ADEX Valves
A00, A05, A12 Series
February 2010
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Compact body with large flow
Body width remains the same, but the flow rate 1.5 to 3 times more than conventional valves.
(In comparison with KURODA products)
It allows flexibility on your applications saving space and reducing costs.
This series is most suitable for driving cylinders of \( \Phi 10 \) to \( \Phi 100 \) in diameter.

<table>
<thead>
<tr>
<th>Series</th>
<th>Body width</th>
<th>Effective area</th>
</tr>
</thead>
<tbody>
<tr>
<td>A05</td>
<td>( W: 28\text{mm} ) ( H: 80\text{mm} ) ( L: 74\text{mm} )</td>
<td>( 10\text{mm} ) ( 5.8\text{ mm}^2 )</td>
</tr>
<tr>
<td>A12</td>
<td>( W: 41\text{mm} ) ( H: 61\text{mm} ) ( L: 93\text{mm} )</td>
<td>( 15\text{mm} ) ( 11.1\text{ mm}^2 )</td>
</tr>
</tbody>
</table>

Quick response time, faster than 10ms
(A05 series, Single solenoid)
Uniquely designed pilot valve cut down on response time to faster than 10ms saving power consumption.

Expected life time more than 50,000,000 operations
(Based on KURODA’s test conditions)
A well-reputed TS (Triple Squeeze) seal is employed in the main spool, resulting in low sliding friction and long service life.

Low power consumption
Only 0.6W
(With indicator light and surge suppressor)
Current required is 25mA on 24V DC.
Direct drive from PLC is possible, contributing to cost reduction as well as down-sizing of the DC power supply.

Multipin connector manifold
Two types of connectors, D sub-connector and a flat cable connector are provided for wiring between the manifold and control device, allowing either to be selected in relation to various control devices used.
Cylinder ports 2 and 4 selectable
(In-line mounting type)

<table>
<thead>
<tr>
<th>Series</th>
<th>Standard</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tapped hole</td>
<td>Push-in fitting</td>
</tr>
<tr>
<td>A05</td>
<td>M5</td>
<td>φ 4</td>
</tr>
<tr>
<td>A12</td>
<td>Rc1/8</td>
<td>φ 6</td>
</tr>
</tbody>
</table>

Locking button (Manual override)
Screwdriver-operated manual override is standard.
It can be used as a hand-operated locking button by fitting an optional locking cover.

Multipurpose tag available
(Sub-base mounting type)
For the convenience of installation, testing, maintenance tag can be mounted on the upside of solenoid valve body.

Captured exhaust from main valve and pilot valve
(Sub-base mounting type & manifold)
Exhaust air from pilot valve is captured together with exhaust air from main valve.
Unlike conventional exhaust systems, exhaust air from pilot valve is not directly discharged to the atmosphere.
This prevents air contamination in the atmosphere.
## Sizing map

<table>
<thead>
<tr>
<th>Series</th>
<th>Conditions</th>
<th>Cylinder Speed (mm/s)</th>
<th>Cylinder bore size (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>150</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>450</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>600</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>750</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>900</td>
<td>6</td>
</tr>
</tbody>
</table>

### Series A05
- Pressure 0.5MPa
- Load factor 30%
- Tube Φ 6× 1m

### Series A12
- Pressure 0.5MPa
- Load factor 30%
- Tube Φ 8× 1m

As cylinder speeds vary according to operating conditions and configurations, use the data as a guide only for selection.
Solenoid valve variations (Lower case)

<table>
<thead>
<tr>
<th>Series</th>
<th>Effective area (mm²)</th>
<th>Function</th>
<th>Voltage</th>
<th>Wiring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2-position</td>
<td>3-position</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single solenoid</td>
<td>Double solenoid</td>
<td>Exhaust center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>○</td>
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<td></td>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Sub-base version

PR type

In-line version

ADEX VALVE

ADEX

Parker Hannifin Corporation
Pneumatic Division
<table>
<thead>
<tr>
<th>Indicator light &amp; screwdriver-operated locking button</th>
<th>Manual override</th>
<th>Bracket</th>
<th>Port size</th>
<th>Special application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hand-operated locking button</td>
<td></td>
<td></td>
<td>M5</td>
<td></td>
</tr>
<tr>
<td>Foot bracket</td>
<td></td>
<td></td>
<td>Rc 1/8</td>
<td></td>
</tr>
<tr>
<td>Side bracket</td>
<td></td>
<td></td>
<td>Rc 1/4</td>
<td></td>
</tr>
<tr>
<td>Push-in Fitting (Only at ports 2,4)</td>
<td></td>
<td></td>
<td>Rc 3/8</td>
<td></td>
</tr>
<tr>
<td>φ 4</td>
<td></td>
<td></td>
<td>φ 6</td>
<td></td>
</tr>
<tr>
<td>φ 8</td>
<td></td>
<td></td>
<td>φ 10</td>
<td></td>
</tr>
</tbody>
</table>

- Vacuum
- Low pressure
- Pressurizing ports 3,5
- Resistant to ozone

○ : Standard  ● : Optional  △ : Made to order

Made to order

Parker Hannifin Corporation
Pneumatic Division
## Manifold variations

<table>
<thead>
<tr>
<th>Sub-base version</th>
<th>In-line version</th>
<th>Mountable solenoid valve series</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADEX</strong></td>
<td></td>
<td><strong>PR type</strong></td>
</tr>
<tr>
<td>MFC</td>
<td></td>
<td>A05P</td>
</tr>
<tr>
<td>Bar type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compact type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual wiring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MFS</td>
<td></td>
<td>A05P</td>
</tr>
<tr>
<td>Bar type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual wiring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MFX</td>
<td></td>
<td>A05P</td>
</tr>
<tr>
<td>Bar type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual wiring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCC</td>
<td></td>
<td>A05P</td>
</tr>
<tr>
<td>Bar type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compact type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multipin connector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCS</td>
<td></td>
<td>A05P</td>
</tr>
<tr>
<td>Bar type</td>
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<td></td>
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<td>Multipin connector</td>
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<td></td>
</tr>
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<td>MCX</td>
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<td>A05P</td>
</tr>
<tr>
<td>Bar type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multipin connector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MFU</td>
<td></td>
<td>A05P</td>
</tr>
<tr>
<td>Bar type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual wiring</td>
<td></td>
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<tr>
<td>MCU</td>
<td></td>
<td>A05P</td>
</tr>
<tr>
<td>Bar type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multipin connector</td>
<td></td>
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</table>

Parker Hannifin Corporation
Pneumatic Division
<table>
<thead>
<tr>
<th>Connecting method</th>
<th>Polarity</th>
<th>Wiring method</th>
<th>Port size 1, 3, 5</th>
<th>Port size 2, 4</th>
<th>Special application</th>
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<tbody>
<tr>
<td>Flat cable</td>
<td></td>
<td></td>
<td>Rc 1/8</td>
<td>Rc 1/4</td>
<td>Rs 1/4</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>M5</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Rc 1/8</td>
<td>Rc 1/4</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Push-in fitting</td>
<td>φ4</td>
<td>φ6</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>φ8</td>
<td>φ10</td>
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<tr>
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<td>Vacuum</td>
</tr>
<tr>
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<td>Low pressure</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Pressurizing port 3, 5</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Resistant to ozone</td>
</tr>
</tbody>
</table>

- : Standard  
△ : Made to order
FOR SAFETY USE

Be sure to read the following instructions before use. For common and individual instructions, refer to the text of this catalogue.

The following safety precautions are provided to prevent damage and danger to personnel and to provide instructions on the correct usage of this product. These precautions are classified into 3 categories; “CAUTION”, “WARNING” and “DANGER” according to the degree of possible injury or damage and the degree of impendence of such injury or damage.

Be sure to comply with all precautions along with JIS B8370(1) and ISO 4414(2), as they include important content regarding safety.

⚠️ CAUTION • Indicates a potentially hazardous situation which may arise due to improper handling or operation and could result in personal injury or property-damage-only accidents.

⚠️ WARNING • Indicates a potentially hazardous situation which may arise due to improper handling or operation and could result in serious personal injury or death.

⚠️ DANGER • Indicates an impending hazardous situation which may arise due to improper handling or operation and could result in serious personal injury or death.

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†1 JIS B8370 : General Rules for Pneumatic Systems
†2 ISO 4414 : Pneumatic fluid power-General rules relating to systems

⚠️ WARNING

● The applicability of pneumatic equipment to the intended system should be judged by the pneumatic system designer or the personnel who determined specifications for such system.

As operating conditions for products contained in this catalogue are diversified, the applicability of pneumatic equipment to the intended system should be determined by the pneumatic system designer or the personnel who determined specifications for such system after conducting an analysis or testing as necessary.

The system designer shall be responsible for assuring the intended system performance and safety. Before making a system, the system designer should thoroughly examine all specifications for such a system and also take into consideration the possibility of any trouble with the equipment.

● The pneumatic equipment should be handled by persons who have sufficient knowledge and rich experience.

Improper handling of compressed air will result in danger.

Assembling, operation and maintenance of machinery using pneumatic equipment should be performed by persons who have sufficient knowledge and rich experience.

● Never operate machinery nor remove the equipment until safety is assured.

• Before checking or servicing machinery and equipment, be sure to check that steps for prevention of dropping or runaway of the driven component have been completely taken.

• When removing the equipment, make sure that the above-mentioned safety measures have been done beforehand.

Then turn off air supply and power to the system and purge compressed air in the system.

• When restarting machinery and equipment, check that proper prevention of malfunction has been provided for and then restart carefully.

● When using the pneumatic equipment in the following conditions or environments, take the proper safety measures and consult KURODA beforehand.

• Conditions and environments other than specified and outdoor use.

• Applications to nuclear power equipment, railroads, aircraft, vehicles, medical equipment, equipment connected with food and drink, amusement facilities and safety devices such as emergency interruption devices, clutch/brake circuits for a press and the likes.

• Applications which require extreme safety and will also greatly affect men and property.
Solenoid valves/Common instructions

Be sure to read them before use.
Also refer to Par. "For Safety Use" and instructions mentioned for each series of solenoid valves.

WARNING

- Stopping actuator at intermediate position
  When stopping the actuator at an intermediate position using a solenoid valve listed in this catalogue, it is difficult to stop it accurately because of the compressibility of air, unlike a hydraulic cylinder can dose.
  In addition, as the solenoid valve and air cylinder allow a certain degree of air leak, they cannot stop at the fixed position for a long period of time according to circumstances. When it is required to stop them at the fixed position for a long period of time, contact KURODA.

- Keeping pressure (including vacuum)
  As the solenoid valve is designed to allow a certain degree of air leak, it cannot be used to keep pressure (including vacuum) in a pressure vessel etc.

- Do not use for emergency shutoff valves.
  Solenoid valves listed in this catalogue are not designed for use in emergency shutoff valves and other safety applications.
  When using the solenoid valve for such applications, provide an independent means to assure safety.

- Exhausitng residual air
  Provide a residual air exhausting function in due consideration of maintenance and inspection. Doing maintenance and inspection without exhausting residual air may sometimes malfunction the actuator.
  When using a 3-position closed center type solenoid valve, compressed air is shut in between solenoid valve and actuator even if residual air from the air supply side to the solenoid valve is exhausted.
  Therefore, provide a means to exhaust the residual air pressure separately.

- Use in vacuum
  When using a solenoid valve for diverting vacuum and other applications, check specifications for the valve and select a proper one that can be used in vacuum.
  In order to prevent sucking foreign matters from the suction pad and exhaust port, provide an inline filter between the suction pad and solenoid valve and at the exhaust port.

- Applying current continuously for long time
  When using a solenoid valve while applying current to it continuously for a long period of time, contact KURODA beforehand.

- Avoid applying current simultaneously.
  When using a double-solenoid valve while applying current to it continuously for a long period of time, do not apply current to both solenoids simultaneously; otherwise the coil may be burnt out or the main valve may malfunction.

- Remodeling the solenoid valve
  Do not remodel the solenoid valve.

CAUTION

- Applying current momentarily
  When using a double-solenoid type valve, apply current for the prescribed period of time (0.1 sec.). If current is not applied for the prescribed period of time, the solenoid valve may not perform the diverting action according to circumstances.

- Leak current
  When a C-R element is used in the contact protective circuit (surge voltage protection), leak current will flow through the C-R element.
  If this leak current becomes large, a malfunction will occur.
  Therefore, reduce leak current to less than 1 mA.

- Use at low temperature
  When using a solenoid valve at 5°C or below, provide an air dryer or other proper means to prevent moisture from solidifying or freezing.

- Use with air blow
  When using a solenoid valve with air blow, select a direct-operated type or external pilot type solenoid valve.
  When an internal pilot type solenoid valve is used, it may not perform the diverting action due to a pressure drop at the time of air blow.
  When an external pilot type solenoid valve is used, supply compressed air within the specified pressure range to the pilot port.

- Mounting position and direction
  A solenoid valve can be mounted in any position and direction as a general.
  However, a metal seal type double-solenoid valve and a 3-position solenoid valve should be mounted so that the spool may be horizontal.

- Shock and vibration
  Reduce shocks and vibrations applied to the solenoid valve to less than the prescribed value. (refer to specifications.) Applying shocks and vibrations exceeding the prescribed value may result in a malfunction of the solenoid valve.
Solenoid Valves/Common instructions

Be sure to read them before use.
Also refer to Par. "For Safety Use" and instructions mentiond for each series of solenoid valves.

Selection

WARNING

- Refer to specifications.
  Solenoid valves listed in this catalogue are designed for compressed air. When using other fluid than compressed air, contact KURODA beforehand.
  Do not use a solenoid valve at pressure and temperature outside the range of specifications, otherwise resulting in a breakdown or malfunction.

Mounting

WARNING

- When mounting the solenoid valve, firmly fix it while using care to prevent the stationary part and joint from loosening.
  If the solenoid valve is mounted with insufficient strength, it may sometimes come off.
- Do not start the system until it is ensured that equipment works properly.
  After mounting the solenoid valve, connect power supply and then perform a functional test and a leak test. Check that it has been correctly mounted and works properly, before starting the system.
- Coating with paint
  When coating the resin portion with paint, it may be adversely affected by paint and solvent. For the propriety of painting, contact KURODA beforehand.
  Do not peel off the nameplate affixed on the solenoid valve and do not erase or smear out the letter on it.
- Provide space for maintenance and inspection.

CAUTION

- Fit an air muffler to the exhaust port (ports 3 • 5) of the solenoid valve.
  Dust or foreign matter that enters it may cause a malfunction of the solenoid valve.
- Do not wipe off the model name inscribed on a nameplate etc. with organic solvent.
  The inscribed indication may be erased.

Piping

CAUTION

- Before piping
  Thoroughly flush the inside of each pipe to remove chips, coolant, dust, etc. before piping.
- How to wind a seal tape
  When winding a seal tape around the threaded portion, leave space of 1.5 to 2 thread turns.
- How to apply liquid sealant
  When applying liquid sealant to the threaded portion, apply a proper amount to about 1/3 of the periphery of the threaded portion and then screw it.
- Screw of pipe and joint
  When screwing the pipe and joint, use care to prevent chips and sealant from entering the pipe and joint.
  Tighten them within a proper range of clamping torque.

<table>
<thead>
<tr>
<th>Port size</th>
<th>Clamping torque (N m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3</td>
<td>0.3 ~ 0.5</td>
</tr>
<tr>
<td>M5</td>
<td>1.5 ~ 2.0</td>
</tr>
<tr>
<td>R, Rc1/4</td>
<td>7.0 ~ 9.0</td>
</tr>
<tr>
<td>R, Rc1</td>
<td>36. ~ 38.</td>
</tr>
<tr>
<td>R, Rc1 1/2</td>
<td>40. ~ 42.</td>
</tr>
<tr>
<td>R, Rc1 1/4</td>
<td>48. ~ 50.</td>
</tr>
</tbody>
</table>
### Solenoid valves/Common instructions

Be sure to read them before use. Also refer to Par. “For Safety Use” and instructions mentioned for each series of solenoid valves.

#### Piping

- **CAUTION**
  - Avoid wrong piping.
    - When connecting a pipe to a solenoid valve, be careful not to mistake the supply port by referring to the nameplate affixed to the product or the product catalogue.
  - When using a 3-position closed center type solenoid valve:
    - Thoroughly check the piping between solenoid valve and actuator for air leak.

#### Wiring

- **WARNING**
  - When doing wiring work, be sure to turn off compressed air and power supplies beforehand.
    - Wiring work without turning off air and power supplies may cause an electric shock or malfunction; this sometimes results in an injury to the human body or a damage to property.
  - Avoid mis-wiring.
    - Some solenoid valves have polarity: Those operating on DC with built-in indicator light and those equipped with surge protective circuit.
    - When wiring to a solenoid valve, check whether or not it has polarity.
    - For a solenoid valve having polarity, check the lead wire color and symbol of the polarity by the catalogue or actual article beforehand and then make correct wiring.
    - Mis-wiring will result in the following problems:
      - (Where no polarity protective diode is incorporated:)
        - Wiring to the wrong polarity will burn out the diode in the solenoid valve, the switching element on the control unit side or the power supply unit.
      - (Where a polarity protective diode is provided:)
        - Wiring to the wrong polarity will not cause the solenoid valve to perform a diverting action.
  - Avoid applying stress and tensile force to lead wire repeatedly.
    - Wiring made in such a manner that stress and tensile force are repeatedly applied to the lead wire will result in the breaking of wire. Provide some degree of margin for wiring.
  - Check that there is no insulation failure.
    - If an insulation failure occurs in the lead wire connection, extension cable and terminal base, an excess flows to the switching element of the solenoid valve or control unit, sometimes resulting in a damage.
  - Do not mistake applied voltage.
    - Mistake in applied voltage in case of wiring to a solenoid valve will cause an operation failure or burn out the coil.
  - After completion of wiring, check for wrong connection before turning on power.

#### Operating environments

- **DANGER**
  - Do not use solenoid valve in a explosive environment.
- **WARNING**
  - Do not use a solenoid valve in atmospheres containing corrosive gases, chemicals, seawater, water and vapor and in places where a solenoid valve contacts these matters.
  - Do not use a solenoid valve in a place where vibrations or shocks are directly applied to it.
  - When a solenoid valve is exposed to the direct sunlight, fit a protective cover to the solenoid valve.
  - When a solenoid valve is located around a heat source, shut off the radiant heat.
  - When installing a solenoid valve in the control panel, take proper heat-radiating measures so that the inside temperature may be kept within the specified temperature range.
  - When using a solenoid valve in a place where it is exposed to welding spatters, provide a protective cover or other proper prevention.
    - Welding spatters may burn out the plastic parts of the solenoid valve, sometimes resulting in a fire.

#### Lubrication

- **CAUTION**
  - Solenoid valves listed in this catalogue are non-lubrication.
    - The non-lubricated solenoid valve can be used without lubrication, but can be used with lubrication. When using it with lubrication, do not discontinue supplying oil.
    - Otherwise, the applied lubricant may run off, sometimes resulting in an operation failure.
    - When using a lubricant, Class 1 turbine oil ISO VG 32 (containing additive) is recommended.
Solenoid Valves/Common instructions

Be sure to read them before use.
Also refer to Par. "For Safety Use" and instructions mentioned for each series of solenoid valves.

Quality of air

WARNING

• Use pure air.
  Compressed air containing corrosive gases, chemicals, salt, etc. causes a breakdown or operation failure. So do not use such air.

CAUTION

• Fit an air filter with filtration of 5 µm or fine.
• Install an air dryer.
  Compressed air containing much drainage causes the operation failure of pneumatic equipment. Install an air dryer, lower the temperature and reduce drainage.
• Take proper countermeasures against sludge.
  If sludge produced in compressor oil enters pneumatic equipment, it will cause the operation failure of pneumatic equipment. It is recommended to use compressor oil (NISSEKI FAIRCALL A68, IDEMITSU DAPHUNY SUPER CS68) featuring minimized sludge production or use a sludge filter or mist cleaner to prevent sludge from entering the pneumatic equipment.

Maintenance and inspection

WARNING

• Inspection before maintenance
  First check that load drop prevention has been provided. Then shut off air and power supplies to the system and exhaust residual air in the system beforehand.
  For a 3-position closed center type solenoid valve, compressed air is sealed between solenoid valve and cylinder. Exhaust this residual compressed air.

• Inspection after maintenance
  When restarting the system, check that preventive measures against flying-out of the actuator have been taken. Then connect compressed air supply to the pneumatic system, and perform a proper functional test and a leak test to check that it works safely without fail, before starting the system.

• Operation at low frequency
  To prevent an operation failure, perform the switching action of the solenoid valve once per 30 days. (Be careful of air supply.)

• Manual operation
  When the solenoid valve is manually operated, the system connected to it is also operated. Make sure safety before operation.

• Disassembly of solenoid valve
  When disassembling the solenoid valve, contact KURODA beforehand.

CAUTION

• Draining
  To keep the quality of air to a certain level, drain the air filter at periodical intervals.
ADEX Valve/Individual instructions
Be sure to read them before use.
Also refer to Par. "For Safety Use" and common instructions.

Flow rate
Flow rate can be calculated from the following formula:
For values in the sonic velocity zone, find out from the attached table.
(1) $P_n \leq 1.89P_l$ (Subsonic velocity zone)
\[ Q = 240 \times S \times \sqrt{P_l \times (P_n - P_l) \times \tfrac{273}{T_n}} \]
(2) $P_n \geq 1.89P_l$ (Sonic velocity zone)
\[ Q = 120 \times S \times P_n \times \tfrac{273}{T_n} \]
\[ Q_f \text{ flow rate} \quad r/min(ANR) \]
\[ S \text{ Effective area of orifice} \quad \text{mm}^2 \]
\[ P_l \text{ Pressure on upper stream} \quad \text{MPa abs} \]
\[ P_n \text{ Pressure on down stream} \quad \text{MPa abs} \]
\[ T_n \text{ Absolute temperature on upper stream} \quad \text{K} \]
(Note) Absolute pressure (MPa) = Supply pressure + 0.100 (MPa)

Port identification

CAUTION
Port mark
Piping port marks such as 1 2 3 4 conforming to JIS and ISO are given in the respective piping port positions.

<table>
<thead>
<tr>
<th>JIS</th>
<th>ISO</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>1</td>
<td>Supply port</td>
</tr>
<tr>
<td>A</td>
<td>4</td>
<td>Output port</td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td>Output port</td>
</tr>
<tr>
<td>R_1</td>
<td>5</td>
<td>Exhaust port</td>
</tr>
<tr>
<td>R_2</td>
<td>3</td>
<td>Exhaust port</td>
</tr>
</tbody>
</table>

X : External pilot port
Y : Pilot valve captured exhaust port

Type of port thread
Type of port thread is marked on the sub-base by the following abbreviation.

Abbr. Type of thread
R Rc
G G
N NPT
F NPTF

Effective area
Effective areas mentioned in this catalog are measured between ports 1—2, 4 in accordance with JIS (JAPANESE INDUSTRIAL STANDARD) B8374/8375.

Using 5-port valve as 3-port valve

CAUTION
A05 and A12 Series are so designed that each of them can be used as a 3-port valve with normal close (NC) or normal open (NO) function. However, use it with port opened. This function is useful when 3-port double solenoid valve is required.

<table>
<thead>
<tr>
<th>Plug position</th>
<th>Port 4</th>
<th>Port 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>NO</td>
<td>NC</td>
</tr>
<tr>
<td>Number of solenoid</td>
<td>Single solenoid</td>
<td>Double solenoid</td>
</tr>
</tbody>
</table>

Parker Hannifin Corporation
Pneumatic Division
**ADEX Valve/Individual instructions**

Be sure to read them before use.
Also refer to Par. "For Safety Use" and common instructions.

---

### Continuous energizing

**CAUTION**

- When ADEX VALVE is continuously energized with power turned on for a long period of time, the solenoid may heat up, resulting in a damage to the packing and gasket according to circumstances. However, ADEX VALVE can be used under the following conditions:
  1. Operating ambient temperature: Below 40 °C
  2. Rated operating voltage (Only DC): ±0 – 10%
  3. The following models can be used under good heat-adiating conditions:
     - Single item of A00
     - Single item of A05P and A05R, and bar type manifolds (MFS, MCS, MCC and MCU), except when MFC, MFU, MFX or single item is mounted on a plane.
- When operating ADEX VALVE with power continuously turned on in other conditions than above-mentioned, be sure to consult KURODA beforehand.

---

### TAG

**CAUTION**

Do not reuse a tag that was once attached to same place. Otherwise, it may be too loose.

---

### Air exhaust

**CAUTION**

- There is the possibility that some fitting cannot be fitted to ports 2 and 4 (manifold, sub-base, and AB plate) of this solenoid valve because there are various fitting makers supplying different types of fittings.
- Check the size of the intended fitting by referring to the catalogue supplied by the fitting maker.
- Note that the pitch between ports 2 and 4 (AB plate) of the in-line mounting type valve is designed to be a minimum.

---

### Selection of proper configuration fitting

**CAUTION**

There is the possibility that some fitting cannot be fitted to ports 2 and 4 (manifold, sub-base, and AB plate) of this solenoid valve because there are various fitting makers supplying different types of fittings.

---

### Pressure supply

(For external pilot type)

**CAUTION**

- Supply pressure to external pilot valve from port X. (Port Y is pilot valve exhaust port.)
- When supplying air pressure, first supply external pilot pressure and then supply main valve pressure.
- To cut the pressure supply and exhaust air, do so for the main valve first and then for the external pilot valve.

---

### Tightening torque for mounting screw

**CAUTION**

Recommended tightening torque range is shown as below.

<table>
<thead>
<tr>
<th>Name</th>
<th>Screw size</th>
<th>Torque (N-m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A05 solenoid valve mounting screw blank plate mounting screw</td>
<td>M2</td>
<td>0.2 – 0.22</td>
</tr>
<tr>
<td>A12 solenoid valve mounting screw blank plate mounting screw</td>
<td>M3</td>
<td>0.5 – 0.55</td>
</tr>
<tr>
<td>A05 AB plate mounting screw</td>
<td>M2</td>
<td>0.18 – 0.2</td>
</tr>
<tr>
<td>A12 AB plate mounting screw</td>
<td>M3</td>
<td>0.8 – 1.0</td>
</tr>
<tr>
<td>A00 solenoid valve mounting screw blank plate mounting screw</td>
<td>M1.6</td>
<td>0.08 – 0.1</td>
</tr>
</tbody>
</table>
ADEX Valve/Individual instructions

Be sure to read them before use.
Also refer to Par. "For Safety Use" and common instructions.

**How to use connectors**

**CAUTION**

When doing wiring work, be sure to turn off power beforehand.

- How to attach and detach a connector

  When attaching a connector, pinch the clip with your finger and insert the connector into the pin straight to the end. When detaching a connector, pinch the clip with your finger and pull out the connector straight.

**Connector ass’y with protective cover**

**CAUTION**

- Prevents short-circuiting caused by the entry of foreign matters into the connector.
- The cover is made of chloroprene rubber for electrical use, assuring excellent weather and insulation resistance. However, be careful not to place it under splash of cutting oil etc.
- Neat appearance owing to use of round cord.

Connector Ass'y with protective cover is optionally available. Specify the following model No. when ordering.

- A05P-DC-CB10

---

Parker Hannifin Corporation
Pneumatic Division
ADEX Valve/Individual instructions

Be sure to read them before use.
Also refer to Par. "For Safety Use" and common instructions.

Internal circuit of solenoid with indicator light and surge suppressor

⚠️ CAUTION

- For DC24V:
  - For PR type:
    - Red(+) for Plus common (NPN)
    - Black(−) for Minus common (PNP)

Make connection in accordance with polarity marks (+) (−) NPN only.
ADEX Valve/Individual instructions
Be sure to read them before use.
Also refer to Par. "For Safety Use" and common instructions.

**Manual override**

**WARNING**

- Screwdriver-operated locking manual override (Standard)
  - No-locking operation
    Push the locking button with a screwdriver, and the valve shifts to energized position. When the screwdriver is released from the locking button, the valve is reset to non-energized position.
  - Locking operation
    Push the locking button with a slotted screwdriver and rotate the button clockwise by 90°.
    The valve is locked to keep energized position.
    When the button is rotated counterclockwise by 90° and the screwdriver is released from the button, the valve is reset to non-energized position.
    Use a screwdriver with blade width of 2.3 to 2.4 mm.

- Hand-operated locking manual override (Option)
  The screwdriver-operated locking button can be used as a hand-operated locking button by fitting an optional locking cover.
  **How to fit a locking cover**
  Adjust the rib provided inside the locking cover to 2 respective groove on the circumference of the screwdriver-operated locking button and insert the cover.
  Then rotate it clockwise by 30°. Thus, the locking cover has been completely fitted. (To remove the locking cover, reverse the above-mentioned procedure.)

![Diagram of locking cover and valve](image)
ADEX Valve/Individual instructions

Be sure to read them before use.
Also refer to Par. "For Safety Use" and common instructions.

Individual supply spacer

**CAUTION**

Mounting an individual supply spacer between solenoid valve and manifold makes it possible to provide each solenoid valve with an individual supply port. However, the types of manifolds to which these spacers can be mounted are specified as follows: As individual supply spacers are optionally available, please order by the model number shown below.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Applicable manifold</th>
</tr>
</thead>
<tbody>
<tr>
<td>A05PA-IS-M5</td>
<td>Individual wiring type MFS□-A05P-01</td>
</tr>
<tr>
<td>A05RA-IS-M5</td>
<td>Multipin connector type MCC□-A05P-M5(C4, C6)</td>
</tr>
<tr>
<td>A12PA-IS-01</td>
<td>Multipin connector type MCS□-A05P-01</td>
</tr>
</tbody>
</table>

(Note) Mounting height of individual supply spacer:
A05: 18.5 mm, A12: 20 mm

- When mounting a supply spacer, turn port 1 toward the end cover side in case of single solenoid valve.

- A05RA-IS-M5

**CAUTION**

Individual exhaust spacer

Mounting an individual exhaust spacer between solenoid valve and manifold makes it possible to provide each solenoid valve with an individual exhaust port. However, the types of manifolds to which these spacers can be mounted are specified as follows: As individual exhaust spacers are optionally available, please order by the model number shown below.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Applicable manifold</th>
</tr>
</thead>
<tbody>
<tr>
<td>A05PA-IE-M5</td>
<td>Individual wiring type MFS□-A05P-01</td>
</tr>
<tr>
<td>A05RA-IE-M5</td>
<td>Multipin connector type MCC□-A05P-M5(C4, C6)</td>
</tr>
<tr>
<td>A12PA-IE-01</td>
<td>Multipin connector type MCS□-A05P-02(C6, C8)</td>
</tr>
</tbody>
</table>

(Note) Mounting height of individual exhaust spacer:
A05: 18.5 mm, A12: 20 mm

- When mounting an exhaust spacer, turn the mounting position mark (shown in the above figure) toward the end cover side in case of single solenoid valve.

- Be sure to connect a pipe to the exhaust port on the pilot valve side and protect the wiring from drain.
**ADEX Valve/Individual instructions**

Be sure to read them before use. Also refer to Par. "For Safety Use" and common instructions.

**Specifications for multipin connector type manifolds**

**CAUTION**

This manifold allows wiring to each solenoid valve to be made on a printed circuit board and allows wiring from the outside to be collectively made using a D sub-connector or flat cable connector, thereby reducing the number of connections and providing a neat appearance. Use of connectors based on MIL specification broadens the compatibility of this manifold.

- **Wiring specifications for D sub-connector (25-pole)**

  ![Wiring Diagram](image.png)

  **Valve numbering order**

  (Note) Internal wiring of manifold is connected to Sol. 14, Sol. 12 and D sub-connector terminal on common specifications.

  - Count the number of stations based on the L side of D sub-connector mounting position.
  - Example: 1-station, 2-station, ..., n-station
  - Maximum number of stations is 12 for manifold and 24 for solenoid.
  - For your specific requirement for more than the maximum number of stations, contact KURODA.
  - When wiring with flat cable be careful of external surge voltage.

- **D sub-connector Ass'y**

  **Ordering Instructions**

  DSS-R25FB-1K

  - Cable length 1K: 1m
  - 2K: 2m
  - Color: Black
  - Connector position: F: Ftype R: Rtype
  - Number of pin: 25 pins

---

Parker Hannifin Corporation
Pneumatic Division

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ADEX Valve/individual instructions
Be sure to read them before use.
Also refer to Par. "For Safety Use" and common instructions.

Specifications for multipin connector type manifolds

- Wiring specifications for flat cable connector (26-pole)

Valve No.          Valve No.

<table>
<thead>
<tr>
<th>No. 1</th>
<th>No. 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2</td>
<td>No. 2</td>
</tr>
<tr>
<td>No. 3</td>
<td>No. 3</td>
</tr>
<tr>
<td>No. 4</td>
<td>No. 4</td>
</tr>
<tr>
<td>No. 5</td>
<td>No. 5</td>
</tr>
<tr>
<td>No. 6</td>
<td>No. 6</td>
</tr>
<tr>
<td>No. 7</td>
<td>No. 7</td>
</tr>
<tr>
<td>No. 8</td>
<td>No. 8</td>
</tr>
<tr>
<td>No. 9</td>
<td>No. 9</td>
</tr>
<tr>
<td>No. 10</td>
<td>No. 10</td>
</tr>
<tr>
<td>No. 11</td>
<td>No. 11</td>
</tr>
<tr>
<td>No. 12</td>
<td>No. 12</td>
</tr>
</tbody>
</table>

(Note) Internal wiring of manifold is connected to Sol.14, Sol.12 and flat cable connector terminal on common specifications.

- Count the number of stations from the L side of flat cable connector mounting position.
  Example: 1-station, 2-station, ..., n-station

- Maximum number of stations is 12 for manifold and 24 for solenoid.

- For your specific requirement for more than the maximum number of stations, contact KURODA Pneumatics Ltd.

- When wiring with flat cable, be careful of external surge voltage.

Flat cable connector
Use a product conforming to MIL-C 83503/7A.
ADEX VALVE

PR TYPE
5 port pilot operated solenoid valve

A05P Series
Rubber Seal/Sub-base Mounting type

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A05PS25</td>
<td>2-position Single solenoid</td>
</tr>
<tr>
<td>A05PD25</td>
<td>2-position Double solenoid</td>
</tr>
<tr>
<td>A05PD35</td>
<td>3-position Closed center</td>
</tr>
<tr>
<td>A05PE35</td>
<td>3-position Exhaust center</td>
</tr>
<tr>
<td>A05PO35</td>
<td>3-position Pressure center</td>
</tr>
</tbody>
</table>

Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Unit</th>
<th>A05PS25</th>
<th>A05PD25</th>
<th>A05PD35</th>
<th>A05PE35</th>
<th>A05PO35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid</td>
<td></td>
<td>Non-lubricated/lubricated air</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>Rc 1/8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective area</td>
<td>mm²</td>
<td>5.8</td>
<td>4.5</td>
<td>6.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cv value</td>
<td></td>
<td>0.32</td>
<td>0.25</td>
<td>0.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating ambient temperature</td>
<td>°C</td>
<td>—5~50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure range</td>
<td>MPa</td>
<td>0.15~0.7</td>
<td>0.1~0.7</td>
<td>0.2~0.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum frequency</td>
<td>cycle/min</td>
<td>600</td>
<td>500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>DC</td>
<td>ON</td>
<td>s</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OFF</td>
<td>s</td>
<td>0.010 (0.016)</td>
<td>—</td>
<td>0.015 (0.021)</td>
</tr>
<tr>
<td>Pilot air exhaust</td>
<td></td>
<td>Captured exhaust</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual override</td>
<td></td>
<td>Screwdriver-operated locking button</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting position</td>
<td></td>
<td>Free</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock resistance</td>
<td>m/s²</td>
<td>150/30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>g</td>
<td>52</td>
<td>67</td>
<td>69</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>Without sub-base</td>
<td>g</td>
<td>108</td>
<td>126</td>
<td>128</td>
<td></td>
<td></td>
</tr>
<tr>
<td>With sub-base</td>
<td>g</td>
<td>126</td>
<td>128</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Note)</td>
<td></td>
<td>Service kit not available</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>When temperature of valve site goes down below 5 °C, complete dry air should be supplied to prevent from freezing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pressure range of external pilot supply: 0.25~0.7MPa</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Response time shown above is in accordance with JIS B 8375.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effective area shown above is a value between ports 1 and 2, 4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Electrical Specifications

| Rated voltage | DC | V | 24 |
| Permissable voltage fluctuation | % | +10, -10 |
| Power consumption | DC | W | 0.6 (with indicator light and surge suppressor), 0.55 (without indicator light and surge suppressor) |
| Grade of Insulation | | JIS grade E |
| Wiring | | Plug-in connector |
| Surge suppressor | | Diode |
| Indicator light | | LED |
A05P Series

Ordering Instructions

**Function**
- S25: 2-position, single solenoid
- D25: 2-position, double solenoid
- D35: 3-position, closed center
- E35: 3-position, exhaust center
- O35: 3-position, pressure center

**Wiring**
- No mark: Without connector
- E: Connector with lead wire (Length: 500mm)

**Port size**
- No mark: Without sub-base
- 01: Rc1/8
- G1: G1/8
- N1: NPT1/8
- F1: NPTF1/8
  (Note) Valve without sub-base comes with a base gasket & two mounting screws.

**Connector position**
- P: (With indicator light and surge suppressor)
- S: (Without indicator light and surge suppressor)

**Voltage**
- 1: DC24V

**Special specification**
- No mark: standard (Internal pilot)
- X: * External pilot
  (Pilot air is exhausted through exclusive port Y.)

* Made to order
A05P Series

Optional Accessories and Spare parts

- **Connector with lead wire**
  - **Type**: P : For PR type
  - **Voltage**: DC : For DC
  - **Lead wire length**
    - 5 : 500mm
    - 10 : 1000mm
  - **Color**: (-) : Black
  - **(+): Black

- **Sub-base**
  - **Type**: A05P – B – 01X
  - **Special specifications**
    - No mark: Standard
    - X : For external pilot (With port X)
  - **Port size**
    - 01 : Rc 1/8
    - G1 : * G 1/8
    - N1 : * NPT 1/8
    - F1 : * NPTF 1/8

- **Locking cover**
  - **Type**: A05P – LA
  - **Color**: A : Orange

- **Tag for solenoid valve**
  - **Type**: A05P – N (Pack of 10)

- **Base gasket**
  - **Type**: A05PX – G
  - **Content of kit**
    - SG : Gasket & mounting screws
    - G : Gasket only (Pack of 10)
    - S : Mounting screw only (Pack of 20)
  - **Special specifications**
    - No mark: Standard
    - X : * For external pilot (With port X)

(Note) For common use with standard types of A05 and A12

(Note) For common use with A05P series

(Note) For common use with PR type of A05 and A12

(Note) For common use with sub-base mounted type of A05 and A12

*: Made to order
A05P Series

Material Specification

2-position
Single solenoid

2-position
Double solenoid

3-position
Closed center
3-position
Exhaust center
3-position
Pressure center

Main Components

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Body</td>
<td>Zinc die-casting</td>
</tr>
<tr>
<td>②</td>
<td>Spool ass'y</td>
<td>Aluminium/NBR</td>
</tr>
<tr>
<td>③</td>
<td>End cover</td>
<td>Resin</td>
</tr>
<tr>
<td>④</td>
<td>Piston housing</td>
<td>Resin</td>
</tr>
<tr>
<td>⑤</td>
<td>Piston</td>
<td>Resin</td>
</tr>
<tr>
<td>⑥</td>
<td>Pilot valve</td>
<td>Refer to A00 Series</td>
</tr>
<tr>
<td>⑦</td>
<td>Base gasket</td>
<td>NBR</td>
</tr>
<tr>
<td>⑧</td>
<td>Sub-base</td>
<td>Aluminium die-casting</td>
</tr>
</tbody>
</table>
A05P Series

Dimensions

**A05PS25**

Connector position:

P or S

- M5 (Port X)
  - (For model with symbol X)
- M6 (Port Y)
  - (For model with symbol X)

**A05PD25**

Connector position:

P or S

- M5 (Port X)
  - (For model with symbol X)
- M5 (Port Y)
  - (For model with symbol X)

With locking cover

ADEX VALVE

Parker Hannifin Corporation
Pneumatic Division
A05P Series

Dimensions
A05PD35, A05PE35, A05PO35

(Unit: mm)

Connector position:
P or S

M5( Port X)
(For model with
symbol X)

M5(port Y)
(For model with
symbol X)

Manual override

With locking cover

(?)

Parker Hannifin Corporation
Pneumatic Division
# 5 Port pilot operated solenoid valve

## A05R Series

### Rubber Seal/In-line Mounting type

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>A05RS25</td>
<td>2-position Single solenoid</td>
</tr>
<tr>
<td>A05RD25</td>
<td>2-position Double solenoid</td>
</tr>
<tr>
<td>A05RD35</td>
<td>3-position Closed center</td>
</tr>
<tr>
<td>A05RE35</td>
<td>3-position Exhaust center</td>
</tr>
<tr>
<td>A05RO35</td>
<td>3-position Pressure center</td>
</tr>
</tbody>
</table>

### Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Unit</th>
<th>A05RS25</th>
<th>A05RD25</th>
<th>A05RD35</th>
<th>A05RE35</th>
<th>A05RO35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid</td>
<td>Non-lubricated / lubricated air</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>Port 2, 4 : M5, C4, C6 Port 1, 3, 5 : M5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective area</td>
<td>mm²</td>
<td>4</td>
<td>3.7</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cv value</td>
<td></td>
<td>0.22</td>
<td>0.20</td>
<td>0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating ambient temperature</td>
<td>°C</td>
<td>-5~50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure range</td>
<td>MPa</td>
<td>0.15~0.7</td>
<td>0.1~0.7</td>
<td>0.2~0.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum frequency</td>
<td>cycle/min</td>
<td>600</td>
<td>500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>DC</td>
<td>ON</td>
<td>s</td>
<td>0.010</td>
<td>0.010</td>
<td>0.010</td>
</tr>
<tr>
<td>Pilot air exhaust</td>
<td></td>
<td>OFF</td>
<td>s</td>
<td>0.010 (0.016)</td>
<td></td>
<td>0.015 (0.021)</td>
</tr>
<tr>
<td>Manual override</td>
<td>Screwdriver-operated locking button</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting position</td>
<td>Free</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock resistance, vibration resistance</td>
<td>m/s²</td>
<td>150/30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>g</td>
<td>59</td>
<td>76</td>
<td>78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Service kit not available
2. When temperature of valve site goes down below 5°C, complete dry air should be supplied to prevent from freezing.
3. Response time in bracket ( ) shows with surge suppressor.
4. Response time shown above is in accordance with JIS B 8375.
5. Effective area shown above is a value between ports 1 and 2, 4.

### Electrical Specifications

<table>
<thead>
<tr>
<th>Rated voltage</th>
<th>DC</th>
<th>V</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permissible voltage fluctuation</td>
<td>%</td>
<td>+10, -10</td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>DC</td>
<td>W</td>
<td>0.6 (with indicator light and surge suppressor), 0.55 (without indicator light and surge suppressor)</td>
</tr>
<tr>
<td>Grade of Insulation</td>
<td>JIS grade E</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wiring</td>
<td>Plug-in connector</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surge suppressor</td>
<td>Diode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator light</td>
<td>LED</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A05R Series

Ordering Instructions

**Function**

S25: 2-position, single solenoid

\[ \begin{align*}
&\text{A1} \downarrow \text{B2} \\
&\text{R1} \uparrow \text{P} \text{R2}
\end{align*} \]

D25: 2-position, double solenoid

\[ \begin{align*}
&\text{A1} \downarrow \text{B2} \\
&\text{R1} \uparrow \text{P} \text{R2}
\end{align*} \]

D35: 3-position, closed center

\[ \begin{align*}
&\text{A1} \downarrow \text{B3} \\
&\text{R1} \uparrow \text{P} \text{R2}
\end{align*} \]

E35: 3-position, exhaust center

\[ \begin{align*}
&\text{A1} \downarrow \text{B3} \\
&\text{R1} \uparrow \text{P} \text{R2}
\end{align*} \]

O35: 3-position, pressure center

\[ \begin{align*}
&\text{A1} \downarrow \text{B3} \\
&\text{R1} \uparrow \text{P} \text{R2}
\end{align*} \]

**Wiring**

No mark: Without connector

E: Connector with lead wire (Length: 500mm)

**Size of ports 2 and 4**

M5: M5

C4: * With push-in fitting φ4

C6: * With push-in fitting φ6

**Connector position**

P: (With indicator light and surge suppressor)

S: (Without indicator light and surge suppressor)

Q: (With indicator light and surge suppressor)

B: (Without indicator light and surge suppressor)

**Voltage**

1: DC24V

**Special specification**

No mark: standard (Internal pilot)

X: * External pilot

(Pilot air is exhaust through exclusive port Y.)

*: Made to order
A05R Series

Optional Accessories and Spare parts

- **Connector with lead wire**
  - A05P – DC – CL5
  - Voltage: DC – For DC
  - Type: P – For PR type
  - Lead wire length:
    - 5: 500mm
    - 10: *1000mm

- **AB plate**
  - A05R – AB – M5X
  - Special specifications:
    - No mark: Standard
    - X: *For external pilot (With port X)
  - Port size:
    - M5: M5
    - C4: *With push-in fitting for ø4
    - C6: *With push-in fitting for ø6

- **Locking cover**
  - A05P – LA
  - Color: A – Orange
  - For PR type:
    - (Note) For common use with PR type of A05 and A12

- **Bracket**
  - A05R – BF
  - Mounting:
    - F: Foot bracket
    - S: Side bracket

(Note) For common use with all A05 and A12

- **Bracket**
  - A05R – BF
  - Mounting:
    - F: Foot bracket
    - S: Side bracket

(Note) Only single solenoid mountable

- **AB plate**
  - A05R – AB
  - Mounting screw
  - Plate gasket

(Note) Gasket & mounting screws are supplied
For common use with A05R

- **Bracket**
  - A05R – BF
  - Mounting:
    - F: Foot bracket
    - S: Side bracket

(Note) Only single solenoid mountable

- **AB plate**
  - A05R – AB
  - Mounting screw
  - Plate gasket

(Note) Gasket & mounting screws are supplied
For common use with A05R

- **Bracket**
  - A05R – BF
  - Mounting:
    - F: Foot bracket
    - S: Side bracket

(Note) Only single solenoid mountable

- **AB plate**
  - A05R – AB
  - Mounting screw
  - Plate gasket

(Note) Gasket & mounting screws are supplied
For common use with A05R

(Note) Only single solenoid mountable

*: Made to order
A05R Series

Material Specification

2-position
Single solenoid

2-position
Double solenoid

3-position
Closed center
3-position
Exhaust center
3-position
Pressure center

Main Components

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Body</td>
<td>Zinc die-casting</td>
</tr>
<tr>
<td>②</td>
<td>Spool ass'y</td>
<td>Aluminium/NBR</td>
</tr>
<tr>
<td>③</td>
<td>End cover</td>
<td>Resin</td>
</tr>
<tr>
<td>④</td>
<td>Piston housing</td>
<td>Resin</td>
</tr>
<tr>
<td>⑤</td>
<td>Piston</td>
<td>Resin</td>
</tr>
<tr>
<td>⑥</td>
<td>Pilot valve</td>
<td>Refer to A00 Series</td>
</tr>
<tr>
<td>⑦</td>
<td>Plate gasket</td>
<td>NBR</td>
</tr>
<tr>
<td>⑧</td>
<td>AB plate</td>
<td>Aluminium die-casting</td>
</tr>
</tbody>
</table>
# A05R Series

**Dimensions**

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimensions (Unit: mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A05RS25</td>
<td>2φ2.1 (Mounting hole)</td>
</tr>
<tr>
<td></td>
<td>Push-in fitting for 2φ4φ6 (For C4,C6)</td>
</tr>
<tr>
<td></td>
<td>M3 (Port X) (For model with symbol X)</td>
</tr>
<tr>
<td></td>
<td>2-M2.5 Depth 4 (Rear surface) (Bracket mounting hole)</td>
</tr>
<tr>
<td></td>
<td>5-M5 or 3-M5 (For C4,C6)</td>
</tr>
<tr>
<td></td>
<td>With locking cover</td>
</tr>
<tr>
<td></td>
<td>With side bracket</td>
</tr>
<tr>
<td></td>
<td>With foot bracket</td>
</tr>
</tbody>
</table>

With side bracket

With foot bracket

ADEX VALVE

Parker Hannifin Corporation
Pneumatic Division
A05R Series

Dimensions
●A05RD25

(Unit : mm)

- Push-in fitting for 2\(\phi 4\) or 6 (For C4, C6)
- Manual override
- M3 (Port X) (For model with symbol X)
- 2-M2.5 Depth 4 (Rear surface) (Bracket mounting hole)
- 5-M5 or 3-M5 (For C4, C6)
- Connector position: P or S
- Connector position: Q or B

With locking cover

With side bracket
A05R Series

Dimensions
- A05RD35, A05RE35, A05RO35

(Unit: mm)
## Individual wiring type manifold

**MF□-A05**

**Bar type**

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>For A05P Series</th>
<th>For A05R Series</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MFC□-A05P</strong></td>
<td>Common SUP, Common EXH Pilot valve captured exhaust Ports 2 &amp; 4 on side</td>
<td>Port size: M5, C4, C6</td>
</tr>
<tr>
<td><strong>MFS□-A05P</strong></td>
<td>Common SUP, Common EXH Pilot valve captured exhaust Ports 2 &amp; 4 on side</td>
<td>Port size: M5, C4, C6</td>
</tr>
<tr>
<td><strong>MFX□-A05P</strong></td>
<td>Common SUP, Common EXH Common external pilot Pilot valve captured exhaust Ports 2 &amp; 4 on side</td>
<td>Port size: M5, C4, C6</td>
</tr>
<tr>
<td><strong>MFU□-A05R</strong></td>
<td>Common SUP, Common EXH Ports 2 &amp; 4 on valve body</td>
<td>Port size: M5, C4, C6</td>
</tr>
</tbody>
</table>

### Manifold Specifications

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>For A05P Series</th>
<th>For A05R Series</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MFC□-A05P</strong></td>
<td>Common SUP, Common EXH Pilot valve captured exhaust Ports 2 &amp; 4 on side</td>
<td>Common SUP, Common EXH Pilot valve captured exhaust Ports 2 &amp; 4 on side</td>
</tr>
<tr>
<td><strong>MFS□-A05P</strong></td>
<td>Common SUP, Common EXH Ports 2 &amp; 4 on side</td>
<td>Common SUP, Common EXH Pilot valve captured exhaust Ports 2 &amp; 4 on side</td>
</tr>
<tr>
<td><strong>MFX□-A05P</strong></td>
<td>Common SUP, Common EXH Common external pilot Pilot valve captured exhaust Ports 2 &amp; 4 on side</td>
<td>Common SUP, Common EXH Pilot valve captured exhaust Ports 2 &amp; 4 on valve body</td>
</tr>
<tr>
<td><strong>MFU□-A05R</strong></td>
<td>Common SUP, Common EXH Ports 2 &amp; 4 on valve body</td>
<td>Common SUP, Common EXH Pilot valve captured exhaust Ports 2 &amp; 4 on valve body</td>
</tr>
</tbody>
</table>

- **Port size**
  - Ports 1, 3, 5: Rc1/8
  - Ports 2, 4: M5, C4, C6
  - Port Y: M5
  - Port X: M5

- **Number of stations**: 2～20

- **Mounting**: Direct mount

- **Mountable solenoid valve**
  - A05PS25
  - A05PD25
  - A05PD35
  - A05PE35
  - A05PO35

- **Blank plate**: A05P-BP

---

Parker Hannifin Corporation
Pneumatic Division

39
A05P, A05R Series

Ordering Instruction

Mountable solenoid valve series

A05P

Mountable solenoid valve

(For details refer to Pages 26~28.)

Function

S25 : 2-position, single solenoid

D25 : 2-position, double solenoid

D35 : 3-position, closed center

E35 : 3-position, exhaust center

O35 : 3-position, pressure center

Special specifications

No mark : Standard (Internal pilot)

X : * External pilot

(Note) External pilot valve is available only when it is mounted on MFX.

Wiring

No mark : Without connector

E : Connector with lead wire

(Length : 500mm)

Size of port 2 and 4

No mark : Without sub-base

(Note) A gasket & two mounting screws come with valve.

Connector position

Voltage

1 : DC24V

Option 1

B : With bracket

No mark : Without bracket

(Note) Bracket can be mounted only when single solenoid is mounted on MFC, MFS type.

Size of Ports 2 and 4

M5 : M5

01 : Rc1/8

C4 : * With push-in fitting for ø 4

C6 : * With push-in fitting for ø 6

Type M5 01 C4 C6

MFC ○ – ○ ○

MFS – – – –

MFX – ○ ○ ○

(Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

* : Made to order
A05P, A05R Series

Ordering Instruction

Manifold for A05R Series

- **Type of manifold**
  - MCU: Common SUP, Common EXH
  - Ports 2 & 4 on valve body

- **Number of stations**
  - 2: 2 station
  - 20: 20 station

Mountable solenoid valve series (For details refer to Pages 32~34.)

- **Function**
  - S25: 2-position, single solenoid
  - D25: 2-position, double solenoid
  - D35: 3-position, closed center
  - E35: 3-position, exhaust center
  - O35: 3-position, pressure center

- **Wiring**
  - No mark: Without connector
  - E: Connector with lead wire
    (Length: 500mm)

- **Connector position**
  - P: With indicator light and surge suppressor
  - S: Without indicator light and surge suppressor

- **Size of A and B ports**
  - M5: M5
  - C4: *With push-in fitting for φ 4
  - C6: *With push-in fitting for φ 6

- **For mounting on manifold**
  - MF: For mounting on manifold
    (Note) A gasket & two mounting screws come with valve.

- **Size of ports 2 and 4**
  - M5: M5
  - C4: *With push-in fitting for φ 4
  - C6: *With push-in fitting for φ 6

- **Connector**
  - P: Made to order

- **Voltage**
  - 1: DC24V
A05P, A05R Series

Optional Accessories and Spare parts

● Connector with lead wire
  A05P DC CL5
  - Lead wire length
    5 : 500mm
    10 : * 1000mm
  - Voltage
    DC : For DC
  - Type
    P : For PR type
    (-) Black
    (+) Red
  (Note) For common use with PR type of A05 and A12
  (Note) For common use with sub-base mountig type of A05 and A12

● AB plate
  A05R AB M5
  - Port size
    M5 : M5
    C4 : * With push-in fitting for φ 4
    C6 : * With push-in fitting for φ 6
  - Mounting screw
  - Plate gasket
  (Note) Gasket & mounting screws are supplied
  For common use with A05R

● Locking cover
  A05P LA
  - Color
    A : Orange
  (Note) For common use with all A05 and A12

● Tag for solenoid valve
  A05P N (Pack of 10)
  - Tag
  - Solenoid valve
  (Note) For common use with sub-base mountig type of A05 and A12

● Blank plate
  A05P BP
  - Mounting screw
  - Blank plate
  - Base gasket
  For A05P

● Blank plate
  A05R BP
  - Mounting screw
  - Blank plate
  - Manifold gasket
  For A05R

● Manifold gasket
  A05R G
  - Content of kit
    SG : Gasket & mounting screws
    G : Gasket only (Pack of 10)
    S : Mounting screw only (Pack of 20)
  - Mounting screw
  - Manifold gasket
  (Note) For common use with all A05 and A12

● Base gasket
  A05P X G
  - Content of kit
    SG : Gasket & mounting screws
    G : Gasket only (Pack of 10)
    S : Mounting screw only (Pack of 20)
  - Special specifications
    No mark : Standard
    X : * For external pilot (With port X)
  - Mounting screw
  - Base gasket
  - * : Made to order

(Parker Hannifin Corporation
Pneumatic Division)
A05P, A05R Series

Dimensions

- MFC□-A05P-M5 (C4, C6)

(Unit: mm)
A05P, A05R Series

Dimensions

\[ \text{MFC□-A05P-M5 (C4, C6)-B} \]

(Unit : mm)

With locking cover

2n-M5
(Push-in fitting for 2n-φ4 : C4)
(Push-in fitting for 2n-φ6 : C6)
(Port 2 & 4)

P=10.5n+9.5
L=10.5n+17.5
(Mounting hole)

A05PS25

Blank plate A05P-BP

3-Rc1/8 (Both side)
(Port 1,3,5)
A05P, A05R Series

Dimensions

MFS□-A05P-01, MFX□-A05P-01 (C4, C6) (Unit:mm)

With locking cover

(A05PS25 (For MFS)
A05PS25X (For MFX)
A05PD35, A05PE35, A05PO35 (For MFS)
A05PD35X, A05PE35X, A05PO35X (For MFX)

M5 (Both side)
(Port Y for MFX)

3-Rc 1/8 (Both side)
(Port 1, 3, 5)

M5 (Both side)
(Port X for MFX)

4-φ4.5
(Mounting hole)

Port 2 & 4
(Push-in fitting for 2n-φ4 : MFX-C4)
(Push-in fitting for 2n-φ6 : MFX-C6)

P = 12.5n + 7.5
(P = 10.5n + 9.5 : For MFX-C4, C6)

L = 12.5n + 15.5
(L = 10.5n + 17.5 : For MFX-C4, C6)
A05P, A05R Series

Dimensions

MFS□-A05P-01-B

(Unit : mm)

With locking cover

3-Rc (Port 1, 3, 5)

2-Rc 1/8

(Port 2 & 4)

3-Rc 1/8 (Both side)

(Port 1, 3, 5)

P=12.5n+7.5

L=12.5n+15.5

A05PS25

Blank plate A05P-BP
A05P, A05R Series

Dimensions
MFU□-A05R-M5 (C4, C6)

(Unit : mm)

Parker Hannifin Corporation
Pneumatic Division

47
Multipin connector type manifold

**MC□-A05P**

Bar type

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>MCC□-A05P</th>
<th>MCS□-A05P</th>
<th>MCX□-A05P</th>
<th>MCU□-A05R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common SUP, Common EXH</td>
<td>Common SUP, Common EXH</td>
<td>Common SUP, Common EXH</td>
<td>Common SUP, Common EXH</td>
<td>Common SUP, Common EXH</td>
</tr>
<tr>
<td>Ports 2 &amp; 4 on side</td>
<td>Pilot valve captured exhaust</td>
<td>Pilot valve captured exhaust</td>
<td>Pilot valve captured exhaust</td>
<td>Pilot valve captured exhaust</td>
</tr>
<tr>
<td>Compact type</td>
<td>Ports 2 &amp; 4 on side</td>
<td>Ports 2 &amp; 4 on side</td>
<td>Ports 2 &amp; 4 on side</td>
<td>Ports 2 &amp; 4 on valve body</td>
</tr>
</tbody>
</table>

Port size

| Ports 1, 3, 5                 | Rc 1/8                         | Rc 1/8                         | Rc 1/8                         | Rc 1/8                         |
| Ports 2, 4                    | M5, C4, C6                     | Rc 1/8                         | Rc1/8, C4, C6                  | M5, C4, C6                     |
| Port Y                        | —                              | —                              | M5                              | —                              |
| Port X                        | —                              | —                              | —                               | —                              |

Number of stations: 2~12

Mounting: Direct mount

Mountable solenoid valve

<table>
<thead>
<tr>
<th></th>
<th>A05PS25</th>
<th>A05PD25</th>
<th>A05PE35</th>
<th>A05PO35</th>
<th>A05PS25X</th>
<th>A05PD25X</th>
<th>A05PE35X</th>
<th>A05PO35X</th>
</tr>
</thead>
</table>

Blank plate: A05PG-BP

A05RG-BP

**Wiring**

When doing wiring work, be sure to turn off power beforehand.

For wiring instructions, refer to Pages 23 and 24.
A05P, A05R Series

Ordering Instructions

Manifold for A05P Series

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>MCC : Common SUP, Common EXH</th>
<th>Compact type</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCS : Common SUP, Common EXH</td>
<td>Ports 2 &amp; 4 on side</td>
<td></td>
</tr>
<tr>
<td>MCX : Common SUP, Common EXH</td>
<td>Common external pilot</td>
<td></td>
</tr>
<tr>
<td>Ports 2 &amp; 4 on side</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of stations

- 2 : 2 station
- 12 : 12 station

Mountable solenoid valve series

A05P

Mountable solenoid valve

(For details refer to Pages 26~28.)

<table>
<thead>
<tr>
<th>Function</th>
<th>A05P</th>
<th>S25</th>
<th>1P</th>
<th>PS</th>
</tr>
</thead>
<tbody>
<tr>
<td>S25 : 2-position, single solenoid</td>
<td>(A)</td>
<td>(R1)</td>
<td>(P)</td>
<td>(R2)</td>
</tr>
<tr>
<td>D25 : 2-position, double solenoid</td>
<td>(A)</td>
<td>(R1)</td>
<td>(P)</td>
<td>(R2)</td>
</tr>
<tr>
<td>D35 : 3-position, closed center</td>
<td>(A)</td>
<td>(R1)</td>
<td>(P)</td>
<td>(R2)</td>
</tr>
<tr>
<td>E35 : 3-position, exhaust center</td>
<td>(A)</td>
<td>(R1)</td>
<td>(P)</td>
<td>(R2)</td>
</tr>
<tr>
<td>O35 : 3-position, pressure center</td>
<td>(A)</td>
<td>(R1)</td>
<td>(P)</td>
<td>(R2)</td>
</tr>
</tbody>
</table>

Special specifications

No mark : Standard (Internal pilot )
X : * External pilot
(Note) External pilot valve is available only when it is mounted on MCX.

Option 2

DMF : With Manifold drive unit
No mark : Without Manifold drive unit
(Note) Manifold drive unit can be mounted for ML type only.

Polarity

P : NPN type
M : * PNP type

Connector specification

ML : Flat cable connector
DL : D sub-connector

Size of Ports 2 and 4

- M5 : M5
- C4 : * With push-in fitting for φ 4
- C6 : * With push-in fitting for φ 6

(Note) For minus common (PNP), order a connector in addition

Voltage

- 1 : DC24V

* : Made to order

Parker Hannifin Corporation
Pneumatic Division

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A05P, A05R Series

Ordering Instructions

Manifold for A05R Series

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>Number of stations</th>
<th>Mountable solenoid valve series</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCU : Common SUP, Common EXH</td>
<td>2 : 2 station</td>
<td>A05R</td>
</tr>
<tr>
<td></td>
<td>12 : 12 station</td>
<td></td>
</tr>
</tbody>
</table>

- Option 2: With Manifold drive unit
- No mark: Without Manifold drive unit
- (Note) Manifold drive unit can be mounted for ML type only.

- Polarity
  - P : NPN type
  - M : *PNP type

- Connector specification
  - ML : Flat cable connector
  - DL : D sub-connector

- Size of ports 2 and 4
  - M5 : M5
  - C4 : * With push-in fitting for φ 4
  - C6 : * With push-in fitting for φ 6

Mountable solenoid valve (For details refer to Pages 32~34.)

<table>
<thead>
<tr>
<th>Function</th>
<th>S25 : 2-position, single solenoid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D25 : 2-position, double solenoid</td>
</tr>
<tr>
<td></td>
<td>D35 : 3-position, closed center</td>
</tr>
<tr>
<td></td>
<td>E35 : 3-position, exhaust center</td>
</tr>
<tr>
<td></td>
<td>O35 : 3-position, pressure center</td>
</tr>
</tbody>
</table>

- Wiring
  - No mark: Without connector
  - PS : With connector for collective wiring (For single solenoid)
  - PD : With connector for collective wiring (For double solenoid)
  - (Note) For minus common (PNP), order a connector in addition

- Size of ports 2 and 4
  - M5 : M5
  - C4 : * With push-in fitting for φ 4
  - C6 : * With push-in fitting for φ 6

- Connector position
  - P :
    - (With indicator light and surge suppressor)
  - S :
    - (Without indicator light and surge suppressor)

- Voltage
  - 1 : DC24V

* : Made to order
A05P, A05R Series

Optional Accessories and Spare Parts

- **Collective wiring connector**
  - Type
    - PS: For PR type single solenoid
    - PD: For PR type double solenoid
  - Polarity
    - No mark: NPN type
    - M: PNP type
  - A05P S - C C -

- **AB plate**
  - Port size
    - M5: M5
    - C4: *With push-in fitting for φ 4
    - C6: *With push-in fitting for φ 6
  - A05R - A B - M 5

- **Blank plate**
  - A05P G - B P
  - For A05R A05 RG - B P

- **Tag for solenoid valve**
  - A05P - N
    - Pack of 10

- **Base gasket**
  - A05PX - G
    - Content of kit
      - SG: Gasket & mounting screws
      - G: Gasket only (Pack of 10)
      - S: Mounting screw only (Pack of 20)
    - Special specifications
      - No mark: Standard
      - X: For external pilot (With port X)

- **Manifold gasket**
  - A05R - G
    - Content of kit
      - SG: Gasket & mounting screws
      - G: Gasket only (Pack of 10)
      - S: Mounting screw only (Pack of 20)
  - Mounting screw
  - Manifold gasket

- **Locking cover**
  - A05P - L A
    - Color
      - A: Orange

- **Tag for solenoid valve**
  - A05P - N
    - Pack of 10

- **Blank plate**
  - For A05P A05PG - B P
  - For A05R A05RG - B P

- **Base gasket**
  - A05PX - G
    - Content of kit
      - SG: Gasket & mounting screws
      - G: Gasket only (Pack of 10)
      - S: Mounting screw only (Pack of 20)
    - Special specifications
      - No mark: Standard
      - X: For external pilot (With port X)

- **Manifold gasket**
  - A05R - G
    - Content of kit
      - SG: Gasket & mounting screws
      - G: Gasket only (Pack of 10)
      - S: Mounting screw only (Pack of 20)
  - Mounting screw
  - Manifold gasket

*Made to order*
A05P, A05R Series

Dimensions

*MCC□-A05-M5 (C4, C6)-DL

(Unit : mm)

With locking cover

ADEX VALVE

Parker Hannifin Corporation
Pneumatic Division
A05P, A05R Series

Dimensions

- **MCC□-A05P-M5 (C4, C6)-ML**

(Unit: mm)

With locking cover

![Diagram of A05P, A05R Series with dimensions and annotations]
A05P, A05R Series

Dimensions
- MCS□-A05P-01-DL, MCX□-A05P-01 (C4, C6)-DL

(Unit: mm)

With locking cover

M5 (Both side)
(X port for MCX)

3-Rc1/8 (Both side)
(P, R1, R2 port)

M5 (Both side)
(Y port for MCX)

5.4

2n-Rc1/8
(Push-in fitting for 2n φ4: MCX-C4)
(Push-in fitting for 2n φ6: MCX-C6)
(Port 2 & 4)

Parker Hannifin Corporation
Pneumatic Division

Page 54
A05P, A05R Series

Dimensions

MCS□-A05P-01-ML, MCX□-A05P-01 (C4, C6) -ML

(Unit : mm)

With locking cover
A05P, A05R Series

Dimensions

MCU□-A05R-M5 (C4, C6)-DL

(Unit: mm)

With locking cover

D sub-connector(25P)

2m-Rc1/8
(Push-in fitting for 2n-φ4 : C4)
(Push-in fitting for 2n-φ6 : C6)
(Port 2 & 4)

Blank plate A05RG-BP

4-φ4.5
(Mounting hole)
A05P, A05R Series

Dimensions
●MCU□-A05R-M5 (C4, C6)-ML

(Unit : mm)

With locking cover

A05RD25
A05RD35, A05RE35, A05RO35

2m-M5
(Push-in fitting for 2-n- φ4 : C4)
(Push-in fitting for 2-n- φ6 : C6)

(Port 2 & 4)

Blank plate A05RG-BP

3-Rc1/8 (Both side)
(Port 1, 3, 5)

Flat cable connector(26P)

4-φ4.5
(Mounting hole)

P=12.5n+34.5
L=12.5n+42.5

(62.7 : For C4)
(63.5 : For C6)
## 5 Port pilot operated solenoid valve

### A12P Series

Rubber Seal/Sub-base Mounting type

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>A12PS25</td>
<td>2-position Single solenoid</td>
</tr>
<tr>
<td>A12PD25</td>
<td>2-position Double solenoid</td>
</tr>
<tr>
<td>A12PD35</td>
<td>3-position Closed center</td>
</tr>
<tr>
<td>A12PE35</td>
<td>3-position Exhaust center</td>
</tr>
<tr>
<td>A12PO35</td>
<td>3-position Pressure center</td>
</tr>
</tbody>
</table>

### Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Unit</th>
<th>A12PS25</th>
<th>A12PD25</th>
<th>A12PD35</th>
<th>A12PE35</th>
<th>A12PO35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid</td>
<td></td>
<td>Non-lubricated / lubricated air</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port size</td>
<td>Rc1/8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective area</td>
<td>mm²</td>
<td>11.1</td>
<td>7.6</td>
<td>14.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cv value</td>
<td></td>
<td>0.61</td>
<td>0.42</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating ambient temperature</td>
<td>°C</td>
<td>–5~50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure range</td>
<td>MPa</td>
<td>0.15~0.7</td>
<td>0.1~0.7</td>
<td>0.2~0.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure range</td>
<td>MPa</td>
<td>–0.1~0.7 For external pilot operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum frequency</td>
<td>cycle/min</td>
<td>600</td>
<td>500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>DC</td>
<td>ON s</td>
<td>0.015</td>
<td>0.010</td>
<td>0.012</td>
<td></td>
</tr>
<tr>
<td>Response time</td>
<td>DC</td>
<td>OFF s</td>
<td>0.018 (0.024)</td>
<td>–</td>
<td>0.036 (0.042)</td>
<td></td>
</tr>
<tr>
<td>Pilot air exhaust</td>
<td></td>
<td>Captured exhaust</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual override</td>
<td></td>
<td>Screwdriver-operated locking button</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting position</td>
<td></td>
<td>Free</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shock resistance, vibration resistance</td>
<td>m/s²</td>
<td>150/30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>g</td>
<td>Without sub-base</td>
<td>60</td>
<td>75</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td>Mass</td>
<td>g</td>
<td>With sub-base</td>
<td>143</td>
<td>161</td>
<td>166</td>
<td></td>
</tr>
</tbody>
</table>

(Note) - Service kit not available
- When temperature of valve site goes down below 5°C, complete dry air should be supplied to prevent from freezing.
- Pressure range of external pilot supply: 0.25~0.7MPa
- Response time in bracket ( ) shows with surge suppressor.
- Response time shown above is in accordance with JIS B 8375.
- Effective area shown above is a value between ports 1 and 2, 4.

### Electrical Specifications

<table>
<thead>
<tr>
<th>Rated voltage</th>
<th>DC</th>
<th>V</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permissible voltage fluctuation</td>
<td>%</td>
<td>+10, –10</td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>DC</td>
<td>W</td>
<td>0.6 (with indicator light and surge suppressor), 0.55 (without indicator light and surge suppressor)</td>
</tr>
<tr>
<td>Grade of Insulation</td>
<td></td>
<td>JIS grade E</td>
<td></td>
</tr>
<tr>
<td>Wiring</td>
<td></td>
<td>Plug-in connector</td>
<td></td>
</tr>
<tr>
<td>Surge suppressor</td>
<td></td>
<td>Diode</td>
<td></td>
</tr>
<tr>
<td>Indicator light</td>
<td></td>
<td>LED</td>
<td></td>
</tr>
</tbody>
</table>
A12P Series
Ordering Instructions

Function
- S25: 2-position, single solenoid
- D25: 2-position, double solenoid
- D35: 3-position, closed center
- E35: 3-position, exhaust center
- O35: 3-position, pressure center

Wiring
- No mark: Without connector
- E: Connector with lead wire (Length: 500mm)

Port size
- No mark: Without sub-base
- 02: Rc1/8
- G2: * G 1/8
- N2: * NPT 1/8
- F2: * NPTF 1/8
(Note) Valve without sub-base comes with a base gasket & two mounting screws.

Connector position
- P: (With indicator light and surge suppressor)
- S: (Without indicator light and surge suppressor)

Voltage
- 1: DC24V

Special specification
- No mark: Standard (Internal pilot)
- X: * External pilot
  (Pilot air is exhaust through exclusive port Y.)

*Made to order
A12P Series

Optional Accessories and Spare parts

● Connector with lead wire
  A05P – DC – C L5
  - Lead wire length
    5: 500mm
    10: *1000mm
  - Voltage
    DC: For DC
  - Type
    P: For PR type

  For PR type
  DC
  (–) Black
  (+) Red

(Note) For common use with PR type of A05 and A12

● Sub-base
  A12P – B – 02X
  - Special specifications
    No mark: Standard
    X: For external pilot (Port X)

  - Port size
    02: R1/8
    G2: *G 1/8
    N2: *NPT 1/8
    F2: *NPTF 1/8

● Locking cover
  A05P – LA
  - Color
    A: Orange

(Note) For common use with all A05 and A12

● Tag for solenoid valve
  A05P – N
  (Pack of 10)

(Note) For common use with sub-base mounting type of A05 and A12

● Base gasket
  A12PX – G
  - Content of kit
    SG: Gasket & mounting screws
    G: Gasket only (Pack of 10)
    S: Mounting screw only (Pack of 20)

  - Special specifications
    No mark: Standard
    X: * For external pilot (With port X)

  Mounting screw
  Base gasket

*Made to order
A12P Series

Material Specification

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Body</td>
<td>Aluminium die-casting</td>
</tr>
<tr>
<td>②</td>
<td>Spool ass’y</td>
<td>Aluminium/NBR</td>
</tr>
<tr>
<td>③</td>
<td>End cover</td>
<td>Resin</td>
</tr>
<tr>
<td>④</td>
<td>Piston housing</td>
<td>Resin</td>
</tr>
<tr>
<td>⑤</td>
<td>Piston</td>
<td>Resin</td>
</tr>
<tr>
<td>⑥</td>
<td>Pilot valve</td>
<td>Refer to A00 Series</td>
</tr>
<tr>
<td>⑦</td>
<td>Base gasket</td>
<td>NBR</td>
</tr>
<tr>
<td>⑧</td>
<td>Sub-base</td>
<td>Aluminium die-casting</td>
</tr>
</tbody>
</table>

Main Components

2-position
Single solenoid

2-position
Double solenoid

3-position
Closed center
3-position
Exhaust center
3-position
Pressure center
A12P Series

Dimensions
○A12PS25

(Unit: mm)

Connector position:
P or S

Mounting hole

Manual override

With locking cover
A12P Series

Dimensions

A12PD25

Connector position:
P or S

With locking cover

Parker Hannifin Corporation
Pneumatic Division

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A12P Series

Dimensions
● A12PD35, A12PE35, A12PO35

(Unit: mm)

Connector position:
P or S

With locking cover

Parker Hannifin Corporation
Pneumatic Division
5 Port pilot operated solenoid valve

A12R Series
Rubber Seal/In-line Mounting type

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>A12RS25</td>
<td>2-position Single solenoid</td>
</tr>
<tr>
<td>A12RD25</td>
<td>2-position Double solenoid</td>
</tr>
<tr>
<td>A12RD35</td>
<td>3-position Closed center</td>
</tr>
<tr>
<td>A12RE35</td>
<td>3-position Exhaust center</td>
</tr>
<tr>
<td>A12RO35</td>
<td>3-position Pressure center</td>
</tr>
</tbody>
</table>

Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Fluid</th>
<th>Port size</th>
<th>Effective area (mm²)</th>
<th>Cv value</th>
<th>Operating ambient temperature (°C)</th>
<th>Pressure range (MPa)</th>
<th>Maximum frequency (cycle/min)</th>
<th>Response time ON (s)</th>
<th>Pilot air exhaust</th>
<th>Manual override</th>
<th>Mounting position</th>
<th>Shock resistance, vibration resistance (m/s²)</th>
<th>Mass (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A12RS25</td>
<td>Non-lubricated/lubricated air</td>
<td>Port 2, 4: Rc 1/8, C6, C8</td>
<td>8.8</td>
<td>0.48</td>
<td>−5~50</td>
<td>0.15~0.7</td>
<td>600</td>
<td>0.015</td>
<td>Individual exhaust</td>
<td>Screwdriver-operated locking button</td>
<td>Free</td>
<td>150/30</td>
<td>83</td>
</tr>
<tr>
<td>A12RD25</td>
<td></td>
<td>Port 1, 3, 5: Rc 1/8</td>
<td>8.5</td>
<td>0.46</td>
<td></td>
<td>0.1~0.7</td>
<td>500</td>
<td>0.010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A12RD35</td>
<td></td>
<td></td>
<td>12</td>
<td>0.66</td>
<td></td>
<td>0.2~0.7</td>
<td>500</td>
<td>0.012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A12RE35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>−0.1~0.7</td>
<td>500</td>
<td>0.036 (0.042)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A12RO35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>−0.1~0.7 For external pilot operation</td>
<td>500</td>
<td>0.036 (0.042)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Note)
- Service kit not available
- When temperature of valve site goes down below 5°C, complete dry air should be supplied to prevent from freezing.
- Pressure range of external pilot supply: 0.25~0.7MPa
- Response time shown above is in accordance with JIS B 8375.
- Effective area shown above is a value between ports 1 and 2, 4.

Electrical Specifications

<table>
<thead>
<tr>
<th>Rated voltage DC</th>
<th>DC</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permissible voltage fluctuation</td>
<td>%</td>
<td>±10, –10</td>
</tr>
<tr>
<td>Power consumption DC</td>
<td>W</td>
<td>0.6 (with indicator light and surge suppressor), 0.55 (without indicator light and surge suppressor)</td>
</tr>
<tr>
<td>Grade of Insulation</td>
<td>JIS grade E</td>
<td></td>
</tr>
<tr>
<td>Wiring</td>
<td>Plug-in connector</td>
<td></td>
</tr>
<tr>
<td>Surge suppressor</td>
<td>Diode</td>
<td></td>
</tr>
<tr>
<td>Indicator light</td>
<td>LED</td>
<td></td>
</tr>
</tbody>
</table>
A12R Series

Ordering Instructions

**A12R S25 - 1P - 01 - E**

**Function**
- S25: 2-position, single solenoid
  
  *(A)*
  *(B)*
  *(R1)* *(P)* *(P2)*

- D25: 2-position, double solenoid
  
  *(A)*
  *(B)*
  *(R1)* *(P)* *(P2)*

- D35: 3-position, closed center
  
  *(A)*
  *(B)*
  *(R1)* *(P)* *(P2)*

- E35: 3-position, exhaust center
  
  *(A)*
  *(B)*
  *(R1)* *(P)* *(P2)*

- O35: 3-position, pressure center
  
  *(A)*
  *(B)*
  *(R1)* *(P)* *(P2)*

**Wiring**
- No mark: Without connector
- E: Connector with lead wire (Length: 500mm)

**Size of ports 2 and 4**
- 01: Rc1/8
- C6: * With push-in fitting for φ6
- C8: ** With push-in fitting for φ8
  (Note) When using G, NPT, NPT threads, consult KURODA Pneumatics Ltd.

**Connector position**
- P: (With indicator light and surge suppressor)
- S: (Without indicator light and surge suppressor)
- Q: (With indicator light and surge suppressor)
- B: (Without indicator light and surge suppressor)

**Voltage**
- 1: DC24V

**Special specification**
- No mark: standard (Internal pilot)
- X: * External pilot
  (Pilot air is exhaust through exclusive port Y.)

* *: Made to order

---

Parker Hannifin Corporation
Pneumatic Division
A12R Series

Optional Accessories and Spare parts

- **Connector with lead wire**
  - Type:
    - P: For PR type
  - Lead wire length:
    - 5: 500mm
    - 10: *1000mm
  - Voltage:
    - DC: For DC
- **Voltage convertor with connector**
  - Refer to page 16 for voltage convertor with connector.

- **Locking cover**
  - Type:
    - A05P - LA
  - Color:
    - A: Orange

- **Bracket**
  - Type:
    - A12R - BF
  - Mounting:
    - F: Foot bracket
    - S: Side bracket

- **AB plate**
  - Type:
    - A12R - AB - 01X
  - Special specifications:
    - No mark: Standard
    - X: * For external pilot
    - Port size:
      - 01: Rc1/8
      - C8: * With push-in fitting for φ6
      - C8: * With push-in fitting for φ8
    - (Note) For common use with PR type of A05 and A12

- **Solenoid valve**
  - Foot bracket/F
  - Side bracket/S

(Nota) For common use with all A05 and A12

* *: Made to order

(Note) When using G, NPT, NPT threads, consult KURODA Pneumatics Ltd.
A12R Series

Material Specification

2-position
Single solenoid

2-position
Double solenoid

3-position
Closed center
3-position
Exhaust center
3-position
Pressure center

Main Components

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>①</td>
<td>Body</td>
<td>Aluminium die-casting</td>
</tr>
<tr>
<td>②</td>
<td>Spool ass’y</td>
<td>Aluminium/NBR</td>
</tr>
<tr>
<td>③</td>
<td>End cover</td>
<td>Resin</td>
</tr>
<tr>
<td>④</td>
<td>Piston housing</td>
<td>Resin</td>
</tr>
<tr>
<td>⑤</td>
<td>Piston</td>
<td>Resin</td>
</tr>
<tr>
<td>⑥</td>
<td>Pilot valve</td>
<td>Refer to A00 Series</td>
</tr>
<tr>
<td>⑦</td>
<td>Plate gasket</td>
<td>NBR</td>
</tr>
<tr>
<td>⑧</td>
<td>AB plate</td>
<td>Aluminium die-casting</td>
</tr>
</tbody>
</table>
A12R Series

Dimensions
●A12RS25

(Unit : mm)

Connector position:
P or S

Push-in fitting for 2-φ6,φ8
(For C6, C8)
M3 (Port X)
(For model with symbol X)

Connector position:
Q or B

With locking cover

With side bracket

With foot bracket

Parker Hannifin Corporation
Pneumatic Division
A12R Series

Dimensions
●A12RD24

(Unit: mm)

Connector position:
P or S

With locking cover

Connector position:
Q or B

With side bracket
A12R Series

Dimensions
● A12RD35, A12RE35, A12RO35

(Unit : mm)
## Individual wiring type manifold

**MF○-A12**

**Bar type**

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>Ports 1, 3, 5</th>
<th>Ports 2, 4</th>
<th>Port Y</th>
<th>Port X</th>
<th>Number of stations</th>
<th>Mounting</th>
<th>Mountable solenoid valve</th>
<th>Blank plate</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFS□-A12P</td>
<td>Rc1/4</td>
<td>Rc1/4</td>
<td>–</td>
<td>–</td>
<td>2～20</td>
<td>Direct mount</td>
<td>A12PS25, A12PD25, A12PD35, A12PE35, A12PO35</td>
<td>A12P-BP</td>
</tr>
<tr>
<td>MFX□-A12P</td>
<td>Rc1/4, C6, C8</td>
<td>Rc1/4, C6, C8</td>
<td>M5</td>
<td>M5</td>
<td></td>
<td></td>
<td>A12PS25X, A12PD25X, A12PD35X, A12PE35X, A12PO35X</td>
<td>A12R-BP</td>
</tr>
<tr>
<td>MFU□-A12R</td>
<td>Rc1/4</td>
<td>Rc1/4</td>
<td>–</td>
<td>–</td>
<td></td>
<td></td>
<td>A12RS25, A05RD25, A05RD35, A05RE35, A05RO35</td>
<td>A12R-BP</td>
</tr>
</tbody>
</table>
A12P, A12R Series

Ordering Instructions

Mountable solenoid valve

- **Function**
  - S25: 2-position, single solenoid
  - D25: 2-position, double solenoid
  - D35: 3-position, closed center
  - E35: 3-position, exhaust center
  - O35: 3-position, pressure center

- **Special specifications**
  - No mark: Standard (Internal pilot)
  - X: * External pilot
  - (Note) External pilot valve is available only when it is mounted on MFX.

- **Wiring**
  - No mark: Without connector
  - E: Connector with lead wire (Length: 500mm)

- **Port size**
  - No mark: Without sub-base
  - (Note) A gasket & two mounting screws come with valve.

- **Connector position**
  - P: (With indicator light and surge suppressor)
  - S: (Without indicator light and surge suppressor)

- **Voltage**
  - 1: DC24V

- **Size of ports 2 and 4**
  - 01: Rc1/8
  - C4: * With push-in fitting for φ6
  - C6: * With push-in fitting for φ8

(Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

- **Mountable solenoid valve series**
  - A12P

- **Type of manifold**
  - MFS: Common SUP, Common EXH
  - Ports 2 & 4 on side
  - MFX: Common SUP, Common EXH
  - Common external pilot
  - Ports 2 & 4 on side

- **Number of stations**
  - 2: 2 station
  - 20: 20 station

- **Manifold for A12P Series**

For details refer to Pages 58~60.

Made to order
A12P, A12R Series

Ordering Instructions

Manifold for A12R Series

Type of manifold
MFU: Common SUP, Common EXH
Ports 2 & 4 on valve body

Number of stations
2: 2 station
20: 20 station

Size of ports 2 and 4
01: Rc1/8
C4: *With push-in fitting for φ 6
C6: *With push-in fitting for φ 8
(Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

Mountable solenoid valve series
A12R

Mountable solenoid valve
(For details refer to Pages 65～67.)

Function
S25: 2-position, single solenoid
D25: 2-position, double solenoid
D35: 3-position, closed center
E35: 3-position, exhaust center
O35: 3-position, pressure center

Wiring
No mark: Without connector
E: Connector with lead wire (Length: 500mm)

Connector position
P: (With indicator light and surge suppressor)
S: (Without indicator light and surge suppressor)

Voltage
1: DC24V

Mountable solenoid valve series
A12R

Ordering Instructions

Parker Hannifin Corporation
Pneumatic Division

ADEX VALVE
## A12P, A12R Series

**Optional Accessories and Spare parts**

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
</table>
| Collective wiring connector      | A05P – DC – CL5  
  Type: For PR type  
  Lead wire length:  
  5: 500mm  
  10: *1000mm  
  Voltage: DC: For DC  
  (-) Black  
  (+) Red |
| AB plate                         | A12R – AB – 01  
  Port size:  
  01: Rc1/8  
  C4: *With push-in fitting for ø 6  
  C6: *With push-in fitting for ø 8  
  (Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.  
  Mounting screw  
  AB plate (Tapped hole type)  
  Plate gasket  
  AB plate (With push-in fitting)  
  Plate gasket |
| Locking cover                    | A05P – LA  
  Color: A: Orange  
  (Note) For common use with all A05 and A12 |
| Tag for solenoid valve           | A05P – N  
  (Pack of 10)  
  Tag  
  Solenoid valve  
  (Note) For common use with sub-base mounting type of A05, and A12 |
| Base gasket                      | A12P – X  
  Content of kit:  
  SG: Gasket & mounting screws  
  G: Gasket only (Pack of 10)  
  S: Mounting screw only (Pack of 20)  
  Special specifications:  
  No mark: Standard  
  X: *For external pilot (With port X)  
  Mounting screw  
  Base gasket  
  (Note) For common use with PR type of A05 and A12 |
| Blank plate                      | A12P – BP  
  For A12P  
  Blank plate  
  Base gasket  
  Manifold gasket  
  (Note) For common use with all A05 and A12 |
| Blank plate                      | A12R – BP  
  For A12R  
  Blank plate  
  Base gasket  
  Manifold gasket  
  (Note) For common use with all A05 and A12 |
| MANIFOLD GASKET                   | A12R – G  
  Content of kit:  
  SG: Gasket & mounting screws  
  G: Gasket only (Pack of 10)  
  S: Mounting screw only (Pack of 20)  
  Special specifications:  
  No mark: Standard  
  X: *For external pilot (With port X)  
  Mounting screw  
  Manifold gasket  
  (Note) For common use with all A05 and A12 |
| Collective wiring connector      | A05P – DC – CL5  
  Type: For PR type  
  Lead wire length:  
  5: 500mm  
  10: *1000mm  
  Voltage: DC: For DC  
  (-) Black  
  (+) Red |
| Locking cover                    | A05P – LA  
  Color: A: Orange  
  (Note) For common use with all A05 and A12 |
| Tag for solenoid valve           | A05P – N  
  (Pack of 10)  
  Tag  
  Solenoid valve  
  (Note) For common use with sub-base mounting type of A05, and A12 |
| Base gasket                      | A12P – X  
  Content of kit:  
  SG: Gasket & mounting screws  
  G: Gasket only (Pack of 10)  
  S: Mounting screw only (Pack of 20)  
  Special specifications:  
  No mark: Standard  
  X: *For external pilot (With port X)  
  Mounting screw  
  Base gasket  
  (Note) For common use with PR type of A05 and A12 |
| Blank plate                      | A12P – BP  
  For A12P  
  Blank plate  
  Base gasket  
  Manifold gasket  
  (Note) For common use with all A05 and A12 |
| Blank plate                      | A12R – BP  
  For A12R  
  Blank plate  
  Base gasket  
  Manifold gasket  
  (Note) For common use with all A05 and A12 |
| MANIFOLD GASKET                   | A12R – G  
  Content of kit:  
  SG: Gasket & mounting screws  
  G: Gasket only (Pack of 10)  
  S: Mounting screw only (Pack of 20)  
  Special specifications:  
  No mark: Standard  
  X: *For external pilot (With port X)  
  Mounting screw  
  Manifold gasket  
  (Note) For common use with all A05 and A12 |

**Note**:
- For common use with PR type of A05 and A12.
- For common use with all A05 and A12.
- For common use with PR type of A05 and A12.
- For common use with all A05 and A12.
- *Made to order.
A12P, A12R Series

Dimensions

- MFS□-A12P-02 (C6, C8), MFX□-A12P-02 (C6, C8)

(Unit : mm)

With locking cover

- M5 (Both side) (Port X for MFX)
- 3-Rc1/4 (Both side) (Port 1,3,5)
- M5 (Both side) (Port Y)
- P=17.5n+8.5 (P=16n+10 : For C6,C8)
- L=17.5n+18.5 (L=16n+20 : For C6,C8)

A12PS25 (For MFS)
A12PS25X (For MFX)
A12PD25 (For MFS)
A12PD25X (For MFX)
A12PD35, A12PE35, A12PO35 (For MFS)
A12PD35X, A12PE35X, A12PO35X (For MFX)
Blank plate A12P-BP

Parker Hannifin Corporation
Pneumatic Division
A12P, A12R Series

Dimensions

MFU□-A12R-01 (C6, C8) (Unit: mm)

With locking cover

Blank plate A12R-BP

Parker Hannifin Corporation
Pneumatic Division
Multipin connector type manifold

**MC□-A12P**  
Bar type

**MCS□-A12P** Common SUP, Common EXH  
Ports 2 & 4 on side

**MCX□-A12P** Common SUP, Common EXH  
Common external pilot  
Ports 2 & 4 on side

**MCU□-A12R** Common SUP, Common EXH  
Ports 2 & 4 on valve body

---

**Manifold Specifications**

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>For A12P Series</th>
<th>For A12R Series</th>
</tr>
</thead>
</table>
| MCS□-A12P        | Common SUP, Common EXH  
Pilot valve captured exhaust  
Ports 2 & 4 on side | Common SUP, Common EXH  
Pilot valve captured exhaust  
Ports 2 & 4 on side | Common SUP, Common EXH  
Pilot valve captured exhaust  
Ports 2 & 4 on valve body |
| MCX□-A12P        | Common SUP, Common EXH  
Common external pilot  
Pilot valve captured exhaust  
Ports 2 & 4 on side | Common SUP, Common EXH  
Pilot valve captured exhaust  
Ports 2 & 4 on side | Common SUP, Common EXH  
Pilot valve captured exhaust  
Ports 2 & 4 on valve body |
| MCU□-A12R        | Common SUP, Common EXH  
Ports 2 & 4 on valve body | Common SUP, Common EXH  
Pilot valve captured exhaust  
Ports 2 & 4 on valve body | Common SUP, Common EXH  
Pilot valve captured exhaust  
Ports 2 & 4 on valve body |

<table>
<thead>
<tr>
<th>Port size</th>
<th>For A12P Series</th>
<th>For A12R Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports 1, 3, 5</td>
<td>Rc 1/4</td>
<td>Rc 1/4</td>
</tr>
<tr>
<td>Ports 2, 4</td>
<td>Rc 1/4, C6, C8</td>
<td>Rc 1/4, C6, C8</td>
</tr>
<tr>
<td>Port Y</td>
<td>—</td>
<td>M5</td>
</tr>
<tr>
<td>Port X</td>
<td>—</td>
<td>M5</td>
</tr>
</tbody>
</table>

| Number of stations | 2~12 |
| Mounting | Direct mount |

<table>
<thead>
<tr>
<th>Mountable solenoid valve</th>
<th>A12PS25</th>
<th>A12PD25</th>
<th>A12PD35</th>
<th>A12PE35</th>
<th>A12PO35</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A12PS25X</td>
<td>A12PD25X</td>
<td>A12PD35X</td>
<td>A12PE35X</td>
<td>A12PO35X</td>
</tr>
<tr>
<td></td>
<td>A12RS25</td>
<td>A05RD25</td>
<td>A05RD35</td>
<td>A05RE35</td>
<td>A05RO35</td>
</tr>
</tbody>
</table>

| Blank plate | A12PG-BP | A12RG-BP |

**WIRING**

When doing wiring work, be sure to turn off power beforehand.  
For wiring instructions, refer to Pages 23 and 24.
A12P, A12R Series

Ordering Instructions

**Manifold for A12P Series**

- **Type of manifold**
  - MCS: Common SUP, Common EXH
  - MCX: Common SUP, Common EXH

- **Number of stations**
  - 2: 2 station
  - 12: 12 station

**Mountable solenoid valve series**

- **A12P**

**Mountable solenoid valve**

- **Function**
  - S25: 2-position, single solenoid
  - D25: 2-position, double solenoid
  - D35: 3-position, closed center
  - E35: 3-position, exhaust center
  - O35: 3-position, pressure center

**Special specifications**

- No mark: Standard (Internal pilot)
- X: * External pilot
  (Note) External pilot valve is available only when it is mounted on MCX.

**Wiring**

- No mark: Without connector
- PS: With connector for collective wiring
- PD: With connector for collective wiring

**Port size**

- No mark: Without sub-base
  (Note) A gasket & two mounting screws come with valve.

**Connector position**

- P: (With indicator light and surge suppressor)
- S: (Without indicator light and surge suppressor)

**Voltage**

- 1: DC24V

(Note) For minus common (PNP), order a connector in addition

- DMF: With Manifold drive unit
- No mark: Without Manifold drive unit
  (Note) Manifold drive unit can be mounted for ML type only.

- Option 2
- Polarity
  - P: NPN type
  - M: *PNP type

- Connector specification
  - ML: Flat cable connector
  - DL: D sub-connector

- Size of ports 2 and 4
  - 02: Rc 1/8
  - C6: * With push-in fitting for Ø 4
  - C8: * With push-in fitting for Ø 6
  (Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

- Option 2
  - DMF: With Manifold drive unit
  - No mark: Without Manifold drive unit
    (Note) Manifold drive unit can be mounted for ML type only.

- Polarity
  - P: NPN type
  - M: *PNP type

- Connector specification
  - ML: Flat cable connector
  - DL: D sub-connector

- Size of ports 2 and 4
  - 02: Rc 1/8
  - C6: * With push-in fitting for Ø 4
  - C8: * With push-in fitting for Ø 6
  (Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

- Option 2
  - DMF: With Manifold drive unit
  - No mark: Without Manifold drive unit
    (Note) Manifold drive unit can be mounted for ML type only.

- Polarity
  - P: NPN type
  - M: *PNP type

- Connector specification
  - ML: Flat cable connector
  - DL: D sub-connector

- Size of ports 2 and 4
  - 02: Rc 1/8
  - C6: * With push-in fitting for Ø 4
  - C8: * With push-in fitting for Ø 6
  (Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.
A12P, A12R Series

Ordering Instructions

Manifold for A12R Series

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>Number of stations</th>
<th>Mountable solenoid valve series</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCU 7 A12R</td>
<td>2: 2 station</td>
<td>A12R</td>
</tr>
<tr>
<td></td>
<td>12: 12 station</td>
<td></td>
</tr>
</tbody>
</table>

Function

- S25: 2-position, single solenoid
- D25: 2-position, double solenoid
- D35: 3-position, closed center
- E35: 3-position, exhaust center
- O35: 3-position, pressure center

Wiring

- No mark: Without connector
- PS: With connector for collective wiring (For single solenoid)
- PD: With connector for collective wiring (For double solenoid)

(For minus common (PNP), order a connector in addition)

Size of ports 2 and 4

- 01: Rc 1/8
- C6: * With push-in fitting for φ 6
- C8: * With push-in fitting for φ 8

(For mounting on manifold)

- MF: For mounting on manifold

(For single solenoid)

- A gasket & two mounting screws come with valve.

Connector position

- P: (With indicator light and surge suppressor)
- S: (Without indicator light and surge suppressor)

Voltage

- 1: DC24V

* Made to order

(Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.
A12P, A12R Series

Optional Accessories and Spare parts

- **Collective wiring connector**
  
  A 1 2 P S – C C –
  
  - **Polarity**
    - No mark: NPN type
    - M: PNP type
  
  - **Type**
    - PS: For PR type single solenoid
    - PD: For PR type double solenoid

- **AB plate**
  
  A 1 2 R – A B – 0 1
  
  - **Port size**
    - 01: Rc1/8
    - C6: • With push-in fitting for φ 6
    - C8: • With push-in fitting for φ 8
  
  (Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

- **Blank plate**
  
  For A12P
  
  A 1 2 P G — B P
  
  For A12R
  
  A 1 2 R G — B P

- **Tag for solenoid valve**
  
  A 0 5 P – N
  
  (Pack of 10)

- **Base gasket**
  
  A 1 2 P X – G
  
  - **Content of kit**
    - SG: Gasket & mounting screws
    - G: Gasket only (Pack of 10)
    - S: Mounting screw only (Pack of 20)

  - **Special specifications**
    - No mark: Standard
    - X: • For external pilot (With port X)

  - **Mounting screw**

- **Manifold gasket**
  
  A 1 2 R – G
  
  - **Content of kit**
    - SG: Gasket & mounting screws
    - G: Gasket only (Pack of 10)
    - S: Mounting screw only (Pack of 20)

  - **Mounting screw**

  - **Made to order**

(Note) For common use with sub-base mounting type of A05, and A12.

(Note) For common use with all A05 and A12.

Parker Hannifin Corporation
Pneumatic Division
A12P, A12R Series

Dimensions
● MCS□-A12P-02 (C6, C8)-DL, MCX□-A12P-02 (C6, C8)-DL

(Unit : mm)

With locking cover
A12P, A12R Series

Dimensions

- MCS□-A12P-02 (C6, C8)-ML, MCX□-A12P-02 (C6, C8)-ML

(Unit: mm)

With locking cover

M5 (Both side)
(Port X for MCX)

3-Rc1/4 (Both side)
(Port 1, 3, 5)

63.5
61
41.5
22
18.5

3-Rc1/8
(Push-in fitting for 2n-φ6 : C6)
(Push-in fitting for 2n-φ8 : C8)
(Port 2 & 4)

M5 (Both side)
(Port Y for MCX)

5.4
Φ 4

P=17.5n+34
L=17.5n+44

2n=Rc1/8

Flat cable connector (26P)

A12PS25 (For MCS)
A12PS25X (For MCX)

A12PD25 (For MCS)
A12PD25X (For MCX)

A12PD35, A12PE35, A12PD35 (For MCS)
A12PD35X, A12PE35X, A12PD35X (For MCX)

A12P, A12R Series

Dimensions

- MCS□-A12P-02 (C6, C8)-ML, MCX□-A12P-02 (C6, C8)-ML

(Unit: mm)

With locking cover

M5 (Both side)
(Port X for MCX)

3-Rc1/4 (Both side)
(Port 1, 3, 5)

63.5
61
41.5
22
18.5

3-Rc1/8
(Push-in fitting for 2n-φ6 : C6)
(Push-in fitting for 2n-φ8 : C8)
(Port 2 & 4)

M5 (Both side)
(Port Y for MCX)

5.4
Φ 4

P=17.5n+34
L=17.5n+44

2n=Rc1/8

Flat cable connector (26P)

A12PS25 (For MCS)
A12PS25X (For MCX)

A12PD25 (For MCS)
A12PD25X (For MCX)

A12PD35, A12PE35, A12PD35 (For MCS)
A12PD35X, A12PE35X, A12PD35X (For MCX)

A12P, A12R Series

Dimensions

- MCS□-A12P-02 (C6, C8)-ML, MCX□-A12P-02 (C6, C8)-ML

(Unit: mm)

With locking cover

M5 (Both side)
(Port X for MCX)

3-Rc1/4 (Both side)
(Port 1, 3, 5)

63.5
61
41.5
22
18.5

3-Rc1/8
(Push-in fitting for 2n-φ6 : C6)
(Push-in fitting for 2n-φ8 : C8)
(Port 2 & 4)
A12P, A12R Series

Dimensions

MCU□-A12R-01 (C6, C8)-DL

(Unit : mm)

With locking cover
A12P, A12R Series

Dimensions

MCU□-A12R-01 (C6, C8)-ML

(Unit: mm)

With locking cover

Flat cable connector(26P) (49.5)

Blank plate A12RG-BP

P=17.5n+34

L=17.5n+44

A12RD25
A12RD35,A12RE35,A12RO35

2m=Rc1/8
(Push-in fitting for 2n-φ6 : C6)
(Push-in fitting for 2n-φ8 : C8)

(Port 2 & 4)

3-Rc1/4 (Both side)

(86.3 : For C6)
(91.6 : For C8)

(48.6)
6

A12RS25

59.5

59.5
34

(5)

7

19.5

10.5

18

5

19.5

10.5

18

5

19.5

10.5

18

5

ADEX VALVE

Parker Hannifin Corporation

Pneumatic Division
3 Port direct operated solenoid valve
A00S Series
Poppet Seal/Sub-base Mounting type

A00SO23 2-position
Single solenoid
Normal open

A00SC23 2-position
Single solenoid
Normal closed

Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Unit</th>
<th>Fluid</th>
<th>Port size</th>
<th>Effective area mm²</th>
<th>Cv value</th>
<th>Operating ambient temperature °C</th>
<th>Pressure range MPa</th>
<th>Vacuum version MPa</th>
<th>Maximum frequency cycle/min</th>
<th>Response time DC ON s</th>
<th>Response time DC OFF s</th>
</tr>
</thead>
<tbody>
<tr>
<td>A00SO23</td>
<td></td>
<td></td>
<td></td>
<td>0.14</td>
<td>0.008</td>
<td>-5〜50</td>
<td>0〜0.5</td>
<td>-0.1〜0.4</td>
<td>600</td>
<td>0.005</td>
<td>0.005(0.01)</td>
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<tr>
<td>A00SC23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0〜0.7</td>
<td>-0.1〜0.6</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>A00SO23J</td>
<td></td>
<td></td>
<td></td>
<td>0.22</td>
<td></td>
<td></td>
<td>0〜0.5</td>
<td>-0.1〜0.5</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>A00SC23J</td>
<td></td>
<td></td>
<td></td>
<td>0.012</td>
<td></td>
<td></td>
<td>0〜0.7</td>
<td>-0.1〜0.6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Response time in bracket () shows with surge suppressor.
Response time shown above is in accordance with JIS B 8375.
Effective area shown above is a value between ports 1 and 2, 4.

(Note): Service kit not available
- When temperature of valve site goes down below 5°C, complete dry air should be supplied to prevent from freezing.
- Response time in bracket ( ) shows with surge suppressor.
- Effective area shown above is a value between ports 1 and 2, 4.

Electrical Specifications

<table>
<thead>
<tr>
<th>Rated voltage</th>
<th>DC</th>
<th>V</th>
<th>Permissible voltage fluctuation %</th>
<th>Power consumption DC W</th>
<th>Grade of insulation</th>
<th>Wiring</th>
<th>Surge suppressor</th>
<th>Indicator light</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>JIS grade E</td>
<td>Plug-in connector</td>
<td>Diode</td>
<td>LED</td>
</tr>
</tbody>
</table>

Parker Hannifin Corporation
Pneumatic Division

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**A00S Series**

**Ordering Instructions**

**Function**
- O23 : Single solenoid, normal open
- C23 : Single solenoid, normal closed

**Wiring**
- No mark: Without connector
- E : Connector with lead wire (Length : 500mm)

**Port size**
- No mark : Without sub-base
- M3 : M3
  (Note) Valve without sub-base comes with a base gasket & two mounting screws.

**Connector position**
- P : [Diagram]
  (With indicator light and surge suppressor)
- S : [Diagram]
  (Without indicator light and surge suppressor)
- Q : [Diagram]
  (With indicator light and surge suppressor)
- B : [Diagram]
  (Without indicator light and surge suppressor)

**Flow**
- No mark: Standard type
- J : Large flow type

**Voltage**
- 1 : DC24V
A00S Series

Optional Accessories and Spare parts

- **Connector with lead wire**
  - A05P - DC - CL5
  - **Voltage**
    - DC: For DC
  - **Lead wire length**
    - 5: 500mm
    - 10: *1000mm

  (Note) For common use with PR type of A05, A12 and A00S

- **Base gasket**
  - A00S - G
  - **Content of kit**
    - SG: Gasket & mounting screws
    - G: Gasket only (Pack of 10)
    - S: Mounting screw only (Pack of 20)

- **Sub-base**
  - A00S - B - M3
  - **Port size**
    - M3: M3

- **Locking cover**
  - A05P - LA
  - **Color**
    - A: Orange

  (Note) For common use with all A05, A12 and A00S

(Note) Made to order
A00S Series

Material Specification

Main Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Resin</td>
</tr>
<tr>
<td>2</td>
<td>Solenoid coil</td>
<td>—</td>
</tr>
<tr>
<td>3</td>
<td>Core</td>
<td>Stainless</td>
</tr>
<tr>
<td>4</td>
<td>Armature ass'y</td>
<td>Stainless/NBR</td>
</tr>
<tr>
<td>5</td>
<td>Return spring</td>
<td>Stainless</td>
</tr>
<tr>
<td>6</td>
<td>Valve seat</td>
<td>NBR</td>
</tr>
<tr>
<td>7</td>
<td>Base gasket</td>
<td>NBR</td>
</tr>
<tr>
<td>8</td>
<td>Sub-base</td>
<td>Aluminium alloy</td>
</tr>
</tbody>
</table>
A00S Series

Dimensions
●A00SO23-□P(S), A00SC23-□P(S)  (Unit: mm)

●A00SO23-□Q(B), A00SC23-□Q(B)  (Unit: mm)

With locking cover

Parker Hannifin Corporation
Pneumatic Division
Individual Wiring type manifold

**MFS-A00S**

Bar type

---

**MFS□-A00S** Common SUP, Common EXH
Port 2 on side

---

### Manifold Specifications

<table>
<thead>
<tr>
<th>Type of manifold</th>
<th>MFS□-A00S</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common SUP, Common EXH</td>
</tr>
<tr>
<td></td>
<td>Port 2 on side</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port size</th>
<th>Port 1, 3</th>
<th>M5</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Port 2</td>
<td>M3, M5</td>
</tr>
<tr>
<td>Number of stations</td>
<td>2～20</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>Direct mount</td>
<td></td>
</tr>
<tr>
<td>Mountable solenoid valve</td>
<td>A00SO23, A00SO23J</td>
<td></td>
</tr>
<tr>
<td>Blank plate</td>
<td>A00S-BP</td>
<td></td>
</tr>
</tbody>
</table>

(Note) A00SO23(J) cannot be mounted on the same manifold together with A00SC23(J).
A00S Series

Ordering Instructions

Manifold for A00S Series

- **MFS 7**
- **A00S**
- **M3**

**Type of manifold**
- MFS: Common SUP, Common EXH
  - A port on side

**Number of stations**
- 2: 2 station
- 20: 20 station

**Mountable solenoid valve series**
- A00S
  - (Note) A00SO23(J) cannot be mounted on the same manifold together with A00SC23(J).

Mountable solenoid valve

- **A00S O23 J - 1P - E**

**Function**
- O23: Single solenoid, normal open
- C23: Single solenoid, normal closed

**Flow**
- No mark: Standard type
- J: Large flow type

**Voltage**
- 1: DC24V

**Wiring**
- No mark: Without connector
- E: Connector with lead wire (Length: 500mm)

**Port size**
- No mark: Without sub-base
  - (Note) A gasket & two mounting screws come with a valve.

**Connector position**

- P:
- S:
- Q:
- B:

(Parker Hannifin Corporation Pneumatic Division)
A00S Series

Optional Accessories Spare parts

- **Connector with lead wire**  
  **A05P - DC - CL5**  
  - Lead wire length  
    - 5 : 500mm  
    - 10 : * 1000mm  
  - Voltage  
    - DC : For DC  

  (Note) For common use with PR type of A05, A12 and A00S

- **Base gasket**  
  **A00S - G**  
  - Content of kit  
    - SG : Gasket & mounting screws  
    - G : Gasket only (Pack of 10)  
    - S : Mounting screw only (Pack of 20)

- **Blank plate**  
  **A00S - BP**

  (Note) For common use with all A05, A12 and A00S

- **Locking cover**  
  **A05P - LA**  
  - Color  
    - \( \text{A} \) : Orange

  (Note) For common use with all A05, A12 and A00S

- **Mounting screw**  
- **Base gasket**
- **Blank plate**
- **Plate gasket**

*(Note)*: Made to order
A00S Series

Dimensions

MFS□-A00S-M3 (Unit : mm)

Connector position:
- Q or B

Port 2: M3

Connector position:
- P or S

(Note) A00SO23 (J) cannot be mounted on the same manifold together with A00SC23 (J).

Port 2: M5

Blank plate A00S-BP

ADEX VALVE

Parker Hannifin Corporation
Pneumatic Division
Manifold Specifications
## INDIVIDUAL WIRING TYPE/MFC MANIFOLD SPECIFICATIONS

(Duplicate this page and fill in this form).

### Type of manifold

Write a mark of circle in □ at the head of the type of manifold to be used and fill in this form.

- **PR type**
  - MFC
  - A05P
  - Bracket

  - Number of stations: 2: 2 station, 20: 20 station

  - Size of ports 2 and 4:
    - M5
    - C4
    - C6
    - CZ

  (Note) CZ: For use with tubes of different diameter

### Type of mountable solenoid valve

Fill in blanks for type of solenoid valve.

- **A05P**
  - **Function**
  - **Voltage**
    - 1: DC24V

### Number of stations

Specify the type and arrangement of solenoid valve to be mounted by a mark of circle.

Standard manifold is so designed that all ports open.

- When plugging a port, specify the intended place to be plugged by writing "×" in the column of port specification.
- When using tubes of different diameter on the same manifold, specify the required size by writing a symbol C4 or C6 in the column of port specification.

| Number of stations for manifold | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | Quantity |
|---------------------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|      |
| Mounted solenoid valve          |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |      |
| Single solenoid                 | S25|   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |      |
| Double solenoid                 | D25|   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |      |
| Closed center                   | D35|   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |      |
| Exhaust center                  | E35|   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |      |
| Pressure center                 | O35|   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |      |
| Blank plate                     |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |      |
| Port specification              | Port 2 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |      |
|                                 | Port 4 |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |      |

### For factory use

<table>
<thead>
<tr>
<th>Control No.</th>
<th>Approved by:</th>
<th>Checked by:</th>
<th>Received by:</th>
<th>Manufacture No.</th>
<th>Approved by:</th>
<th>Person in charge</th>
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<tbody>
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### For sales department use

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<th>Received by:</th>
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<tbody>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
### INDIVIDUAL WIRING TYPE/MFS,MFX MANIFOLD SPECIFICATIONS

(Duplicate this page and fill in this form.)

**Type of manifold**

Write a mark of circle in □ at the head of the type of manifold to be used and fill in this form.

- **PR type**
- **MF**
- **A**
- **P**

- **Bracket**
  - No mark: Without bracket
  - **B**: With bracket

- **Mountable solenoid**
  - Value series:
    - A05 Series
    - A12 Series

- **Size of ports 2 and 4**

- **Special specifications**
  - S: Standard
  - **X**: Common external pilot

- **Number of stations**
  - 2: 2 station
  - 20: 20 station

- **Bracket**
  - When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

- **Function**
  - Wiring:
    - NPN type:
      - P: With indicator light and surge suppressor
      - S: Without indicator light and surge suppressor
    - PNP type (Only GF type):
      - M: With indicator light and surge suppressor
      - J: Without indicator light and surge suppressor

- **Special specifications**
  - No mark: Standard
  - **X**: External pilot

- **Voltage**
  - 1: DC24V

- **Number of stations**

| Number of stations | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|--------------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
| Mounted solenoid   | Single solenoid | S25 |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |
|                    | Double solenoid | D25 |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |
|                    | Closed center   | D35 |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |
|                    | Exhaust center  | E35 |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |
|                    | Pressure center | O35 |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |
| Blank plate        | Port 2          |     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |
|                    | Port 4          |     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |

- **For factory use**
- **For sales department use**

<table>
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<th>Person in charge</th>
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</thead>
</table>

Parker Hannifin Corporation
Pneumatic Division

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INDIVIDUAL WIRING TYPE/MFU
MANIFOLD
SPECIFICATIONS

(Duplicate this page and fill in this form.)

Type of manifold
Write a mark of circle in □ at the head of the type of manifold to be used and fill in this form.

(Note) * : Made to order

PR type MFU A R

Number of stations
Mountable solenoid valve series
Size of ports 2 and 4

2 : 2 station
A05 Series

20 : 20 station
A12 Series

(Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

Type of mountable solenoid valve
Fill in blanks for type of solenoid valve.

Wiring
NPN type
P : With indicator light and surge suppressor
S : Without indicator light and surge suppressor
M : With indicator light and surge suppressor
J : Without indicator light and surge suppressor

Solenoid valve series
A05 Series
A12 Series

Function
Voltage
1 : DC24V

Number of stations
Specify the type and arrangement of solenoid valve to be mounted by a mark of circle.
Standard manifold is so designed that all ports open.
When plugging a port, specify the intended place to be plugged by writing “×” in the column of port specification.

Number of stations for manifold

<table>
<thead>
<tr>
<th>Number of stations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
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<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounted solenoid valve</td>
<td>Single solenoid</td>
<td>S25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Double solenoid</td>
<td>D25</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Closed center</td>
<td>D35</td>
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<tr>
<td></td>
<td>Exhaust center</td>
<td>E35</td>
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<tr>
<td></td>
<td>Pressure center</td>
<td>O35</td>
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</tr>
<tr>
<td>Blank plate</td>
<td>Port 2</td>
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</tr>
<tr>
<td></td>
<td>Port 4</td>
<td></td>
<td></td>
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</table>

For factory use

Control No.    Approved by:
Checked by:
Received by:

For sales department use

Manufacture No.    Approved by:
Person in charge

Parker Hannifin Corporation
Pneumatic Division
MULTIPIN CONNECTOR TYPE/MCC
MANIFOLD
SPECIFICATIONS

(Duplicate this page and fill in this form).

Type of manifold
Write a mark of circle □ at the head of the type of manifold to be used and fill in this form.

Option: PR type

- MCC - A05P -

- Number of stations
  2 : 2 station
  12 : 12 station

- Size of ports 2 and 4
  C4
  C6
  CZ

- Connector specification
  DL : D sub-connector
  ML : Flat cable connector

- Polarity
  P : NPN type
  M : PNP type

(Note) : Made to order

Type of mountable solenoid valve
Fill in blanks for type of solenoid valve.

Option: A05P

- Function
- Voltage
  1 : DC24V

- Wiring
  NPN type
  P : With indicator light and surge suppressor
  S : Without indicator light and surge suppressor
  M : With indicator light and surge suppressor
  J : Without indicator light and surge suppressor

(Note) : Made to order

Number of stations
Specify the type and arrangement of solenoid valve to be mounted by a mark of circle.
Standard manifold is so designed that all ports open.
When plugging a port, specify the intended place to be plugged by writing "×" in the column of port specification.
When using tubes of different diameter on the same manifold, specify the required size by writing a symbol C4 or C6 in the column of port specification.

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<th>Number of stations for manifold</th>
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For factory use
Control No.
Approved by:
Checked by:
Received by:
For sales department use
Manufacture No.
Approved by:
Person in charge

Parker Hannifin Corporation
Pneumatic Division

100
MULTIPIN CONNECTOR TYPE/MCS, MCX
MANIFOLD SPECIFICATIONS

(Duplicate this page and fill in this form.)

Type of manifold
Write a mark of circle in: at the head of the type of manifold to be used and fill in this form.

- PR type MC
- Special specifications
  - S: Standard
  - X: Common external pilot
- Number of stations
  - 2: 2 station
  - 12: 12 station

Type of mountable solenoid valve
Fill in blanks for type of solenoid valve.

- Function
  - Single solenoid S25
  - Double solenoid D25
  - Closed center D35
  - Exhaust center E35
  - Pressure center O35

- Wiring
  - Voltage
    - 1: DC24V
  - Polarity
    - P: NPN type
    - M: PNP type

Special specifications
- No mark: Standard
- X: External pilot

Port specification
- Port 2
- Port 4

Number of stations for manifold

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<th>Number of stations for manifold</th>
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Control No. | Approved by: | Checked by: | Received by: |
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For sales department use

Manufacture No. | Approved by: | Person in charge |
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(Note) * Made to order

(Note): Made to order

(Note) X is used only when solenoid valve is mounted on manifold for common external pilot.

(Note): Made to order

When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

When plugging a port, specify the intended place to be plugged by writing "×" in the column of port specification.

When using tubes of different diameter on the same manifold, specify the required size by writing a symbol C4, C6, C8 or C10 in the column of port specification.
# MULTIPIN CONNECTOR TYPE/MCU MANIFOLD SPECIFICATIONS

(Duplicate this page and fill in this form)

**Type of manifold**

Write a mark of circle in the head of the type of manifold to be used and fill in this form.

(Note) *: Made to order

- **PR type** MCU - A - F -

- **Number of stations**
  - 2 station
  - 12 station

- **Mountable solenoid**
  - Value series
    - A05 Series
    - A12 Series

- **Size of ports 2 and 4**
  - M5
  - C4
  - C6
  - C8
  - C10

- **Connector specification**
  - DL: D sub-connector
  - ML: Flat cable connector

(Note) When using G, NPT, NPTF threads, consult KURODA Pneumatics Ltd.

**Type of mountable solenoid valve**

Fill in blanks for type of solenoid valve.

(Note) *: Made to order

- **A** \(\text{ R } \star \star \star \)

- **Solenoid valve series**
  - A05 Series
  - A12 Series

- **Function**

- **Wiring**
  - NPN type
    - P: With indicator light and surge suppressor
    - S: Without indicator light and surge suppressor

  - PNP type (Only GF type)
    - M: With indicator light and surge suppressor
    - J: Without indicator light and surge suppressor

**Number of stations**

Specify the type and arrangement of solenoid valve to be mounted by a mark of circle.

Standard manifold is so designed that all ports open.

When plugging a port, specify the intended place to be plugged by writing "×" in the column of port specification.

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INDIVIDUAL WIRING TYPE/MFS MANIFOLD SPECIFICATIONS

(Duplicate this page and fill in this form.)

**Type of manifold**

Fill in blanks for type of manifold.

**MFS** - **A00S** - **M3**

- **Mountable solenoid valve series**: A00S Series
- **Size of port**: M3 : M3
- **Number of stations**: 2 : 2 station
  - 20 : 20 station

**Type of mountable solenoid valve**

Fill in blanks for type of solenoid valve.

- **A00S**
  - **Function**: * * *
  - **Flow**: No mark : Standard type
    - **Normal open** O23
    - **Normal closed** C23
  - **Voltage**: 1 : DC24V
  - **Wiring**: P : With indicator light and surge suppressor
    - S : Without indicator light and surge suppressor
    - Q : With indicator light and surge suppressor
    - B : Without indicator light and surge suppressor
  - **Connector**: E : With connector

- **(Note)**: S & B : In case of AC, without indicator light with surge suppressor

**Number of stations**

Specify the type and arrangement of solenoid valve to be mounted by a mark of circle.

- **Number of stations**: 1 → 5

However, A00SO23(J) cannot be mounted on the same manifold together with A00SC23(J).

Standard manifold is so designed that all ports open.

When plugging a port, specify the intended place to be plugged by writing "×" in the column of port specification.

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2. Payment: Payment shall be made by Buyer net 30 days from the date of delivery of the items purchased hereunder. Amounts not timely paid shall bear interest at the maximum rate permitted by law for each month or portion thereof that the Buyer is late in making payment. Any claims by Buyer for omissions or shortages in a shipment shall be waived unless Seller receives notice within 30 days after Buyer's receipt of the shipment.

3. Delivery: Unless otherwise provided on the face hereof, delivery shall be made F.O.B. Seller's plant. Regardless of the method of delivery, however, risk of loss shall pass to Buyer upon Seller's delivery to a carrier. Any delivery dates shown are approximate only and Seller shall have no liability for any delays in delivery.

4. Warranty: Seller warrants that the items sold hereunder shall be free from defects in material or workmanship for a period of 18 months from date of shipment from Parker Hannifin Corporation. THIS WARRANTY COMPRISSES THE SOLE AND ENTIRE WARRANTY PERTAINING TO ITEMS PROVIDED HEREUNDER. SELLER MAKES NO OTHER WARRANTY, GUARANTEE, OR REPRESENTATION OF ANY KIND WHATSOEVER, INCLUDING BUT NOT LIMITED TO, MERCHANTABILITY AND FITNESS FOR PURPOSE, WHETHER EXPRESS, IMPLIED, OR ARISING BY OPERATION OF LAW, TRADE USAGE, OR COURSE OF DEALING ARE HEREBY DISCLAIMED.

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6. Changes, Reschedules and Cancellations: Buyer may request to modify the designs or specifications for the items sold hereunder as well as the quantities and delivery dates thereof, or may request to cancel all or part of this order, however, no such requested modification or cancellation shall become part of the contract between Buyer and Seller unless accepted by Seller in a written amendment to this Agreement. Acceptance of any such requested modification or cancellation shall be at Seller's discretion, and shall be upon such terms and conditions as Seller may require.

7. Special Tooling: A tooling charge may be imposed for any special tooling, including without limitations, dies, fixtures, molds and patterns, acquired to manufacture items sold pursuant to this contract. Such special tooling shall be and remain Seller's property notwithstanding payment of any charges by Buyer. In no event will Buyer acquire any interest in apparatus belonging to Seller which is utilized in the manufacture of the items sold hereunder, even if such apparatus has been specially converted or adapted for such manufacture and notwithstanding any charges paid by Buyer. Unless otherwise agreed, Seller shall have the right to alter, discard or otherwise dispose of any special tooling or other property in its sole discretion at any time.

8. Buyer's Property: Any designs, tools, patterns, materials, drawings, confidential information or equipment furnished by Buyer, or any other items which become Buyer's property, may be considered obsolete and may be destroyed by Seller after two (2) consecutive years have elapsed without Buyer placing an order for the items which are manufactured using such property. Seller shall not be responsible for any loss or damage to such property while it is in Seller's possession or control.

9. Taxes: Unless otherwise indicated on the face hereof, all prices and charges are exclusive of excise, sales, use, property, occupational or like taxes which may be imposed by any taxing authority upon the manufacture, sale or delivery of the items sold hereunder. If any such taxes must be paid by Seller or if Seller is liable for the collection of such tax, the amount thereof shall be in addition to the amounts for the items sold. Buyer agrees to pay all such taxes or to reimburse Seller therefore upon receipt of its invoice. If Buyer claims exemption from any such sales, use or other tax imposed by any taxing authority, Buyer shall save Seller harmless from and against any such tax, together with any interest or penalties thereof which may be assessed if the items are held to be taxable.

10. Indemnity For Infringement of Intellectual Property Rights: Seller shall have no liability for infringement of any patents, trademarks, copyrights, trade dress, trade secrets or similar rights except as provided in this Part 10. Seller will defend and indemnify Buyer against allegations of infringement of U.S. patents, U.S. trademarks, copyrights, trade dress and trade secrets (hereinafter "Intellectual Property Rights"). Seller will defend at its expense and will pay the cost of any settlement or damages awarded in an action brought against Buyer based on an allegation that an item sold pursuant to this contract infringes the Intellectual Property Rights of a third party. Seller's obligation to defend and indemnify Buyer is contingent on Buyer notifying Seller within ten (10) days after Buyer becomes aware of such allegations of infringement, and Seller having sole control over the defense of any allegations or actions including all negotiations for settlement or compromise. If an item sold hereunder infringes an Intellectual Property Right, Seller will at its own expense and option, procure for Buyer the right to continue using said item, replace or modify said item so as to make it noninfringing, or offer to accept return of said item and return the purchase price less a reasonable allowance for depreciation. Notwithstanding the foregoing, Seller shall have no liability for claims of infringement based on information provided by Buyer, or directed to items delivered hereunder for which the designs are specified in whole or part by Buyer, or infringements resulting from the modification, combination or use in a system of any item sold hereunder. The foregoing provisions of this Part 10 shall constitute Seller's sole and exclusive liability and Buyer's sole and exclusive remedy for infringement of Intellectual Property Rights. If a claim is based on information provided by Buyer or if the design for an item delivered hereunder is specified in whole or in part by Buyer, Buyer shall defend and indemnify Seller for all costs, expenses or judgements resulting from any claim that such item infringes any patent, trademark, copyright, trade dress, trade secret or any similar right.

11. Force Majeure: Seller does not assume the risk of and shall not be liable for delay or failure to perform any of Seller's obligations by reason of circumstances beyond the reasonable control of Seller (hereinafter "Events of Force Majeure"). Events of Force Majeure shall include without limitation, accidents, acts of God, strikes or labor disputes, acts, laws, rules or regulations of any government or government agency, fires, floods, delays or failures in delivery of carriers or suppliers, shortages of materials and any other cause beyond Seller's control.

12. Entire Agreement/Governing Law: The terms and conditions set forth herein, together with any amendments, modifications and any different terms or conditions expressly accepted by Seller in writing, shall constitute the entire Agreement concerning the items sold, and there are no oral or other representations or agreements which pertain thereto. This Agreement shall be governed in all respects by the law of the State of Ohio. No actions arising out of sale of the items sold hereunder or this Agreement may be brought by either party more than two (2) years after the cause of action accrues.
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