

Provider / Power Unit

PROVIDER POWER

Maximum operating pressure ■ 500 MPa (for liquid) ■ 150 MPa (for N₂ gas)



WHAT is PROVIDER?

0.7MPa Operating Air pressure which is available in any plant move the PISTON.

Discharge high pressure continuously 150MPa (N2 GAS) 500MPa (Liquid) 3 series(Model:JHP, MG, ML)

JHP series: Small body, companct (for Intermittent drive) MG, ML series: for continuous drive

Specifications

| Max. Discharge Pressure(MPa) | Operating Temperature(°C) |
|--|---------------------------|
| 500 (Liquid) | |
| 150 (N2 Gas) | 5 - 40 |
| Please contact us if you need other type of gases. | |

*: Even more hotness is sometimes practicable by the gas kind, so please consult Fujikin

Features

Pressure Set:

Once you set operation pressure between 0.1 - 0.7 MPa, automatically max. pressure is available.

- Explosion Proof: as only air is use.
- Wetted parts: Suitable material & oil free type is available
- Double action cylinder: discharge big volume outlet.
- Stable Action: Balancing of Inlet & outlet pressure keeps set pressure. No trouble against over load
 Low Noise Drive:
 - This system uses only air and use no motor. Silencer reduce the air vent noise.
- Low Price:
 because of no motor like compressor type.

Caution Plea

Please use in the room of temperature 5 - 40°C.

Products Line Up

PROVIDER series kept responding to the customer's needs, and the rich product line-up is made even.

Power unit

JHP Series: Small, Compact, for intermittent drive.



POWER UNIT

operating **PROVIDER**.

produce high pressure like:

Provider

strainer

Equipped with all functions necessary to

Power unit includes all necessary equipments to

Compact ! Light Weight! Transportable !

Provider, Air-regurator, Air-filter, Pressure gauge, Exaust & Inlet pressure control valves,

MG, ML Series: For continuous drive, (Oil free, for liquid, etc.)



MG Series for GAS

Typical Use Example

PROVIDER is using widely by the high

performance beyond the expectation.

Test under high pressure safety



ML Series for Liquid/ Double action type

Fluid

Gases : Air, N2, He, H2, O2, others

Liquids :

Water, Oil, Organic Solvent, (MNP, Methanol), etc. When it's for gases besides Air and N₂, it'll be the different specification, so please consult Fujikin

- regulation for tank, pressure registant, air tightness, destructive test. • For test of plant piping, instrumentation line pressure registant,
- For test of plant piping, instrumentation line pressure registant, air tightness.

APPLICATION

- As test equipment for plant pressure gauge, bourdon gauge.
- For molding bellows, valve.
- For oil pressure equipment.
- For high pressure boost.



JHP Series (for gas)

| Мо | del | Maximum operating pressure (discharge pressure) (MPa) *1 | Multiplying *2 factor (x) | Displacement*3 (ml / 1Stroke) | Air consumption *4 Nl / min |
|-------------------------------|-----------|--|------------------------------|----------------------------------|--------------------------------|
| | JHP-M7WG | 3.5 | 7 | 320 | |
| Double-acting type | JHP-M10WG | 5 | 10 | 220 | 600 |
| | JHP-M14WG | 7 | 14 | 150 | |
| | JHP-150WG | 15 | 30 | 90 | 950 |
| Two-stage compression type | JHP-300WG | 30 | 62 | 70 | 990 |
| | JHP-500WG | 50 | 110 | 70 | 1,080 |

*1: Multiplying factor × operating pressure (calculated value)
 *2: Ratio of discharge pressure to operating pressure
 *3: Intake cylinder cross-sectional area × stroke length
 *4: When operating pressure is 0.5 MPa (calculated value)



Flow sheet





For required devices such as safety valves, etc. that are not on the flow sheet, please inquire and we will install the devices.

Power unit specifications

| No. | Name | Count | Remarks |
|-----|---------------------------------------|-------|--------------------|
| 1 | Unit box | 1 | Coating |
| 2 | Discharge pressure gauge | 1 | |
| З | Operating air pressure indicator | 1 | |
| 4 | Discharge pressure opening | 1 | Rc 1/4, etc. |
| 5 | Stop valve for discharge pressure | 1 | Needle valve |
| 6 | Pressure regulator | 1 | Air regulator |
| 7 | Stop valve for operating air pressure | 1 | Ball valve |
| 8 | Castors | 4 | |
| 9 | Operating air pressure opening | 1 | Rc ³ /8 |
| 10 | Intake port | 1 | Rc ³ /8 |

Dimensions





| | | | UN | JII (mm, |
|--------------------------|-----|-----|-----|----------|
| Model | А | В | С | Weight |
| JHP-M-7WG | 180 | 465 | 120 | 20kg |
| JHP-M-10WG JHP-M-14WG | 180 | 465 | 120 | 20kg |
| JHP-150WG | 180 | 625 | 120 | 25kg |
| JHP-300WG | 210 | 640 | 135 | 26kg |
| JHP-500WG | 250 | 643 | 165 | 47kg |



JHP Series (for liquids)

| Model | | | Maximum operating pressure *1 (discharge pressure) (MPa) | Multiplying *2 factor (x) | Displacement *3 (ml / 1Stroke) | Air consumption *4 NØ / min | |
|---------------|--------------|-------------|---|------------------------------|-----------------------------------|--------------------------------|--|
| | | JHP-200-8S | 20 | 39 | 8 | | |
| | S type | JHP-400-4S | 40 | 68 | 4 | 300 | |
| | *5 | JHP-800-2S | 80 | 157 | 2 | | |
| | | JHP-M-7 | 3.5 | 7 | 140 | | |
| Single-acting | | JHP-M-10 | 5 | 10 | 90 | 600 | |
| type | | JHP-M-14 | 7 | 14 | 60 | | |
| | M type *6 | JHP-100-40M | 10 | 22 | 40 | | |
| | | JHP-200-20M | 20 | 45 | 20 | 600 | |
| | | JHP-500-10M | 50 | 100 | 10 | 800 | |
| | | JHP-1000-5M | 100 | 175 | 5 | | |

*1: Multiplying factor × operating pressure (calculated value)
 *2: Ratio of discharge pressure to operating pressure
 *3: Intake cylinder cross-sectional area × stroke length
 *4: When operating pressure is 0.5 MPa (calculated value)
 *5: Drive cylinder, small type
 *6: Drive cylinder, standard type

Flow sheet



Dimensions



| | | | | | | | | | UNIT(mm) |
|------|--|-----|-----|-----|-----|-----|----|-------------------------------------|---------------------|
| Туре | Model | А | В | С | D | E | F | Intake port | Weight |
| S | JHP-200-8S·JHP-400-4S JHP-800-2S | 114 | 395 | 110 | 190 | 156 | 68 | Rc ¹ /4 | Approx. 9 kg |
| М | JHP-1000-5M·JHP-500-10M JHP-200-20M·JHP-100-40M | 180 | 430 | 120 | 190 | 156 | 68 | Rc 1/4 | Approx. 15 kg to |
| | JHP-M-7·JHP-M-10·JHP-M-14 | 180 | 432 | 120 | 190 | 156 | 68 | Rc ³ /8, ¹ /2 | 20 kg |

MG Series (for gas)

| Мо | del | Maximum operating pressure (discharge pressure) (MPa) *1 | Multiplying *2 factor (x) | Displacement*3 (ml / 1Stroke) | Air consumption *4 Nl / min |
|--|--------------|--|------------------------------|----------------------------------|--------------------------------|
| | MGS-NCs-10 1 | | 2 | 570 | 700 |
| Single-acting type | MGS-NC-20 | 2 | 4 | 502 | |
| | MGS-NC-35 | 3.5 | 7 | 282 | 950 |
| (Compression | MGS-NC-70 | 7 | 14 | 138 | |
| | MGS-NE-500 | 50 | 100 | 37 | 1000 |
| | MGS-NE-900 | 90 | 182 | 20 | 1080 |
| | MGW-NC-15 | 1.5 | 3 | 1357 | |
| | MGW-NC-20 | 2 | 4 | 1004 | |
| | MGW-NC-35 | 3.5 | 7 | 565 | 950 |
| | MGW-NC-70 | 7 | 14 | 276 | |
| | MGW-NC-150 | 15 | 28 | 141 | |
| Double-acting type | MGW-ND-20 | 2 | 4 | 1271 | |
| Compression cyclinder: | MGW-ND-50 | 5 | 10 | 565 | 990 |
| | MGW-ND-250 | 25 | 53 | 106 | |
| | MGW-NE-35 | 3.5 | 7 | 1004 | |
| (Same diameter) / | MGW-NE-50 | 5 | 10 | 769 | |
| | MGW-NE-70 | 7 | 14 | 565 | |
| | MGW-NE-100 | 10 | 19 | 392 | 1080 |
| | MGW-NE-150 | 15 | 30 | 251 | |
| | MGW-NE-300 | 30 | 62 | 123 | |
| | MGW-NE-700 | 70 | 149 | 50 | |
| | MGT-NC-150 | 15 | 32 | 125 | 050 |
| | MGT-NC-250 | 25 | 52 | 70 | 950 |
| Two-stage | MGT-ND-300 | 30 | 62 | 70 | 990 |
| compression type | MGT-ND-700 | 70 | 136 | 45 | 330 |
| | MGT-NE-150 | 15 | 30 | 196 | |
| (Compression cylinder: Twin (Different diameters)) | MGT-NE-300 | 30 | 61 | 125 | |
| | MGT-NE-500 | 50 | 100 | 70 | 1080 |
| | MGT-NE-700 | 70 | 149 | 53 | |
| | MGT-NE-900 | 90 | 189 | 45 | |
| | MGT-2D-1500 | 150 | 223 | 45 | 1800 |
| For low intake procesure | MGT-ND-50/15 | 25 | 53 | 196 | 000 |
| TO TOW ITTAKE PIESSUIE | MGT-ND-75/15 | 35 | 75 | 196 | 990 |

*1: Multiplying factor × operating pressure (calculated value) *2: Ratio of discharge pressure to operating pressure *3: Intake cylinder cross-sectional area × stroke length *4: When operating pressure is 0.5 MPa (calculated value)



ML Series (for liquids)

| Model | | Maximum operating pressure (discharge pressure) (MPa) * 1 | Multiplying *2 factor (x) | Displacement*3 (ml / 1Stroke) | Air consumption*4 N& / min |
|---------------------|-------------|---|------------------------------|----------------------------------|-------------------------------|
| | MLS-A-20 | 2 | 4 | 37 | |
| | MLS-A-75 | 7.5 | 16 | 9 | |
| | MLS-A-150 | 15 | 32 | 5 | 130 |
| | MLS-A-200 | 20 | 44 | 3 | |
| | MLS-A-300 | 30 | 64 | 2 | |
| | MLS-C-35 | 3.5 | 7 | 141 | |
| | MLS-C-50 | 5 | 10 | 98 | |
| | MLS-C-75 | 7.5 | 16 | 63 | |
| | MLS-C-150 | 15 | 28 | 35 | |
| | MLS-C-200 | 20 | 44 | 22 | 700 |
| | MLS-C-250 | 25 | 52 | 19 | |
| Single-acting type | MLS-C-500 | 50 | 100 | 10 | |
| (Compression) | MLS-C-1000 | 100 | 177 | 6 | |
| \cylinder: Single / | MLS-C-1500 | 150 | 318 | 4 | |
| | MLS-D-50 | 5 | 10 | 141 | |
| | MLS-D-100 | 10 | 22 | 63 | |
| | MLS-D-300 | 30 | 62 | 22 | 720 |
| | MLS-D-1500 | 150 | 298 | 5 | |
| | MLS-D-2500 | 250 | 445 | 3 | |
| | MLS-E-70 | 7 | 13 | 141 | |
| | MLS-E-150 | 15 | 30 | 63 | |
| | MLS-E-250 | 25 | 53 | 35 | 1060 |
| | MLS-E-1000 | 100 | 182 | 12 | |
| | MLS-E-3000 | 300 | 597 | 3 | |
| | MLS-2D-5000 | 500 | 891 | 3 | 1400 |

*1: Multiplying factor × operating pressure (calculated value)
 *2: Ratio of discharge pressure to operating pressure
 *3: Intake cylinder cross-sectional area × stroke length
 *4: When operating pressure is 0.5 MPa (calculated value)

*In addition to the above, the double-acting type MLW Series and MLTW Series are also available. Please inquire. (The displacement of the MLW Series is twice the displacement indicated in the table above.)

Flow sheet



Model indication (MG, ML type)



Examples of equipment with Provider installed

Power Unit



Inside

Appearance

MGS type

Inside JHP type (for gas)

Surge pressure unit for N₂ gas



By installing Provider and supplying air to drive Provider, this equipment pressurizes low-pressure nitrogen gas at 0.7 MPa to high-pressure nitrogen gas at 23 MPa.

(Design conditions) ● Fluid : N₂, etc.

- Pressure : 25 MPa
- •Temperature : Normal temperature

N₂ gas supply device



Two Provider units are installed to first pressurize gas, and then regulate the pressure with a pressure reducing valve and supply the gas through an automatic valve to exhaust the gas. The touch panel on the front of the equipment can be used to regulate parameters such as the valve operation time and open/close timing.

[Design conditions] ● Fluid : N₂, etc. ● Pressure : 25 MPa ●Temperature : Normal temperature

Engineering services, equipment/ piping design and manufacture

Taking advantage of our No. 1 record and experience in flow control technology and high-pressure gas certification, we help our customers navigate all phases of equipment use, from equipment design and manufacture to startup, modifications, and maintenance!



If you have trouble with unit or piping, please contact Fujikin local office by all means!



Other examples of equipment manufactured

Gas valve stand

Supplies high-pressure gas to manufacturing processes that use a large furnace

Gas supply can be controlled by a control valve (our "MINUCON"® product, with high-pressure gas minister certification). The high-pressure gas piping is manufactured as a high-pressure gas minister certified item (pipes and tubes).







Strong record and cutting-edge manufacturing technology

Taking advantage of the "flow control technology" we have cultivated in many industries, we meet our customers' needs with a strong record of manufacturing accomplishments, including various equipment such as integrated gas systems, water generation equipment and fluid mixing/dispersal units, as well as prefabricated piping.

Support for high-pressure gas certification (piping and tubing, valves, joints) is possible

- We have by far the widest certification range in the industry Design pressure : 99.9 MPa (max.), temperature range: -269 to +800°C
- Please also consult us about high-pressure/high-temperature piping.

Please inquire as well about manufacture and sales of other equipment that uses your component technology.

| Year | Month | Day |
|------|-------|-----|
| | | |

No.

Provider Manufacture / Estimate Request Sheet

Note: Circle "Manufacture" or "Estimate" above.

| | Com | pany nar | ne | | | | | | | | | |
|--|--|------------|---|--|--|--|---|---------------------------------|-----------------------------|-------------------------|-----------------|-----------------|
| | Address | | | TEL | | | | | | | | |
| | Final customer name | | | | | | | | | | | |
| | A | ddress | | | | | | | т | EL | | |
| Ta | arget equ | ipment i | name | | | | | | Desired delivery date | | | |
| | Product | name (m | nodel) | | | | | | Count | | | |
| | N | Nodel | *1 | 🗆 Sta | ndalone | D Pov | wer unit | | Need sa Pes No | afety valv (discharg | ve? Je press | *1 ure: MPa) |
| | Fl | uid nam | e *2 | | | | | | Requir | ed flow | | NL/min. |
| Spe | Discharg | ge pressu | re (MPa) | MAX. | NOR. | | MIN. | | Minimum | n pressure | | Мра |
| cifi | Intake p | oressure (| (MPa)*3 | MAX. | NOR. | | MIN. | | | | | |
| 요. Operating pressure (MPa) | | | re (MPa) | | | | | | (pressur | e source | pressur | e) |
| suc | Tem | perature | e (°C) | MAX. | NOR. | | MIN. | | | | | |
| | Viscosity | y(mPa•s,m | 1 ² •s ^{−1}) *4 | | | | | | Need Of | | □ Ye | s / 🗆 No |
| Purpose of use *1 | | | *1 | □ 1 A □ 2 F □ 3 N □ 4 C | irtightne illing (ba 1obile fill 0ther (ple | ess test o tch type) ing (usin ease indic | f product) g gas col cate in de | t or othe ntinuous etail) | r item ily) | | |) |
| | Docume | nts subr | nitted | | | | | | | | | |
| (pr | Destination (product and documentation) | | | ₸ | | | | | | | | |
| Points to note when comp Please circle "Manufacture *1: Please select (check) the app *2: Please indicate the specific n *3: The processing volume varies *4: Separate specifications apply | | | leting this e" or "Estir licable item. ame of the l s by intake p if the fluid i | s form nate" in th iquid or gas. ressure, so s a liquid of | ne Reques | ate this. ty. | Other p | points to n | ote | | | |
| Your company's approval stamp | | | Sales repre | sentative's co | onfirmation | | | | | | | |
| tam | · · · | , , , , | | | | | | | | | | |
| p field | | | | | | | | | | | | |





