Related Products: Heavy Duty Auto Drain Series ADH4000

Easy maintenance

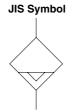
It is possible to maintain without changing existing piping.

No need for electric power and no waste of air.

Float style drain allows automatic drain discharge without electric power.

Aftercooler Air tank Air dryer Air compressor ADH4000 ADH4000





Specifications

Auto-drain type	Float type
Auto-drain valve type	N.O. (Normally open: Open in the case of pressure loss)
Proof pressure	2.5 MPa
Max. operating pressure	1.6 MPa
Operating pressure range Note)	0.05 to 1.6 MPa
Fluid Note)	Compressed air
Ambient and Fluid temperature	5 to 60°C (With no condensation) <corrosive allowed.="" and="" are="" flammable="" gas="" gas,="" not="" organic="" solvents=""></corrosive>
Max. drain discharge	400 cc/min (Pressure 0.7 MPa, in the case of water)
Weight	1.2 kg (With bracket: 1.3 kg)
Paint color	Light gray
Weight	1.2 kg (With bracket: 1.3 kg)

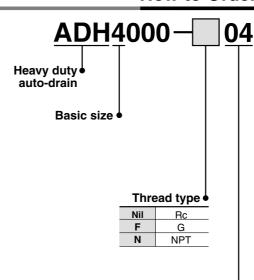
Note) Use for air compressor with flow more than 50 ℓ /min (ANR).

Accessory (Option)

Description	Part no.	Contents
Bracket set	BM58	Bracket
Ball valve piping set	ADH-C400	Ball valve/Rc 1/2

Note) The accessories (Option) are shipped unassembled, but packed in the same container.

How to Order



• Accessory (Option)

Nil	No option (Standard)
В	Bracket set
С	Ball valve piping set

HA□

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AMG

AFF

 $AM\square$

Misc.

* Notes

- When more than one option is desired, list in alphabetical order.
- Accessories are not factory assembled.
- Refer to each drawing for details of dimensions and mounting methods.
- Accessory "C" is available only with Rc thread.

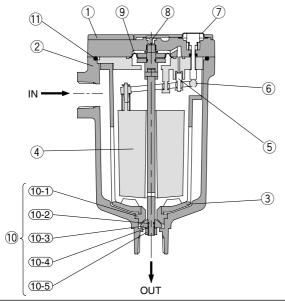
Port size •

1/2 (Female thread)



Series ADH4000

Construction



Component Parts

No.	Description	Material	Note
1	Body	Aluminum alloy	Baking finish
2	Housing	Aluminum alloy	Baking finish
3	Drain guard	Aluminum alloy	Baking finish
4	Float	Foam rubber	
(5)	Pilot valve	Stainless steel + Rubber	
6	Lever	Resin	
7	Flushing button	Brass	
8	Orifice		
9	Diaphragm	Rubber	

Replacement Parts

No.	Description	Part no.	Note
10	Repair kit for main valve	ADH-D400	Kit includes parts from 10-1 to 10-5.
11)	O-ring	G85(B)	Material: NBR

Note) When changing parts, follow the instruction manual. Do not disassemble other parts.

APrecautions

Be sure to read before handling. Refer to pages 14-21-3 to 4 for Safety Instructions and Common Precautions on the products mentioned in this catalog, and pages 14-14-6 to 8 for Precautions on every series.

Caution on Design

⚠ Caution

- Operate this product in an area in which the air pressure does not exceed 1.6 MPa.
 - If this value is exceeded, it could lead to an accident or
- 2. An air pressure of 0.05 MPa and an air compressor's discharge flow rates higher than 50 dmin (ANR) are required
 - Below these values, the air will continue to be discharged from the drainage discharge port.
- **3.** Keep the compressed air temperature and the ambient temperature of the location in which this product is installed within the range of 5 to 60°C. Exceeding this range could lead to failure or malfunction.
- 4. Avoid operating this product in an area in which corrosive gases, flammable gases or organic solvents are contained in the compressed air or in the surrounding air.

Selection

⚠ Caution

1. The maximum dischargeable drainage rate is 400 cc/min.

If the product is operated in excess of this value, there is a risk of causing the drainage to flow over to the outlet side.

Piping

⚠ Caution

- 1. Use piping of 1/2B bore size or larger for drain inlet and allow for unobstructed flow-in for drain.
- 2. Drain line should be 8 mm or more in diameter and less than 10 m in length. Do not make any upward angles in drain line. Be sure to secure exhaust port piping since drain is under pressure.

Mounting

∴ Caution

- 1. Install with "out port" down in a vertical position. Inclination from the vertical line should be less than 5°.
- Install with at least 200 mm of free space above the unit to allow for maintenance.
- To place this product near the air compressor, install in such a way that the vibrations will not be transmitted.
- 4. Install a valve to drain inlet so that maintenance is possible.
 - Use a ball valve with a bore size of more than 15 mm to ensure proper flow-in of drain. (Ball valve piping set is available as optional accessory.)
- 5. When not draining sufficiently, adjust the open angle of its bleed valve to lower the pressure inside the case, so that drainage will run through easily.

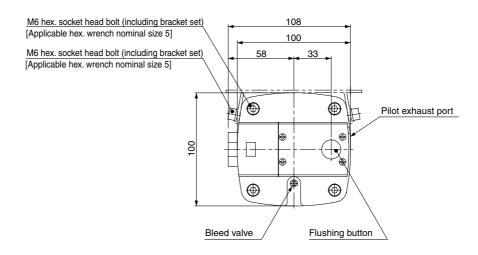
Maintenance

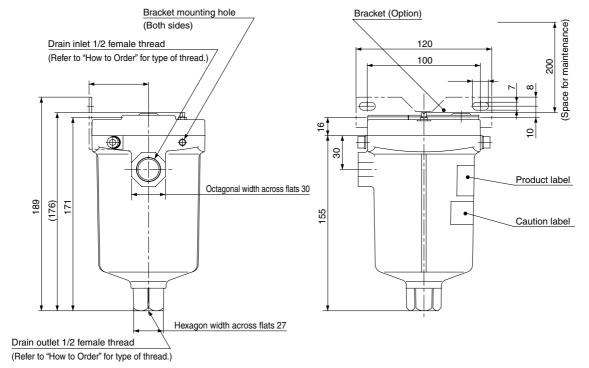
⚠ Caution

- 1. Check drain condition periodically (more than once a day).
- Then push flushing button to open exhaust valve.
- 2. Pilot air is exhausted from the exhaust port indicated in the "Dimensions" section. Do not cover this exhaust port. Clean exhaust port so that port is not blocked by dust, etc.
- 3. When solid foreign objects exceeding 1 mm comes in, the main valve may become blocked. After recovering the internal pressure of this product to 0 MPa (atmospheric pressure), remove the hexagon socket head bolt (M6) from the body part and wash inside with water to remove foreign solid particles blocking the main valve.
- **4.** While operating, there may be cases where drainage will not easily enter this product. In such a case, adjust the open angle of its bleed valve to lower the pressure a bit inside the bowl, so that drainage will run through easily.

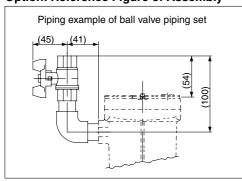
Heavy Duty Auto drain Series ADH4000

Dimensions





Option: Reference Figure of Assembly



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Misc.



Safety Instructions

These safety instructions are intended to prevent a hazardous situation and/or equipment damage. These instructions indicate the level of potential hazard by labels of **"Caution", "Warning"** or **"Danger"**. To ensure safety, be sure to observe ISO 4414 Note 1), JIS B 8370 Note 2) and other safety practices.

Caution: Operator error could result in injury or equipment damage.

Warning: Operator error could result in serious injury or loss of life.

Danger: In extreme conditions, there is a possible result of serious injury or loss of life.

Note 1) ISO 4414: Pneumatic fluid power--General rules relating to systems.

Note 2) JIS B 8370: General Rules for Pneumatic Equipment

⚠ Warning

1. The compatibility of pneumatic equipment is the responsibility of the person who designs the pneumatic system or decides its specifications.

Since the products specified here are used in various operating conditions, their compatibility for the specific pneumatic system must be based on specifications or after analysis and/or tests to meet your specific requirements. The expected performance and safety assurance will be the responsibility of the person who has determined the compatibility of the system. This person should continuously review the suitability of all items specified, referring to the latest catalog information with a view to giving due consideration to any possibility of equipment failure when configuring a system.

2. Only trained personnel should operate pneumatically operated machinery and equipment.

Compressed air can be dangerous if an operator is unfamiliar with it. Assembly, handling or repair of pneumatic systems should be performed by trained and experienced operators.

- 3. Do not service machinery/equipment or attempt to remove components until safety is confirmed.
 - 1. Inspection and maintenance of machinery/equipment should only be performed once measures to prevent falling or runaway of the driver objects have been confirmed.
 - 2. When equipment is to be removed, confirm the safety process as mentioned above. Cut the supply pressure for this equipment and exhaust all residual compressed air in the system.
 - 3. Before machinery/equipment is restarted, take measures to prevent shooting-out of cylinder piston rod. etc.
- 4. Contact SMC if the product is to be used in any of the following conditions:
 - 1. Conditions and environments beyond the given specifications, or if product is used outdoors.
 - 2. Installation on equipment in conjunction with atomic energy, railway, air navigation, vehicles, medical equipment, food and beverages, recreation equipment, emergency stop circuits, clutch and brake circuits in press applications, or safety equipment.
 - 3. An application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.





Common Precautions

Be sure to read before handling. For detailed precautions on every series, refer to main text.

Selection

⚠ Warning

1. Confirm the specifications.

Products represented in this catalog are designed for use in compressed air appllications only (including vacuum), unless otherwise indicated.

Do not use the product outside their design parameters.

Please contact SMC when using the products in applications other than compressed air (including vacuum).

Mounting

⚠ Warning

1. Instruction manual

Install the products and operate them only after reading the instruction manual carefully and understanding its contents. Also keep the manual where it can be referred to as necessary.

2. Securing the space for maintenance

When installing the products, please allow access for maintenance.

3. Tightening torque

When installing the products, please follow the listed torque specifications.

Piping

⚠ Caution

1. Before piping

Make sure that all debris, cutting oil, dust, etc, are removed from the piping.

2. Wrapping of pipe tape

When screwing piping or fittings into ports, ensure that chips from the pipe threads or sealing material do not get inside the piping. Also, when the pipe tape is used, leave 1.5 to 2 thread ridges exposed at the end of the threads.

Air Supply

⚠ Warning

1. Operating fluid

Please consult with SMC when using the product in applications other than compressed air (including vacuum). Regarding products for general fluid, please ask SMC about applicable fluids.

2. Install an air dryer, aftercooler, etc.

Excessive condensate in a compressed air system may cause valves and other pneumatic equipment to malfunction. Installation of an air dryer, after cooler etc. is recommended.

3. Drain flushing

If condensate in the drain bowl is not emptied on a regular basis, the bowl will over flow and allow the condensate to enter the compressed air lines.

If the drain bowl is difficult to check and remove, it is recommended that a drain bowl with the auto-drain option be installed.

For compressed air quality, refer to "Air Preparation Equipment" catalog.

4. Use clean air

If the compressed air supply is contaminated with chemicals, cynthetic materials, corrosive gas, etc., it may lead to break down or malfunction.

Operating Environment

\land Warning

- 1. Do not use in environments where the product is directly exposed to corrosive gases, chemicals, salt water, water or steam.
- 2. Do not expose the product to direct sunlight for an extended period of time.
- 3. Do not use in a place subject to heavy vibrations and/or shocks.
- 4. Do not mount the product in locations where it is exposed to radiant heat.

Maintenance

🗥 Warning

1. Maintenance procedures are outlined in the operation manual.

Not following proper procedures could cause the product to malfunction and could lead to damage to the equipment or machine.

2. Maintenance work

If handled improperly, compressed air can be dangerous. Assembly, handling and repair of pneumatic systems should be performed by qualified personnel only.

3. Drain flushing

Remove drainage from air filters regularly. (Refer to the specifications.)

4. Shut-down before maintenance

Before attempting any kind of maintenance make sure the supply pressure is shut of and all residual air pressure is released from the system to be worked on.

5. Start-up after maintenance and inspection

Apply operating pressure and power to the equipment and check for proper operation and possible air leaks. If operation is abnormal, please verify product set-up parameters.

6. Do not make any modifications to be product.

Do not take the product apart.



Quality Assurance Information (ISO 9001, ISO 14001)

Reliable quality of products in the global market

To enable our customers throughout the world to use our products with even greater confidence, SMC has obtained certification for international standards "ISO 9001" and "ISO 14001", and created a complete structure for quality assurance and environmental controls. SMC products to pursue meet customers' expectations while also considering company's contribution in society.

Quality management system $ISO\ 9001$

This is an international standard for quality control and quality assurance. SMC has obtained a large number of certifications in Japan and overseas, providing assurance to our customers throughout the world.







Environmental management system ISO 14001

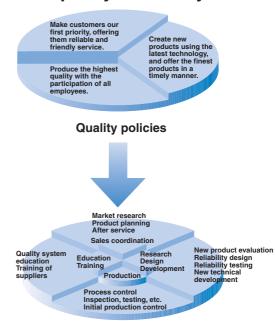
This is an international standard related to environmental management systems and environmental inspections. While promoting environmentally friendly automation technology, SMC is also making diligent efforts to preserve the environment.







SMC's quality control system



Quality control activities

SMC Product Conforming to Inter

SMC products complying with EN/ISO, CSA/UL standards are supporting



The CE mark indicates that machines and components meet essential requirements of all the EC Directives applied.

It has been obligatory to apply CE marks indicating conformity with EC Directives when machines and components are exported to the member Nations of the EU.

Once "A manufacturer himself" declares a product to be safe by means of CE marking (declaration of conformity by manufacturer), free distribution inside the member Nations of the EU is permissible.

■ CE Mark

SMC provides CE marking to products to which EMC and Low Voltage Directives have been applied, in accordance with CETOP (European hydraulics and pneumatics committee) guide lines.

■ As of February 1998, the following 18 countries will be obliged to conform to CE mark legislation Iceland, Ireland, United Kingdom, Italy, Austria, Netherlands, Greece, Liechtenstein, Sweden, Spain, Denmark, Germany, Norway, Finland, France, Belgium, Portugal, Luxembourg

■ EC Directives and Pneumatic Components

Machinery Directive

The Machinery Directive contains essential health and safety requirements for machinery, as applied to industrial machines e.g. machine tools, injection molding machines and automatic machines. Pneumatic equipment is not specified in Machinery Directive. However, the use of SMC products that are certified as conforming to EN Standards, allows customers to simplify preparation work of the Technical Construction File required for a Declaration of Conformity.

• Electromagnetic Compatibility (EMC) Directive

The EMC Directive specifies electromagnetic compatibility. Equipment which may generate electromagnetic interference or whose function may be compromised by electromagnetic interference is required to be immune to electromagnetic affects (EMS/immunity) without emitting excessive electromagnetic affects (EMI/emission).

Low Voltage Directive

This directive is applied to products, which operate above 50 VAC to 1000 VAC and 75 VDC to 1500 VDC operating voltage, and require electrical safety measures to be introduced.

• Simple Pressure Vessels Directive

This directive is applied to welded vessels whose maximum operating pressure (PS) and volume of vessel (V) exceed 50 bar/L. Such vessels require EC type examination and then CE marking.



national Standards

you to comply with EC directives and CSA/UL standards.



■ CSA Standards & UL Standards

UL and CSA standards have been applied in North America (U.S.A. and Canada) symbolizing safety of electric products, and are defined to mainly prevent danger from electric shock or fire, resulting from trouble with electric products. Both UL and CSA standards are acknowledged in North America as the first class certifying body. They have a long experience and ability for issuing product safety certificate. Products approved by CSA or UL standards are accepted in most states and governments beyond question.

Since CSA is a test certifying body as the National Recognized Testing Laboratory (NRTL) within the jurisdiction of Occupational Safety and Health Administration (OSHA), SMC was tested for compliance with CSA Standards and UL Standards at the same time and was approved for compliance with the two Standards. The above CSA NRTL/C logo is described on a product label in order to indicate that the product is approved by CSA and UL Standards.

■ TSSA (MCCR) Registration Products

TSSA is the regulation in Ontario State, Canada. The products that the operating pressure is more than 5 psi (0.03 MPa) and the piping size is bigger than 1 inch. fall into the scope of TSSA regulation.

Products conforming to CE Standard

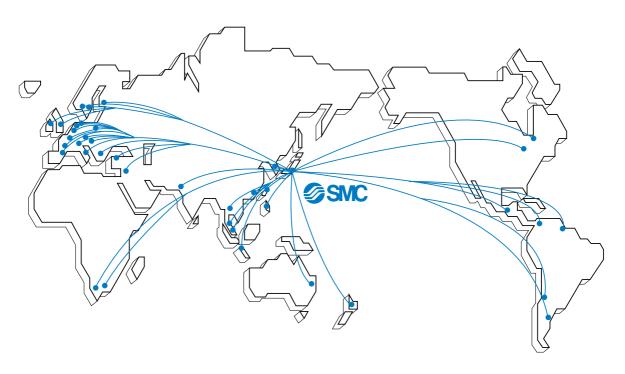


In this catalog each accredited product series is indicated with a CE mark symbol. However, in some cases, every available models may not meet CE compliance. Please visit our web site for the latest selection of available models with CE mark.

http://www.smcworld.com



SMC's Global Service Network



America

U.S.A. SMC Corporation of America

3011 North Franklin Road Indianapolis, IN 46226, U.S.A. TEL: 317-899-4440 FAX: 317-899-3102

CANADA SMC Pneumatics (Canada) Ltd. 6768 Financial Drive Mississauga, Ontario, L5N 7J6 Canada

TEL: 905-812-0400 FAX: 905-812-8686

MEXICO SMC Corporation (Mexico), S.A. DE C.V.

Carr. Silao-Trejo K.M. 2.5 S/N, Predio San Jose del Duranzo

C.P. 36100, Silao, Gto., Mexico

TEL: 472-72-2-55-00 FAX: 472-72-2-59-44/2-59-46

CHILE SMC Pneumatics (Chile) S.A.

Av. La Montaña 1,115 km. 16,5 P. Norte Parque

Industrial Valle Grande, Lampa Santiago, Chile TEL: 02-270-8600 FAX: 02-270-8601

ARGENTINA SMC Argentina S.A.

Teodoro Garcia 3860 (1427) Buenos Aires, Argentina

TEL: 011-4555-5762 FAX: 011-4555-5762

BOLIVIA SMC Pneumatics Bolivia S.R.L.

Avenida Beni Numero 4665

Santa Cruz de la Sierra-Casilla de Correo 2281, Bolivia

TEL: 591-3-3428383 FAX: 591-3-3449900

VENEZUELA SMC Neumatica Venezuela S.A.

Apartado 40152, Avenida Nueva Granada, Edificio Wanlac,

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CEP: 09950-350, Brasil

TEL: 11-4051-1177 FAX: 11-4071-6636

BRAZIL SMC Pneumaticos Do Brasil Ltda.

COLOMBIA (Distributor) Airmatic Ltda.

Calle 18 69-05 Apart. Aereo 081045 Santa Fe de Bogotá, Colombia

TEL: 1-424-9240 FAX: 1-424-9260

Europe

U.K. SMC Pneumatics (U.K.) Ltd.

Vincent Avenue, Crownhill, Milton Keynes, MK8 0AN, Backinghamshire, U.K.

TEL: 01908-563888 FAX: 01908-561185

GERMANY SMC Pneumatik GmbH

Boschring 13-15 D-63329 Egelsbach, Germany

TEL: 06103-4020 FAX: 06103-402139

ITALY SMC Italia S.p.A.

Via Garibaldi 62 I-20061 Carugate Milano, Italy

TEL: 02-9271365 FAX: 02-9271365

FRANCE SMC Pneumatique S.A.

1 Boulevard de Strasbourg, Parc Gustave Eiffel, Bussy Saint Georges, F-77600

Marne La Vallee Cedex 3 France

TEL: 01-64-76-10-00 FAX: 01-64-76-10-10

SWEDEN SMC Pneumatics Sweden AB

Ekhagsvägen 29-31, S-141 05 Huddinge, Sweden TEL: 08-603-07-00 FAX: 08-603-07-10

SWITZERLAND SMC Pneumatik AG Dorfstrasse 7, Postfach 117, CH-8484 Weisslingen, Switzerland

TEL: 052-396-3131 FAX: 052-396-3191

AUSTRIA SMC Pneumatik GmbH (Austria)

Girakstrasse 8, A-2100 Korneuburg, Austria

TEL: 0-2262-6228-0 FAX: 0-2262-62285

SPAIN SMC España, S.A.

Zuazobidea 14 Pol. Ind. Júndiz 01015 Vitoria, Spain

TEL: 945-184-100 FAX: 945-184-510

IRELAND SMC Pneumatics (Ireland) Ltd.

2002 Citywest Business Campus, Naas Road, Saggart, Co. Dublin, Ireland

TEL: 01-403-9000 FAX: 01-466-0385

NETHERLANDS (Associated company) SMC Pneumatics BV

De Ruyterkade 120, NL-1011 AB Amsterdam, Netherlands

TEL: 020-5318888 FAX: 020-5318880

GREECE (Distributor) S.Parianopoulos S.A.

7, Konstantinoupoleos Street 11855 Athens, Greece TEL: 01-3426076 FAX: 01-3455578

DENMARK SMC Pneumatik A/S

Knudsminde 4 B DK-8300

TEL: 70252900 FAX: 70252901

Europe

FINLAND SMC Pneumatics Finland OY

PL72, Tiistinniityntie 4, SF-02231 ESP00, Finland

TEL: 09-8595-80 FAX: 09-8595-8595

NORWAY SMC Pneumatics Norway A/S

Vollsveien 13C, Granfoss Næringspark N-1366 LYSAKER, Norway

TEL: 67-12-90-20 FAX: 67-12-90-21

BELGIUM (Distributor) SMC Pneumatics N.V./S.A.

Nijverheidsstraat 20 B-2160 Wommelgem Belguim

TEL: 03-355-1464 FAX: 03-355-1466

POLAND SMC Industrial Automation Polska Sp.z.o.o. ul. Konstruktorska 11A, PL-02-673 Warszawa, Poland

TEL: 022-548-5085 FAX: 022-548-5087

TURKEY (Distributor) Entek Pnömatik San.ve Tic. Ltd. Sti

Perpa Tic. Merkezi Kat:11 No.1625 80270 Okmeydani Istanbul, Türkiye

TEL: 0212-221-1512 FAX: 0212-221-1519

RUSSIA SMC Pneumatik LLC.

36/40 Sredny prospect V.O. St. Petersburg 199004, Russia TEL: 812-118-5445 FAX: 812-118-5449

CZECH SMC Industrial Automation CZ s.r.o. Hudcova 78a, CZ-61200 Brno, Czech Republic

TEL: 05-4121-8034 FAX: 05-4121-8034

HUNGARY **SMC Hungary Ipari Automatizálási kft.** Budafoki ut 107-113 1117 Budapest TEL: 01-371-1343 FAX: 01-371-1344

ROMANIA SMC Romania S.r.I.

Str. Frunzei, Nr. 29, Sector 2, Bucharest, Romania

TEL: 01-3205111 FAX: 01-3261489

SLOVAKIA SMC Priemyselná automatizáciá, s.r.o

Nova 3, SK-83103 Bratislava

TEL: 02-4445-6725 FAX: 02-4445-6028

SLOVENIA SMC Industrijska Avtomatilca d.o.o.

Grajski trg 15, SLO- 8360 Zuzemberk, Slovenia

TEL: 07388-5240 FAX: 07388-5249

LATVIA SMC Pneumatics Latvia SIA

Šmerļa ielā 1-705, Rīga LV-1006 TEL: 777 94 74 FAX: 777 94 75

SOUTH AFRICA (Distributor) Hyflo Southern Africa (Ptv.) Ltd. P.O.Box 240 Paardeneiland 7420 South Africa

TEL: 021-511-7021 FAX: 021-511-4456

EGYPT (Distributor) Saadani Trading & Ind. Services 15 Sebaai Street, Miami 21411 Alexandria, Egypt

TEL: 3-548-50-34 FAX: 3-548-50-34

Oceania/Asia

AUSTRALIA SMC Pneumatics (Australia) Ptv.Ltd.

14-18 Hudson Avenue Castle Hill NSW 2154, Australia

TEL: 02-9354-8222 FAX: 02-9894-5719

NEW ZEALAND SMC Pneumatics (New Zealand) Ltd.

8C Sylvia Park Road Mt.Wellington Auckland, New Zealand

TEL: 09-573-7007 FAX: 09-573-7002

TAIWAN SMC Pneumatics (Taiwan) Co.,Ltd.

17, Lane 205, Nansan Rd., Sec.2, Luzhu-Hsiang, Taoyuan-Hsien, TAIWAN

TEL: 03-322-3443 FAX: 03-322-3387

HONG KONG SMC Pneumatics (Hong Kong) Ltd.

29/F, Clifford Centre, 778-784 Cheung, Sha Wan Road, Lai Chi Kok, Kowloon,

Hong Kong

TEL: 2744-0121 FAX: 2785-1314

SINGAPORE SMC Pneumatics (S.E.A.) Pte. Ltd.

89 Tuas Avenue 1, Jurong Singapore 639520

TEL: 6861-0888 FAX: 6861-1889

PHILIPPINES SHOKETSU SMC Corporation

Unit 201 Common Goal Tower, Madrigal Business Park.

Ayala Alabang Muntinlupa, Philippines

TEL: 02-8090565 FAX: 02-8090586

MALAYSIA SMC Pneumatics (S.E.A.) Sdn. Bhd. Lot 36 Jalan Delima1/1, Subang Hi-Tech Industrial Park, Batu 3 40000 Shah Alam

Selangor, Malaysia

TEL: 03-56350590 FAX: 03-56350602

SOUTH KOREA SMC Pneumatics Korea Co., Ltd.

Woolim e-BIZ Center (Room 1008), 170-5, Guro-Dong, Guro-Gu,

Seoul, 152-050, South Korea

TEL: 02-3219-0700 FAX: 02-3219-0702

CHINA SMC (China) Co., Ltd.

7 Wan Yuan St. Beijing Economic & Technological Development Zone 100176, China

TEL: 010-67882111 FAX: 010-67881837

THAILAND SMC Thailand Ltd.

134/6 Moo 5, Tiwanon Road, Bangkadi, Amphur Muang, Patumthani 12000, Thailand

TEL: 02-963-7099 FAX: 02-501-2937

INDIA SMC Pneumatics (India) Pvt. Ltd. D-107 to 112, Phase-2, Extension, Noida, Dist. Gautaim Budh Nagar,

U.P. 201 305, India

TEL: (0120)-4568730 FAX: 0120-4568933

INDONESIA (Distributor) P.T. Riyadi Putera Makmur

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