GAS AND LIQUID CONTROL TECHNOLOGY WITH DRASTAR

DRASTAR

Dragon Precision Industry LTD.

안녕하십니까. 저희 "㈜드래곤 정공"은 고객 여러분의 성원에 힘입어 거듭 성장해 왔습니다. 저희는 고객 지향적 마인드와 최고 품질의 제품으로 무장하지 않으면 시장에서 절대 강자가 될수 없다는 신념을 되새기며, 지난 10여년 동안 인재와 기술을 기초로 한 최고 품질의 신기술 연구를 통해 기술확보와 함께 국내 및 해외에서 선도적인 역할을 담당하였다고 자부합니다. 당사는앞으로도 더욱 더 연구와 개발에 힘쓸 것이며, 가스 조정기에 관한 한 세계 최고의 제품만을 생산, 제작하여 고객의 요구에 가장 적합한 제품을 만들기 위해 끊임없이 노력하는 "㈜드래곤 정공"이 되기 위해 노력하겠습니다. 당사의 제품에 이상이나 의문점이 있으시면 언제라도 E-mail 또는 전화 연락 주시면 성심 성의껏 바로 처리할 것을 약속드립니다.
언제나 여러분의 가정에 행복이 가득하시길 기원합니다.

대표이사 윤 승 찬

We, Dragon Precision Industry Ltd. have found the Company on June, 1996, and produced the gas regulators and are a manufacturer specialized in the production of special gas regulators of ultra-high purity pressure reducing regulator (VCR &Lock type) which are mainly applicable to semiconductor production line and the liquid & gas regulators suitable for any corrosive gases as well. We, Dragon Precision Industry Ltd.,So far, have developed various products from B. A.(23Ra) grade to E. P. 10Ra / 5Ra grades suitable for semiconductor production lines. With our accumulated experience and technology in this field, we have actively been exporting our proven products to more than 20 countries such as England, Australia, New Zealand, and Israel, etc.

Our gas regulators are the most essential products in the semiconductor industry, petrochemical industry, and the general industrial facilities due to the speedy and advanced industrial development, and we believe that they are also the most needed products in those fields.

Dragon Precision Industry Ltd. always try to lead the market with the newest products and the best quality by continuous developments of technology even before the customers want to have them. We cherish customers and hope to remain close to them, and that is why we do not spare our efforts for the investments and developments of technology and that is our company' s policy.

President **Seung-Chan, Yun**

DRA100 SERIES

ULTRA-HIGH PURITY

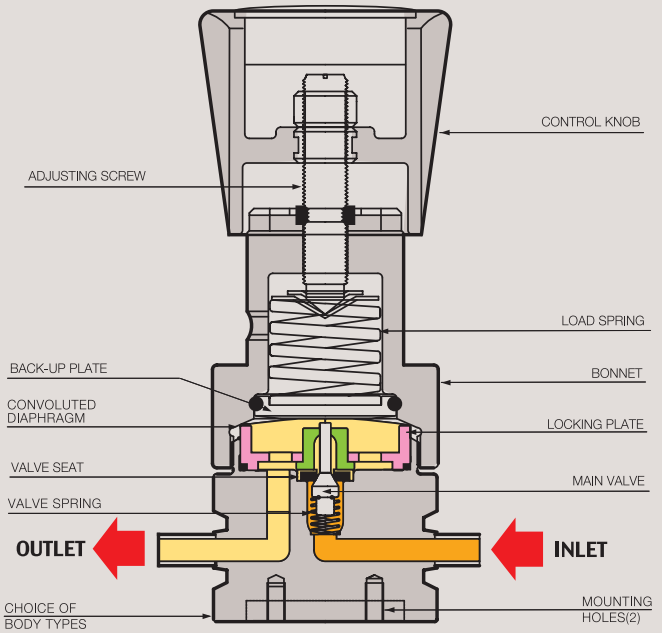
Pressure Reducing Regulator

DRA100 SERIES

This is revision by Jan of 2010

DRA100 SERIES

FUNCTIONAL SCHEMATIC



ULTRA-HIGH PURITY / PRESSURE REDUCING REGULATOR

DRA100 SERIES(VCR Type Regulator)

DRA100 시리즈는 초고순도 반도체 제조용 특수 가스 라인, Bulk Gas Line , 기타 설비 라인 등에 사용하도록 고안된 Pressure Reducing Regulator입니다. 반도체 생산 hook-up 라인 등에 사용되도록 내부 표면은 B. A. 급에서 E. P 10 Ra, 5 Ra급까지 처리하였습니다. DRASTAR만의 Locking-Plate Seal방식을 개발하여 특허 출원을 하였으며, 특허(10-0753280) 출원한 Locking-Plate 방식이 적용된 제품입니다. DRA100 시리즈는 조립, 용접, 실험과 세정까지의 모든 공정은 100-class와 10-class 크린룸에서 모든 작업이 이루어집니다. 모든 DRASTAR Regulators는 외부적인 진동과 가스 배관 라인의 미세 진동 등으로 인하여 초기 셋팅 값이 스스로 변하는 현상를 완전히 해결한 드라스타만의 Push and Lock 타입의 조절 손잡이를 적용하여 사용하기에 더욱 편리합니다. 조절 손잡이를 누르면 셋팅값이 변하는 것을 방지하며, 손잡이를 위로 올려 자유롭게 원하는 압력으로 다시 셋팅 할 수 있는 드라스타만의 특허 10-2009-0012957출원한 Push and Lock 타입의 레귤레이터입니다.

DRA 100 Series is the pressure reducing regulator designed to use at the special manufacturing line of ultra-high pure semi-conductors, bulk gas lines, and other facility lines. In order to use at the semi-conductor hook-up line, etc., regulator' s internal surface is treated to the level of E.P. 10Ra, 5Ra under B. A. grade. A special locking-plate system which DRASTAR has developed and applied for patent (patent no. 10-0753280) is used for the regulator. All the process assembly, welding, testing and washing of this DRA 100 series is carried out and thoroughly managed in the 100-class and 10-class clean room. DRASTAR regulators are designed and manufactured for easier operation by equipping with the DRASTAR' s own developed push and lock type handle which completely prevents the self-change of pre-set value which can be caused by the vibration from outside or minute vibration at the gas pipeline. You can prevent the self-changing of pre-set value just by pushing the handle and reset the value freely by holding upward the handle. DRASTAR has created and applied patent for this push and lock system for DRASTAR regulators (patent number 10-2009-0012957).

Features

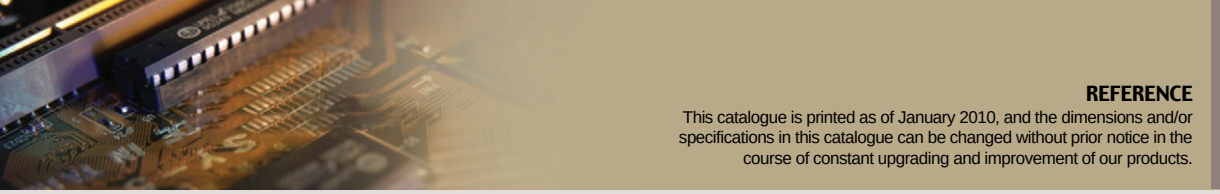
- VCR Type Regulator
- available for semiconductor applications
- Internal surfaces B. A. grade to E. P. 10 Ra, 5 Ra
- All performed in class 100 and class 10 clean-rooms
- Threadless type
- Locking-Plate Seal system(Patent No : 10-0753280)

권장 사항

각 제품들은 최고의 안전성과 쉬운 조작성을 고려하여 제작되었습니다. 그러나 가장 안전하고 효율적인 Regulator 사용을 위해서는 실제 사용 압력을 각각 모델의 사용 압력에 25% ~ 75% 이내에서 사용하면 가장 이상적인 압력을 사용할 수 있습니다, 정밀하고 원활한 동작과 제품의 수명 연장을 위해서는 위의 범위 내에서 사용하기를 적극 권장합니다.

Recommendations

Each product is manufactured since being taken into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe and effective way, you are recommended to use the actual pressure within the range of its 25% ~ 75%. For making precise, smooth movement and to prolong product life, strongly recommended to make a use within above mentioned range.



REFERENCE

This catalogue is printed as of January 2010, and the dimensions and/or specifications in this catalogue can be changed without prior notice in the course of constant upgrading and improvement of our products.

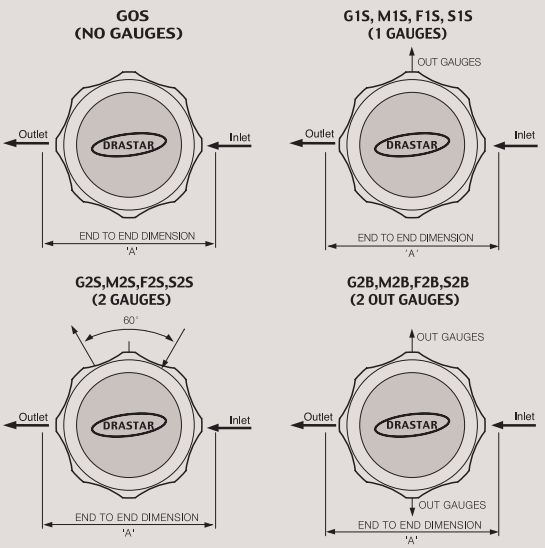
DRASTAR

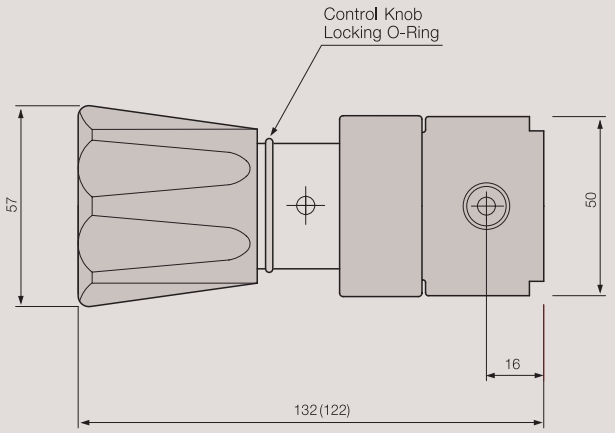
Dragon Precision Industry LTD.

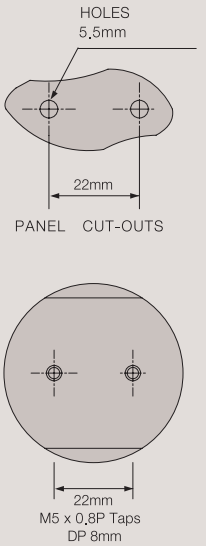
INSTALLATION DIMENSIONS

METRIC EQUIVALENTS ARE IN PARENTHESES

■ GAUGE PORT OPTIONS







ORDERING INFORMATION

DRA100 - A 025 S - L P O - 4MS - G0S

BASIC SERIES

BODY MATERIAL / FINISH

A = Bright Annealed	B.A.
B = STS 316L Electropolish	10Ra
C = STS 316L Internal Electropolish	10Ra
D = STS 316L Electropolish VAR Precision (P.E.P)	10Ra
E = STS 316L Electropolish VAR Precision (P.E.P)	5Ra

OUTLET PRESSURE RANGES

025 = 1-25PSIG (.1-1.7bar)
050 = 1-50PSIG (.1-3.5bar)
100 = 1-100PSIG (.1-7bar)
250 = 1-250PSIG (.1-17bar)

DIAPHRAGM MATERIAL

S = Stainless Steel 316L
H = Hastelloy-C

MAXIMUM INLET PRESSURE

L = 600PSIG (41bar)
H = 3500PSIG (238bar)

SEAT MATERIAL

P = PCTFE
T = Teflon®
V = Vespel®

GAUGE PORT OPTIONS / GAUGE PORTS

G0S = None	0
G1S = 1/4" H.P.I.C	1
G2S = 1/4" H.P.I.C	2
G2B = 1/4" H.P.I.C	2
M1S = 1/4" Male Swivel	1
M2S = 1/4" Male Swivel	2
M2B = 1/4" Male Swivel	2
F1S = 1/4" Female Swivel	1
F2S = 1/4" Female Swivel	2
F2B = 1/4" Female Swivel	2
S1S = 1/4" Fixed Male	1
S2S = 1/4" Fixed Male	2
S2B = 1/4" Fixed Male	2

INLET & OUTLET PORT SIZE & TYPE — "A"± 0.2mm

4HP = 1/4" H.P.I.C	
4MS = 1/4" Male Swivel	94.00
4FS = 1/4" Female Swivel	94.00
8MS = 3/8" Male Swivel	120.00
8FS = 3/8" Female Swivel	120.00
2MS = 1/2" Male Swivel	140.00
2FS = 1/2" Female Swivel	140.00
3MS = 3/4" Male Swivel	160.00
3FS = 3/4" Female Swivel	160.00
IMF = In Port 1/4" Male / Out Port Female	94.00
IFM = In Port 1/4" Female / Out Port Male	94.00
4TS = 1/4" Tube Stubs	94.00
8TS = 1/4" Tube Stubs	94.00
2TS = 1/4" Tube Stubs	120.00

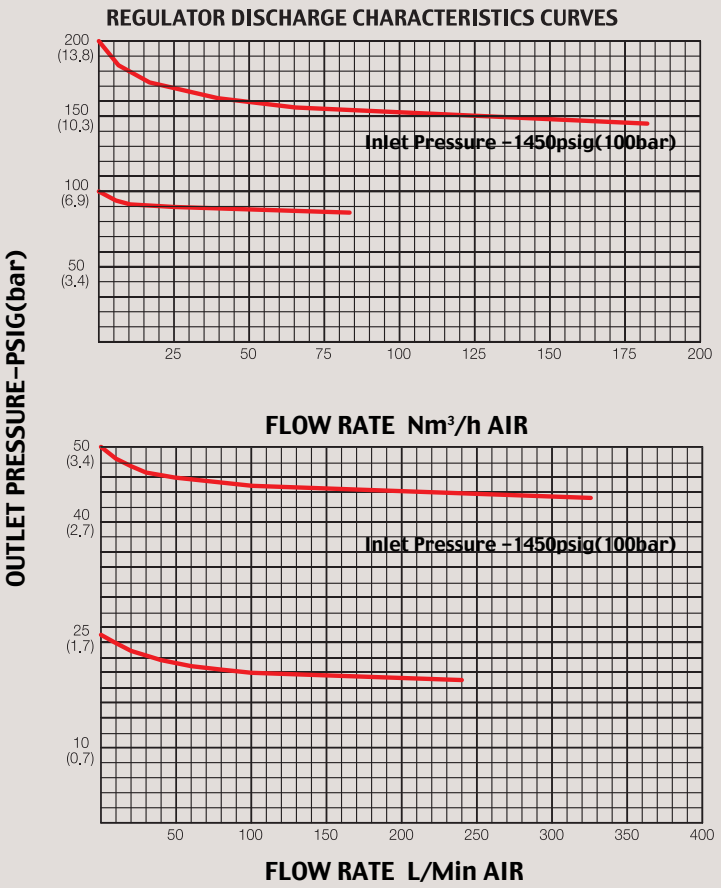
FLOW CAPACITY

O = Cv = 0.2 Standard (1/4")
Cv = 0.2 Standard (3/8")
S = Cv = 0.5 Standard (1/2")
O = Cv = 1.0 Optional (1/2")
S = Cv = 1.2 Standard (3/4")

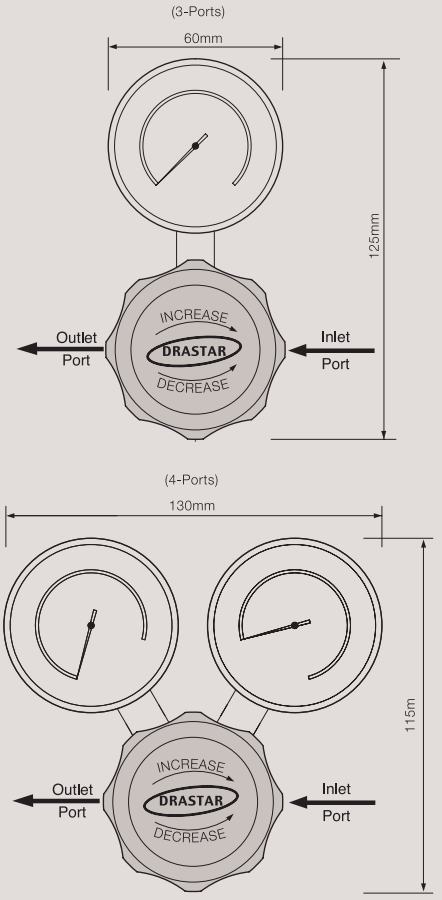
DRA100 SERIES

This is revision by Jan of 2010

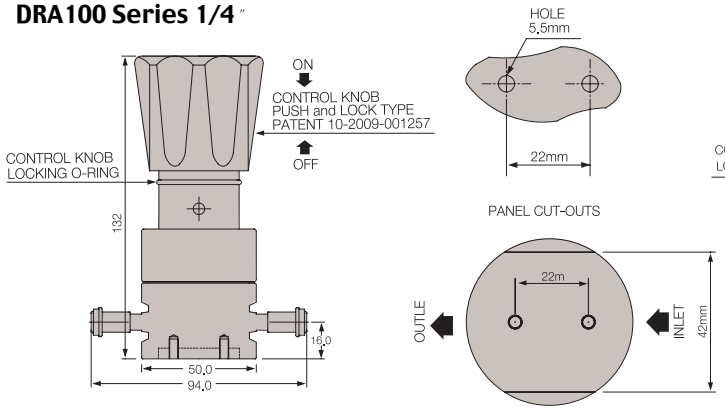
FLOW CHART



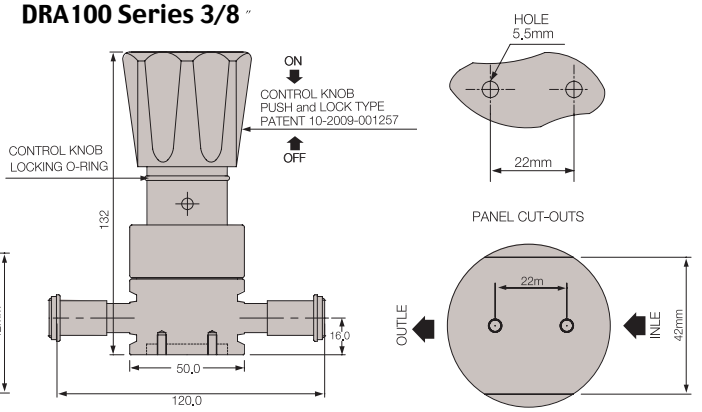
DRA100 Series for 1/4 ″ and 3/8 ″



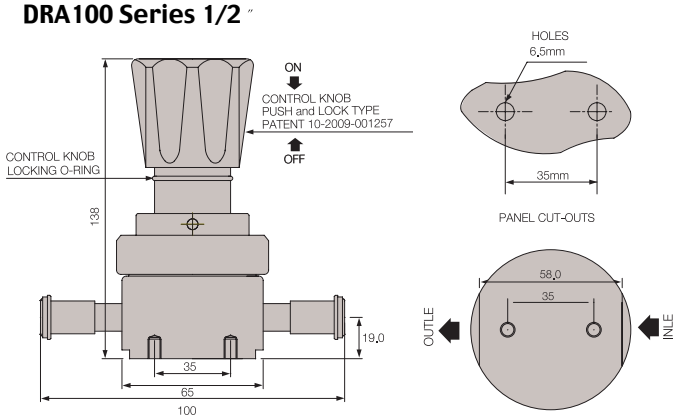
DRA100 Series 1/4 ″



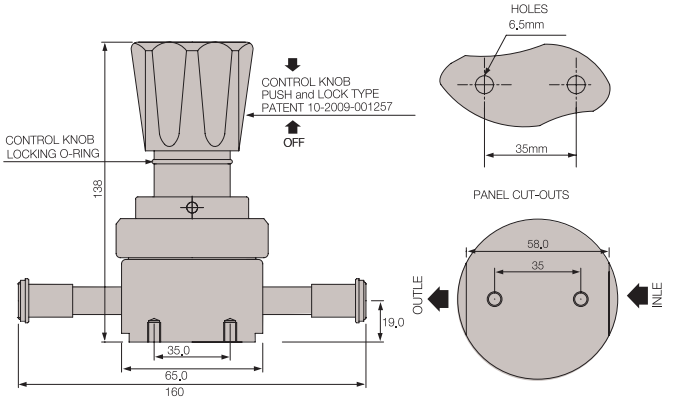
DRA100 Series 3/8 ″



DRA100 Series 1/2 ″



DRA100 Series 3/4 ″



DRA200 SERIES

ULTRA-HIGH PURITY

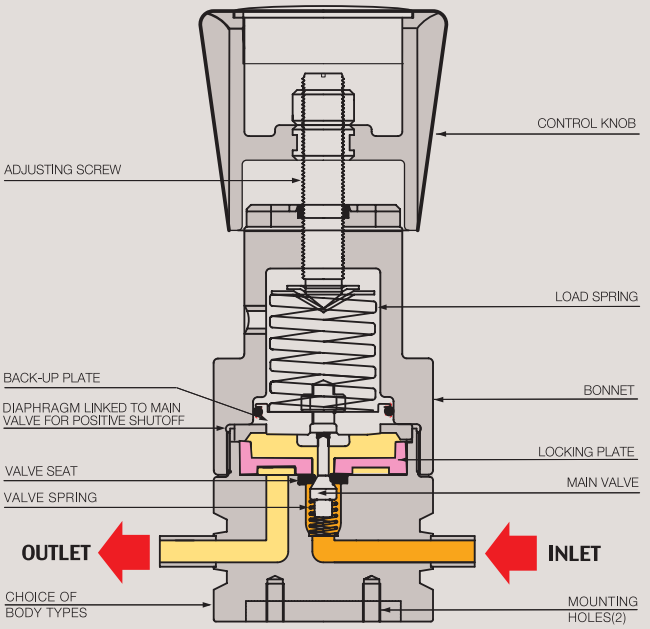
Positive Shutoff Regulator

DRA200 SERIES

This is revision by Jan of 2010

DRA200 SERIES

FUNCTIONAL SCHEMATIC



ULTRA-HIGH PURITY POSITIVE SHUTOFF REGULATOR

DRA200 SERIES(Tied Diaphragm Regulator)

DRA200(Tied type) 시리즈는 초고순도 반도체 제조용 Gas Cabinet, 특수 가스 라인, Valve Manifold Boxes, 기타 연구실 등에 사용하도록 고안된 Tied Diaphragm Pressure Reducing Regulator입니다. Tied type은 다이아프램과 메인 밸브를 연결시켜 이물질이 밸브 시트에 형성되더라도 압력 누설이 되지 않도록 최고의 안전성을 겸비한 방식으로 설계 고안된 제품입니다. 특히 독성 가스, 발화성 가스, 고부식성 가스등으로 다이아프램을 파열로 부터 안전하게 보호하는 데 유용하며, 특허(10-0753280) 출원한 Locking-Plate 방식이 적용된 제품입니다. DRA200 시리즈는 이물질 발생을 방지하기 위해 DI water 세정과 E. P 10 Ra, 5 Ra급으로 내부표면을 처리하였습니다. DRA200시리즈는 조립, 용접, 실험과 세정까지의 모든 공정은 100-class와 10-class 크린룸에서 모든 작업이 이루어집니다. 모든 DRASTAR Regulators는 외부적인 진동과 가스배관 라인의 미세 진동 등으로 인하여 초기 셋팅 값이 스스로 변하는 현상을 완전히 해결한 드라스타만의 Push and Lock 타입의 조절 손잡이를 적용하여 사용하기에 더욱 편리합니다. 조절 손잡이를 누르면 셋팅값이 변하는 것을 방지하며, 손잡이를 위로 올려 자유롭게 원하는 압력으로 다시 셋팅 할 수 있는 드라스타만의 특허 10-2009-0012957출원한 Push and Lock 타입의 레귤레이터입니다.

DRA200 (tied type) series is the tied-diaphragm pressure reducing regulator designed to use for gas cabinet for manufacturing the ultra-high pure semi-conductor, special gas line, valve manifold boxes, other laboratory, etc. Tied-diaphragm type regulator connects the diaphragm and main valve together which prevents pressure loss and so maximizes safety of the regulator. Specially, this model is very useful to protect the diaphragm from toxic gas, ignition gas, high-corrosive gases, etc., and patent-applied locking plate system is adopted (patent no. 10-0753280), too. In order to prevent generation of impurities, it is washed in DI water and the internal surface is treated to the grade of E.P. 10 Ra and 5 Ra. All processes of assembly, welding, testing and washing of DRA200 series are carried out and thoroughly managed in the 100-class and 10-class clean room. DRASTAR regulators are designed and manufactured for easier operation by equipping with the DRASTAR' s own developed push and lock type handle which completely prevents the self-change of pre-set value which can be caused by the vibration from outside or minute vibration at the gas pipeline. You can prevent the self-changing of pre-set value just by pushing the handle and reset the value freely by holding upward the handle. DRASTAR has created and applied patent for this push and lock system for DRASTAR regulators (patent number 10-2009-0012957).

Features

- Tied Diaphragm design for positive shut-off
- All semiconductor gas industry
- For toxic gas
- For pyrophoric gas
- For high corrosive gas
- For protecting the diaphragm from rupturing
- Locking-Plate Seal system(Patent No : 10-0753280)

권장 사항

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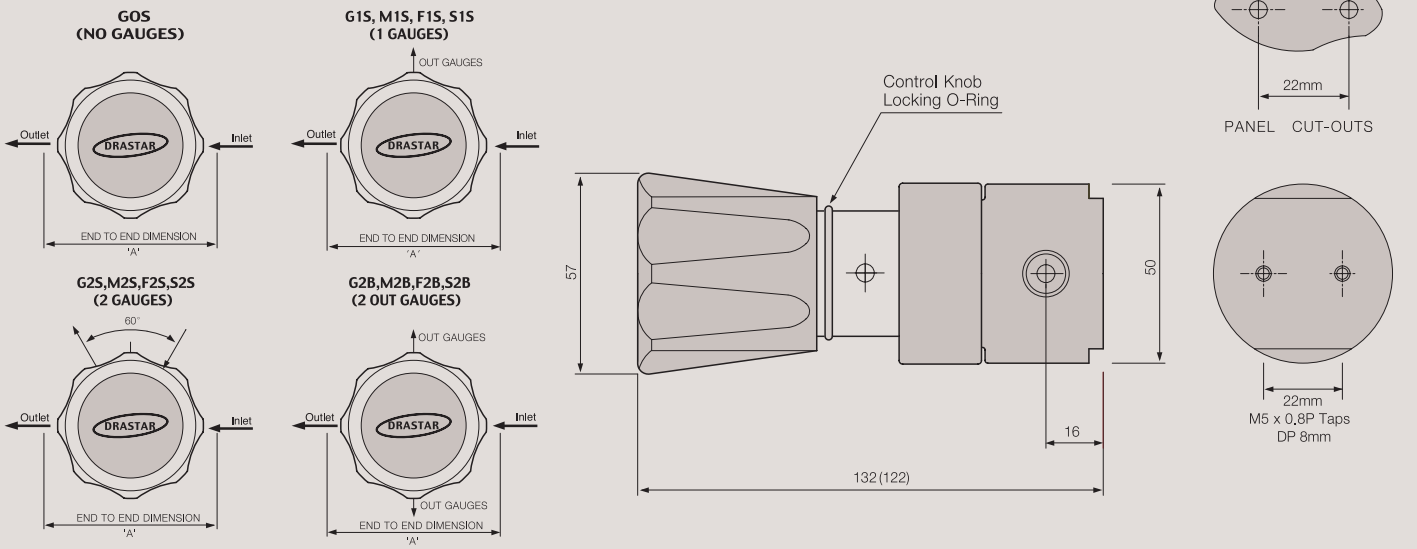
Recommendations to Use

Each product is manufactured since being taken into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe and effective way, you are recommended to use the actual pressure within the range of its 25% ~ 75%. For making precise, smooth movement and to prolong product life, strongly recommended to make a use within above mentioned range.

INSTALLATION DIMENSIONS
METRIC EQUIVALENTS ARE IN PARENTHESES

■ GAUGE PORT OPTIONS



ORDERING INFORMATION

DRA200 - A 025 S - L P O - 4MS - G0S

BASIC SERIES

BODY MATERIAL — FINISH
A = Bright Annealed ---------- B.A.
B = STS 316L Electropolish------- 10Ra
C = STS 316L Internal Electropolish-- 10Ra
D = STS 316L Electropolish ------- 10Ra
VAR Precision (P.E.P)
E = STS 316L Electropolish ------- 5Ra
VAR Precision (P.E.P)

OUTLET PRESSURE RANGES
025 = 1-25PSIG (.1-1.7bar)
050 = 1-50PSIG (.1-3.5bar)
100 = 1-100PSIG (.1-7bar)
250 = 1-250PSIG (.1-17bar)

DIAPHRAGM MATERIAL
S = Stainless Steel 316L
H = Hastelloy-C

MAXIMUM INLET PRESSURE
L = 600PSIG (41bar)
H = 3500PSIG (238bar)

SEAT MATERIAL
P = PCTFE
T = Teflon®
V = Vespel®

GAUGE PORT OPTIONS — GAUGE PORTS
G0S = None ---------- 0
G1S = 1/4" H.P.I.C ---------- 1
G2S = 1/4" H.P.I.C ---------- 2
G2B = 1/4" H.P.I.C ---------- 2
M1S = 1/4" Male Swivel ---------- 1
M2S = 1/4" Male Swivel ---------- 2
M2B = 1/4" Male Swivel ---------- 2
F1S = 1/4" Female Swivel ---------- 1
F2S = 1/4" Female Swivel ---------- 2
F2B = 1/4" Female Swivel ---------- 2
S1S = 1/4" Fixed Male ---------- 1
S2S = 1/4" Fixed Male ---------- 2
S2B = 1/4" Fixed Male ---------- 2

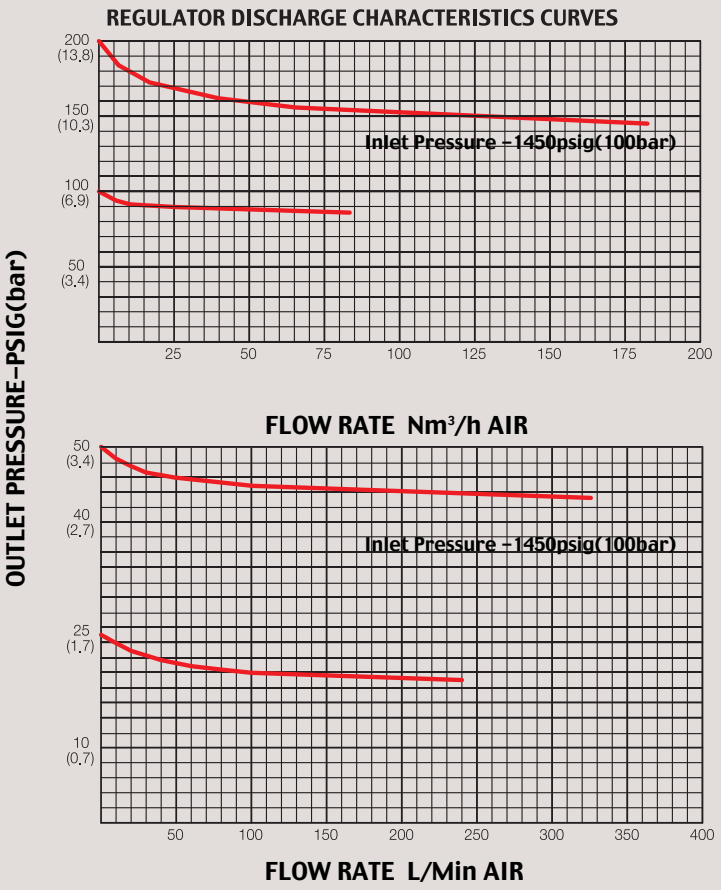
INLET & OUTLET PORT SIZE & TYPE — "A"± 0.2mm
4HP = 1/4" H.P.I.C
4MS = 1/4" Male Swivel ---------- 94.00
4FS = 1/4" Female Swivel ---------- 94.00
8MS = 3/8" Male Swivel ---------- 120.00
8FS = 3/8" Female Swivel ---------- 120.00
2MS = 1/2" Male Swivel ---------- 140.00
2FS = 1/2" Female Swivel ---------- 140.00
IMF = In Port 1/4" Male / Out Port Female -------- 94.00
IFM = In Port 1/4" Female / Out Port Male -------- 94.00
4TS = 1/4" Tube Stubs ---------- 94.00
8TS = 1/4" Tube Stubs ---------- 94.00
2TS = 1/4" Tube Stubs ---------- 120.00

FLOW CAPACITY
S = Cv = 0.06 Standard (1/4")
O = Cv = 0.2 Optional (1/4")
Cv = 0.2 Standard (3/8")
S = Cv = 0.5 Standard (1/2")
O = Cv = 1.0 Optional (1/2")

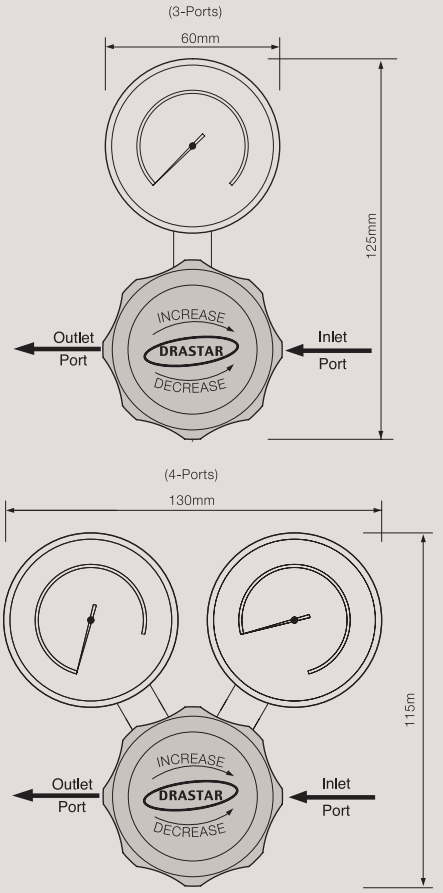
DRA200 SERIES

This is revision by Jan of 2010

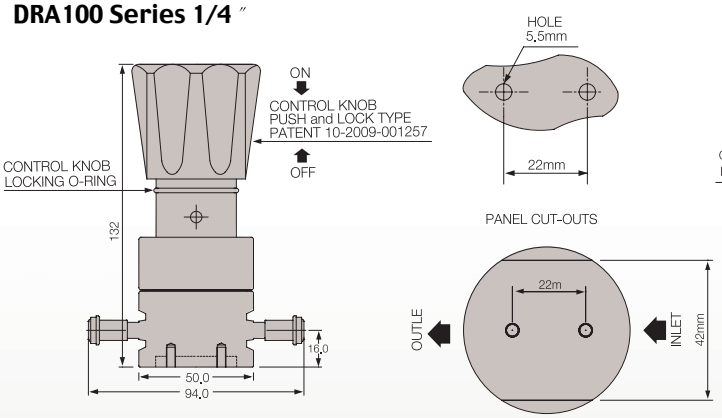
FLOW CHART



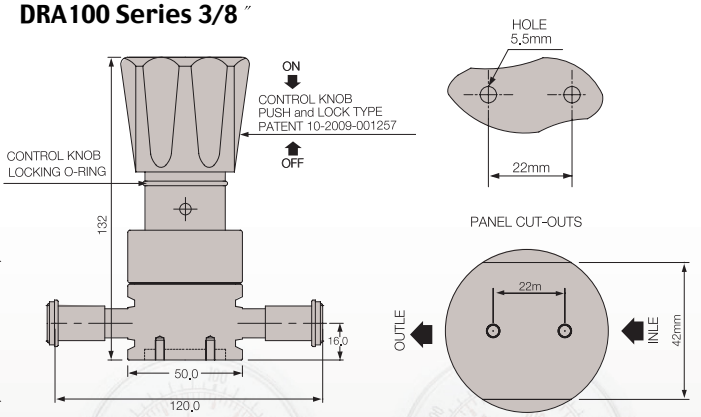
DRA200 Series for 1/4 ″ and 3/8 ″



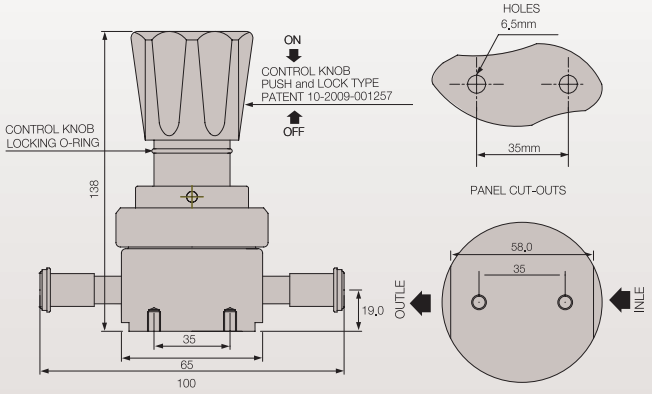
DRA100 Series 1/4 ″



DRA100 Series 3/8 ″



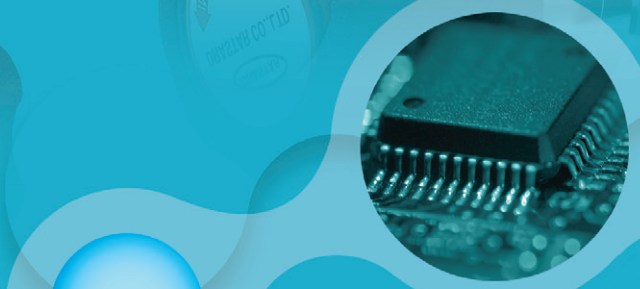
DRA100 Series 1/2 ″

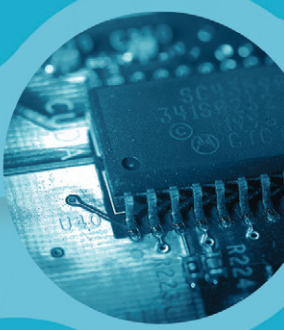


DRA 700 SERIES

ULTRA-HIGH PURITY

Economical Regulator



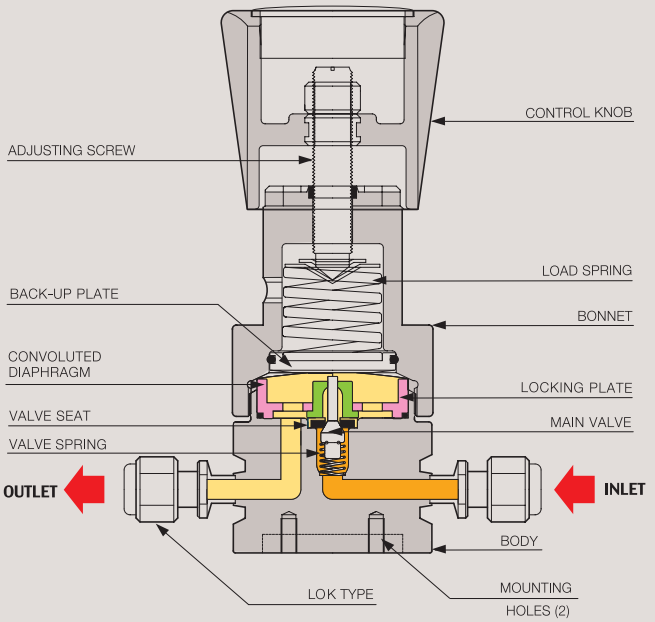


DRA700 SERIES

This is revision by Jan of 2010

DRA700 SERIES

FUNCTIONAL SCHEMATIC



ULTRA HIGH PURITY B. A. MICROINCH INTERNAL FINISHES

DRA 700 SERIES(Lok Type Regulator)

DRA700 시리즈는 Hook-up Line, Bulk Gas Line, 고순도 가스등에 사용하기에 최적의 성능과 세정을 구현한 경제적인 모델의 Pressure Reducing Regulator입니다. 반도체 생산 라인 등에 사용하기에 적합한 제품이며 내부 표면은 B. A. 급으로 처리하였습니다. 특허(10-0753280) 출원한 Locking-Plate 방식이 적용된 제품입니다. DRA700 시리즈는 조립, 용접, 실험과 세정까지의 모든 공정은 1000-class와 100-class 크린룸에서 이루어집니다. 모든 DRASTAR Regulators는 외부적인 진동과 가스배관 라인의 미세 진동 등으로 인하여 초기 셋팅 값이 스스로 변하는 현상를 완전히 해결한 드라스타만의 Push and Lock 타입의 조절 손잡이를 적용하여 사용하기에 더욱 편리합니다. 조절 손잡이를 누르면 셋팅값이 변하는 것을 방지하며, 손잡이를 위로 올려 자유롭게 원하는 압력으로 다시 셋팅 할 수 있는 드라스타만의 특허 10-2009-0012957출원한 Push and Lock 타입의 레귤레이터입니다.

DRA700 Series is the economical model of pressure reducing regulator which is suitable to use for the hook-up line, bulk gas line and high-purity gases and realizes the optimal performance and washing. It is suitable to use at the semi-conductor production line. Internal surface is processed to the grade of B. A. Patent-applied locking-plate system is also used to this model. All processes of assembly, welding, testing and washing of DRA700 series are carried out and thoroughly managed in the 1000-class and 100-class clean room. DRASTAR regulators are designed and manufactured for easier operation by equipping with the DRASTAR' s own developed push and lock type handle which completely prevents the self-change of pre-set value which can be caused by the vibration from outside or minute vibration at the gas pipeline. You can prevent the self-changing of pre-set value just by pushing the handle and reset the value freely by holding upward the handle. DRASTAR has created and applied patent for this push and lock system for DRASTAR regulators (patent number 10-2009-0012957).

Features

- Lok Type Regulator
- suitable for the hook-up line of semiconductor process
- Internal surfaces B. A. grade
- All performed in class 1000 and class 100 clean-rooms
- Locking-Plate Seal system(Patent No : 10-0753280)

권장 사항

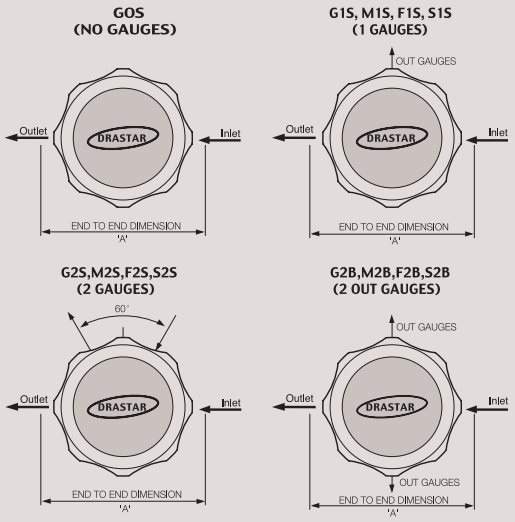
각 제품들은 최고의 안전성과 쉬운 조작성을 고려하여 제작되었습니다. 그러나 가장 안전하고 효율적인 Regulator 사용을 위해서는 실제 사용 압력을 각각 모델의 사용 압력에 25% ~ 75% 이내에서 사용하면 가장 이상적인 압력을 사용할 수 있습니다, 정밀하고 원활한 동작과 제품의 수명 연장을 위해서는 위의 범위 내에서 사용하기를 적극 권장합니다.

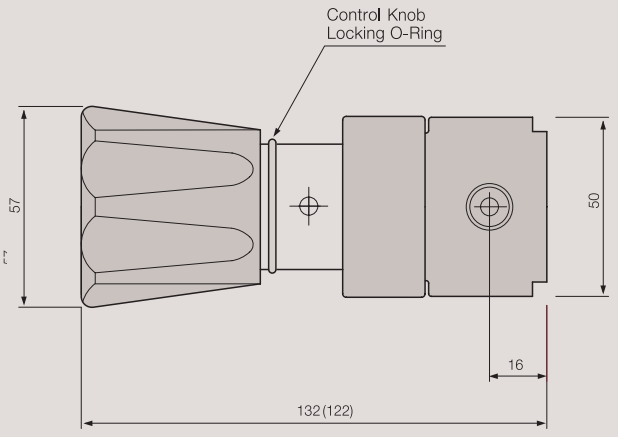
Recommendations to Use

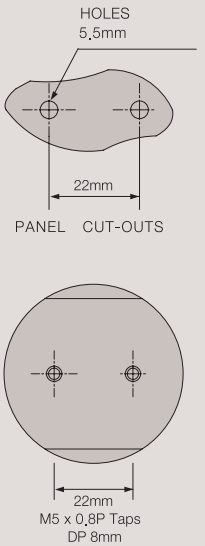
Each product is manufactured since being taken into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe and effective way, you are recommended to use the actual pressure within the range of its 25% ~ 75%. For making precise, smooth movement and to prolong product life, strongly recommended to make a use within above mentioned range.

INSTALLATION DIMENSIONS
METRIC EQUIVALENTS ARE IN PARENTHESES

■ GAUGE PORT OPTIONS







ORDERING INFORMATION

DRA700 - A 100 - L P O - 4L - G0S

BASIC SERIES

BODY MATERIAL — **FINISH**
A = Bright Annealed ---------- B.A

OUTLET PRESSURE RANGES
025 = 1-25PSIG (.1-1.7bar)
050 = 1-50PSIG (.1-3.5bar)
100 = 1-100PSIG (.1-7bar)
250 = 1-250PSIG (.1-17bar)

MAXIMUM INLET PRESSURE
L = 600PSIG (41bar)
H = 3500PSIG (238bar)

SEAT MATERIAL
P = PCTFE
T = Teflon®

GAUGE PORT OPTIONS — **GAUGE PORTS**

G0S = None	0
G1S = 1/4" H.P.I.C	1
G2S = 1/4" H.P.I.C	2
G2B = 1/4" H.P.I.C	2
M1S = 1/4" Male Swivel	1
M2S = 1/4" Male Swivel	2
M2B = 1/4" Male Swivel	2
F1S = 1/4" Female Swivel	1
F2S = 1/4" Female Swivel	2
F2B = 1/4" Female Swivel	2

INLET & OUTLET PORT SIZE & TYPE — **"A"±1.0mm**

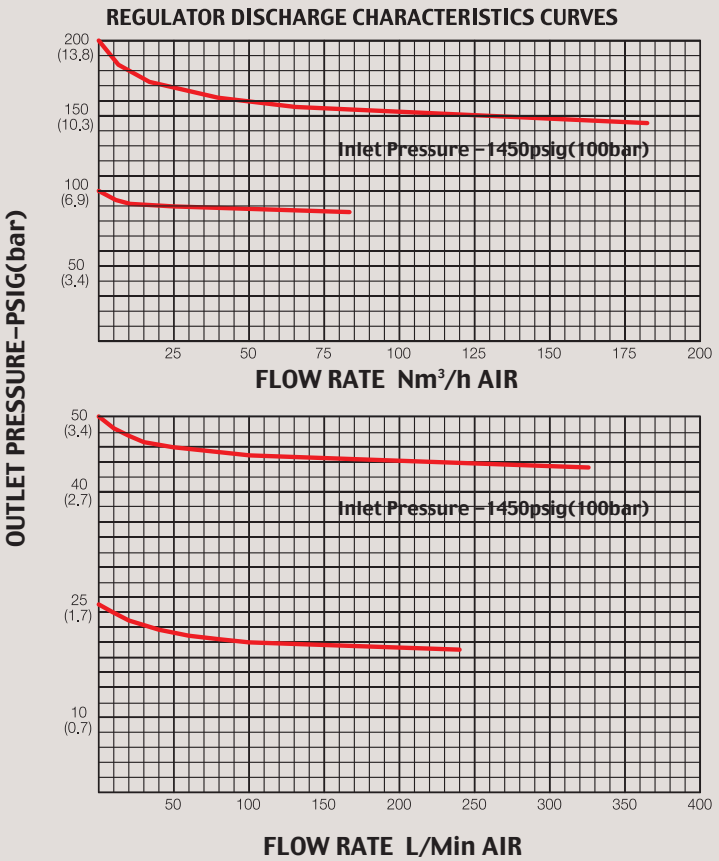
4L = 1/4" Lock	105.00
8L = 3/8" Lock	115.00
2L = 1/2" Lock	150.00
3L = 3/4" Lock	150.00

FLOW CAPACITY
O = Cv = 0.2 Standard (1/4")
Cv = 0.2 Standard (3/8")
S = Cv = 0.5 Standard (1/2")
O = Cv = 1.0 Optional (1/2")
O = Cv = 1.0 Standard (3/4")

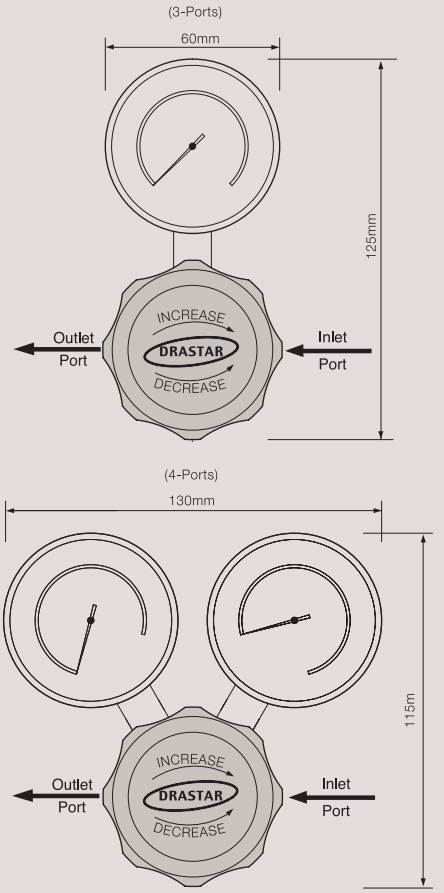
DRA700 SERIES

This is revision by Jan of 2010

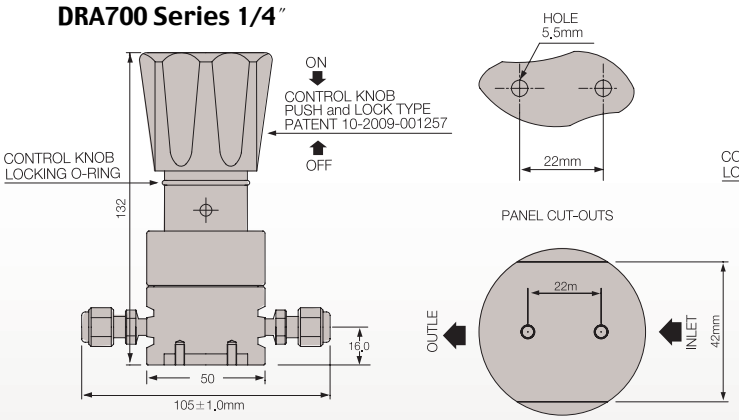
FLOW CHART



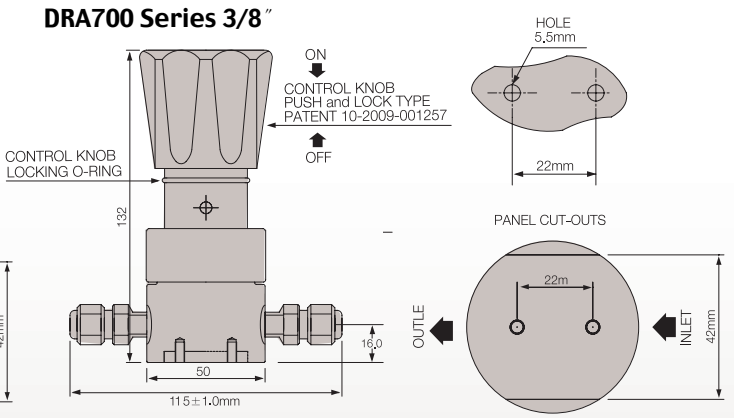
DRA700 Series for 1/4″ and 3/8″



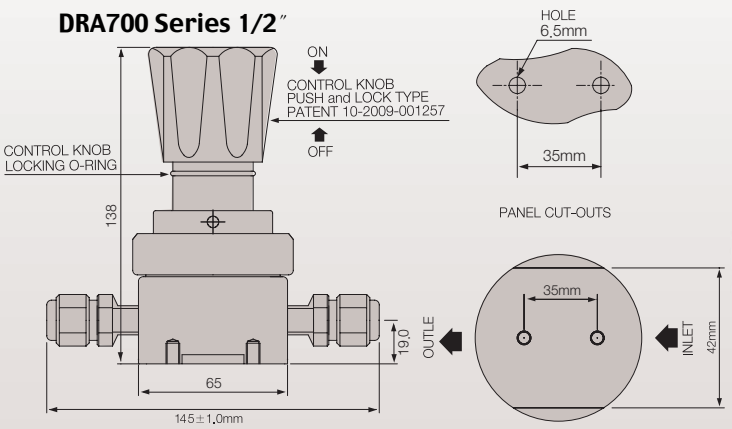
DRA700 Series 1/4″



DRA700 Series 3/8″



DRA700 Series 1/2″



072 SERIES

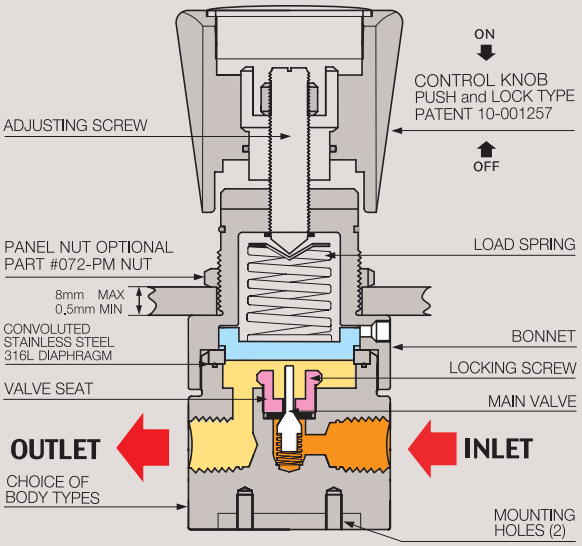
GAS and LIQUID PRECISION CONTROL

Pressure Reducing Regulator

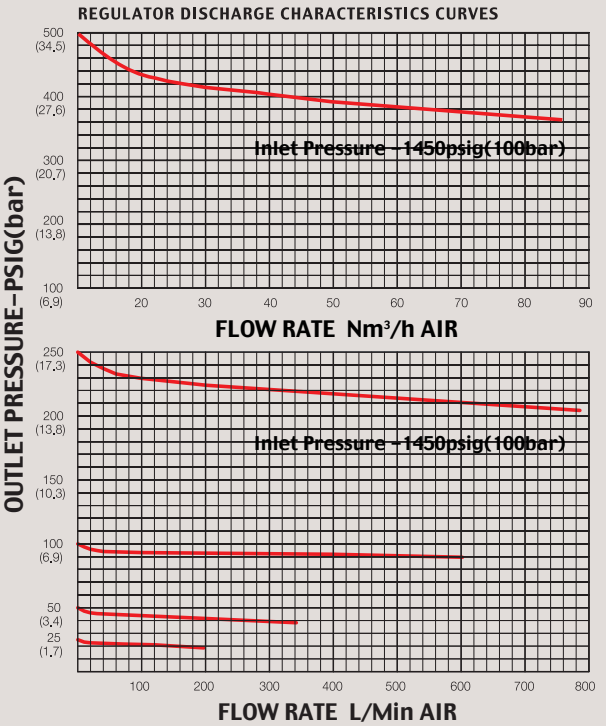
072 SERIES

This is revision by Jan of 2010

FUNCTIONAL SCHEMATIC



FLOW CHART



GAS AND LIQUID PRESSURE REDUCING REGULATOR

072 SERIES

072시리즈는 정밀 산업에서 가장 많이 필요로 하고 가장 많이 사용되는 1/4″ NPT type Pressure Reducing Regulator입니다, 본체와 내부의 모든 부품은 Stainless steel 316L로 이루어졌으며, Bulk Gas Line, 실험실, 분석용 특수 가스, 또는 고순도 가스, 믹싱용 가스, 그리고 부식성 가스와 액체 등에서 모두 사용할 수 있도록 제작 설계되었습니다. 사용 용도에 따라 3-ports 또는 4-ports를 선택하여 사용 할 수 있도록 하였습니다. 입구 압력은 3500psig(241bar)이고 Outlet working pressure 각각의 모델에 따라 최대 500psig(35bar)까지 사용할 수 있습니다. 모든 DRASTAR Regulators는 외부적인 진동과 가스배관 라인의 미세 진동 등으로 인하여 초기 셋팅 값이 스스로 변하는 현상를 완전히 해결한 드라스타만의 Push and Lock 타입의 조절 손잡이를 적용하여 사용하기에 더욱 편리합니다. 조절 손잡이를 누르면 셋팅값의 변하는 것을 방지하며, 손잡이를 위로 올려 자유롭게 원하는 압력으로 다시 셋팅 할 수 있는 드라스타만의 특허 10-2009-0012957출원한 Push and Lock 타입의 레귤레이터입니다.

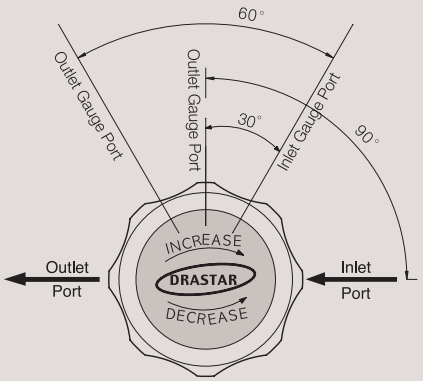
072 Series gas regulators are specially designed to regulate the high-corrosive gas and liquid and suitable for semi-conductor equipment production line where the special gases are used and liquid line. As the product' s body and all internal parts are made of stainless steel 316L 072S Series, they can be also used for ultra-pure six-nine(99.9999) gases. 3-ports or 4-ports 1/4″ FNPT can be connected to this 072S Series.DRASTAR regulators are designed and manufactured for easier operation by equipping with the DRASTAR' s own developed push and lock type handle which completely prevents the self-change of pre-set value which can be caused by the vibration from outside or minute vibration

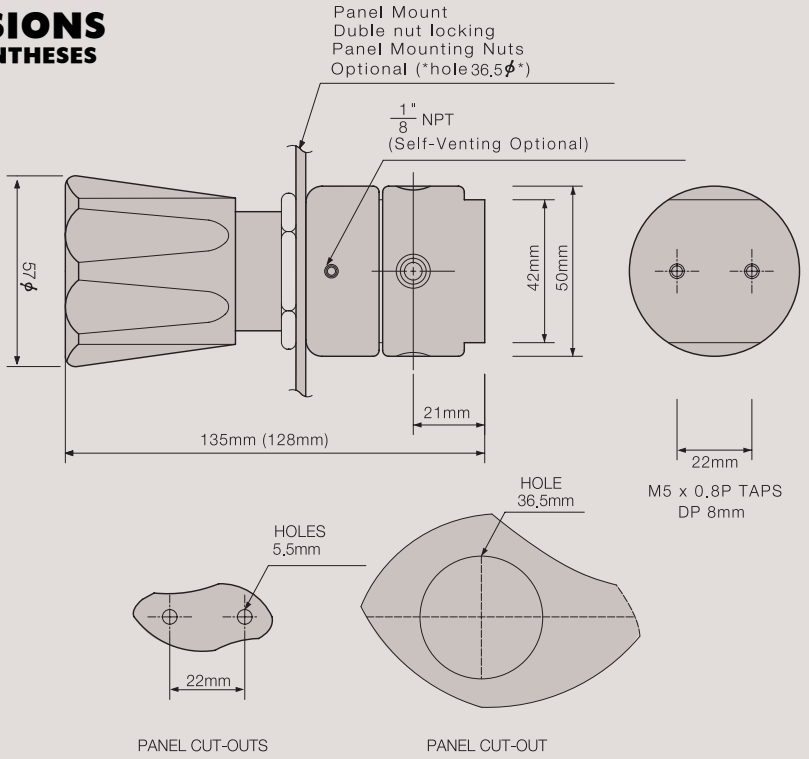
SPECIFICATIONS

Ports	1/4″ NPT type 072X-0000L-1S, 3-ports 072X-0000C-1S, 4-ports
Leak Rate Certification	to 2x10^{-8} atm cc/sec Helium available.
Body Materials	072S-0000-1S / Stainless steel 316L 072B-0000-1S / Brass
Bonnet Material	Nickel Plated Brass / Stainless steel 316L
Diaphragm	Stainless steel 316L
Main Valve	Stainless steel 316L
Valve Spring	Stainless steel 316L
Valve Seat	Teflon® (Kel-F, Polyimide, etc.. Optional)
Inlet Pressure Ranges	072X-0000-1S, 3,500psig (238bar) 072X-0000-1S-5, 500psig (35bar)
Outlet Pressure Ranges	25(1.7bar), 50(3.4bar), 100(7bar), 250(17bar), 500psig(35bar)
Self-Venting	072X-0000-1S-V, Optional
Operating Temperature	-40˚C - +70˚C(-40˚F - +160˚F) (standard) 072x-0000-1S-H1, +120˚C (Optional) 072x-0000-1S-H2, +250˚C (Optional)
Flow Capacity	Cv=0.06 (Cv=0.2 etc.. Optional)
Standard Optional	CGA, Inlet and Outlet Gauges, etc..

INSTALLATION DIMENSIONS
METRIC EQUIVALENTS ARE IN PARENTHESES

■ GAUGE PORT OPTIONS





at the gas pipeline. You can prevent the self-changing of pre-set value just by pushing the handle and reset the value freely by holding upward the handle. DRASTAR has created and applied patent for this push and lock system for DRASTAR regulators (patent number 10-2009-0012957).

Features

- Precision control of 1/4″ NPT type Regulator
- Suitable for the research labs, industrial control
- Inlet 3500 or 500 psig
- Outlet 25psig(1.7bar), 50psig(3.5bar), 100psig(7bar), 250psig(17bar),500psig(35bar)
- Panel mounting nut option
- W072S-0000x-1O / W MODEL IS ONLY TYPE for LIQUID or WATER

권장 사항

각 제품들은 최고의 안전성과 쉬운 조작성을 고려하여 제작되었습니다. 그러나 가장 안전하고 효율적인 Regulator 사용을 위해서는 실제 사용 압력을 각각 모델의 사용 압력에 25% ~ 75% 이내에서 사용하면 가장 이상적인 압력을 사용할 수 있습니다. 정밀하고 원활한 동작과 제품의 수명 연장을 위해서는 위의 범위 내에서 사용하기를 적극 권장합니다.

Recommendations

Each product is manufactured since being taken into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe and effective way, you are recommended to use the actual pressure within the range of its 25% ~ 75%. For making precise, smooth movement and to prolong product life, strongly recommended to make a use within above mentioned range.

ORDERING INFORMATION

W 072 S - 0025 L - 1 S - 5 - V - H1

W MODEL IS ONLY TYPE FOR LIQUID or WATER

BASIC SERIES NUMBER
Standard Inlet Pressure
3500PSIG (238 bar)

BODY MATERIAL
B = Brass
S = Stainless Steel 316L

OUTLET PRESSURE RANGE
0025 = 1-25PSIG(.1~1.7 bar)
0050 = 1-50PSIG(.1~3.5 bar)
0100 = 1-100PSIG(.1~ 7 bar)
0250 = 2-250PSIG(.1~17 bar)
0500 = 3-500PSIG(.2~35 bar)

PORT TYPE
L = 3-ports
C = 4-ports

HIGH TEMPERATURE OPTION
H1 = 120°C H2 = 250°C

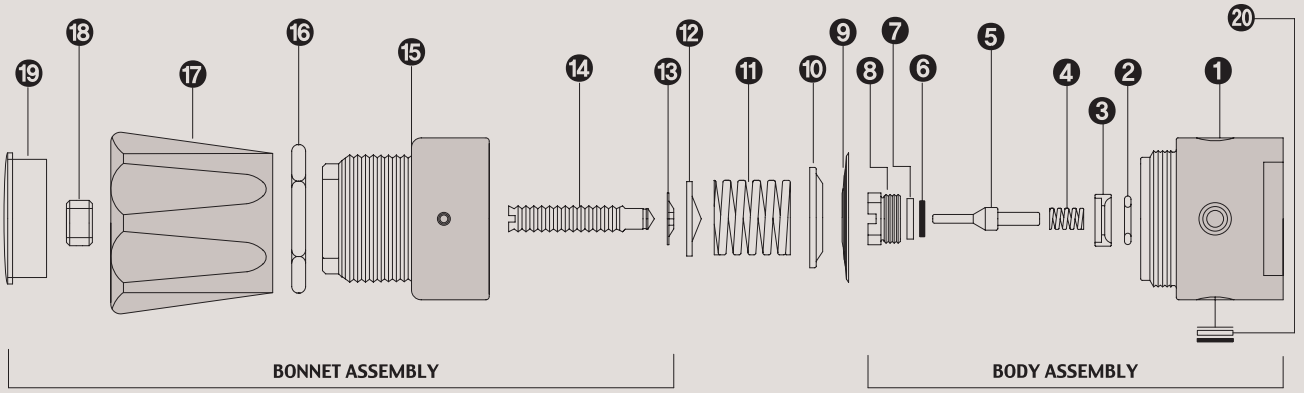
V = Self-Venting (Optional)

INLET PRESSURE OPTION
5 = 500psig (35 bar)

FLOW CAPACITY
S = Cv=0.06 (Standard)
0 = Cv=0.2, etc...

INLET AND OUTLET PORTS SIZE
1 = 1/4" NPT

072 SERIES PART LIST



STANDARD MODEL SERIES

Item No.	Description	Part No	Model Application
01	Body	072-01	072-01-1 Stainless Steel 316L body / 072-01-2 Brass body
02	Main Valve Guide O-ring	072-02	All Model Same
03	Main Valve O-ring Cartridge	072-03	All Model Same
04	Valve Spring	072-04	072-04-1(25psi),072-04-2(50psi),072-04-3(100psi),072-04-4(250psi),072-04-5(500psi)
05	Main Valve	072-05	All Model Same
06	Valve Seat	072-06	072-06-2,072X-OOOOX-1S-H1(120°c), 072-06-3, 072X-OOOOX-1S-H2(250°c), Optional
07	Valve Seat Cartridge	072-07	All Model Same
08	Locking Screw	072-08	All Model Same
09	STS316L Diaphragm	072-09	All Model Same
10	Back-up Plate	072-10	072-10-1(25psi),072-10-2(50psi),072-10-3(100psi),072-10-4(250psi),072-10-5(500psi)
11	Load Spring	072-11	072-11-1(25psi),072-11-2(50psi),072-11-3(100psi),072-11-4(250psi),072-11-5(500psi)
12	Pivot	072-12	072-12-1(25psi),072-12-2(50psi),072-12-3(100psi),072-12-4(250psi),072-12-5(500psi)
13	Locking Ring	072-13	All Model Same
14	Adjusting Screw	072-14	All Model Same
15	Bonnet	072-15	All Model Same (072-15-2, Stainless steel 316L Bonnet Optional)
16	Panel mount Nut	072-16	All Model Same (M35 x P1.5 Optional)
17	Control Knob	072-17	All Model Same (120°c, 250°c, Aluminum Control knob 072-16-2 Optional)
18	Locking Nut	072-18	All Model Same
19	Name Cap	072-19	25, 50, 100, 250, 500
20	Filter Assembly	072-20	All Model Same

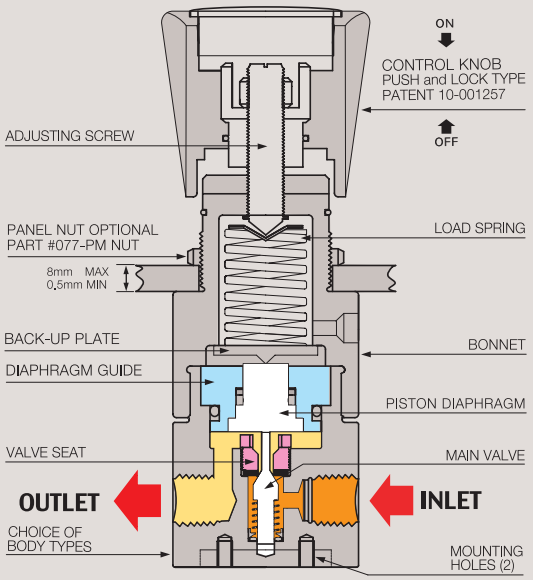
082 SERIES

HIGH-PRESSURE REGULATOR

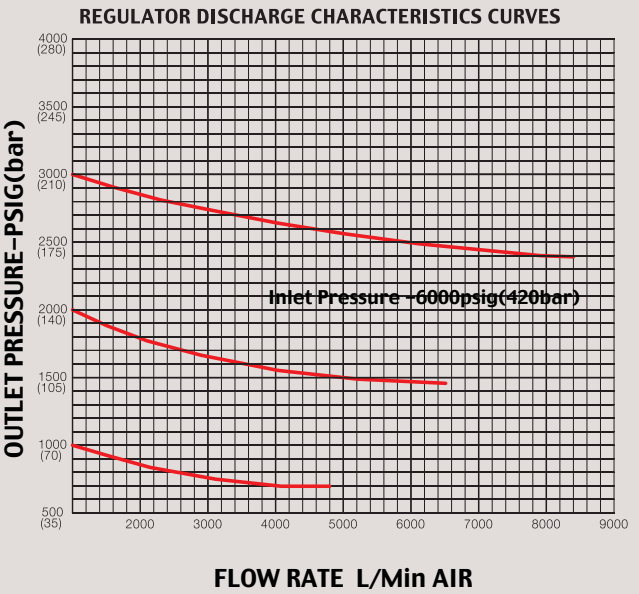
082 SERIES

This is revision by Jan of 2010

FUNCTIONAL SCHEMATIC



FLOW CHART



HIGH-PRESSURE REGULATOR

082 SERIES

082 시리즈는 고압가스와 액체 등에서도 안전하고 안정적으로 사용할 수 있도록 드라스타만의 Piston- Diaphragm 방식을 개발하여 더욱 더 안전하게 사용할 수 있습니다, 본체와 내부의 모든 부품은 Stainless steel 316L로 이루어져 부식성 가스 또는 액체 등에서 안심하고 사용할 수 있도록 하였으며, 입구 압력은 6000psig〈420bar〉이고 출구 압력은 최대 3000psi 〈210bar〉 까지 사용 할 수 있으며 1/4″ NPT type 4-Ports Regulator입니다. 모든 DRASTAR Regulators는 외부적인 진동과 가스배관 라인의 미세 진동 등으로 인하여 초기 셋팅 값이 스스로 변하는 현상를 완전히 해결한 드라스타만의 Push and Lock 타입의 조절 손잡이를 적용하여 사용하기에 더욱 편리합니다. 조절 손잡이를 누르면 셋팅값이 변하는 것을 방지하며, 손잡이를 위로 올려 자유롭게 원하는 압력으로 다시 셋팅 할 수 있는 드라스타만의 특허 10-2009-0012957출원한 Push and Lock 타입의 레귤레이터입니다.

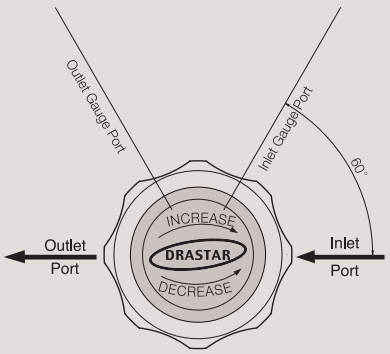
082 Series gas regulators are specially designed to regulate the high pressure gases safely. As the product' s body and all internal parts are made of stainless steel 316L(082S Series) that is strong for corrosiveness and liquid and brass (082B Series), they can be also used for ultra-pure six-nine(99.9999) gases. As these models can be connected by 4-ports 1/4″ FNPT, they are suitable for semi-conductor equipment production line and ultra-precision plumbing line. max. inlet pressure is 6000 psig(420 bar) and outlet pressure, 1000 psi(70 bar), 2000 psi(140 bar), and 3000 psi(210 bar).DRASTAR regulators are designed and manufactured for easier operation by equipping with the DRASTAR' s own developed push and lock type handle which completely prevents the self-change of pre-set value which can be caused by the vibration from

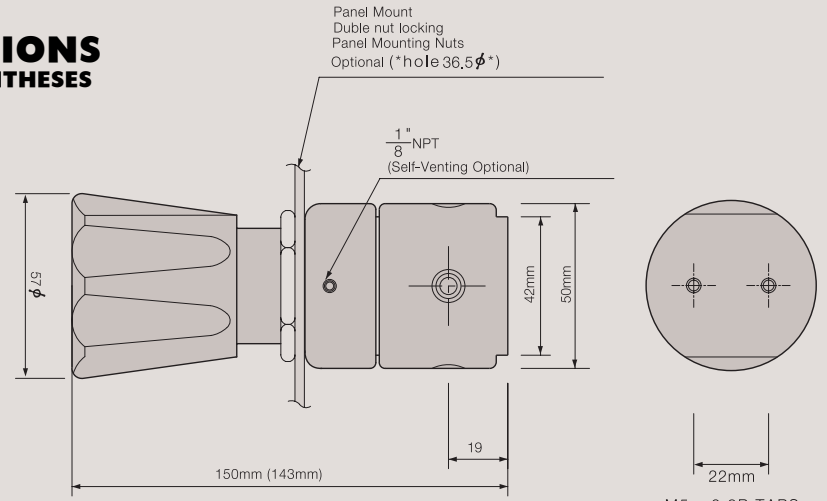
SPECIFICATIONS

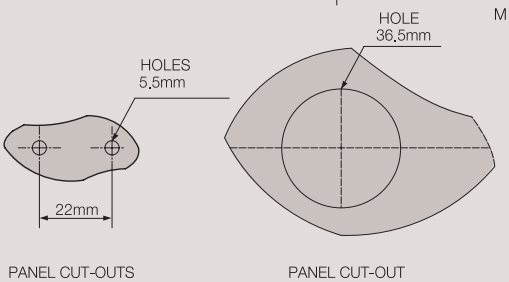
Ports	1/4″ 4-ports NPT type
Leak Rate Certification	to $2x10^{-8}$ atm cc/sec Helium available.
Body Materials	082S-0000-1S / Stainless steel 316L 082B-0000-1S / Brass
Bonnet Materia	Nickel Plated Forged Brass / Stainless steel 316L
Main Valve	Stainless steel 316L
Valve Spring	Stainless steel 316L
Valve Seat	Teflon® (Kel-F, Polyimide, etc.. Optional)
Inlet Pressure Range	6,000psig(420bar)
Outlet Pressure Ranges	1000(70bar), 2000(140bar), 3000psig(210bar)
Self-Venting	082X-0000-1S-V, Optional
Operating Temperature	-40°C - +70°C(-40°F - +160°F) (standard) 082S-0000-1S-H1, +120°C (Optional) 082S-0000-1S-H2, +250°C (Optional)
Flow Capacity	Cv=0.06 (Cv=0.2 etc.. Optional)
Standard Optional	CGA, Inlet and Outlet Gauges, etc..

INSTALLATION DIMENSIONS
METRIC EQUIVALENTS ARE IN PARENTHESES

■ GAUGE PORT OPTIONS







outside or minute vibration at the gas pipeline. You can prevent the self-changing of pre-set value just by pushing the handle and reset the value freely by holding upward the handle. DRASTAR has created and applied patent for this push and lock system for DRASTAR regulators (patent number 10-2009-0012957).

Features

- Piston- Diaphragm Type Regulator of 1/4″ NPT Type
- Suitable for the High-Pressure Regulator
- Inlet 6000psig(420bar)
- Outlet 1000(70bar), 2000(140bar), 3000(210bar)psig
- Panel mounting nut option

권장 사항

각 제품들은 최고의 안전성과 쉬운 조작성을 고려하여 제작되었습니다. 그러나 가장 안전하고 효율적인 Regulator 사용을 위해서는 실제 사용 압력을 각각 모델의 사용 압력에 25% ~ 75% 이내에서 사용하면 가장 이상적인 압력을 사용할 수 있습니다, 정밀하고 원활한 동작과 제품의 수명 연장을 위해서는 위의 범위 내에서 사용하기를 적극 권장합니다.

Recommendations

Each product is manufactured since being taken into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe and effective way, you are recommended to use the actual pressure within the range of its 25% ~ 75%. For making precise, smooth movement and to prolong product life, strongly recommended to make a use within above mentioned range.

ORDERING INFORMATION

082 S - 1000 - 1 S - V - H1

BASIC SERIES NUMBER
Standard Inlet Pressure
6000PSIG (420 bar) 4-ports

BODY MATERIAL
B = Brass
S = Stainless Steel 316L

OUTLET PRESSURE RANGE
1000 = 10-1000PSIG (7~70 bar)
2000 = 20-2000PSIG (15~140 bar)
3000 = 30-3000PSIG (20~210 bar)

HIGH TEMPERATURE OPTION
H1 = 120°C, H2 = 250°C

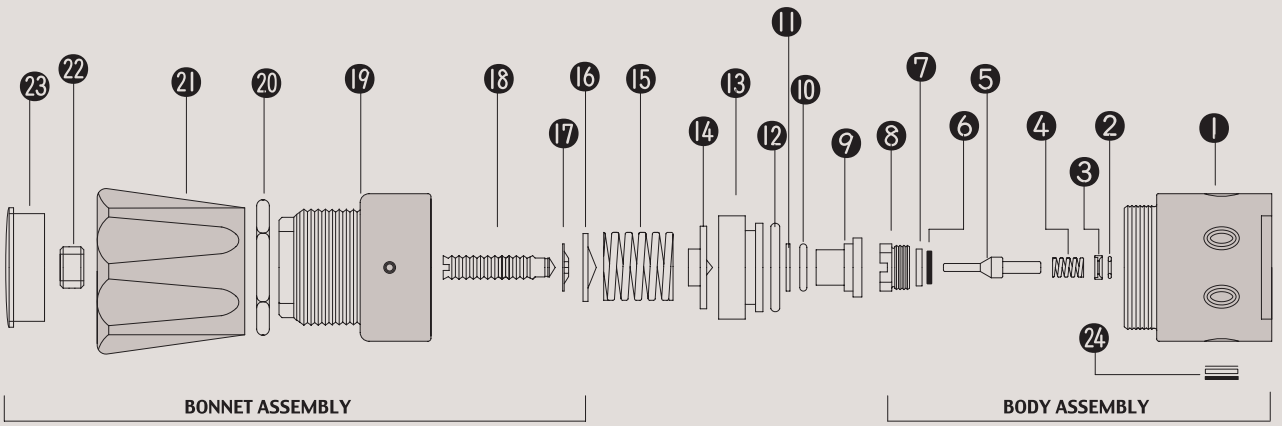
V = Self-Venting (Optional)

FLOW CAPACITY
S = Cv=0.06 (Standard)
0 = Cv=0.2 etc...

INLET AND OUTLET PORTS SIZE
1 = 1/4" NPT

This is revision by Jan of 2010

082 SERIES PART LIST



STANDARD MODEL SERIES

Item No.	Description	Part No.	Model Application
01	Body	082-01	082-01-1 Stainless Steel 316L Body/082-01-2 Brass Body
02	Main Valve guide O-ring	082-02	All Model Same
03	Main Valve Guide O-ring Cartridge	082-03	All Model Same
04	Valve Spring	082-04	All Model Same
05	Main Valve	082-05	All Model Same
06	Valve Seat	082-06	082-06-2, 082X-XXXX-1S-H1(120°C),082-06-2 082X-XXXX-1S-H2(250°C), Optional
07	Valve Seat Cartridge	082-07	All Model Same
08	Locking Screw	082-08	All Model Same
09	Piston Diaphragm	082-09	082-09-01(082S Series Stainless steel 316L) 082-09-2(082B Series Brass)
10	Piston Diaphragm O-ring	082-10	All Model Same
11	Diaphragm Teflon Ring	082-11	All Model Same
12	Diaphragm Guide O-ring	082-12	All Model Same
13	Piston Diaphragm Guide	082-13	082-13-1(082S Series Stainless steel 316L) 082-13-2(082B Series Brass)
14	Back-up Plate	082-14	082-14-1 1000psi/082-14-2 2000psi/082-14-3 3000psi
15	Load Spring	082-15	082-15-1 1000psi/082-15-2 2000psi/082-15-3 3000psi
16	Pivot	082-16	082-16-1 1000psi/082-16-2 2000psi/082-16-3 3000psi
17	Locking Ring	082-17	All Model Same
18	Adjusting Screw	082-18	All Model Same
19	Bonnet	082-19	082-19-2(Stainless steel 316L Bonnet Optional)
20	Panel mount Nut	082-20	All Model Same (M35 x P1.5 Optional)
21	Control Knob	082-21	082-21-2(Aluminum Control knob Optional)
22	Locking Nut	082-22	All Model Same
23	Name Cap	082-23	1000, 2000, 3000
24	Filter Assembly	082-24	All Model Same

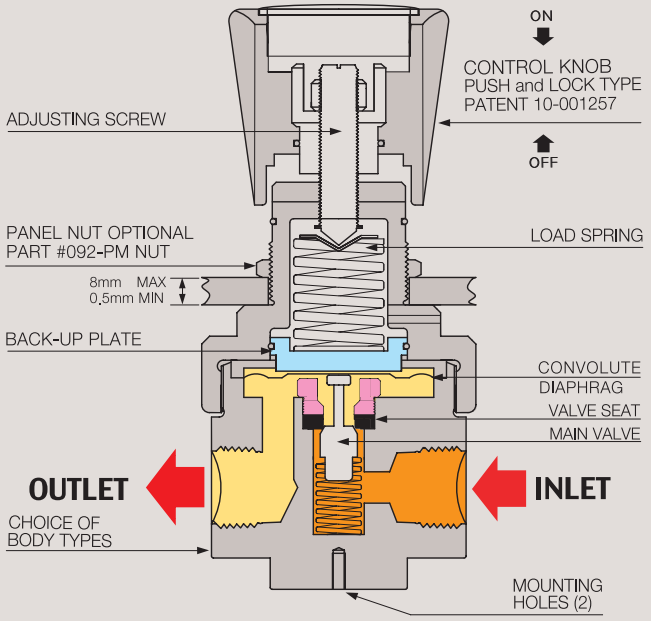
092 SERIES

HIGH-FLOW REGULATOR

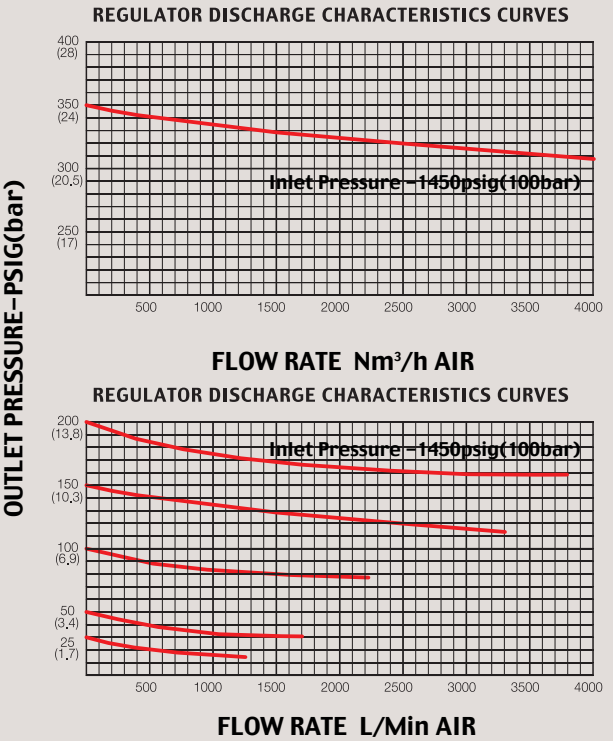
092 SERIES

This is revision by Jan of 2010

FUNCTIONAL SCHEMATIC



FLOW CHART



HIGH-FLOW REDUCING REGULATOR

092 SERIES

092시리즈는 정밀 배관 라인에서 고유량의 부식성 가스와 액체 등을 조절할 수 있도록 고안된 1/2″ NPT 타입 Regulator입니다. 본체와 내부의 모든 부품은 Stainless steel 316L로서 산업 전반의 부식성 가스, 고순도 가스와 액체 등에 강한 특성을 나타냅니다. 입구 압력은 3500psig(241bar) or 500psi(35bar)이고 출구 압력은 각각의 모델에 따라 최대 350psig(24bar)까지 사용할 수 있도록 제작 설계 되였습니다. 모든 DRASTAR Regulators는 외부적인 진동과 가스배관 라인의 미세 진동 등으로 인하여 초기 셋팅 값이 스스로 변하는 현상를 완전히 해결한 드라스타만의 Push and Lock 타입의 조절 손잡이를 적용하여 사용하기에 더욱 편리합니다. 조절 손잡이를 누르면 셋팅값이 변하는 것을 방지하며, 손잡이를 위로 올려 자유롭게 원하는 압력으로 다시 셋팅 할 수 있는 드라스타만의 특허 10-2009-0012957출원한 Push and Lock 타입의 레귤레이터입니다.

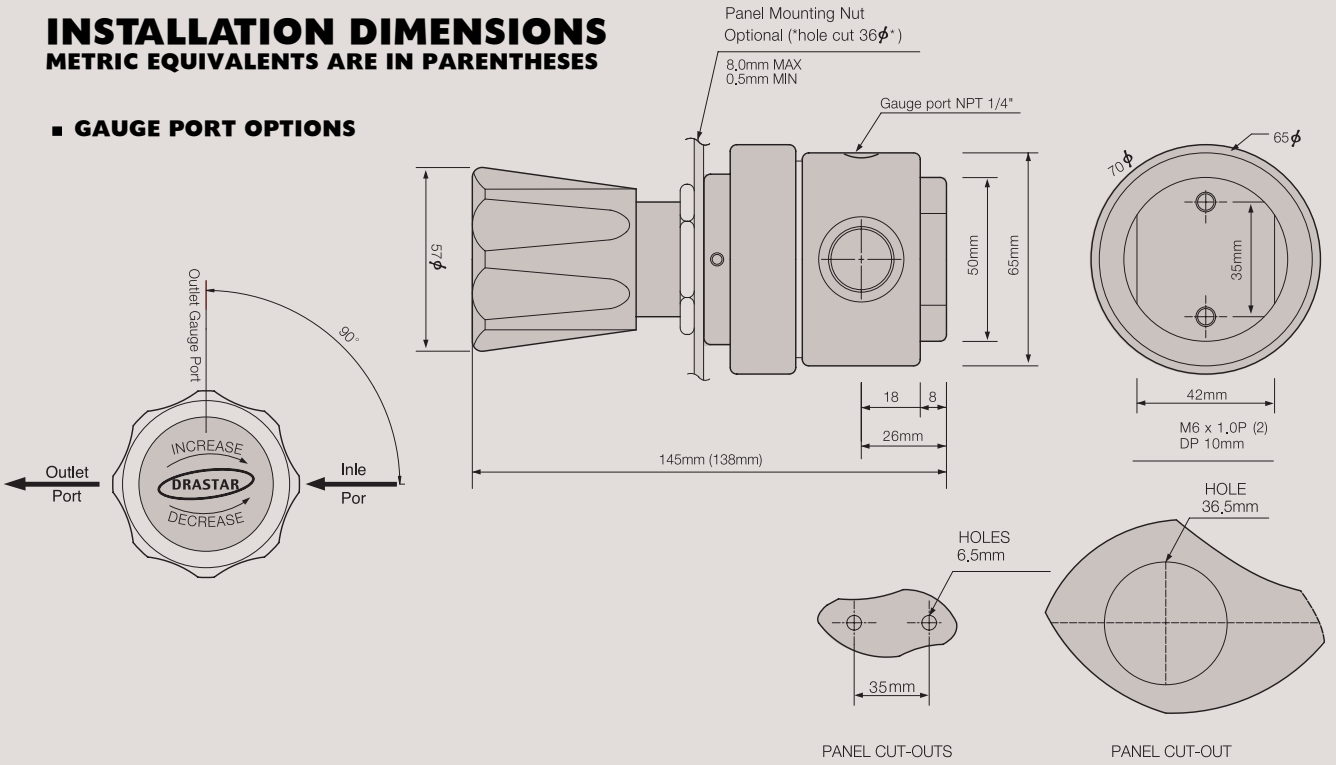
092 Series gas and liquid regulators are specially designed to regulate the mass-flow of gases and liquid such as semi-conductor equipment production line and ultra-precision plumbing line with 1/2″ FNPT, etc. As the product' s body and all internal parts are made of stainless steel 316L that is strong for corrosiveness and liquid, they can be used for ultra-pure six-nine (99.9999) gases, corrosive gases, and liquids. Accordingly, special regard was paid to utmost safety and easy operation of the regulators.DRASTAR regulators are designed and manufactured for easier operation by equipping with the DRASTAR' s own developed push and lock type handle which completely prevents the self-change of pre-set value which can be caused by the vibration from outside or minute vibration at the gas pipeline. You can prevent the self-changing of pre-set value just by pushing the handle and reset the value freely by holding upward the handle. DRASTAR has created and applied patent for this push and lock system for DRASTAR regulators (patent number 10-2009-0012957).

SPECIFICATIONS

Ports	1/2″ 3-ports NPT type
Leak Rate Certification	to 2x10^{-8} atm cc/sec Helium available.
Body Material	Stainless steel 316L
Bonnet Material	Nickel Plated Forged Brass/stainless steel 316L
Diaphragm	Stainless steel 316L
Main Valve	Stainless steel 316L
Valve Spring	Stainless steel 316L
Valve Seat	Teflon® (Kel-F, Polyimide, etc.. Optional)
Inlet Pressure Ranges	092-0000-1S, 3,500psig (238bar) 092-0000-1S-5, 500psig (35bar)
Outlet Pressure Ranges	25(1.7bar), 50(3.5bar), 100(7bar), 200(14bar), 350psig(24bar)
Self-Venting	092-0000-1S-V Optional
Operating Temperature	-40°C - +70°C(-40°F - +160°F) (standard) 092-0000-1S-H1, +120°C (Optional) 092-0000-1S-H2, +250°C (Optional)
Flow Capacity	Cv=1.0 (Cv=1.2 Optional)

INSTALLATION DIMENSIONS
METRIC EQUIVALENTS ARE IN PARENTHESES

■ GAUGE PORT OPTIONS



Features

- Suitable for the High-Flow Regulator of 1/2″ NPT Type
- Body and all internal parts are Stainless steel 316L
- Inlet 3500psig(241bar) or 500psi(35bar)
- Outlet 25psig(1.7bar), 50psig(3.5bar), 100psig(7bar), 200psig(14bar), 350psig(24bar)
- Panel mounting nut option
- W092-0000-1S / W MODEL IS ONLY TYPE for LIQUID or WATER

권장 사항

각 제품들은 최고의 안전성과 쉬운 조작성을 고려하여 제작되었습니다. 그러나 가장 안전하고 효율적인 Regulator 사용을 위해서는 실제 사용 압력을 각각 모델의 사용 압력에 25% ~ 75% 이내에서 사용하면 가장 이상적인 압력을 사용할 수 있습니다, 정밀하고 원활한 동작과 제품의 수명 연장을 위해서는 위의 범위 내에서 사용하기를 적극 권장합니다.

Recommendations to Use

Each product is manufactured since being taken into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe and effective way, you are recommended to use the actual pressure within the range of its 25% ~ 75%. For making precise, smooth movement and to prolong product life, strongly recommended to make a use within above mentioned range.

ORDERING INFORMATION

W 092 0025 - 1 S - 5 - V - H1

W MODEL IS ONLY TYPE FOR LIQUID or WATER

BASIC SERIES NUMBER
Standard Inlet Pressure
3500PSIG (238 bar)
Standard Material
Stainless Steel 316L
3-Ports NPT

OUTLET PRESSURE RANGES
0025 = 1-25PSIG (.1~1.7 bar)
0050 = 1-50PSIG (.1~3.5 bar)
0100 = 1-100PSIG (.1~ 7 bar)
0200 = 2-200PSIG (.1~14 bar)
0350 = 3-350PSIG (.1~24 bar)
0500 = 4-500PSIG (.1~34bar)
* 500PSIG : W Model Only

HIGH TEMPERATURE OPTION
H1 = 120℃, H2 = 250℃

V = Self-Venting (Optional)

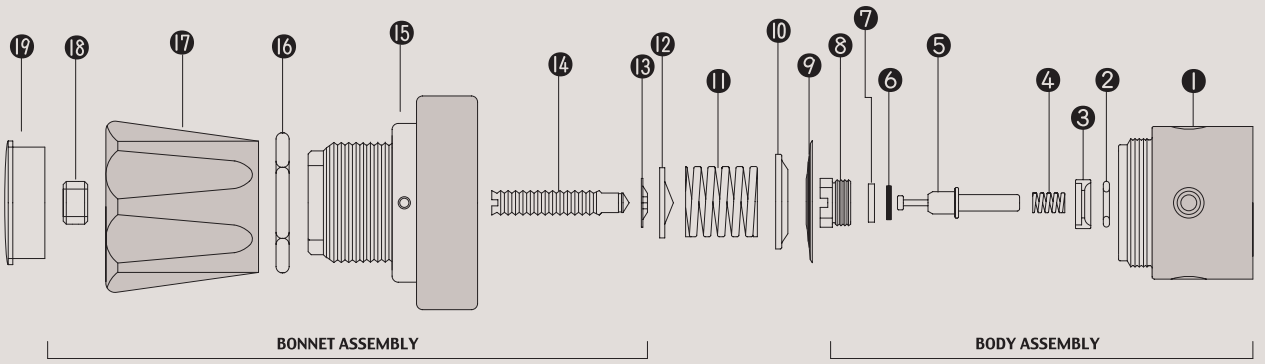
INLET PRESSURE OPTION
5 = 500psig (35 bar)

FLOW CAPACITY
S = Cv=1.0 (Standard)
O = Cv=1.2 (Option)

INLET AND OUTLET PORTS
1 = 1/2″ NPT

This is revision by Jan of 2010

092 SERIES PART LIST



STANDARD MODEL SERIES

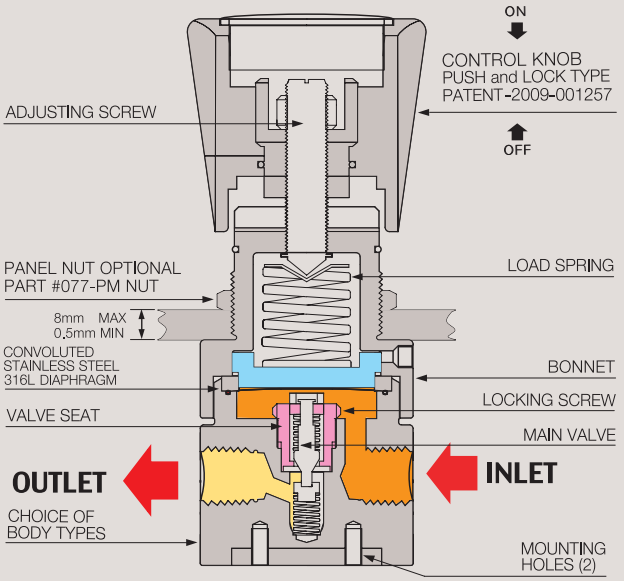
Item No.	Description	Part No.	Model Application
01	Body	092-01	All Model Same (Stainless steel 316L)
02	Main Valve guide O-ring	092-02	All Model Same
03	Main Valve O-ring Cartridge	092-03	All Model Same
04	Valve spring	092-04	092-04-1(25psi),092-04-2(50psi),092-04-3(100psi),092-04-4(200psi),092-04-5(350psi)
05	Main Valve	092-05	All Model Same
06	Valve Seat	092-06	092-06-2,092-XXXX-1S-H1(120°c), 092-06-3, 092-XXXX-1S-H2(250°c), Optional
07	Valve Seat Cartridge	092-07	All Model Same
08	Locking Screw	092-08	All Model Same
09	STS 316L Diaphragm	092-09	All Model Same
10	Back-up Plate	092-10	092-12-1(25psi),092-12-2(50psi),072-12-3(100psi),092-12-4(000psi),092-04-5(350psi)
11	Load Spring	092-11	092-12-1(25psi),092-12-2(50psi),072-12-3(100psi),092-12-4(000psi),092-04-5(350psi)
12	Pivot	092-12	092-14-1(25psi),092-14-2(50psi),092-14-3(100psi),092-14-4(200psi),092-04-5(350psi)
13	Locking Ring	092-13	092-13-1(25psi),092-13-2(50psi),092-13-3(100psi),092-13-4(200psi),092-04-5(350psi)
14	Adjusting Screw	092-14	All Model Same
15	Bonnet	092-15	All Model Same (092-17-2, Stainless steel 316L Bonnet Optional)
16	Panel mount Nut	092-16	All Model Same (M35 x P1.5 Optional)
17	Control Knob	092-17	All Model Same, (120°c, 250°c, Aluminum Control knob 092-19-2 Optional)
18	Locking Nut	092-18	All Model Same
19	Name Cap	092-19	25,50,100,200,350

077 SERIES

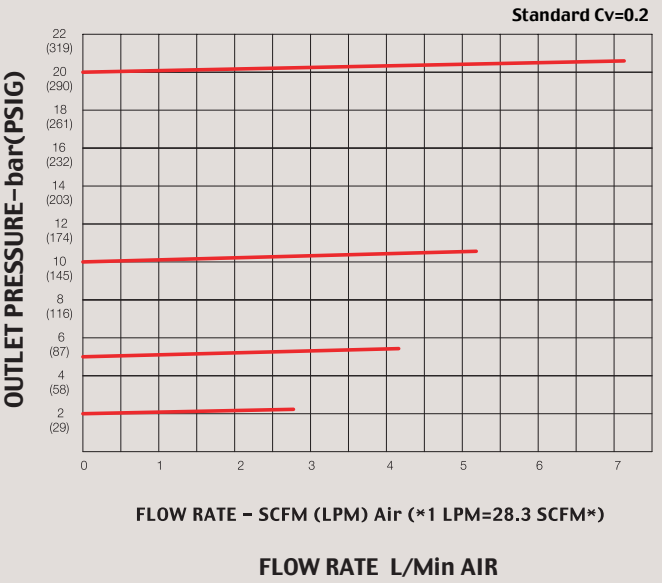
077 SERIES

This is revision by Jan of 2010

FUNCTIONAL SCHEMATIC



FLOW CHART



FLOW RATE L/Min AIR

HIGH-FLOW REDUCING REGULATOR

077 SERIES

077시리즈는 back-pressure regulator로서 물, 케미칼, Liquid 또는 가스등을 사용하기에 적합한 제품이며 배관 사이즈는 NPT 1/4″ 전용 레귤레이터 입니다 Body 의 재질은 모델에 따라 Brass or Stainless steel 316L로 이루어졌으며 각 모델에 따라 Working pressure 0.2~20bar(290psi)까지 폭넓게 사용할 수 있습니다. 모든 DRASTAR Regulators는 외부적인 진동과 가스배관 라인의 미세 진동 등으로 인하여 초기 셋팅 값이 스스로 변하는 현상를 완전히 해결한 드라스타만의 Push and Lock 타입의 조절 손잡이를 적용하여 사용하기에 더욱 편리합니다. 조절 손잡이를 누르면 셋팅값이 변하는 것을 방지하며, 손잡이를 위로 올려 자유롭게 원하는 압력으로 다시 셋팅 할 수 있는 드라스타만의 특허 10-2009-0012957출원한 Push and Lock 타입의 레귤레이터입니다.

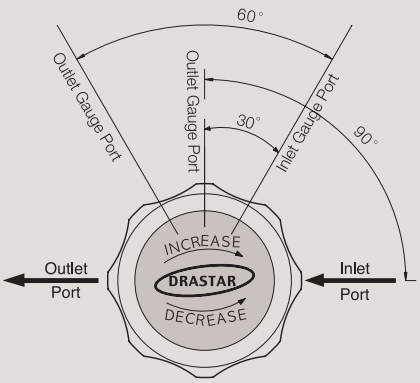
077 Series is the back-pressure type regulator suitable for water, chemical, liquid, gas, etc. and uses NPT 1/4″ pipe exclusively. Regulator body is made of brass or stainless steel 316L and has the wide range of working pressure of 0.2 ~ 20 bar (290psi) by model. DRASTAR regulators are designed and manufactured for easier operation by equipping with the DRASTAR' s own developed push and lock type handle which completely prevents the self-change of pre-set value which can be caused by the vibration from outside or minute vibration at the gas pipeline. You can prevent the self-changing of pre-set value just by pushing the handle and reset the value freely by holding upward the handle. DRASTAR has created and applied patent for this push and lock system for DRASTAR regulators (patent number 10-2009-0012957).

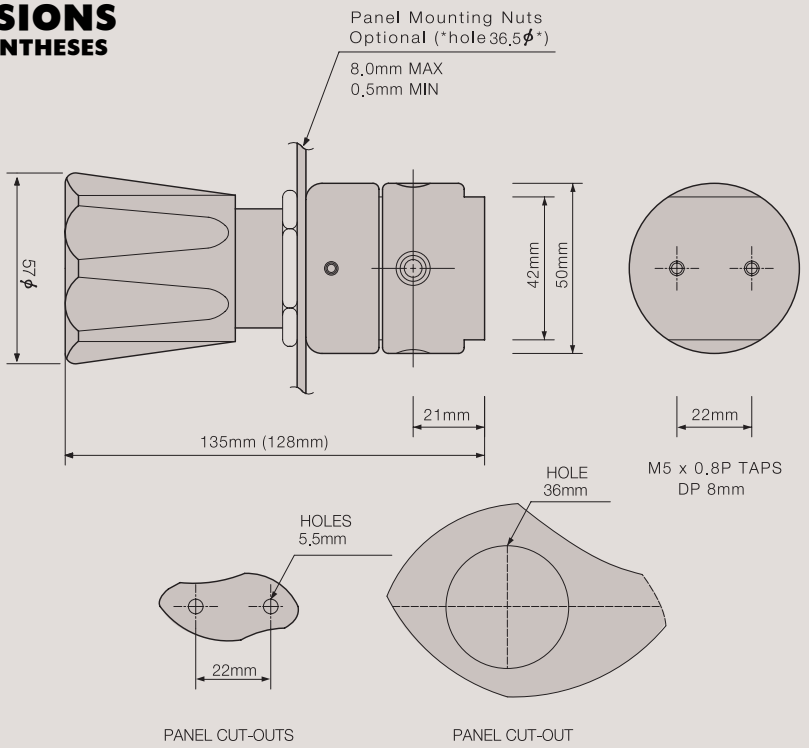
SPECIFICATIONS

Ports	077S-000-2NP4 2-ports NPT 1/4″ 077S-000-3NP4 3-ports
Leak Rate Certification	to $2x10^{-8}$ atm cc/sec Helium available.
Body Materials	077S-000-xNP4 / Stainless steel 316L 077B-000-xNP4 / Brass
Bonnet Material	Nickel Plated Brass / (Stainless steel 316L Optional)
Diaphragm	Stainless steel 316L
Main Valve	Stainless steel 316L
Valve Spring	Stainless steel 316L
Valve Seat	Teflon (Kel-F, Polyimide, etc.. Optional)
Outlet Pressure Ranges	2bar(30psig), 5bar(72psig) 10bar(145psig), 25bar(362psig)
Operating Temperature	-40°C - +70°C (standard) 077S-000-xNP4-H1, +120℃ (Optional) 077S-000-xNP4-H2, +250℃ (Optional)
Flow Capacity	Cv=0.2 (Standard)

INSTALLATION DIMENSIONS
METRIC EQUIVALENTS ARE IN PARENTHESES

▪ GAUGE PORT OPTIONS





Features
- Precision control of 1/4″ NPT Type Back Pressure Regulator
- Suitable for the research labs, industrial control
- Control 2bar(30psig), 5bar(72psig) 10bar(145psig), 25bar(362psig)
- Panel mounting NUT (#077-PM nut) option
- W077S-000-XNP4 W MODEL IS ONLY TYPE for LIQUID or WATER

권장 사항
각 제품들은 최고의 안전성과 쉬운 조작성을 고려하여 제작되었습니다. 그러나 가장 안전하고 효율적인 Regulator 사용을 위해서는 실제 사용 압력을 각각의 모델에 따라 25%~75% 이내에서 사용하면 가장 이상적인 압력을 사용할 수 있습니다. 정밀하고 원활한 동작과 제품의 수명 연장을 위해서는 위의 범위 내에서 사용하기를 적극 권장합니다.

Recommendations
Each product is manufactured since being taken into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe and effective way, you are recommended to use the actual pressure within the range of its 25% ~ 75%. For making precise, smooth movement and to prolong product life, strongly recommended to make a use within above mentioned range.

ORDERING INFORMATION

W 077 S - 002 - 2 NP4 - H1

W MODEL IS ONLY TYPE FOR LIQUID or WATER

BASIC SERIES
077

BODY MATERIAL
S = STS 316L
M = MONEL
B = Brass

IDIAPHRAGM and NTERNAL PARTS
S = STS 316L
B = STS 316L
M = Hastelloy or Monel

HIGH TEMPERATURE
H1 = 120
H2 = 250

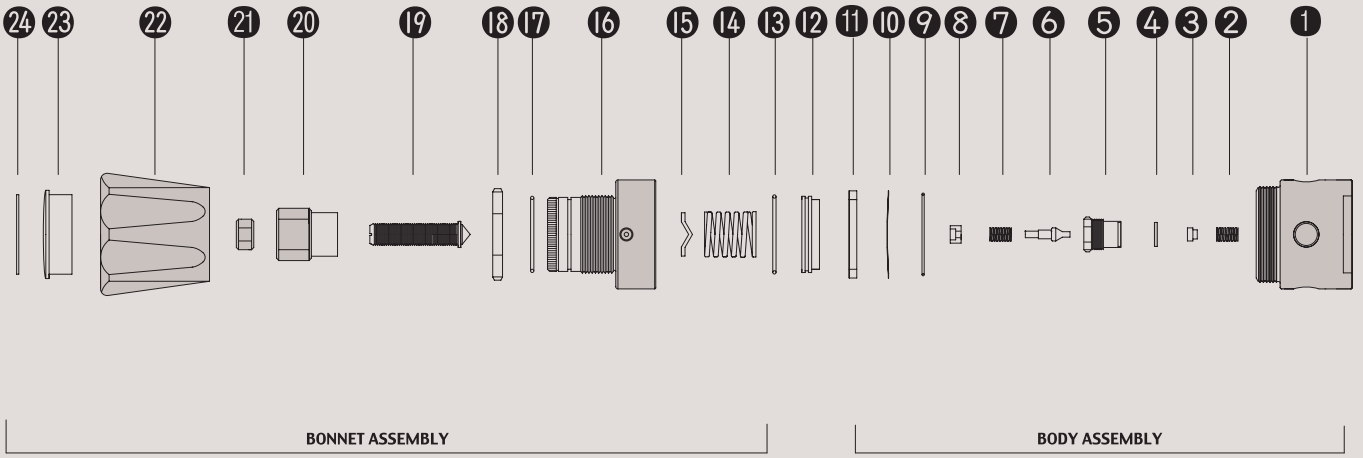
IN & OUT PORTS SIZE
NP4 = 1/4" NPT

Ports
2 = 2 Port
3 = 3 Port
4 = 4 Port

CONTROLLED PRESS. RANGES
002 = 2bar (30psi)
005 = 5bar (72psi)
010 = 10bar (145psi)
025 = 25bar (362psi)

This is revision by Jan of 2010

077 SERIES PART LIST



STANDARD MODEL SERIES

Item No.	Description	Part No.	Model Application
01	Body	077-01-01	077-01-1 Stainless Steel 316L body / 077-01-02 Brass body
02	Low Valve Spring	077-02	All Model Same
03	Sprimg Locking Plate	077-03	All Model Same
04	Valve Seat	077-04	077-04-01 2bar, 5bar, 10bar, 25bar
05	Valve Seat Locking Screw	077-05	All Model Same
06	Main Valve	077-06	All Model Same
07	Valve Sprimg	077-07	All Model Same
08	Valve Sprimg Locking Plate	077-08	All Model Same
09	O-Ring	077-09	All Model Same
10	STS316L Diaphragm	077-10	All Model Same
11	Locking Ring	077-11	All Model Same
12	Back-up Plate	077-12	All Model Same
13	O-Ring	077-13	All Model Same
14	Load Spring	077-14	077-32-01 2bar, 5bar, 10bar, 25bar
15	Pivot	077-15	All Model Same
16	Bonnet	077-16	All Model Same (077-40-03, Stainless steel 316L Bonnet Optional)
17	O-Ring	077-17	All Model Same
18	Panel mount Nut	077-18	All Model Same
19	Adjusting Screw	077-19	All Model Same
20	Push and Lock Slide	077-20	All Model Same
21	Locking Nut	077-21	All Model Same
22	Control Knob	077-22	All Model Same
23	Name Cap	077-23	All Model Same
24	Name Cap Plate	077-24	077-48-01 2bar, 5bar, 10bar, 25bar

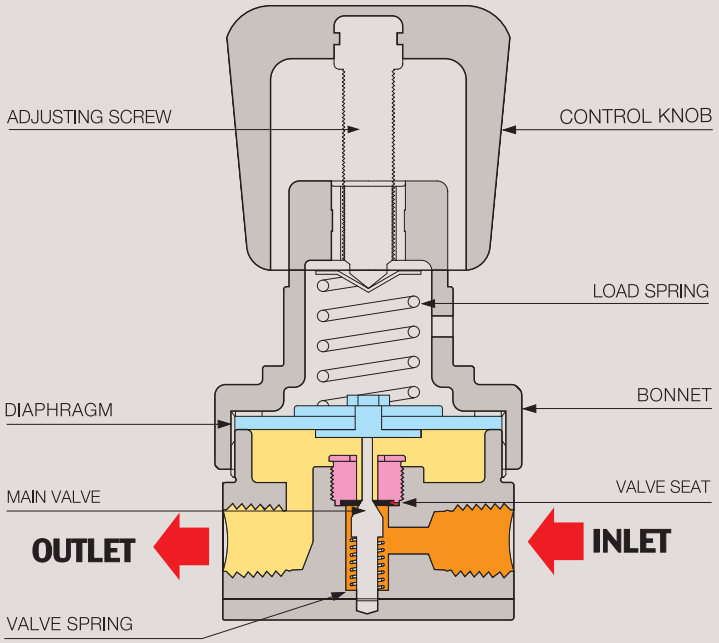
DR60 SERIES

GENERAL GAS REGULATOR

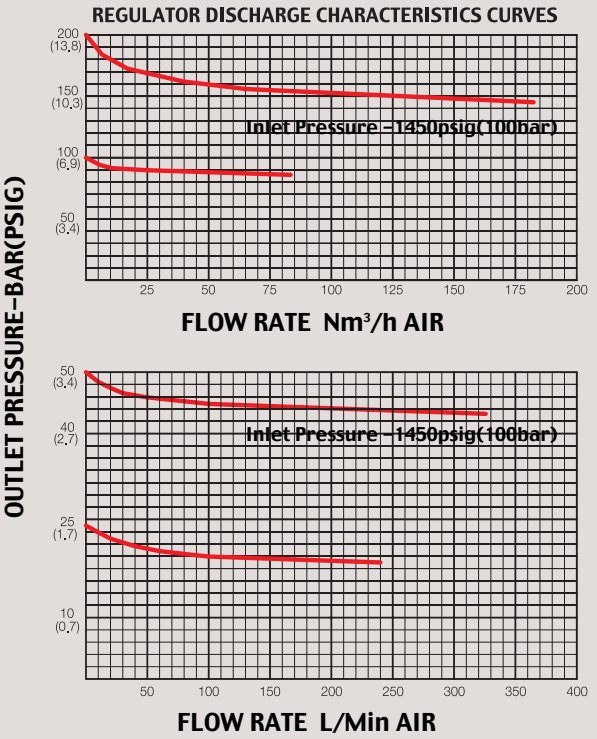
DR60 SERIES

This is revision by Jan of 2010

FUNCTIONAL SCHEMATIC



FLOW CHART



GENERAL GAS REGULATOR

DR60 SERIES

DR60시리즈의 바디 재질은 Nickel Plated Forged Brass이며 가장 일반적인 산업용 가스를 사용하기에 가장 이상적인 Gas Regulator입니다. 산업용 일반 배관 등에 적합하도록 설계되였으며, 3-ports 또는 4-ports 1/4″ NPT 타입으로 이루어져 있습니다. 내부의 부품은 sts or brass를 사용하였으며 Valve seat는Teflon를 사용하여 내구성이 뛰어나며 다이아후렘은 특수고무를 사용하였습니다. Inlet과 Outlet Gauge가 기본으로 조립된 제품입니다.

DR60 Series are the industrial gas regulators,applicable to oxygen and non-corrosive gases. Available for general pipeworks and cylinder equipments. They are designed and produced for the customers to use them easily and expediently with ultimate safety. Special rubber is used for its internal diaphragm and inlet and outlet gauge are assembled as standard.

Recommendations to Use

Each regulator is designed and manufactured taking into full consideration of safety and easy operation. However, for doubled safety and use of the regulators most effectively, it is strongly recommended to use each regulator within the range of 25% ~ 75% of its working pressure. It is also recommended to use within this range for most smooth operation and extension of products life.

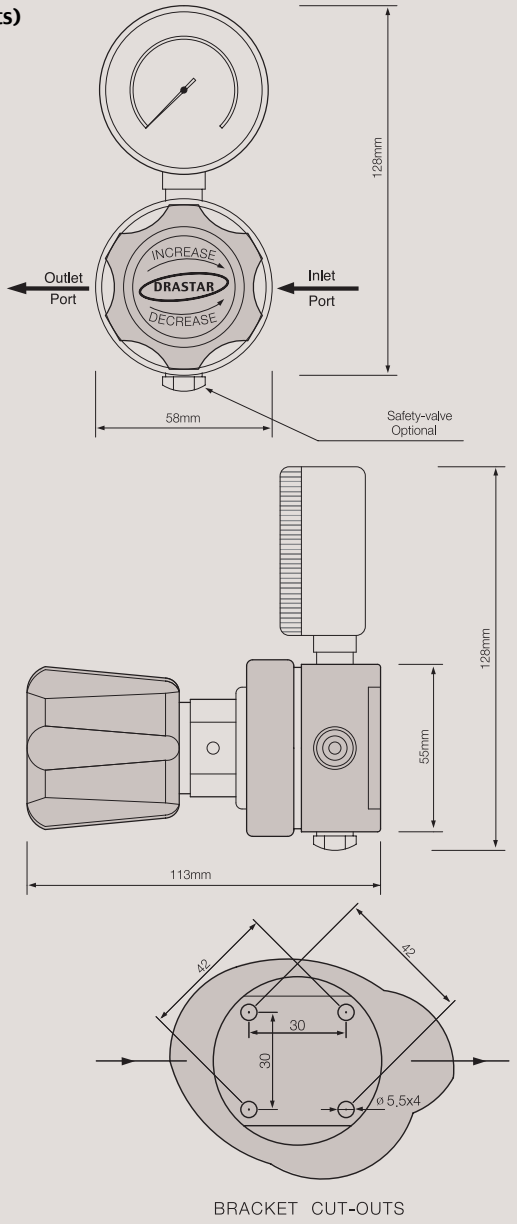
SPECIFICATIONS

Ports	1/4″ NPT type DR60-A000-1 3-ports DR60-A000-2 4-ports
Body Material	Nickel Plated Forged Brass
Bonnet Material	Zinc(Zn) Casting Nickel Plated
Diaphragm	Particular of Synthetic Rubber
Valve Seat	Teflon®
Valve Spring	Stainless steel
Inlet Pressure Ranges	DR60-A000-1, 3500psig (238bar) DR60-B000-1, 500psig (35bar)
Outlet Pressure Ranges	25(1.7bar), 50(3.4bar), 100(7bar), 200psig(14bar)
Self-Venting	DR60-X000-1-V, Optional
Operating Temperature	-40°C - +70°C(-40°F - +160°F) (standard)
Standard Optional	CGA, Inlet and Outlet Gauges, etc..

INSTALLATION DIMENSIONS METRIC EQUIVALENTS ARE IN PARENTHESES

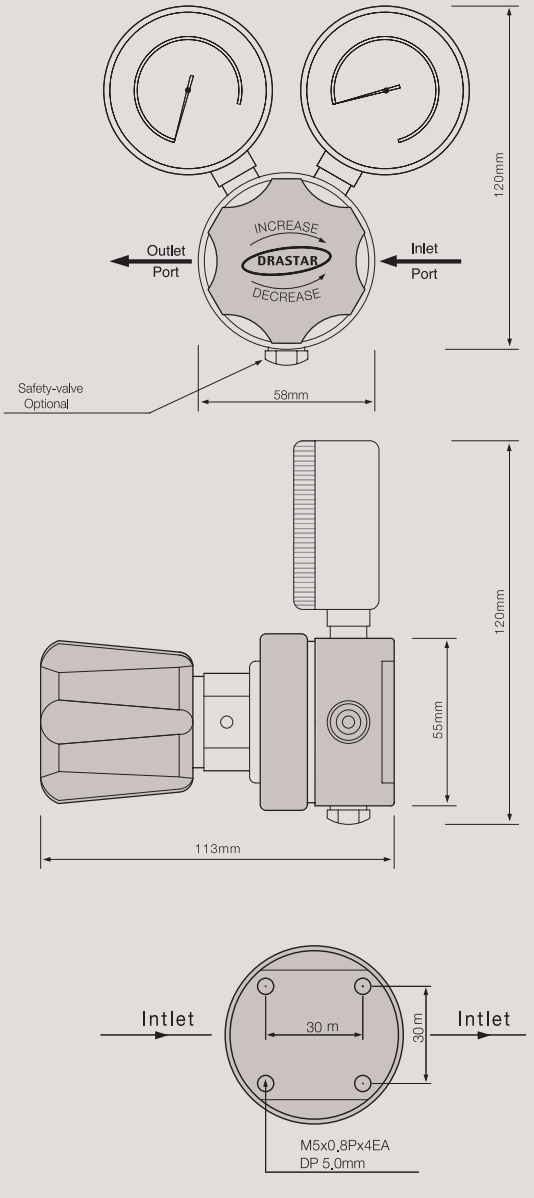
■ GAUGE PORT OPTIONS

MODEL DR60-A025-1
(3-Ports)



BRACKET CUT-OUTS

MODEL DR60-A025-2
(4-Ports)



ORDERING INFORMATION

DR60 - A 025 - 1 - V

BASIC SERIES NUMBER

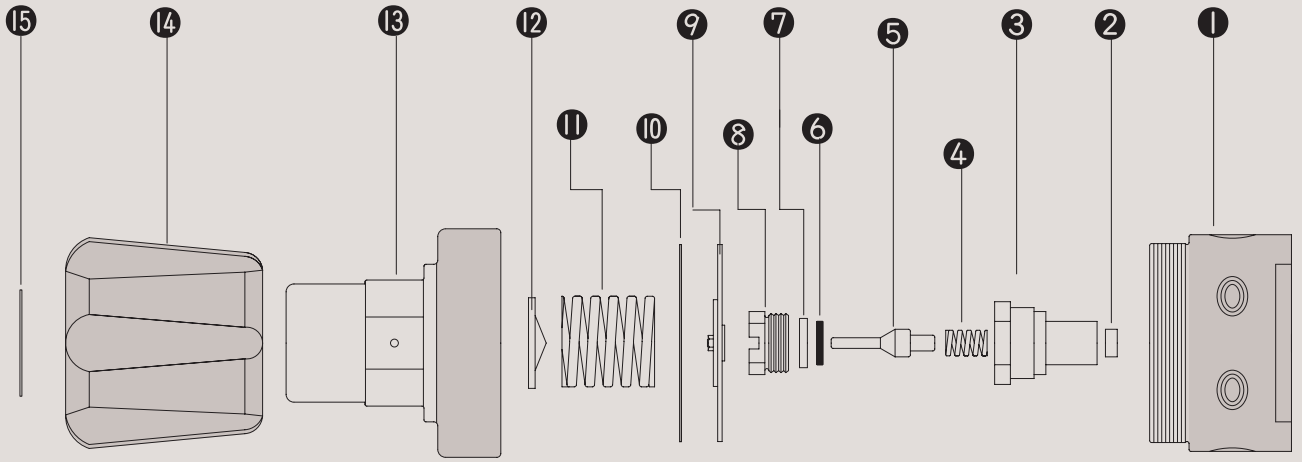
MAX. INLET PRESSURE
A = 3,500psig (238 bar)
B = 500psig (35 bar)

OUTLET PRESSURE RANGES
025 = 0-25PSIG (0~1.7 bar)
050 = 0-50PSIG (0~3.5 bar)
100 = 0-100PSIG (0~7 bar)
200 = 0-200PSIG (0~14 bar)

V = Self-Venting (Optional)

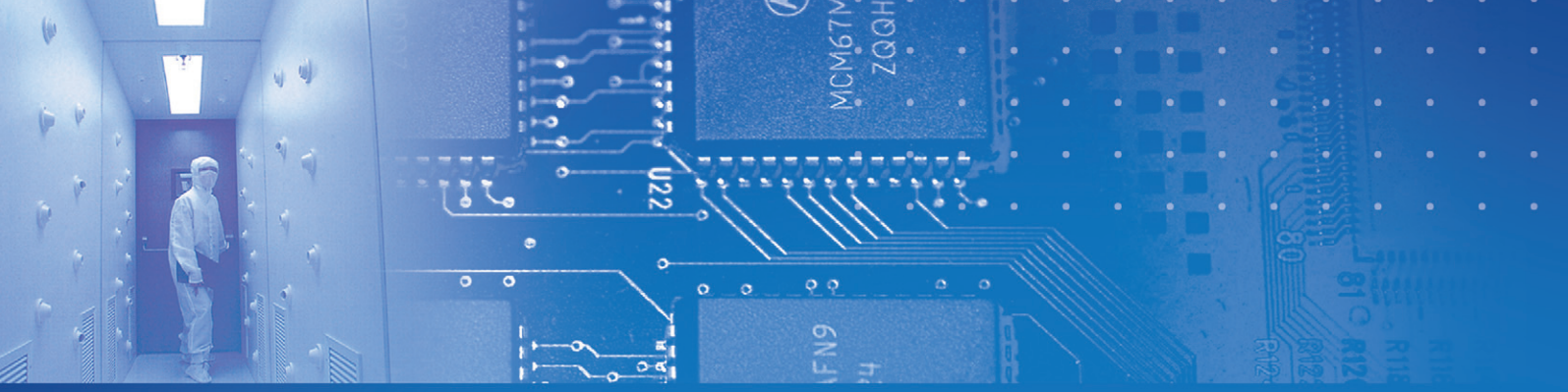
PORT SIZE 1/4" NPT TYPE
1 = 3-ports
2 = 4-ports

DR60 SERIES PART LIST



STANDARD MODEL SERIES

Item No.	Description	Part No.	Model Application
01	Body Material	DR60-01	DR60-01-1 3-ports / DR60-01-2 4-ports
02	Cartridge Filter	DR60-02	All Model Same
03	Cartridge	DR60-03	All Model Same
04	ValveSpring	DR60-04	All Model Same
05	Main Valve	DR60-05	All Model Same
06	Valve Seat	DR60-06	All Model Same
07	Valve Seat Cartridge	DR60-07	All Model Same
08	Locking Screw	DR60-08	All Model Same
09	Diaphragm Assembly	DR60-09	All Model Same
10	Gasket	DR60-10	All Model Same
11	Load Spring	DR60-11	DR60-11-1 25psi/DR60-11-2 50psi/DR60-11-3 100psi/DR60-11-4 200psi
12	Pivot	DR60-12	DR60-12-1 25psi/DR60-12-2 50psi/DR60-12-3 100psi/DR60-12-4 200psi
13	Bonnet	DR60-13	All Model Same
14	Control Knob	DR60-14	All Model Same
15	Name Plate	DR60-15	All Model Same
	Safety-valve Assembly		All Model Optional
	Self-venting		All Model Optional



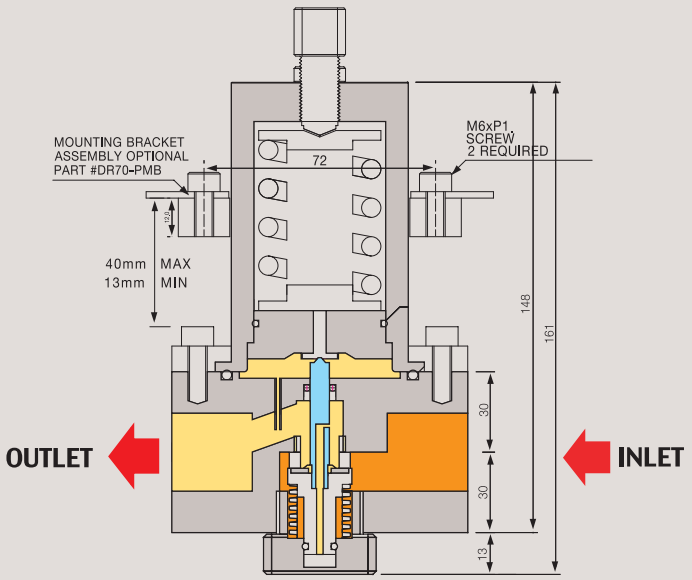
DR70 SERIES

DR70 SERIES

This is revision by Jan of 2010

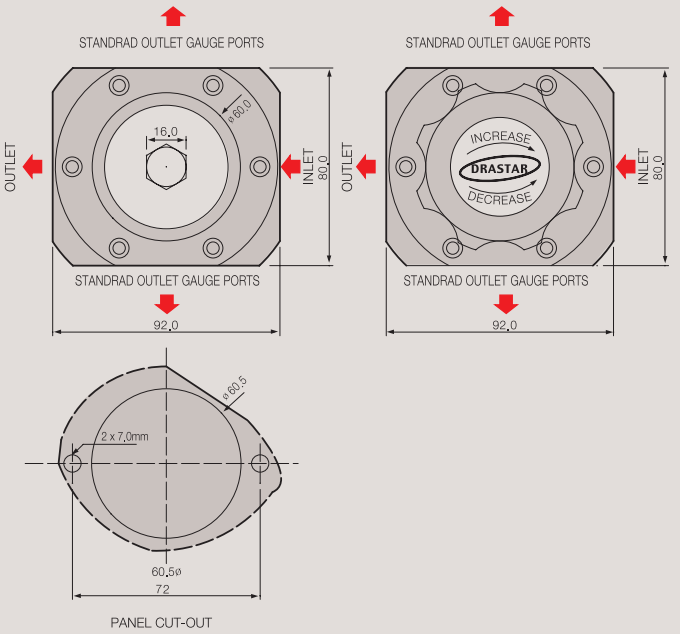
FUNCTIONAL SCHEMATIC

▪ BOLT CONTROL TYPE (DR701 SERIES)



INSTALLATION DIMENSIONS

▪ BOLT CONTROL TYPE ▪ KNOB CONTROL TYPE



HIGH-FLOW AND HIGH PRESSURE

DR70 SERIES

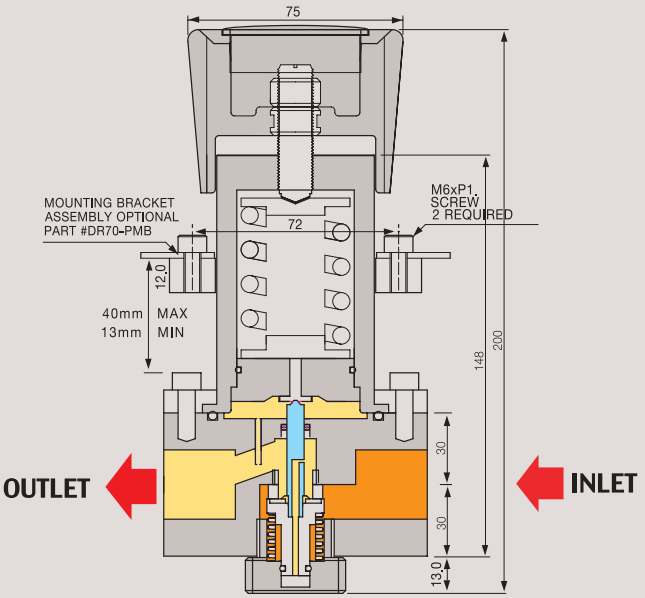
DR70시리즈는 물, 케미칼, Liquid 또는 가스등 많은 유량을 필요로 하는 배관라인등에 가장 적합한 제품이며 배관 사이즈는 NPT or BSP 3/4, 1″ 까지 선택하여 사용 가능하며 제품의 장점은 자체적으로 DROP를 완전히 보정해주기(잡아주기) 때문에 P1의 압력 변화가 크다하여도 P2의 압력(조정 또는 셋팅압력)은 변화없이 안정적으로 정밀하게 유지시켜 주는 레귤레이터 입니다. Body 의 재질은 모델에 따라 Brass and Stainless steel 316L로 이루어졌으며 입구 압력은 Brass 250bar(3625psi) Stainless steel 350bar(5076psi)까지 폭넓게 사용 가능하며 각각의 모델에 따라 Outlet Working pressure 0.5~55bar(780psi)까지 사용할 수 있습니다. 또한 모든 DRASTAR Regulators는 외부적인 진동과 가스배관 라인의 미세 진동 등으로 인하여 초기 셋팅 값이 스스로 변하는 현상를 완전히 해결한 드라스타만의 Push and Lock 타입의 조절 손잡이를 적용하여 사용하기에 더욱 편리합니다. 조절 손잡이를 누르면 셋팅값이 변하는 것을 방지하며, 손잡이를 위로 올려 자유롭게 원하는 압력으로 다시 셋팅 할 수 있는 드라스타만의 특허 10-2009-0012957출원한 Push and Lock 타입의 레귤레이터입니다.

SPECIFICATIONS

Ports	DR70x-SP-010 -NP2 3/4″ NPT DR70x-SP-010 -BS2 3/4″ BSP DR70x-SP-010 -NP3 1″ NPT DR70x-SP-010 -BS3 1″ BSP
Leak Rate Certification	to $2x10^{-8}$ atm cc/sec Helium available.
Body Materials	DR70x-BP-010 -NP2 Brass DR70x-SP-010 -NP2 Stainless steel 316L
Bonnet Material	Nickel Plated Brass / Stainless steel 316L(Optional)
Main Valve	Stainless steel 316L
Valve Spring	Stainless steel 316L(Optional)
Valve Seat	DR70x-SR-010 -NP2 VITON DR70x-SP-010 -NP2 TEFLON
Outlet Pressure Ranges	10bar(145psig), 25bar(362psig) 50bar(725psig), 70bar(1015psig)
Operating Temperature	-30℃ ~ +60℃ VITON / -40℃ ~ +70℃ TEFLON (standard)
Flow Capacity	Cv= 3.5 (Standard)

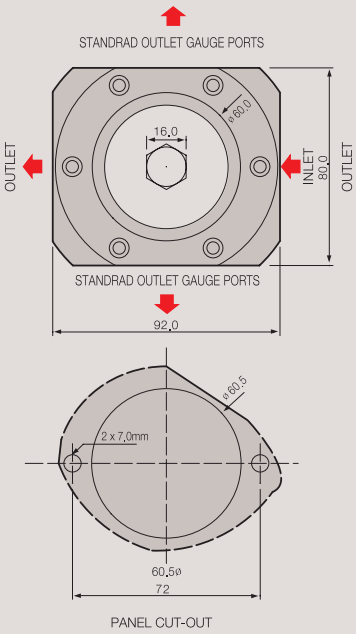
FUNCTIONAL SCHEMATIC

▪ **KNOB CONTROL TYPE (DR702 SERIES)**

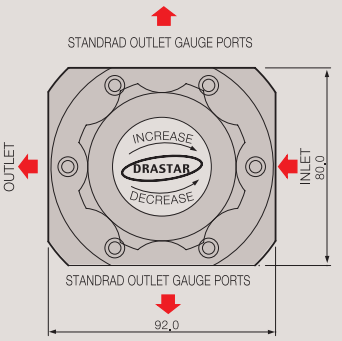


INSTALLATION DIMENSIONS

▪ **BOLT CONTROL TYPE**



▪ **KNOB CONTROL TYPE**



DR70 Series is a regulator most suitable for pipeline application where high flow of water, chemical, liquid, gas, etc. is requested. NPT or BSP 3/4″ and up to 1″ pipe can be selectively used to this series. The self-correction function of DROP built in this regulator enables to keep the P2 pressure (adjusted or setting pressure) stable and constant without impact from P1 if it faces big pressure differences at P1. Regulator body is made of brass or stainless steel 316L and has the wide range of inlet pressure up to 250bar (3,625psi) for brass body and 350bar (5,076psi) for stainless steel body respectively by model. Outlet working pressure has the range of 0.5~55bar(780psi) by model. DRASTAR regulators are designed and manufactured for easier operation by equipping with the DRASTAR' s own developed push and lock type handle which completely prevents the self-change of pre-set value which can be caused by the vibration from outside or minute vibration at the gas pipeline. You can prevent the self-changing of pre-set value just by pushing the handle and reset the value freely by holding upward the handle. DRASTAR has created and applied patent for this push and lock system for DRASTAR regulators (patent number 10-2009-0012957).

Features

- Precision control of NPT or BSP 3/4″ 1″ Type Regulators
- Drop-prevention function Built-in.
- Suitable for the research labs, industrial control
- Outlet 10bar(145psig), 25bar(362psig) 50bar(725psig), 70bar(1015psig)
- Panel mounting Bracket #DR70-PMB option

권장 사항

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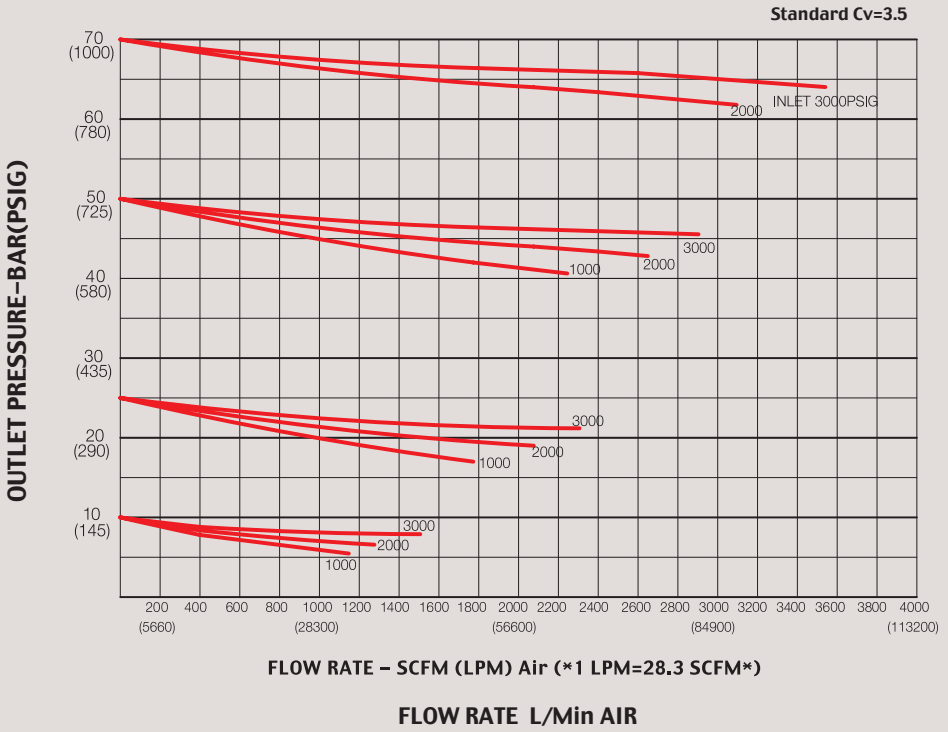
Recommendations

Each product is manufactured since being taken into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe and effective way, you are recommended to use the actual pressure within the range of its 25% ~ 75%. For making precise, smooth movement and to prolong product life, strongly recommended to make a use within above mentioned range.

DR70
SERIES

FLOW CHART



ORDERING INFORMATION

DR70 1 - S P - 010 - NP 2 - V

BASIC SERIES
DR70

CONTROL TYPE
1 = BOLT TYPE
2 = KNOB CONTROL

BODY MATERIAL
S = STS 316L 3000 Psig (200bar)
B = BRASS 1500 Psig (100bar)

VALVE SEAT
P = TEFLON
R = RUBBER VITION
or EPDM

SELF–EVNTING
V = SELF - VENTING

IN & OUT PORTS SIZE
2 = 3/4 "
3 = 1"

IN & OUT PORTS TYPE
NP = NPT
BS = BSP

CONTROLLED PRESS. RANGES
010 = 10bar
025 = 25bar
050 = 50bar
070 = 70bar

UHP Regulator Series Quick Selection Guide

Product	Surface Treatment	Port	Body Material	Diaphragm	Port Size(Cv)	Connection/Type	Final Cleaning	Packing
DRA100 Series	EP	2-Port	STS316L	STS316L	1/4″(0.2) ,3/8″(0.2),1/2″(0.5, 1.0)	VCR	DI-Water	N2 Purge+Double PE bag
		3-Port	STS316L	STS316L	1/4″(0.2) ,3/8″(0.2),1/2″(0.5, 1.0)	VCR	DI-Water	N2 Purge+Double PE bag
		4-Port	STS316L	STS316L	1/4″(0.2) ,3/8″(0.2),1/2″(0.5, 1.0)	VCR	DI-Water	N2 Purge+Double PE bag
DRA100 Series	EP	2-Port	STS316L	Hastelloy-C	1/4″(0.2) ,3/8″(0.2),1/2″(0.5, 1.0)	VCR	DI-Water	N2 Purge+Double PE bag
		3-Port	STS316L	Hastelloy-C	1/4″(0.2) ,3/8″(0.2),1/2″(0.5, 1.0)	VCR	DI-Water	N2 Purge+Double PE bag
		4-Port	STS316L	Hastelloy-C	1/4″(0.2) ,3/8″(0.2),1/2″(0.5, 1.0)	VCR	DI-Water	N2 Purge+Double PE bag
DRA100 Series	BA	2-Port	STS316L	STS316L	1/4″(0.2) ,3/8″(0.2),1/2″(0.5, 1.0)	VCR	DI-Water	N2 Purge+Double PE bag
		3-Port	STS316L	STS316L	1/4″(0.2) ,3/8″(0.2),1/2″(0.5, 1.0)	VCR	DI-Water	N2 Purge+Double PE bag
		4-Port	STS316L	STS316L	1/4″(0.2) ,3/8″(0.2),1/2″(0.5, 1.0)	VCR	DI-Water	N2 Purge+Double PE bag
DRA200 Series	EP	2-Port	STS316L	STS316L	1/4″(0.06, 0.2),3/8″(0.2),1/2″(0.5, 1.0)	VCR / TIED	DI-Water	N2 Purge+Double PE bag
		3-Port	STS316L	STS316L	1/4″(0.06, 0.2),3/8″(0.2),1/2″(0.5, 1.0)	VCR / TIED	DI-Water	N2 Purge+Double PE bag
		4-Port	STS316L	STS316L	1/4″(0.06, 0.2),3/8″(0.2),1/2″(0.5, 1.0)	VCR / TIED	DI-Water	N2 Purge+Double PE bag
DRA200 Series	EP	2-Port	STS316L	Hastelloy-C	1/4″(0.06, 0.2),3/8″(0.2),1/2″(0.5, 1.0)	VCR / TIED	DI-Water	N2 Purge+Double PE bag
		3-Port	STS316L	Hastelloy-C	1/4″(0.06, 0.2),3/8″(0.2),1/2″(0.5, 1.0)	VCR / TIED	DI-Water	N2 Purge+Double PE bag
		4-Port	STS316L	Hastelloy-C	1/4″(0.06, 0.2),3/8″(0.2),1/2″(0.5, 1.0)	VCR / TIED	DI-Water	N2 Purge+Double PE bag
DRA200 Series	BA	2-Port	STS316L	STS316L	1/4″(0.06, 0.2),3/8″(0.2),1/2″(0.5, 1.0)	VCR / TIED	DI-Water	N2 Purge+Double PE bag
		3-Port	STS316L	STS316L	1/4″(0.06, 0.2),3/8″(0.2),1/2″(0.5, 1.0)	VCR / TIED	DI-Water	N2 Purge+Double PE bag
		4-Port	STS316L	STS316L	1/4″(0.06, 0.2),3/8″(0.2),1/2″(0.5, 1.0)	VCR / TIED	DI-Water	N2 Purge+Double PE bag
DRA700 Series	BA	2-Port	STS316L	STS316L	1/4″(0.2),3/8″(0.2),1/2″(0.5,1.0)	LOK	DI-Water	N2 Purge+Double PE bag
		3-Port	STS316L	STS316L	1/4″(0.2),3/8″(0.2),1/2″(0.5,1.0)	LOK	DI-Water	N2 Purge+Double PE bag
		4-Port	STS316L	STS316L	1/4″(0.2),3/8″(0.2),1/2″(0.5,1.0)	LOK	DI-Water	N2 Purge+Double PE bag

※ Pleas refer to catalogue indetail.

Semiconductor Gas Property & Selection Guide

★★	Very Suitable	☆	Partial application
★	Suitable	×	unsuitable
☆☆	Applicable		

UHP(VCR)-Type (1)

Gas Name		Gas Property									Model (DRASTAR)							
Elementary symbol	Name	Flammable (가연성)	Oxidiz (산화성)	Toxic (독 성)	Corrosive (부식성)	Inert (비활성)	Pyrophoric (자연발화)	High-Perssure (고압가스))	Mixid Gas (혼합가스)	Has telloy-C (Diaphragm)	DRA100	DRA200	DRA700	072S	072B	082S	082B	092
Kr	Krypton					●					★	★	☆☆	☆	×	☆	×	☆
Ne	Neon					●					★	★	☆☆	☆	×	☆	×	☆
Xe	Xenon					●					★	★	☆☆	☆	×	☆	×	☆
AsH3	Arsine	●		●				◎			★	★★	☆☆	☆	×	☆	×	☆
B2H6	Diborane	●		●				◎			★	★★	☆☆	☆	×	☆	×	☆
BCl3	Boron Trichloride			●	●					⊙	★	★★	☆☆	☆	×	☆	××	☆
BF3	Boron Trifluoride	●		●	●					⊙	★	★★	☆☆	☆	×	☆	×	☆
CO	Carbon Monoxide	●		●	●						★	★★	☆☆	☆	×	☆	×	☆
CO2	Carbon Dioxide					●					★	★	☆☆	☆	×	☆	×	☆
CH4	Methane	●									★	★	☆☆	☆	×	☆	×	☆
C2H4	Ethylene	●									★	★	☆☆	☆	×	☆	×	☆
Cl2	Chlorine		●	●	●					⊙	★	★★	☆☆	☆	×	☆	×	☆
F2	Flourine		●	●	●				◎	⊙	★	★★	☆☆	☆	×	☆	×	☆
GeH4	Germane	●		●				◎			★	★★	☆☆	☆	×	☆	×	☆
HCl	Hydrogen Chloride		●	●	●					⊙	★	★★	☆☆	☆	×	☆	×	☆
HF	Hydrogen Fluoride		●	●	●					⊙	★	★★	☆☆	☆	×	☆	×	☆
HBr	Hydrogen Bromide		●	●	●					⊙	★	★★	☆☆	☆	×	☆	×	☆
H2	Hydrogen	●						◎			★	★★	☆☆	☆	×	☆	×	☆
H2S	Hydrogen Sulfide	●		●	●						★	★★	☆☆	☆	×	☆	×	☆
H2Se	Hydrogen Selenide	●		●				◎			★	★★	☆☆	☆	×	☆	×	☆
NH3	Ammonia	●		●	●						★	★★	☆☆	☆	×	☆	×	☆
NF3	Nitrogen Trifluoride		●	●	●						★	★★	☆☆	☆	×	☆	×	☆

★★	Very Suitable	☆	Partial application
★	Suitable	×	unsuitable
☆☆	Applicable		

UHP(VCR)-Type (2)

Gas Name		Gas Property									Model (DRASTAR)							
Elementary symbol	Name	Flammable (가연성)	Oxidizer (산화성)	Toxic (독 성)	Corrosive (부식성)	Inert (비활성)	Pyrophoric (자연발화)	High-Perssure (고압가스)	Mixid Gas (혼합가스)	Has telloy-C (Diaphragm)	DRA100	DRA200	DRA700	072S	072B	082S	082B	092
NO	Nitric Oxide		●	●	●						★	★★	☆☆	☆	×	☆	×	☆
NO2	Nitrogen Dioxide		●	●	●						★	★★	☆☆	☆	×	☆	×	☆
N2O	Nitrous Oxide		●								★	★	☆☆	☆	×	☆	×	☆
PH3	Phosphine	●		●				◎			★	★★	☆☆	☆	×	☆	×	☆
PCl3	Phosphorus Trichloride			●	●						★	★★	☆☆	☆	×	☆	×	☆
SiH4	Monosilane	●		●			●	◎			★	★★	☆☆	☆	×	☆	×	☆
Si2H6	Disilane	●		●				◎			★	★★	☆☆	☆	×	☆	×	☆
SiH2Cl2	Dichlorosilane	●		●						⊙	★	★★	☆☆	☆	×	☆	×	☆
SiCl4	Silicon Tetrachloride			●	●					⊙	★	★★	☆☆	☆	×	☆	×	☆
SiF4	Silicon Tetrafluoride			●	●					⊙	★	★★	☆☆	☆	×	☆	×	☆
SF6	Sulfur Hexafluoride	non property									★	★	☆☆	☆	×	☆	×	☆
WF6	Tungsten Hexafluoride			●	●					⊙	★	★★	☆☆	☆	×	☆	×	☆
SIF3	Chlorine Trifluoride			●	●					⊙	★	★★	☆☆	☆	×	☆	×	☆
CCl3F	Freon(Halocarbon)11	non property									★	★	☆☆	☆	×	☆	×	☆
CCl2F2	Freon(Halocarbon)12	non property									★	★	☆☆	☆	×	☆	×	☆
CClF3	Freon(Halocarbon)13	non property									★	★	☆☆	☆	×	☆	×	☆
CBrF3	Freon(Halocarbon)13B1	non property									★	★	☆☆	☆	×	☆	×	☆
CF4	Freon(Halocarbon)14	non property							◎		★	★	☆☆	☆	×	☆	×	☆
CHF3	Freon(Halocarbon)23	non property									★	★	☆☆	☆	×	☆	×	☆
C2F6	Freon(Halocarbon)116	non property									★	★	☆☆	☆	×	☆	×	☆
C3F6	Freon(Halocarbon)218	non property									★	★	☆☆	☆	×	☆	×	☆
CCl4	Carbon Tetrachloride			●							★	★★	☆☆	☆	×	☆	×	☆

NPT Regulator Series Quick Selection Guide

Product	Body Material	Diaphragm	Port Size	INLET	OUTLET	Cv	Corrosive (부식성)	Toxic (독 성)	Flammable (가연성)	High-purity (고순도)	General (無특성)
072S Series	STS316L	STS316L	NPT 1/4″	3500psi	500psi	0.06/0.2	○	○	○	○	○
	STS316L	STS316L		3500psi	500psi		○	○	○	○	○
072B Series	Brass	STS316L	NPT 1/4″	3500psi	500psi	0.06/0.2	×	T	○	×	○
	Brass	STS316L		3500psi	500psi		×	T	○	×	○
082S Series	STS316L	STS316L	NPT 1/4″	6000psi	3000psi	0.06/0.2	○	○	○	○	○
082B Series	Brass	STS316L	NPT 1/4″	6000psi	3000psi	0.06/0.2	×	T	○	×	○
092 Series	STS316L	STS316L	NPT 1/2″	3500psi	350psi	1.0	○	○	○	○	○
DR60 Series	Brass	Rubber	NPT 1/4″	3500psi	200psi	0.2	×	×	○	×	○
DR70 Series	STS316L	STS316L	NPT 3/4″ or 1″	3000psi	70bar	3.5	○	○	○	○	○
	Brass		BSP 3/4″ or 1″	1500psi			×	T	○	×	○
077 Series	STS316L	STS316L	NPT 1/4″		25bar	0.2	○	○	○	○	○
	Brass						×	T	○	×	○

※ 세부 사양은 카달로그 참고하세요.

※ Please refer to catalogue in detail

Initial Interpretation		
	○	Suitable (적합)
	T	Unsuitable with condition (부분적 적합)
	×	Unsuitable (부적합)

제품의 안전, 설치 & 작동 시 유의점

- 본 사용 설명서를 읽고 충분히 숙지하기 전까지는 선택, 설치, 사용 혹은 Regulator나 혹은 부속품들을 정비하려 하지 마십시오.
- 본 정보는 설치 후 제품 유지와 조작방법을 제공한다.
- 숙련되지 않은 사람에게 설치, 사용 혹은 본 Regulator나 혹은 부속품 정비를 허락하지 마십시오.

1. 사용하는 가스가 무엇인지 파악하시기 바랍니다.
   사용되는 원천압력(Inlet), 출구압력(Outlet)-현 사용 압력 / 최대 압력 여부, 유량이 얼마인지 파악하십시오.

2. 모든 시리즈는 Outlet 최대 사용 압력이 각 모델의 85% 이상 넘으면 안됩니다.

3. Regulator 사용시 안정적 유량이 중요하다. 이유는 급격한 유량의 변화는 다이아후렘 누적피로로 인하여 깨짐의 주요원인이 됩니다.

4. 바디 재료는 가스의 순도에 영향을 미칩니다. 가스의 순도에 영향을 끼치지 않는 바디를 사용하길 권합니다.

5. 가스를 서로 혼합하여 압축을 가하면 격렬한 반응과 폭발을 일으키므로 모든 고압 가스 용기 또는 Regulator은 서로 혼용을 해서 사용하면 안 됩니다.

6. CGA 나사산 타입에 따른 구분
   좌나사: 위험한 가스들(수소, 메탄, 오일가스, 석탄가스, 클로로메틸, 클로로에틸, 가연성가스, 압축가스, 가연성 액화가스등..)

7. 092시리즈의 경우 클린 라인이 아닌 일반 라인 조립 시 필히 Regulator Inlet 부분에 7마이트론(180매쉬) 이상의 필터링은 필수이며, 그렇지 못하면 바로 고장의 원인이 됩니다.

8. 제품의 안전한 사용을 위해, 최대 압력의 25% ~ 75% 이내에서 사용을 적극 권장 합니다.

9. Regulator, 밸브 혹은 부속품의 최대 압력 비율보다 더 큰 압력을 제공하는 근원을 Regulator, 밸브 혹은 부속품에 접속시키지 마십시오.

10. 만약 Regulator 혹은 밸브가 누출하거나 혹은 기계고장 시 즉시 서비스를 받도록 하십시오.

11. 제조자의 허가 없이 기기를 고치거나 부속품을 추가하지 마십시오.

12. 시스템 정비에 갑작스러운 압력, 충격 혹은 유체의 급격한 변화 등을 피하도록 시스템에 서서히 압력을 조정하십시오.

13. 귀사 장비의 정기적인 검사와 정비는 지속적이고 안전한 기계조작을 위해 필요합니다.

14. 사용자는 원료의 적합성 확인을 위해 표준 작업 조건에 따라 테스트 해야만 합니다.

15. 많은 가스가 질식을 야기 시킬 수 있습니다. 환기가 잘되는 구역을 만드시기 바랍니다. 산소의 부족을 직원에게 알릴 수 있는 안전장치를 제공하십시오.

16. 절대 본 Regulator 혹은 부속품에 윤활유 혹은 오일을 사용하지 마십시오. 〈제조자에 의해 허가되지 않은 부품을 첨부하거나 기계 수리를 하지 마십시오.〉

제품 보증 기간

A/S 보증 기간은 1년이며 제품 하자 발생 시 A/S 또는 1:1 무상 교환이 원칙입니다. 보증과 배상은 이 명시된 보증에서 어떤 제품 즉 사고로 손상된 것, 남용, 악용, 또는 (주)드래곤정공의 공인된 개인에 의해서가 아닌 다른 어떤 방법으로 변경, 바꾸어진 것에는 적용되지 않는 것으로 규정한다.

자사 제품의 조립부품 매뉴얼, 부품 리스트는 우리 홈페이지에서 정보를 얻으실 수 있습니다.

Instructions for Safe Installation and Operation

- This Instructions is to provide how to maintain and operate of the DRASTAR Gas Regulators.
- Do NOT try to select, install, use, nor repair this regulator before you carefully read and aware this instructions. Also, it is NOT allowed any unskilled or unauthorized personnel to install, use or repair the regulators or any of their parts.
- Selection of unsuitable product, improper installation, repair, abuse, misapplication, and/or overuse of the gas regulator or any of its parts may cause death, serious personnel injury and/or damages to your property.
- Before use the gas regulators, it is strongly recommended to check the followings:

1. Types and specifications of gases to use; inlet pressure, outlet pressure, current working pressure, max. pressure, flow rate, etc.
2. For all regulators, maximum outlet pressure for working shall not exceed 75% of the equipment's designed limit, i.e. use the 100psi regulators within 0~75psi range.
3. For gas regulators, stable flow rate is very critical. Exponential change of flow rate cause a break of diaphragm.
4. The regulator and body material of it may affect the purity of gases. So, it is very desirable to choose and use the proper regulator with the right material for body not affecting the purity of gases as the manufacturer recommended.
5. It is recommended NOT to use the regulator for mixed or different gases different from the gas that initially flowed in; use only the gas that you used. (If you mix-use some gas such as Toxic Gas can bring a violent reaction and/or explosion which can be lead to a serious injury to person.
6. Caution for thread type;
   The counterclockwise thread type is suitable for dangerous gases such as hydrogen, methane, oil gas, coal gas, chloro-methyl, chloro-ethyl, combustible compressed gas, and combustible liquidated gas, etc.
7. If the 092 Series should be used in a normal assembly line other than in a clean room, the inlet area shall be filtered/protected by 180 mesh or higher filter. Otherwise, it may cause a breakdown to the regulator.
8. For safety, it is strongly recommended to use the regulators within the range of 25% ~ 75% of maximum pressure.
9. Do NOT connect any inlet source with higher pressure than regulator, valve, and/or any parts of it.
10. In case that any leaks found or the regulator is out of order, immediately stop using the regulator and get maintenance.
11. Without manufacturer's prior permission, do NOT repair and/or alter any parts of the regulator.
12. At the time of maintenance, do not apply any sudden pressure, shocks, and/or exponential change of flow rate to the system, but adjust the pressure slightly and gradually.
13. Please check, inspect and maintain the regulator regularly by the skilled personnel in order to keep the regulator's optimum operation without trouble.
14. Before using the regulator, please recheck the inlet sources and the working environment and/or conditions, etc. to ensure the most safe and compatible operation of the regulator.
15. As the regulator is used in a mass flow of gases, it may suffocate personnel(s). Please prepare some ventilation area and alarm system to give notice for lack of oxygen.
16. Never feed any lubricant oil or any other oil to the regulator or any of its parts.