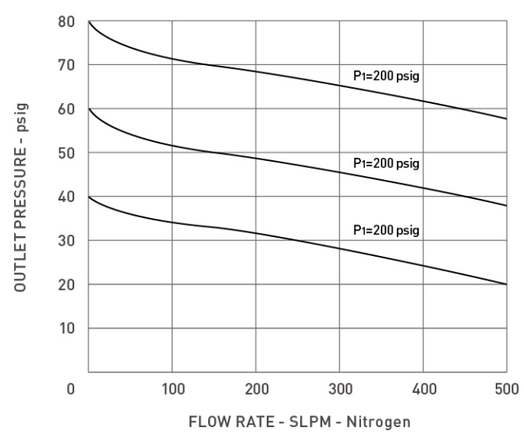
Internal Surface Finish

Designator	Surface Finish(μm)	
	Average	Maximum
BA	< 0.4	< 1.6
EP	< 0.125	< 0.4

Features

- The RCTS2 series ultra high purity, tied diaphragm pressure reducing regulator provides excellent stability of set pressure with accuracy, sensitivity.
- Low internal volume
- Metal to metal diaphragm seals provide enhanced leak integrity
- Positive shutoff seal reduces creep
- Optimum performance and cleanliness at a great value
- All performed in class 100 and class 10 clean rooms

Flow Chart



How To Order

RCTS2	C	-	08F	-	22	2	3	-	2			
Regulator Type	Connection Type		Connection Size		Inlet / Outlet Pressure	Gauge Port Option	Outlet Gauge		Body Material	Surface Finish	Trim Material	Seat Material

Regulator Type	
RCTS2	UHP Regulator

Connection Type	
C-*M	Male UCR Swivel
C-*F	Female UCR Swivel
WB-*T	Tube Butt Weld
U-*T	UNILOK Tube Fitting

Connection Size	
06	3/8 inch
08	1/2 inch

Maximum Inlet Pressure	
1	3500 psig / 241 bar
2	1000 psig / 69.0 bar
3	600 psig / 41.4 bar

Outlet Pressure Range	
0	1~30 psig / 0.1~2.1 bar
1	1~60 psig / 0.1~4.1 bar
2	1~100 psig / 0.1~6.9 bar
3	1~150 psig / 0.1~10.3 bar

Gauge Port Option	
None	None (Fig. A)
1	1/4" Internal UCR (Fig. B)
2	1/4" Internal UCR (Fig. C)
3	1/4" Internal UCR (Fig. D)
4	1/4" Male Swivel (Fig. B)
5	1/4" Male Swivel (Fig. C)
6	1/4" Male Swivel (Fig. D)
7	1/4" Female Swivel (Fig. B)
8	1/4" Female Swivel (Fig. C)
9	1/4" Female Swivel (Fig. D)

Outlet Gauge	
None	No Gauge
0	0~30 psig
1	0~60 psig
2	0~100 psig
3	0~160 psig
4	0~200 psig

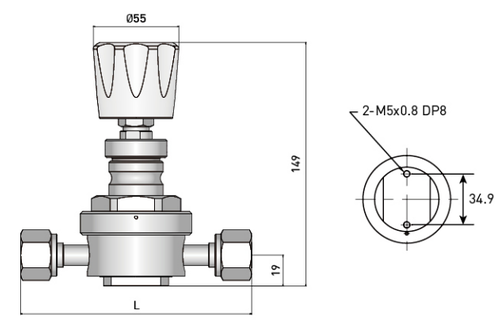
Body Material	
2	316L VAR Stainless Steel
4	316L Stainless Steel

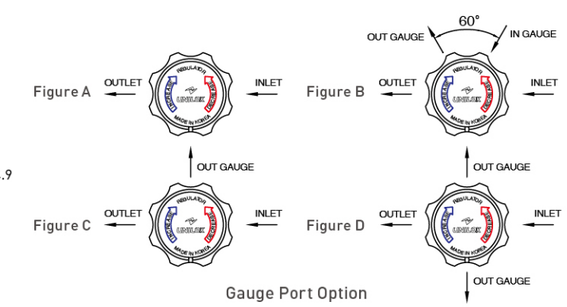
Internal Surface Finish	
None	EP – Electro Polished
BA	BA

Trim Material	
None	316 SS
H	Hastelloy®

Seat Material	
None	PCTFE
V	Vespel®

Ordering Information & Dimensions





Part Number		End Connection		Dimensions(mm)
		Inlet	Outlet	L ± 1
RCTS2	U-06T	3/8" UNILOK Tube Fitting		163
	U-08T	1/2" UNILOK Tube Fitting		152.4
	C-08M-	1/2" Male UCR Swivel		142
	C-08F-	1/2" Female UCR Swivel		142
	WB-06T-	3/8" Tube Butt Weld		94
	WB-08T-	1/2" Tube Butt Weld		94

Dimensions are for reference only and are subject to change without prior notice.

Catalog Jan. 2020

WITH THE SAME ATTITUDE OF THE TIME OF BEGINNING

UNILOK

(주) 유니락

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