DRASTAR DRASTAR CONTROL CONTRO

DRASTAR CO., LTD.

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ORASTAR DRASTAR CO., LTD



DRAST

3000

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 시 장에서 절대 강자가 될수 없다는 신념을 되새기며, 지난 10여년 동안 인재와 기술 을 기초로 한 최고 품질의 신기술 연구를 통해 기술확보와 함께 국내 및 해외에서 선도적인 역할을 담당하였다고 자부합니다. 당시는앞으로도 더욱 더 연구와 개발 에 힘쓸 것이며, 가스 조정기에 관한 한 세계 최고의 제품만을 생산, 제작하여 고객 의 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

RAI00



ULTRA-HIGH PURITY 10Ra0r 5Ra MICROINCH INTERNAL FINISHES

DRAIOO SERIES(VCR Type Regulator)

DRA100(VCR type) 시리즈는 초고순도 반도체 제조용 특수 가스 라 인, Bulk Gas Line , 기타 설비 라인 등에 사용하도록 고안된 Pressure Reducing Regulator입니다. 반도체 생산 hook-up 라인 등에 사용되도 록 내부 표면은 B. A. 급에서 E. P 10 Ra, 5 Ra급까지 처리하였습니다. DRASTAR만의 Locking-Plate Seal방식을 개발하여 특허 출원을 하였 으며,특히 특허(10-0753280) 출원한 DRASTAR만의 Locking-Plate 방 식이 적용된 이 제품은 다음과 같은 장점이 있습니다.

첫째, Diaphragm에 가해지는 압력을 분산시켜 주는 역할을 합니다. 둘째, 기존의 나사산을 모두 없애주므로 Particle 생성의 주된 요인을 사전에 없애, 반도체 생산 라인의 청정도와 순도를 유지시켜 줍니다.

셋째, Diaphragm의 누적된 피로를 최소화 하므로 Diaphragm 파손으로 인한 가스 누출 위험을 사전에 줄여줍니다. 조립, 용접, 실험과 세정 까지의 모든 공정은100-class와 10-class 크린룸에서 모든 작업이 이 루어집니다.

DRA100 Series (VCR Type) are the pressure reducing regulators specially designed to use at the special gas line for ultra-pure semiconductor manufacturing, bulk gas line and other industrial facility lines.

In order to use for semi-conductor hook-up line, we treated the internal surface up to B.A. 23Ra and E.P. 10Ra, 5 Ra. .

We have developed our own Locking-Plate Seal for which we hold a patent. (Patent No. 10-0753280). Being equipped with this Locking-Plate Seal, DRA100 Series have the merits as below;

Firstly, the pressure on the Diaphragm will be dispersed. Secondly, as it has no threads, it enables to keep the semiconductor manufacturing lineclean and pure by preventing generation of particles in advance.

Thirdly, it will minimize the risk of gas leak which can be happenedby breaking of Diaphragm as this system will minimize the accumulated fatigue on Diaphragm. All procedures from assembly, welding, testing and cleaning are carried out in the 100-Class and 10-Class clean room.

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)

Recommendations to Use

They are designed and manufactured taking into consideration of the highest safety and easy operation. But, for safest and most efficient operation and maintenance of the regulators, it is recommended to use the products within 25%~75% of the designed working pressure.

FLUID MEDIA-All gases corrosive or non-corrosive or those requiring high purity regulation compatible with materials of construction. For other media, consult company.

HIGH PURITY INTERNAL CONNECTIONS(H.P.I.C): Drastar high purity internal constructions. Those are machined inside the regulator body and are designed to be compatible with VCR (or equivalent) male fittings-swivel only.

WELDED FITTINGS: Tube stubs or VCR (compatible) fittings welded to the regulator body.

CLEANING: All DRA100 Series Regulators are DI water electronic grade cleaned. In addition, DRA100 Regulators with the internal eletropolish or P.E.P.

FUNCTIONAL SCHEMATIC



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Dragon Precision Industry LTD.

DRASTAB

INSTALLATION DIMENSIONS METRIC EQUIVALENTS ARE IN PARENTHESES

GAUGE PORT OPTIONS



ORDERING INFORMATION

IC SERIES GAUGE PORT OPTIONS GOS = None	DR/	A100-A025S-L	. P <mark>O-</mark> 4MS-G0	S
MATERIAL FINISH htt Annealed	SERIES			GAUGE PORT OPTIONS
LET PRESSURE RANGES = 1-25PSIG (.1-1.7bar) = 1-50PSIG (.1-3.5bar) = 1-50PSIG (.1-7bar) = 1-250PSIG (.1-7bar) = 1-250PSIG (.1-7bar) = 1-250PSIG (.1-7bar) HRAGM MATERIAL Stainless Steel 316L -tastelloy-C HRAGM MATERIAL Stainless Steel 316L -tastelloy-C	DY MATERIALFINISHBright AnnealedB.A.STS 316L Electropolish10RaSTS 316L Internal Electropolish10RaSTS 316L Electropolish10RaVAR Precision (PE,P)STS 316L ElectropolishSTS 316L Electropolish5RaVAR Precision (PE,P)STS 316L Electropolish			G0S = None G1S = 1/4" H P.I.C G2S = 1/4" H P.I.C G2B = 1/4" Male Swivel M1S = 1/4" Male Swivel M2S = 1/4" Male Swivel M2B = 1/4" Male Swivel F1S = 1/4" Female Swivel F2S = 1/4" Female Swivel F2B = 1/4" Female Swivel S1S = 1/4" Fixed Male
PHRAGM MATERIAL 8MS = 3/8" Male Swivel Stainless Steel 316L 8FS = 3/8" Female Swivel Hastelloy-C 2MS = 1/2" Male Swivel UFF 1/4" Control of the Switel UFF 1/4" Control of the Switel UFF 1/4" Control of the Switel UFF 1/4" Control of the Switel	LET PRESSURE RANGES = 1-25PSIG (.1-1.7bar) = 1-50PSIG (.1-3.5bar) = 1-100PSIG (.1-7bar) = 1-250PSIG (.1-17bar)			S2B = 1/4" Fixed Male INLET & OUTLET PORT SIZE & TYPE 4HP = 1/4" H.P.I.C 4MS = 1/4" Male Swivel
	PHRAGM MATERIAL Stainless Steel 316L Hastelloy-C			8KS = 3/8" Male Swivel 8KS = 3/8" Female Swivel 2MS = 1/2" Male Swivel 2KS = 1/2" Female Swivel 2FS = 1/2" Female Swivel IMF = In Port 1/4" Male / Out Port Female
	MATERIAL ² CTFE eflon [®] ⁴ espel [®] (3500PSIG Models only)			

DRAI 00 S E R I E S

This is revision by Jan of 2009



* Inlet Pressure -1420psig(100bar)

Ports	DRA100-A000S-LPO-4MS-G1S / 1/4″ VCR type
	DRA100-A000S-LPO-8MS-G1S / 3/8" VCR type
	DRA100-A000S-LPO-2MS-G1S / 1/2" VCR type
Leak Rate Certification	to 2x10 ^s atm cc/sec Helium available.
Body Materials	DRA100-A000S-LPO-4MS-G1S / Stainless steel 316L B.A
	DRA100-B000S-LPO-4FS-G1S / STS 316L Electropolish
	DRA100-C000S-LPO-4FS-G1S / STS 316L Internal, Electropolish
	DRA100-D000S-LPO-4FS-G1S / STS 316L VAR, Electropolish P.E.P
Bonnet Material	Nickel Plated Brass (Stainless steel 316L Optional)
Diaphragm	DRA100-X000S-LPO-4FS-G1S / Stainless steel 316L
	DRA100-X000H-LPO-4FS-G1S/ Hastelloy -C®
Main Valve	Stainless steel 316L
Valve Spring	Stainless steel 316L
Valve Seat	DRA100-A000S-LPO-G1S / PCTFE
	DRA100-A000S-LTO-G1S / Teflon
	DRA100-A000S-LVO-G1S / Vespel,
Internal Surface Finish	DRA100-A000S-LPO-G1S / 23Ra ~ 15 Ra microinch
	DRA100-B000S-LPO-G1S / 10 Ra microinch
	DRA100-E000S-LPO-G1S / 5 Ra microinch
Inlet Pressure Ranges	DRA100-A000S-HPO-G1S 3500psig (238bar)
	DRA100-A000S-LPO-G1S 600psig (41bar)
Outlet Pressure Ranges	25psig (1.7bar), 50psig (3.4bar), 100psig (7bar), 250psig(17bar)
Operating Temperature	PCTFE -40°C - +60°C (-40°F - +140°F)
	Teflon -40°C - +70°C (-40°F - +160°F)
	Vespel -40°C - +170°C (-40°F - +350°F)
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



DRA200 SERIES



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 다이 아후렘과 메인 밸브를 연결시킨 방식인데, 이렇게 함으로써 이물질이 밸 브 시트에 형성되더라도 압력 누설이 되지 않도록 최고의 안전한 방식으 로 설계 고안된 것입니다. 특히 독성 가스, 발화성 가스, 고부식성 가스등 으로 다이아후렘을 파열로 부터 보호하는 데 유용하며, 특허(10-0753280) 출원한 DRASTAR만의 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.

DRA200 Series (Tied Type) is the Tied Diaphragm Pressure Reducing Regulators specially designed to use at the gas cabinet for ultra-pure semiconductor manufacturing, special gas line, value manifold boxes, and other research institutes. This series is the regulator that Diaphragm is tied with main valve, which will prevent pressure leaking even if foreign substances are foamed on valve sheet. So, it is the gas regulator designed focusing on the safety above all. In particular, it is very useful to protect the Diaphragm breaking by poisonous gas, flammable gas, and high corrosive gas, etc. Equipped with the DRASATR's own Locking-Plate Seal for which we hold a patent (Patent No. 10-0753280), this product has the following merits;

Firstly, the pressure on the Diaphragm will be dispersed.

Secondly, as it has no threads, it enables to keep the semiconductor manufacturing line clean and pure by preventing generation of particles in advance.

Thirdly, as this system will minimize the accumulated fatigue on Diaphragm, it will minimize the risk of gas leak which could be happened due to breaking of Diaphragm. This type of regulator improves the performance of the products and extends the lifetime of Diaphragm. In order to prevent generation of foreign substances, we perform the DI water cleaning and internal surface treatment up to E.P. 10Ra and 5Ra grade. All procedures from assembly, welding, testing and cleaning for this DRA200 Series are carried out in the 100-Class and 10-Class clean room.

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)

Recommendations to Use

They are designed and manufactured taking into consideration of the highest safety and easy operation. But, for safest and most efficient operation and maintenance of the regulators, it is recommended to use the products within 25%~75% of the designed working pressure.

FLUID MEDIA-All gases corrosive or non-corrosive or those requiring high purity regulation compatible with materials of construction. For other media, consult company.

HIGH PURITY INTERNAL CONNECTIONS(H.P.I.C): Drastar high purity internal constructions. Those are machined inside the regulator body and are designed to be compatible with VCR (or equivalent) male fittings-swivel only.

WELDED FITTINGS: Tube stubs or VCR (compatible) fittings welded to the regulator body.

CLEANING: All DRA200 Series Regulators are DI water electronic grade cleaned. In addition, DRA200 Regulators with the internal eletropolish or P.E.P.

FUNCTIONAL SCHEMATIC



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Dragon Precision Industry LTD.

DRASTAR

INSTALLATION DIMENSIONS METRIC EQUIVALENTS ARE IN PARENTHESES

GAUGE PORT OPTIONS



ORDERING INFORMATION

DR.	A200- <mark>A 025 S</mark> -H	PS-4MS-G0	S	
BASIC SERIES			GAUGE PORT OPTIONS	GAUGE PC
BODY MATERIALFINISHA = Bright Annealed B. AB = STS 316L Electropolish 10 RaC = STS 316L Internal Electropolish 10 RaD = STS 316L Electropolish 10 RaVAR Precision (P.E.P)E = STS 316L Electropolish 5 RaVAR Precision (P.E.P)			G0S = None	
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			S2S 1/4" Fixed Male S2B 1/4" Fixed Male S2B 1/4" Fixed Male INLET & OUTLET PORT SIZE & TYPE 4HP 1/4" H.P.J.C 4MS 1/4" Male Swivel 4FS 1/4" Female Swivel 8MS 3/8" Male Swivel	''A''±0.5i
S = Stainless Steel 316L H = Hastelloy-C MAXIMUM INLET PRESSURE L = 600PSIG (41bar) H = 3500PSIG (238bar)			8FS = 3/8" Female Swivel 2MS = 1/2" Male Swivel 2FS = 1/2" Female Swivel IMF = In Port 1/4" Male / Out Port Female IFM = In Port 1/4" Female / Out Port Male 4TS = 1/4" Tube Stubs	12C 14C 14C 94 94 94
SEAT MATERIAL P = PCTFE T = Teflon [®] V = Vespel [®] (3500PSIG Models only)			FLOW CAPACITY S = Cv = 0.06 Standard (1/4") O = Cv = 0.2 Optional Cv = 0.2 Standard (3/8") S = Cv = 0.5 Standard (1/2") O = Cv = 1.0 Optional	



This is revision by Jan of 2009





Ports	DRA200-A000X-LPS-4MS-G1S / 1/4 VCR type
	DRA200-A000X-LPS-8MS-G1S / 3/8" VCR type
	DRA200-A000X-LPS-2MS-G1S / 1/2" VCR type
Leak Rate Certification	to 2x10° atm cc/sec Helium available.
Body Materials	DRA200-A000X-LPS-4MS-G1S / STS 316L BA
	DRA200-B000S-LPO-4FS-G1S / STS 316L Electropolish
	DRA200-C000S-LPO-4FS-G1S / STS 316L Internal Electropolish
	DRA200-D000S-LPO-4FS-G1S / STS 316L VAR Electropolish P.E.P
Bonnet Material	Nickel Plated Brass (Stainless steel 316L Optional)
Diaphragm	DRA200-B000S-LPS-4MS-G1S / Stainless steel 316L
	DRA200-B000H-LPS-4MS-G1S / Hastelloy -C®
Main Valve	Stainless steel 316L
Valve Spring	Stainless steel 316L
Valve Seat	DRA200-B000X-LPS-4MS-G1S / PCTFE
	DRA200-B000X-LTS-4MS-G1S / Teflon
	DRA200-B000X-LVS-4MS-G1S / Vespel
Internal Surface Finish	DRA200-A000X-LPS-4MS-G1S / B.A 23 ~ 15 Ra microinch
	DRA200-B000X-LPS-4MS-G1S / 10 Ra or 5 Ra microinch
Inlet Pressure Ranges	DRA200-A000X-HPS-4MS-G1S 3500psig (238bar)
	DRA200-A000X-LPS-4MS-G1S 600psig (41bar)
Outlet Pressure Ranges	25psig(1.7bar), 50 psig(3.4bar), 100psig(7bar), 250psig(17bar)
Operating Temperature	PCTFE -40°C - +60°C (-40°F - +140°F)
	Teflon -40°C - +70°C (-40°F - +160°F)
	Vespel -40°C - +170°C (-40°F - +350°F)
Flow Capacity	S = Cv=0.06 Standard(1/4")
	O = Cv=0.2 Optional
	Cv=0.2 Standard(3/8")
	S = Cv=0.5 Standard(1/2")
	O = Cv=1.0 Optional



DRA700 SERIES

FUNCTIONAL SCHEMATIC



ULTRA HIGH PURITY B. A. MICROINCH INTERNAL FINISHES

DRA 700 SERIES (Lok Type Regulator)

DRA700(Lok type) 시리즈는 Hook-up Line, Bulk Gas Line, 고순도 가스등에 사용하기에 최적의 성능과 세정을 구현한 경제적인 모델의 Pressure Reducing Regulator 입니다. 반도체 생산 라인 등에 사용 하기에 적합한 제품이며 내부 표면은 B. A. 급으로 처리하였습니다. 조립, 용접, 실험과 세정까지의 모든 공정은 1000-class와 100-class 크린룸에서 이루어집니다.

DRA700(Lok type) Series are Pressure Reducing Regulators of economical model to use Bulk Gas Line, Hook-up Line, high purity gas offers optimum performance and cleanliness. This model is suitable for the semiconductor process. Internal surfaces are finished to B. A. grade. DRASTAR's Locking-Plate Seal system that we develop is on an applicant for patent and minimize particle and leak generation factor clearly. Assembly, welding, testing and final cleaning are all performed in class 1000 and class 100 clean-rooms.

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)

Recommendations to Use

They are designed and manufactured taking into consideration of the highest safety and easy operation. But, for safest and most efficient operation and maintenance of the regulators, it is recommended to use the products within 25%~75% of the designed working pressure.

FLUID MEDIA-All gases corrosive or non-corrosive or those requiring high purity regulation compatible with materials of construction. For other media, consult company.

HIGH PURITY INTERNAL CONNECTIONS(H.P.I.C): Drastar high purity internal constructions. Those are machined inside the regulator body and are designed to be compatible with Lock (or equivalent) male fittings-swivel only.

WELDED FITTINGS: Tube stubs or Lock (compatible) fittings welded to the regulator body.

CLEANING: All DRA700 Series Regulators are DI water electronic grade cleaned.



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Dragon Precision Industry LTD.









ORDERING INFORMATION



A700

This is revision by Jan of 2009



FLOW CHART



Lok type DRA700-A000-LPO-4L-G1S / 1/4" Lok type Ports DRA700-A000-LPO-8L-G1S / 3/8" Lok type DRA700-A000-LPO-2L-G1S / 1/2" Lok type Leak Rate Certification to 2x10⁹ atm cc/sec Helium available. **Body Materials** DRA700-A000-LPO-4L-G1S/ Stainless steel 316L **Bonnet Material** Nickel Plated Brass (Stainless steel 316L Optional) Diaphragm Stainless steel 316L Main Valve Stainless steel 316L Valve Spring Stainless steel 316L DRA700-A000-LPO-4L-G1S / PCTFE Valve Seat DRA700-A000-LTO-4L-G1S / Teflon Internal Surface Finish DRA700-A000-LPO-4MS-G1S / B.A 23 ~ 15 Ra microinch DRA700-A000-HPO-4L-G1S 3500psig (238bar) **Inlet Pressure Ranges** DRA700-A000-LPO-4L-G1S 600psig (41bar) 25(1.7bar), 50(3.4bar), 100(7bar), 250psig(17bar) **Outlet Pressure Ranges** PCTFE -40°C - +60°C (-40°F - +140°F) **Operating Temperature** Teflon -40°C - +70°C (-40°F - +160°F) O=Cv=0.2 Standard(1/4") Cv=0.2 Standard(3/8") Flow Capacity S=Cv=0.5 Standard(1/2") O=Cv=1.0 Optional







This is revision by Jan of 2009

FUNCTIONAL SCHEMATIC



FLOW CHART

GAS AND LIQUID PRESSURE REDUCING REGULATOR 072 SERIES

072시리즈는 정밀 산업에서 가장 많이 필요로 하고 가장 많이 사용되는 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 사용 할 수 있도록 제작 설계되었습니다. Inlet과 Outlet 포트는 1/4″ NPT 타입이며. 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.

072 Series the Pressure Reducing Regulator that is most popular and most widely used in the precision industry. Made of stainless steel 316L for its body and all internal parts, this 072 Series is designed and suitable for wide use for bulk gas line, laboratory, special gases for analysis, high purity gases, mixing gases, corrosive gases and liquids, etc.

Inlet and outlet ports are 1/4" NPT type, and 3-ports or 4-ports can be adoptable according to the needs. Inlet pressure is 3,500 psig (241 bar) and outlet working pressure can be used maximum up to 500 psig (35 bar) according to model.

Ports	1/4" NPT type
	072X-0000L-1S, 3-ports
	072X-0000C-1S, 4-ports
Leak Rate Certification	to 2x10 ^s 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



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Dragon Precision Industry LTD.

INSTALLATION DIMENSIONS METRIC EQUIVALENTS ARE IN PARENTHESES

GAUGE PORT OPTIONS



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

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 $25\% \sim 75\%$ of its working pressure. It is also recommended to use within this range for most smooth operation and extension of products life.





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-0000X-1S-H1(120°c), 072-06-3, 072X-0000X-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

E INCR





FUNCTIONAL SCHEMATIC

FLOW CHART

HIGH-PRESSURE REGULATOR

082 SERIES

082시리즈는 고압가스와 액체 등에서도 안전하고 안정적으로 사용할 수 있도록 우리만의 Piston- Diaphragm 방식을 개발하여 더욱 더 안전하 게 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 Regulator 입니다.

You may use this 082 Series with more confidence as we developed it as <piston-diaphragm type> to enhance safe and stable operation of regulator even for high-pressured gases and liquid.

Its body and all internal parts are made of stainless steel 316L against corrosive gases and /or liquid. It is designed to use inlet pressure at 6,000psig (420 bar) and maximum outlet pressure up to 3,000psi (210 bar). It is 1/4"

1/4" 4-ports NPT type
to 2x10 ^{-®} atm cc/sec Helium available.
082S-0000-1S / Stainless steel 316L
082B-0000-1S / Brass
Nickel Plated Forged Brass / Stainless steel 316L
Stainless steel 316L
Stainless steel 316L
Teflon® (Kel-F, Polyimide, etc Optional)
6,000psig(420bar)
1000(70bar), 2000(140bar), 3000psig(210bar)
082X-0000-1S-V, Optional
-40°C - +70°C(-40°F - +160°F) (standard)
082S-0000-1S-H1, +120°C (Optional)
082S-0000-1S-H2, +250°C (Optional)
Cv=0.06 (Cv=0.2 etc Optional)
CCA Inlat and Outlat Courses, ato

SOmm

19

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Dragon Precision Industry LTD.

22mm

M5 x 0.8P TAPS DP 8mm

INSTALLATION DIMENSIONS METRIC EQUIVALENTS ARE IN PARENTHESES

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

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 $25\% \sim 75\%$ of its working pressure. It is also recommended to use within this range for most smooth operation and extension of products life.

150mm (143mm)

ORDERING INFORMATION

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	

FUNCTIONAL SCHEMATIC

FLOW CHART REGULATOR DISCHARGE CHARACTERISTICS CURVES 400 (28) 350 (24) 300 (20.5 250 (17) 1000 1500 2500 3000 3500 4000 FLOW RATE Nm³/h AIR **REGULATOR DISCHARGE CHARACTERISTICS CURVES** 200 150 (10<u>.</u>3 100 50 (3.4) 25 1000 1500 2000 3000 4000

FLOW RATE L/Min AIR * Inlet Pressure – 1420psig(100bar)

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 되었습니다.

OUTLET PRESSURE-PSIG(bar)

This 092 Series is 1/2" NPT type regulator designed for high-flow corrosive gases and liquid. Being made of stainless steel 316L for its body and all internal parts, this 092 Series has strong characteristics for all corrosive gases, high purity gases and liquid in overall industry. Designed to use inlet pressure is 3,500 psig (241 bar) or 500 psi (35 bar) and outlet pressure is maximum up to 350 psig (24 bar).

Ports	1/2" 3-ports NPT type
Leak Rate Certification	to 2x10 ^{-s} 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)

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Dragon Precision Industry LTD.

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

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 $25\% \sim 75\%$ of its working pressure. It is also recommended to use within this range for most smooth operation and extension of products life.

ORDERING INFORMATION

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	

FLOW CHART

FUNCTIONAL SCHEMATIC

* Inlet Pressure –1420psig(100bar)

GENERAL GAS REGULATOR

DR60 SERIES

DR60시리즈의 바디 재질은 Nickel Plated Forged Brass를 사용하여 일반적인 비부식성 산업용 가스를 사용하기에 이상적인 Gas Regulator 입니다. 산업용 정밀 배관 등에 적합하도록 설계 되었으며, 3-ports 또는 4-ports 1/4″ NPT 타입으로 이루어져 있습니다. 내부의 다이아후렘은 특수고무를 사용하였으며, Inlet과 Outlet Gauge가 기본으로 조립된 제품입니다.

Made of nickel plated forged brass for its body, DR 60 Series is very suitable for normal anti-corrosive industrial gases. It is composed of 3-ports or 4-ports 1/4" NPT type and designed applicable for industrial precision piping. 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 $25\% \sim 75\%$ of its working pressure. It is also recommended to use within this range for most smooth operation and extension of products life.

Ports	1/4 <i>″</i> 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

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Dragon Precision Industry LTD.

INSTALLATION DIMENSIONS METRIC EQUIVALENTS ARE IN PARENTHESES

GAUGE PORT OPTIONS

ORDERING INFORMATION

113mm

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
120	085	Locking Screw	DR60-08	All Model Same
-	09	Diaphragm Assembly	DR60-09	All Model Same
O OIL	10-2	Gasket	DR60-10	All Model Same
e ps	11	Load Spring	DR60-11	DR60-11-1 25psi/DR60-11-2 50psi/DR60-11-3 100psi/DR60-11-4 200psi
PORE	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

DRAGON

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DRAGON

UHP Regulator Series Quick Selection Guide

Product	Surface Treatment	Port	Body Material	Diaphragm	Port Size(Cv)	Connection/Type	Final Cleaning	Packing
		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
DRA100 Series	EP	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
		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
DRA100 Series	EP	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
		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
DRA100 Series	BA	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
	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
DRA200 Series		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
		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
DRA200 Series	EP	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
		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
DRA200 Series	BA	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
		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
DRA700 Series	BA	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

UHP(VCR)-Type (1)

 ★★
 Very Suitable
 ☆
 Partial application

 ★
 Suitable
 ×
 unsuitable

 ☆☆
 Applicable
 ✓

	Gas Name				Ga	s Prop	erty				Model (DRASTAR)							
Elementary symbol	Name	Flammable (가연성)	Oxidiz (산화성)	Toxic (독성)	Corrosive (부식성)	lnert (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	•		•				0			*	**	**	☆	×	☆	×	4
B2H6	Diborane	•		•				0			*	**	**	☆	×	☆	×	43
BCI3	Boron Trichloride			•	•					۲	*	**	☆☆	☆	×	☆	$\times \times$	47
BF3	Boron Trifluoride	•		•	•					۲	*	**	☆☆	☆	×	☆	×	☆
со	Carbon Monoxide	•		•	•						*	**	☆☆	☆	×	☆	×	\$
CO2	Carbon Dioxide					•					*	*	☆☆	☆	×	☆	×	☆
CH4	Methane	•									*	*	☆☆	☆	×	☆	×	\$
C2H4	Ethylene	•									*	*	☆☆	☆	×	☆	×	☆
CI2	Chlorine		•	•	•					۲	*	**	☆☆	☆	×	☆	×	☆
F2	Flourine		•	•	•				0	۲	*	**	☆☆	☆	×	☆	×	☆
GeH4	Germane	•		•				0			*	**	☆☆	☆	×	☆	×	☆
HCI	Hydrogen Chloride		•	•	•					۲	*	**	☆☆	☆	×	☆	×	☆
HF	Hydrogen Fluoride		•	•	•					۲	*	**	☆☆	☆	×	☆	×	☆
HBr	Hydrogen Bromide		•	•	•					۲	*	**	☆☆	☆	×	☆	×	☆
H2	Hydrogen	•						O			*	**	☆☆	☆	×	☆	×	☆
H2S	Hydrogen Sulfide	•		•	•						*	**	☆☆	☆	×	☆	×	☆
H2Se	Hydrogen Selenide	•		•				0			*	**	☆☆	☆	×	☆	×	☆
NH3	Ammonia	•		•	•						*	**	☆☆	☆	×	☆	×	☆
NF3	Nitrogen Trifluoride		•	•	•						*	**	☆☆	☆	×	☆	×	☆

UHP(VCR)-Type	(2)
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G

 ★★
 Very Suitable
 ☆
 Partial application

 ★
 Suitable
 ×
 unsuitable

 ☆☆
 Applicable
 ×

		Gas Name	Gas Property Model (DRASTAR)																
	Elementary symbol	Name	Flammable (가연성)	Oxidizer (산화성)	Toxic (독성)	Corrosive (부식성)	lnert (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	•		•				0			*	**	☆☆	☆	×	☆	×	☆
	PCI3	Phosphorus Trichloride			•	•						*	**	☆☆	☆	×	☆	×	☆
	SiH4	Monosilane	•		•			•	0			*	**	☆☆	☆	×	☆	×	☆
	Si2H6	Disilane	•		•				O			*	**	☆☆	☆	×	☆	×	☆
	SiH2Cl2	Dichlorosilane	•		•						۲	*	**	**	☆	×	☆	×	☆
	SiCl4	Silicon Tetrachloride			•	•					۲	*	**	**	☆	×	☆	×	☆
	SiF4	Silicon Tetrafluoride			•	•					۲	*	**	☆☆	☆	×	☆	×	☆
22 - 2 - 24	SF6	Sulfur Hexafluoride		•	noi	n prop	erty					*	*	**	☆	×	☆	×	☆
	WF6	Tungsten Hexafluoride			•	•					۲	*	**	☆☆	☆	×	☆	×	☆
	SIF3	Chlorine Trifluoride			•	•					۲	*	**	**	☆	×	☆	×	☆
and	CCI3F	Freon(Halocarbon)11			noi	n prop	erty					*	*	**	☆	×	☆	×	☆
	CCI2F2	Freon(Halocarbon)12			noi	n prop	erty					*	*	**	☆	×	☆	×	☆
	CCIF3	Freon(Halocarbon)13			noi	n prop	erty					*	*	☆☆	☆	×	☆	×	☆
	CBrF3	Freon(Halocarbon)13B1			noi	n prop	erty					*	*	☆☆	☆	×	☆	×	☆
1	CF4	Freon(Halocarbon)14			noi	n prop	erty			0		*	*	☆☆	☆	×	☆	×	☆
	CHF3	Freon(Halocarbon)23			noi	n prop	erty					*	*	☆☆	☆	×	☆	×	☆
	C2F6	Freon(Halocarbon)116			noi	n prop	erty					*	*	☆☆	☆	×	☆	×	☆
	C3F6	Freon(Halocarbon)218			noi	n prop	erty					*	*	☆☆	☆	×	☆	×	☆
CCI4 Carbon Tetrachloride				٠							*	**	☆☆	☆	×	☆	×	☆	

NPT Regulator Series Quick Selection Guide

Product	PORT	Body Material	Diaphragm	Port Size	INLET	OUTLET	Cv	Corrosive (부식성)	Toxic (독성)	Flammable (가연성)	High-purity (고순도)	General (無특성)
072S Series	3-Port	STS316L	STS316L	NPT 1/4"	3500psi	500psi	0.06/0.2	0	0	0	0	0
	4-Port	STS316L	STS316L	NPT 1/4"	3500psi	500psi	0.06/0.2	0	0	0	0	0
072B Series	3-Port	Brass	STS316L	NPT 1/4"	3500psi	500psi	0.06/0.2	×	Т	0	×	0
	4-Port	Brass	STS316L	NPT 1/4"	3500psi	500psi	0.06/0.2	×	Т	0	×	0
082S Series	4-Port	STS316L	STS316L	NPT 1/4"	6000psi	3000psi	0.06/0.2	0	0	0	0	0
082B Series	4-Port	Brass	STS316L	NPT 1/4"	6000psi	3000psi	0.06/0.2	×	Т	0	×	0
092 Series	3-Port	STS316L	STS316L	NPT 1/2"	3500psi	350psi	1.0	0	0	0	0	0
DR60	3-Port	Brass	Rubber	NPT 1/4"	3500psi	200psi	0.2	×	×	0	×	0
Series	4-Port	Brass	Rubber	NPT 1/4"	3500psi	200psi	0.2	×	×	0	×	0
※ 세부 사양은 5		0	Suitable (적합)									
	Initial	_										

* Please refer to catalogue in detail

Unsuitable with condition (부분적 적합)

Unsuitable (부적합)

Т

 \times

Interpretation

제품의 안전, 설치 & 작동 시 유의점

- 본 사용 설명서를 읽고 충분히 숙지하기 전까지는 선택, 설치, 사용 혹 은 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 압 력 여부, 유량이 얼마인지 파악하십시오.
- 2. 모든 시리즈는 Outlet 최대 사용 압력이 각 모델의 85% 이상 넘으 면 안됩니다.
- 3. Regulator 사용시 안정적 유량이 중요하다. 이유는 급격한 유량의 변 화는 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 일으키 므로 모든 고압 가스 용기 또는 Regulator은 서로 혼용을 해서 사 용하면 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 필수이 며, 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 제 공하는 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 등 을 피하도록 시스템에 서서히 압력을 조정하십시오.
- 13. 귀사 장비의 정기적인 검사와 정비는 지속적이고 안전한 기계조작 을 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 안전장치 를 제공하십시오.
- 16. 절대 본 Regulator 혹은 부속품에 윤활유 혹은 오일을 사용하지 마 십시오. 〈제조자에 의해 허가되지 않은 부품을 첨부하거나 기계 수 리를 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 손 상된 것, 남용, 악용, 또는 (주)드래곤정공의 공인된 개인에 의해서가 아 닌 다른 어떤 방법으로 변경, 바꾸어진 것에는 적용되지 않는 것으로 규 정한다.

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.
- 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.
- 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, chloromethyl, 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.
- 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

DRASTAB

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