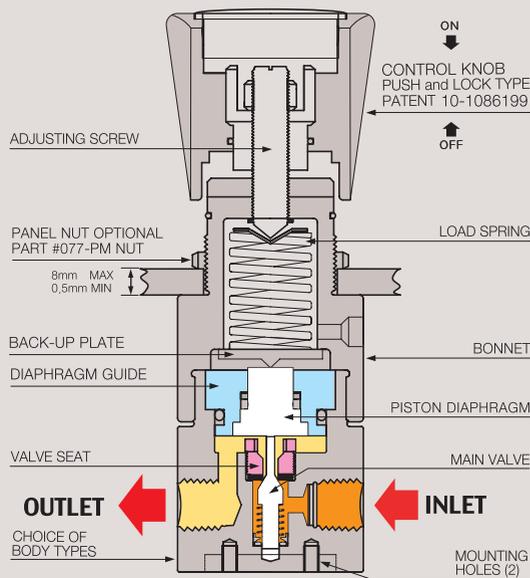
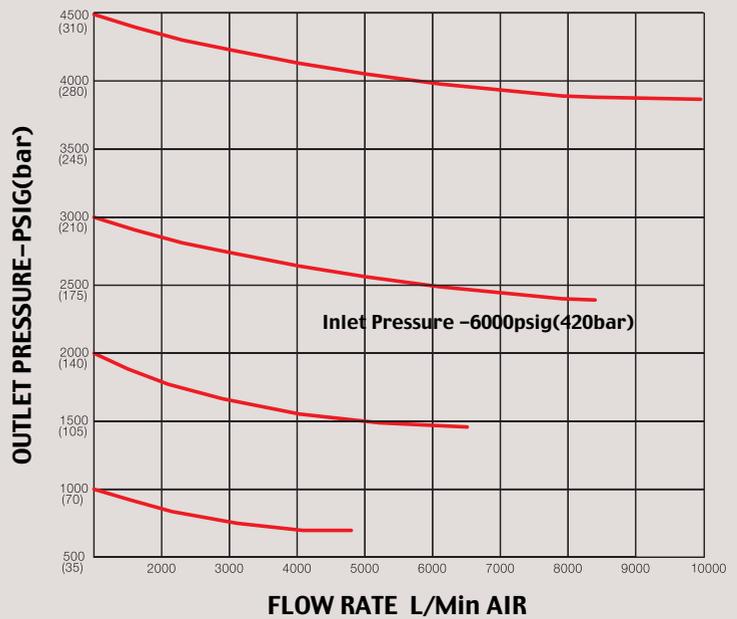


FUNCTIONAL SCHEMATIC



FLOW CHART

REGULATOR DISCHARGE CHARACTERISTICS CURVES



HIGH-PRESSURE REGULATOR

ORK82 SERIES

ORK82 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 (ORK82B 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" F NPT, 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).ORK82 regulators are designed and manufactured for easier operation by equipping with the 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 drawing the handle.



SPECIFICATIONS

| | |
|-------------------------|-------------------------------------------------------------------------------------------------------------|
| Ports | 1/4" 4-ports NPT type |
| Leak Rate Certification | to 2x10 ⁻⁸ atm cc/sec Helium available. |
| Body Materials | ORK82S-0000-1S / Stainless steel 316L ORK82B-0000-1S / Brass |
| Bonnet Material | 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), 4500psig(310bar) |
| Self-Venting | 082X-0000-1S-V, Optional |
| Operating Temperature | -40 °C - +70 °C(-40 °F - +160 °F) (standard) ORK82S-0000-1S-H1, +120 °C (Optional) ORK82S-0000-1S-H2, |
| Flow Capacity | +250 °C (Optional) Cv=0.06 (Cv=0.2 |
| Standard Optional | etc.. Optional) CGA, Inlet and Outlet Gauges, etc.. |

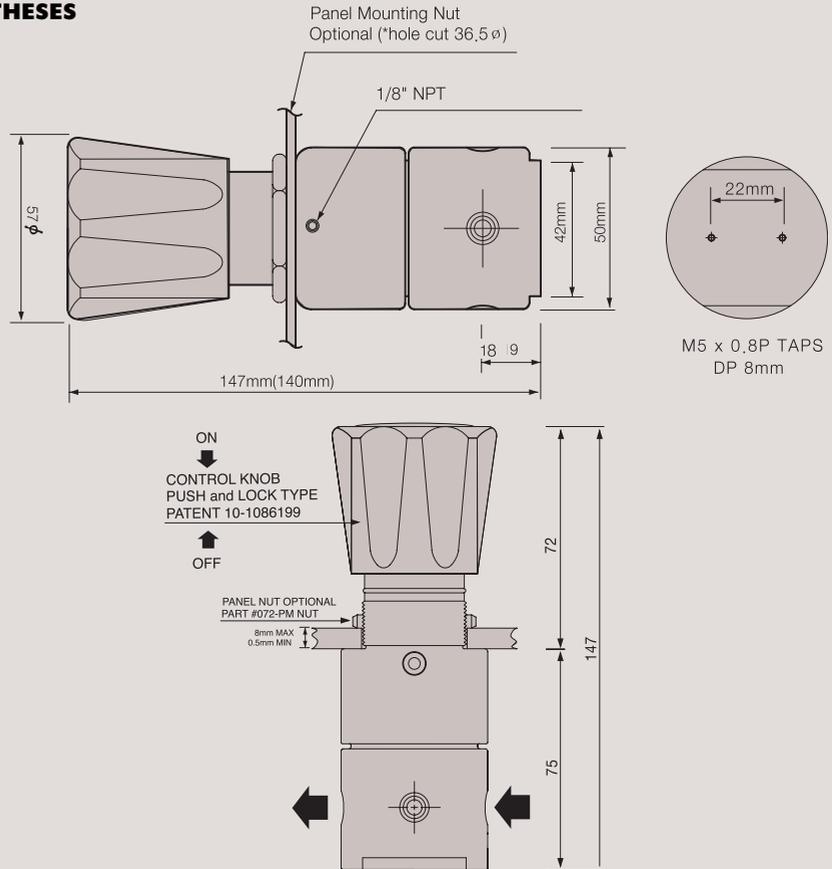
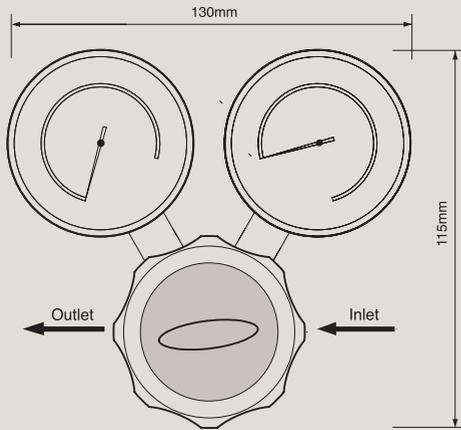
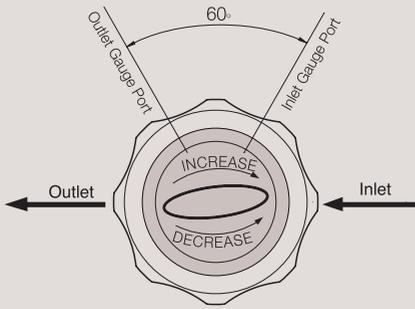
REFERENCE

This catalogue is printed as of January 2013, 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.

ORKIMSAN LTD.

INSTALLATION DIMENSIONS
METRIC EQUIVALENTS ARE IN PARENTHESES

■ **GAUGE PORT OPTIONS**



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, 4500(310bar)
- Panel mounting nut option

Recommendations

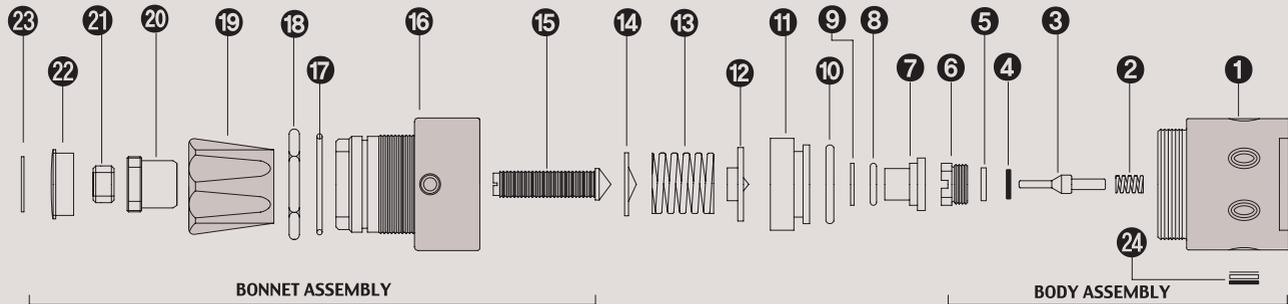
Each product is manufactured since being taken into consideration of the best safety and easy manipulation. However in order to use the regulator in most safe and effective way, you are recommended to use the actual pressure within the range of its 25% ~ 75%. For making precise, smooth movement and to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

ORDERING INFORMATION

ORK82 S - 1000 - 1S H - V - H1

| BASIS SERIES NUMBER | BODY MATERIAL | OUTLET PRESSURE RANGE | FLOW CAPACITY | DIAPHRAGM MATERIAL | SELF VENTING | HIGH TEMPERATURE |
|--------------------------------------------|---------------------------------------|-------------------------------|-----------------------|--------------------|------------------|------------------|
| Standard Inlet Pressure 6000psig (420 bar) | B = Brass S = Stainless Steel 316L | 1000 = 10-1000psi (7-70bar) | 1 = 1/4" Female NPT | STS 316L Standard | V = Self-Venting | H1 = 120 °C |
| | | 2000 = 20-2000psi (15-140bar) | 1S = Cv 0.06 Standard | H = Hastelloy-C | | H2 = 250 °C |
| | | 3000 = 30-3000psi (20-210bar) | 1O = Cv 0.2 Optional | Optional | Optional | Optional |

ORK82 SERIES PART LIST



STANDARD MODEL SERIES

| Item No. | Description | Part No. | Model Application |
|----------|-------------------------|-----------|---------------------------------------------------------------|
| 01 | Body | 082-02-01 | 02-01 Stainless Steel 316L / 02-02 Brass Body / 02-03 Monel |
| 02 | Valve Spring | 082-04-01 | 04-01 STS 316L / 04-03 Hastelloy C-22 / 04-04 Monel |
| 03 | Main Valve | 082-06-01 | 06-01 STS 316L / 06-03 Hastelloy C-275 / 04-04 Monel |
| 04 | Valve Seat | 082-10-01 | 10-01 PFA / 10-05 Vespel / 10-06 Peek |
| 05 | Valve Seat Cartridge | 082-08-01 | All Model Same |
| 06 | Locking Screw | 082-12-01 | All Model Same |
| 07 | Piston Diaphragm | 082-18-01 | All Model Same |
| 08 | Piston Diaphragm O-ring | 082-18-00 | All Model Same |
| 09 | Diaphragm Teflon Ring | 082-18-00 | All Model Same |
| 10 | Diaphragm Guide O-ring | 082-18-00 | All Model Same |
| 11 | Piston Diaphragm Guide | 082-20-01 | 20-01 Series Stainless steel 316L / 20-02 Brass |
| 12 | Spring Plate | 082-30-01 | All Model Same |
| 13 | Load Spring | 082-38-01 | 38-08 1000psi / 38-09 2000psi / 38-10 3000psi / 38-11 4500psi |
| 14 | Pivot | 082-40-01 | All Model Same |
| 15 | Adjusting Screw | 082-42-01 | All Model Same |
| 16 | Bonnet | 082-44-02 | 44-02 Brass / 44-01 Stainless steel 304 Bonnet Optional |
| 17 | Push & Lock O-Ring | 082-46-01 | All Model Same |
| 18 | Panel mount Nut | 082-48-01 | All Model Same |
| 19 | Control Knob | 082-50-01 | 50-01 ABS / 50-04 Aluminum Control knob Optional) |
| 20 | Push & Lock Handle nut | 082-52-01 | All Model Same |
| 21 | Locking Nut | 082-54-01 | All Model Same |
| 22 | Name Cap | 082-56-01 | 56-01 ABS |
| 23 | Name Cap Plate | 082-58-07 | 58-08 1000psi / 58-09 2000psi / 58-10 3000psi / 58-11 4500psi |
| 24 | Filter Assembly | 082-60-02 | All Model Same |