



## Precision Clean Regulator *Series SRP*



High precision, low flow consumption stainless steel regulator

# Precision Clean Regulator *Series SRP*

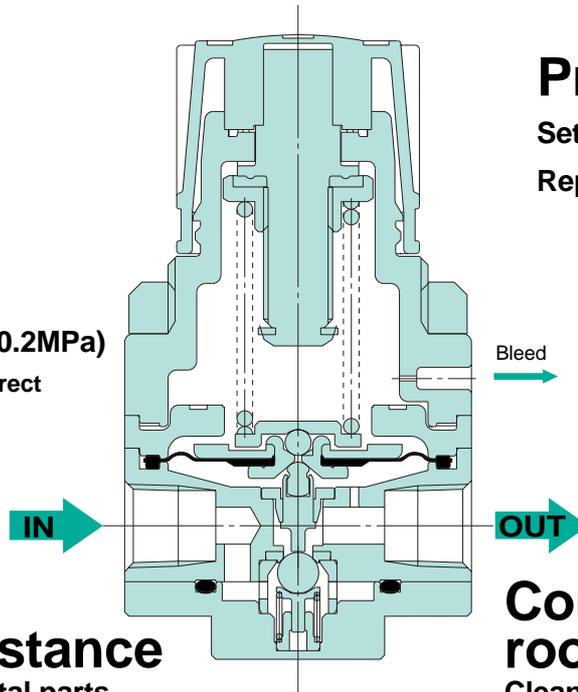
High precision, low flow consumption stainless steel regulator



Achieves flow consumption "under a liter"

Bleed volume  
0.5ℓ/min(ANR) or less  
(downstream pressure at 0.2MPa)

\* Approx. 1/4 of the ARP3000 direct operated precision regulator



**Precision**

Setting sensitivity: 0.3%F.S.  
Repeatability: 1%F.S.

**Oil free**

Parts composition with no use of oils.  
HFC1416 ultrasonic cleaning of all fluid-contact parts.

**Excellent corrosion resistance**

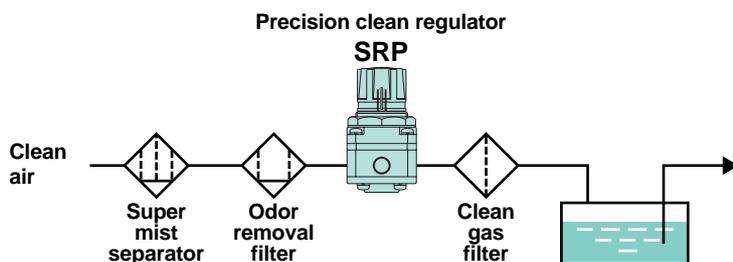
SUS316 is used for all metal parts in contact with the fluid.

**Consistent clean room production**

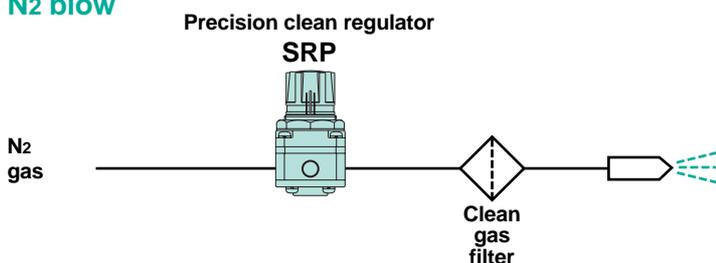
Cleaned, assembled, inspected, and sealed in double packaging in a Class 10,000 environment

## Applications

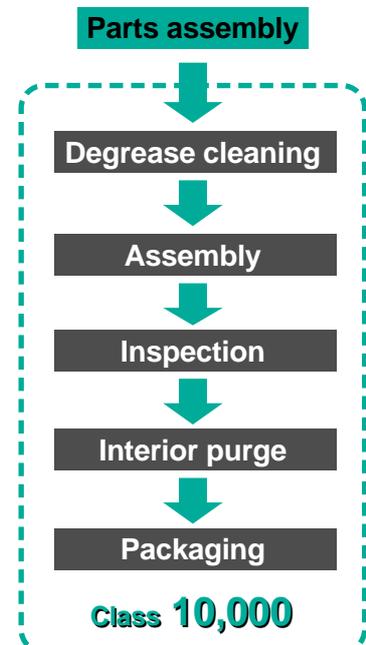
### Pressure feed of chemicals



### N<sub>2</sub> blow



## Manufacturing process



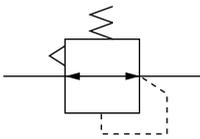
# Precision Clean Regulator

# Series *SRP*

## How to Order



JIS symbol



SRP 1 1 0 1 — 01 — R

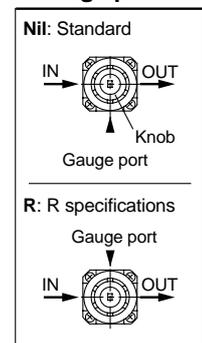
### Set pressure

0	0.005 to 0.2MPa
1	0.01 to 0.4MPa

### Port size

Symbol	Piping port size
M5	M5 x 0.8
01	Rc 1/8

### Gauge port orientation



\* Gauge port positions are indicated with the knob on the top side.

## Options

Description	Model	Material
Bracket	B21-1-T1	Rolled steel plate (electroless nickel plated)

## Specifications

Connection port size		M5, Rc 1/8
Fluid		Air, N <sub>2</sub> , CO <sub>2</sub> , Ar
Proof pressure MPa		1.5
Maximum operating pressure MPa		1.0
Regulating pressure range MPa	Low pressure type	0.005 to 0.2
	High pressure type	0.01 to 0.4
Ambient and fluid temperature (°C)		0 to 60
Fluid consumption ℓ/min (ANR) <small>Note 1)</small>		0.5 or less
Sensitivity		0.3% of full span
Repeatability		±1% of full span
Fluid-contact parts	Metal	SUS316
	Resin	Fluororesin
	Rubber	Fluoro rubber
	Other	Ceramics
Assembly environment		Clean room class 10000
Parts cleaning		HCFC141b ultrasonic cleaning of all fluid-contact parts

Note 1) At set pressure of 0.2MPa

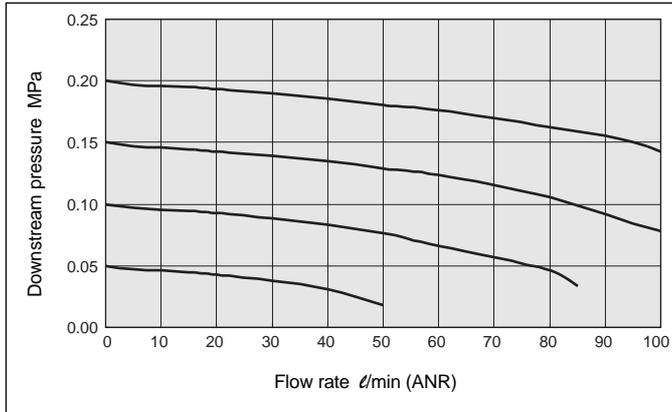
# Series SRP

## Flow Characteristics

Fluid: Air

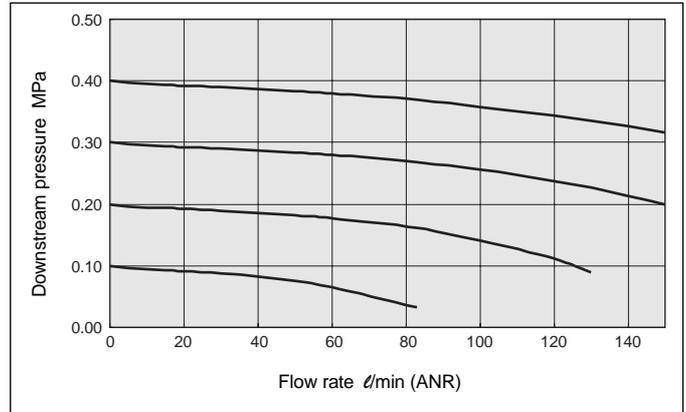
SRP1101-M5

Conditions/Upstream pressure: 0.5MPa



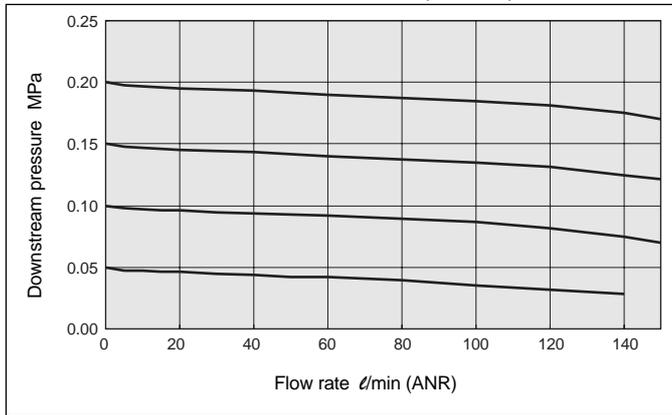
SRP1111-M5

Conditions/Upstream pressure: 0.7MPa



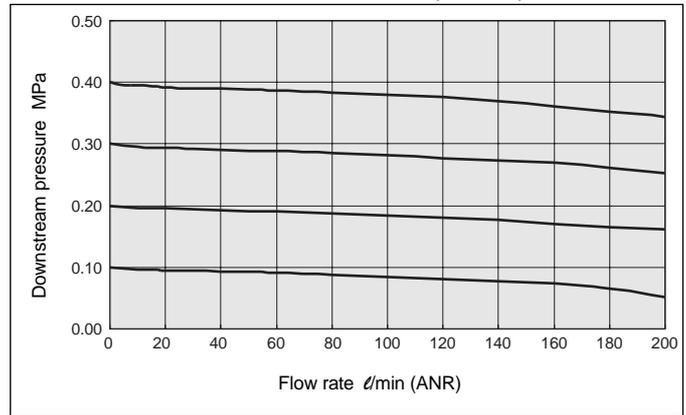
SRP1101-01

Conditions/Upstream pressure: 0.5MPa



SRP1111-01

Conditions/Upstream pressure: 0.7MPa

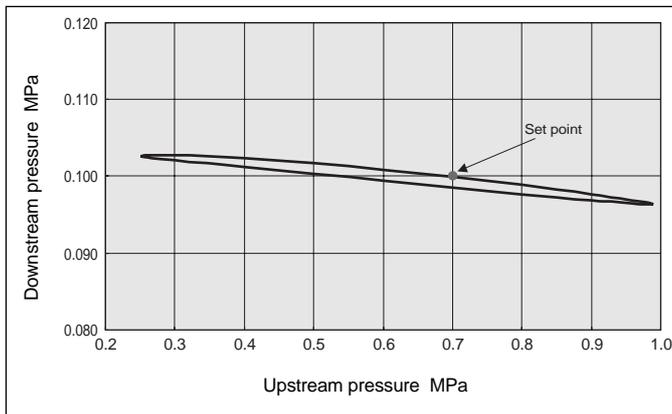


## Pressure Characteristics

Fluid: Air

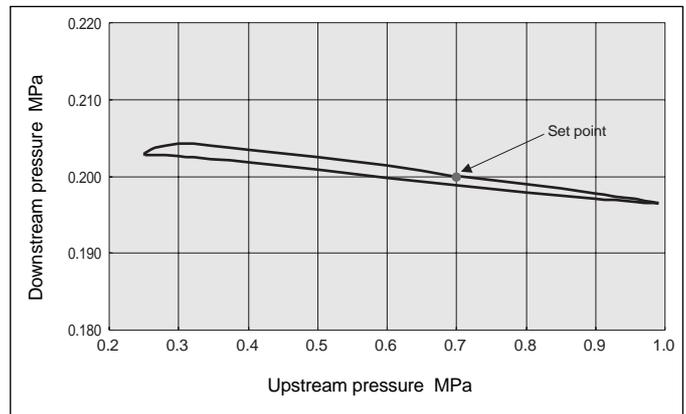
SRP1101

Initial setting/Upstream pressure: 0.7MPa  
Downstream pressure: 0.1MPa

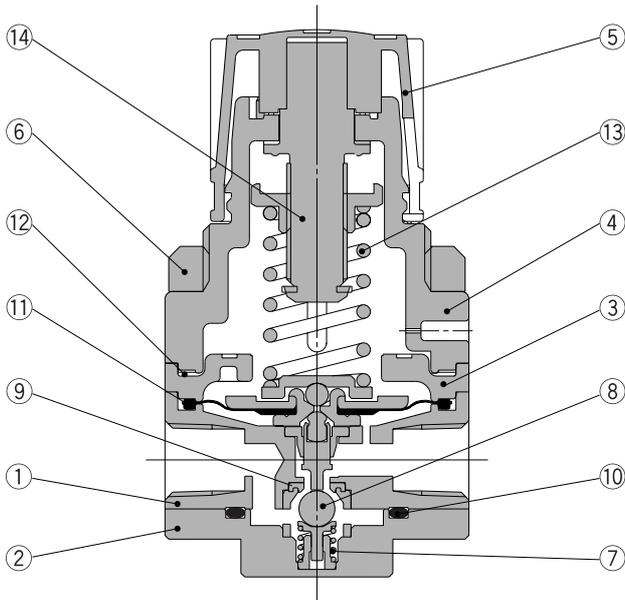


SRP1111

Initial setting/Upstream pressure: 0.7MPa  
Downstream pressure: 0.2MPa



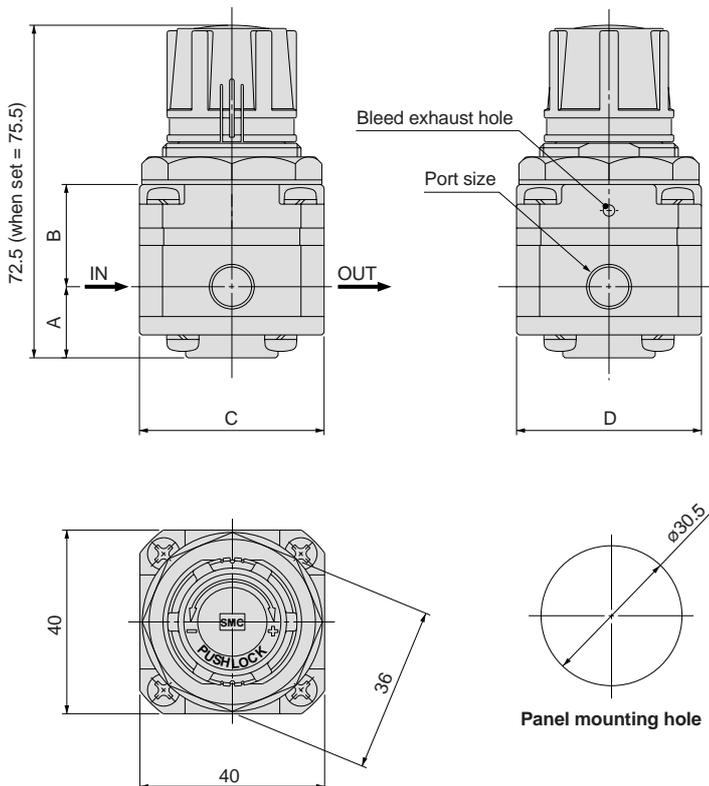
## Construction



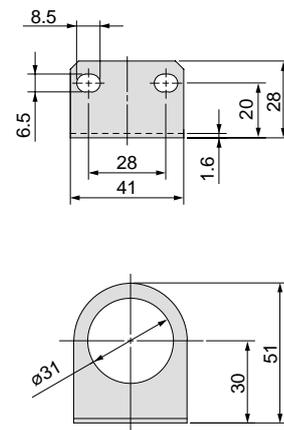
### Parts list

No.	Description	Material	Treatment
1	Body	SUS316L	
2	Valve guide	SUS316	
3	Spacer	PPS	
4	Bonnet	PPS	
5	Knob	PBT	
6	Set nut	ZDC	Electroless nickel plated
7	Valve spring	SUS316	
8	Main valve	Ceramics	
9	Valve seat	PTFE	
10	O-ring	Fluoro rubber	
11	Diaphragm	Fluoro rubber	
12	Gasket	Fluoro rubber	
13	Pressure regulator spring	Steel wire	
14	Pressure regulator screw assembly	—	

## Dimensions



### Bracket



Model	Port size	A	B	C	D
SRP11□1-M5	M5 x 0.8	14	23.5	30	30
SRP11□1-01	Rc 1/8	15	22.5	40	40



# Series *SRP* 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 a label 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 – Recommendations for the application of equipment to transmission and control systems

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

## **Warning**

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

Since the products specified here are used in various operating conditions, their compatibility for the specific system must be based on specifications or after analysis and/or tests to meet your specific requirements.

### **2. Only trained personnel should operate machinery and equipment.**

The fluid can be dangerous if handled incorrectly. Assembly, handling or repair of 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 after confirmation of safe locked-out control positions.
2. When equipment is to be removed, confirm the safety process as mentioned above. Cut the fluid and power supplies for this equipment and release all residual pressure in the system.
3. Before machinery/equipment is restarted, take measures to prevent shooting-out of cylinder piston rod, etc., and proceed with caution.

### **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, 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.



# Series SRP/Specific Product Precautions

Be sure to read before handling.  
Refer to page 4 for Safety instructions.

## Design and Selection

### ⚠ Warning

#### 1. Types of fluid

This product is designed for use with air, N<sub>2</sub>, CO<sub>2</sub> and Ar as fluids. Consult SMC if it will be used with any other fluids.

Since this product uses a bleed mechanism and fluid is released from the bleed hole, poisonous or corrosive gases cannot be used.

#### 2. Fluids containing solids cannot be used.

Since this can cause malfunction, install a mist separator, etc., upstream from the regulator.

#### 3. For air containing a large amount of drainage, install an air dryer or after cooler, etc., upstream from the regulator.

This can otherwise cause malfunction.

#### 4. Do not use in locations subject to vibration or impact.

#### 5. Avoid direct sunlight by providing a protective cover, etc.

#### 6. When sources of heat are located nearby, block off any radiated heat.

### ⚠ Caution

#### 1. It is recommended that the downstream pressure be set in the range of 25 to 85% of the upstream pressure.

## Mounting

### ⚠ Caution

#### 1. Open the sealed package inside a clean room.

This product is packaged in sealed double packaging in a clean room. It is recommended that the inside packaging be opened in a clean room or other clean environment.

#### 2. Flush out the piping.

Connect this product to piping only after the piping has been flushed or washed, etc. If debris or scale, etc., remains in the piping, this can cause malfunction or failure.

#### 3. Keep sealing material from getting inside the piping.

When screwing in pipes and fittings, etc., take care that chips from the pipe threads, sealing material, and other debris do not get inside the piping. If debris or scale, etc., remain inside the piping, this can cause malfunction or failure. Also, when pipe tape is used, leave 1.5 to 2 threads ridges exposed at the end of the threads.

#### 4. Confirm the mounting orientation of the product.

The side marked IN is the fluid inlet, and the side marked OUT is the fluid outlet. If mounted backwards, the product will not operate properly.

#### 5. Do not block the bleed hole.

If the bleed hole is blocked, the product will not operate properly.

## Pressure Adjustment

### ⚠ Warning

#### 1. Do not use tools when operating the pressure regulator knob.

If tools, etc., are used to operate the pressure regulator knob, damage can occur. Operate this knob only by hand.

#### 2. Perform settings while confirming upstream and downstream pressure indicators.

Turning the knob more than necessary can cause damage to internal parts.

### ⚠ Caution

#### 1. Perform pressure adjustments only after releasing the lock.

When the pressure regulator knob will not turn, it is locked. Release the lock by pulling the pressure regulator knob out. If the knob is turned by force damage will occur.

After adjusting the pressure, lock the knob again by pressing it back down.

#### 2. Adjust pressure in an upward direction.

A correct pressure setting cannot be achieved by adjusting the pressure downward. The downstream pressure is increased by turning the pressure regulator knob to the right, and decreased by turning the knob to the left.

#### 3. Confirm the upstream pressure.

Set the downstream pressure to no more than 85% of the upstream pressure. If the upstream pressure is too low, a correct set pressure cannot be attained.

#### 4. A small volume of fluid will be expended from the bleed hole.

The bleed mechanism is used to perform high precision pressure adjustment. Therefore, it is not abnormal for a small volume of fluid to be expended from the bleed hole.

**Austria**

SMC Pneumatik GmbH (Austria).  
Girakstrasse 8, A-2100 Körneuburg  
Phone: 02262-62280, Fax: 02262-62285

**Belgium**

SMC Pneumatics N.V./S.A.  
Nijverheidsstraat 20, B-2160 Wommelgem  
Phone: 03-355-1464, Fax: 03-355-1466

**Czech**

SMC Czech.s.r.o.  
Kodanska 46, CZ-100 10 Prague, 10  
Phone: 02-67154 790, Fax: 02-67154 793

**Denmark**

SMC Pneumatik A/S  
Jens Juuls vej 32, DK-8260 Viby J  
Phone: 45-70252900, Fax: 45-70252901

**Estonia**

Teknoma Eesti AS  
Mustamäe tee 5, EE-0006 Tallinn, Estonia  
Phone: 259530, Fax: 259531

**Finland**

SMC Pneumatikka OY  
Veneentekijäntie 7, SF-00210 Helsinki  
Phone: 09-681021, Fax: 09-6810233

**France**

SMC Pneumatique, S.A.  
1, Boulevard de Strasbourg, Parc Gustave Eiffel  
Bussy Saint Georges  
F-77607 Marne La Vallée Cedex 3  
Phone: 01-6476 1000, Fax: 01-6476 1010

**Germany**

SMC Pneumatik GmbH  
Boschring 13-15, D-63329 Egelsbach  
Phone: 06103-4020, Fax: 06103-402139

**Greece**

S. Parianopoulos S.A.  
9, Konstantinoupoleos Street,  
GR-11855 Athens  
Phone: 01-3426076, Fax: 01-3455578

**Hungary**

SMC Hungary Kft.  
Budafoki ut 107-113, 1117 Budapest  
Phone: 01-204 4366, Fax: 01-204 4371

**Ireland**

SMC Pneumatics (Ireland) Ltd.  
2002 Citywest Business Campus,  
Naas Road, Saggart, Co. Dublin  
Phone: 01-403 9000, Fax: 01-464 0500

**Italy**

SMC Italia S.p.A  
Via Garibaldi 62, I-20061 Carugate, (Milano)  
Phone: 02-92711, Fax: 02-92150394

**Latvia**

Ottensten Latvia SIA  
Ciekurkalna Prima Gara Linija 11,  
LV-1026 Riga, Latvia  
Phone: 371-23-68625, Fax: 371-75-56748

**Lithuania**

UAB Ottensten Lietuva  
Savanoriu pr.180, LT-2600 Vilnius, Lithuania  
Phone/Fax: 370-2651602

**Netherlands**

SMC Pneumatics BV  
Postbus 308, 1000 AH Amsterdam  
Phone: 020-5318888, Fax: 020-5318880

**Norway**

SMC Pneumatics (Norway) A/S  
Wollsveien 13 C, granfoss Noeringspark  
N-134 Lysaker, Norway  
Phone: 22 99 6036, Fax: 22 99 6103

**Poland**

Semac Co., Ltd.  
PL-05-075 Wesola k/Warszaway, ul. Wspolna 1A  
Phone: 022-6131847, Fax: 022-613-3028

**Portugal**

SMC España (Sucursal Portugal), S.A.  
Rua de Engº Ferreira Dias 452, 4100 Porto  
Phone: 02-610-89-22, Fax: 02-610-89-36

**Romania**

SMC Romania srl  
Vasile Stroescu 19, Sector 2, Bucharest  
Phone: 01-210-1354, Fax: 01-210-1680

**Russia**

SMC Pneumatik LLC  
Centrako Business Centre 103,  
Bolshoy Prospect V.O., 199106 St. Petersburg  
Phone: 812-1195131, Fax: 812-1195129

**Slovakia**

SMC Slovakia s.r.o.  
Pribinova ul. C. 25, 819 02 Bratislava  
Phone: 0-563 3548, Fax: 07-563 3551

**Slovenia**

SMC Slovenia d.o.o.  
Grajski trg 15, 8360 Zuzemberk  
Phone: 068-88 044 Fax: 068-88 041

**Spain**

SMC España, S.A.  
Zuazobidea 14, Pol. Ind. Jundiz,  
E-01015 Vitoria  
Phone: 945-184 100, Fax: 945-184 124

**Sweden**

SMC Pneumatics Sweden A.B.  
Ekhagsvägen 29-31, S-14105 Huddinge  
Phone: 08-603 07 00, Fax: 08-603 07 10

**Switzerland**

SMC Pneumatik AG  
Dorfstrasse 7, CH-8484 Weisslingen  
Phone: 052-396-3131, Fax: 052-396-3191

**Turkey**

Entek Pnömatik San. ve Tic Ltd. Sti.  
Perpa Tic. Merkezi Kat: 11 No: 1625,  
TR-80270 Okmeydanı Istanbul  
Phone: 0212-221-1512, Fax: 0212-220-2381

**UK**

SMC Pneumatics (UK) Ltd  
Vincent Avenue, Crownhill,  
Milton Keynes, MK8 0AN  
Phone: 01908-563888 Fax: 01908-561185

**OTHER SUBSIDIARIES WORLDWIDE:**

ARGENTINA, AUSTRALIA, BOLIVIA, BRASIL, CANADA, CHILE, CHINA, HONG KONG, INDIA, MALAYSIA, MEXICO, NEW ZEALAND, PHILIPPINES, SINGAPORE, SOUTH KOREA, TAIWAN, THAILANDIA, USA, VENEZUELA

*For more information, please contact your local SMC Regional Centre*

**SMC UK Regional Centres****BELFAST**

Tel:02890 778414 Fax:02890 778422  
SMC Pneumatics (UK) Ltd  
Northern Ireland Regional Centre  
Suite 3, Shaftesbury House, Edgewater Road  
Belfast  
BT3 9JQ

**BIRMINGHAM**

Tel:01675 467177 Fax:01675 465073  
SMC Pneumatics (UK) Ltd  
Birmingham Regional Centre  
24 The Courtyard, Gorseley Lane, Coleshill  
Warwickshire  
B46 1JA

**BRISTOL**

Tel:01179 522155 Fax:01179 522186  
SMC Pneumatics (UK) Ltd  
Bristol Regional Centre  
5 East Gate Office Centre  
East Gate Road, Eastville, Bristol  
BS5 6XX

**CRAWLEY**

Tel:01293 614094 Fax:01293 614135  
SMC Pneumatics (UK) Ltd  
Crawley Regional Centre  
9 Pelham Court, Pelham Place, Broadfield  
Crawley  
RH11 9AZ

**CUMBERNAULD**

Tel:01236 781133 Fax:01236 780611  
SMC Pneumatics (UK) Ltd  
Scottish Regional Centre  
1 Carradale Crescent,  
Broadwood Business Park, Cumbernauld  
Glasgow  
G68 9LE

**IPSWICH**

Tel:01473 240040 Fax:01473 747707  
SMC Pneumatics (UK) Ltd  
Ipswich Regional Centre  
Unit 6 & 7, Alpha Business Park  
16-18 Whitehouse Road, Ipswich, Suffolk  
IP1 5LT

**MANCHESTER**

Tel:0161 876 7371 Fax:0161 876 7372  
SMC Pneumatics (UK) Ltd  
Manchester Regional Centre  
3 Modwen Road, Waters Edge Business Park  
Ordsall Lane, Salford, Manchester  
M5 3EZ

**MILTON KEYNES**

Tel: 01908 265247 Fax: 01908 262705  
SMC Pneumatics (UK) Ltd  
Vincent Avenue, Crownhill, Milton Keynes  
MK8 0AN

**NEWCASTLE**

Tel:0191 487 2040 Fax:0191 487 2041  
SMC Pneumatics (UK) Ltd  
Newcastle Regional Centre  
Unit B6, Marquis Court, Marquis Way  
Team Valley Trading Estate, Gateshead  
Tyne & Wear  
NE11 0RU

**POOLE**

Tel:01202 732233 Fax:01202 737743  
SMC Pneumatics (UK) Ltd  
Poole Regional Centre  
Unit 4, Acorn Business Centre, Ling Road  
Poole, Dorset  
BH12 4NZ

**SHEFFIELD**

Tel: 01909 565504 Fax: 01909 569717  
SMC Pneumatics (UK) Ltd  
Sheffield Regional Centre  
Unit 4, North Anston Business Park  
Houghton Road, North Anston, Sheffield  
S25 4JJ

**SMC UK Distributors****Birmingham**

JAMES LISTER  
Tel: 0121 5803800  
Fax: 0121 5535951

**Blackburn**

BLACKBURN PNEUMATIC SYSTEMS LTD  
Tel: 01254 682232  
Fax: 01254 682224

**Bristol**

APPLIED AUTOMATION  
Tel: 0117 9827769  
Fax: 0117 9235522

**Bury St Edmunds**

PNEUMATIC LINES  
Tel: 01284 706239  
Fax: 01284 761218

**Cardiff**

WALES FLUID POWER  
Tel: 02920 494551  
Fax: 02920 481955

**Plymouth**

APPLIED AUTOMATION  
Tel: 01752 343300  
Fax: 01752 341161