

**SHAVO**  
FIRST NAME IN PNEUMATICS

FRLS

Act

technology for total pneumatic solution

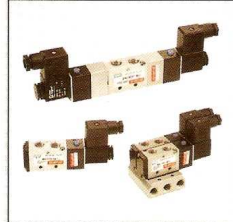
**Industrial Sales & Service**  
S-5, 3rd Floor, Shatabdi Towers, 1 SNP Area  
Sakchi, Jamshedpur - 831 001  
Tele/Fax:(0657)-2423890, Ph. No. 6452923  
E-mail : [issjsr@sify.com](mailto:issjsr@sify.com)



# VALVES

## SOLENOID VERSIONS

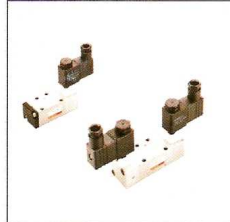
### SVSC SERIES



Port Sizes  
Port / Position  
Flow (l/min)  
Working Pr.  
Proof Pr.  
Ambient Temp.  
Voltage  
Response Time  
Power Consump.

G1/4, G 3/8, G1/2  
3/2, 5/2 & 5/3  
G1/4:1100, G3/8:2200, G1/2:3200  
2/3 - 7 kgf/cm<sup>2</sup>  
10 kgf/cm<sup>2</sup>  
5 - 50 0C  
AC 110V, AC 220V, DC 24V  
30 ms  
AC = 6/4.9VA, DC 2.5W

### ISO-1 - SVSI SERIES



ISO # 1  
5/2 & 5/3  
1450 l/min  
2/3 - 7 kgf/cm<sup>2</sup>  
10.5 kgf/cm<sup>2</sup>  
5 - 50 0 C  
AC 110V, AC 220V, DC 24V  
40 ms  
AC = 6/4.9VA, DC 2.5W

### NAMUR - SVSN SERIES



ISO#1, G1/4 (Post A, R1, R2)  
5/2 & 5/3  
1450 l/min  
2/3 - 7 kgf/cm<sup>2</sup>  
10.5 kgf/cm<sup>2</sup>  
5 - 50 0 C  
AC 110V, AC 220V, DC 24V  
50 ms  
AC = 6/4.9VA, DC 2.5W

- Manual override as standard. Other voltages available on request. Solenoid coils with LED indicators and Explosion-proof coils available.

## MANUAL VERSIONS

### HAND LEVER - SVHB SERIES



Port Sizes  
Port / Position  
Working Pr.  
Ambient Temp.

G1/4, G1/2  
5/2 & 5/3  
0 - 7 kgf/cm<sup>2</sup>  
5 - 60°C

### ROTARY VALVE - SVHC SERIES



G 1/4, G 3/8 & G 1/2  
4/3 & 4/2  
0 - 10 kgf/cm<sup>2</sup>  
5 - 60°C

### HAND SLIDE - SVHS SERIES



G 1/4, G 3/8, G 1/2, G 3/4  
3/2  
0 - 10 kgf/cm<sup>2</sup>  
5 - 60°C

## PNEUMATIC VERSIONS

### PILOT OPERATED - SVAA SERIES



Port Sizes G1/4, G3/8 & G1/2  
Port / Positions 3/2, 5/2  
Sizes G1/4 G3/8 G1/2  
flow(l/min) 1100 2000 3200  
Working Pr. 0 - 8 kgf/cm<sup>2</sup>  
Proof Pr. 10 kgf/cm<sup>2</sup>  
Ambient Temp. 5 - 60°C

## MECHANICAL VERSIONS

### MECHANICAL - SVMC SERIES



Port Sizes G1/8 & G1/4  
Port / Positions 3/2  
Effective Orifice 7 mm<sup>2</sup>  
Working Pr. 0 - 7 kgf/cm<sup>2</sup>  
Ambient Temp. 5 - 60°C  
Actuation Roller Lever,  
Palm latching,  
Lever Actuator,  
Turning Actuator,  
Palm Actuator &  
Palm Button



## FRLs \* G 1/8 - G 2

### AIR FILTERS



For General Industrial use

SIZE	MODEL	FILTRATION AVAILABLE IN MICRONS	BOWLS	DRAIN	OVERALL HT. IN MM	FLOW RATE IN SCFM	REMARKS
1/8"	S F07	5, 25, 100	Polycarbonate, Metal	M.D., A.D.	106	10	A.D. works only on flow changes
1/4"	S F07	5, 25, 100	Polycarbonate, Metal	M.D., A.D.	106	21	A.D. works only on flow changes
	S F11	5, 25, 50	Polycarbonate, Metal	M.D., A.D.	161	90	
	S F13	5, 25, 50	Polycarbonate, Metal with sight glass	M.D., A.D.	195	113	Plug-in System
3/8"	S F11	5, 25, 50	Polycarbonate, Metal	M.D., A.D.	161	100	
	S F13	5, 25, 50	Polycarbonate, Metal with sight glass	M.D., A.D.	195	189	Plug-in System
1/2"	S F13	5, 25, 50	Polycarbonate, Metal with sight glass	M.D., A.D.	195	212	Plug-in System
3/4"	S F13	5, 25, 50	Polycarbonate, Metal with sight glass	M.D., A.D.	195	212	Plug-in System
1"	S F17	5, 50	Metal with sight glass	M.D., A.D.	297	740	
1 1/2"	S F17	5, 50	Metal with sight glass	M.D., A.D.	297	740	
2"	S F18	5, 50	Metal with sight glass	M.D., A.D.	436	2225	

M.D. = Manual Drain A.D.= Automatic Drain \* Flow rate given in the table are at 6 bar supply pressure and 1 bar pressure drop - 50µ filtration.

### OIL REMOVAL FILTERS



For Instruments, Food, Breathing Sets, Pharmaceutical, Photographic etc.

PORT SIZE	MODEL	FILTER STAGES	DRAIN	OVERALL HT IN MM	MAX FLOW IN SCFM	REMARKS
1/8"	S F39	1	M.D., A.D.	106	3	Puraire, A.D. works on flow changes
	S F39	1	M.D., A.D.	106	3	Puraire, A.D. works on flow changes
1/4"	S F44	1	M.D., A.D.	161	8	Puraire
	S F51	1	M.D., A.D.	199	26	Puraire - Plug-in System
	S F50	2	M.D., A.D.	271	15	Ultraire - Plug-in System
	S F44	1	M.D., A.D.	161	8	Puraire
3/8"	S F51	1	M.D., A.D.	247	55	Puraire - Plug-in System
	S F50	2	M.D., A.D.	319	24	Ultraire - Plug-in System
	S F51	1	M.D., A.D.	247	55	Puraire - Plug-in System
1/2"	S F50	2	M.D., A.D.	319	24	Ultraire - Plug-in System
	S F46	1	M.D., A.D.	297	60	Puraire
3/4"	S F46	1	M.D., A.D.	297	90	Puraire
1"	S F46	1	M.D., A.D.	297	120	Puraire
1 1/2"	S F47	1	M.D., A.D.	436	250	Puraire
2"	S F47	1	M.D., A.D.	436	300	Puraire

M.D. = Manual Drain A.D.= Automatic Drain \* Flow rate given in the table are at 6 bar supply pressure and 1 bar pressure drop - 50µ filtration.

### PRESSURE REGULATORS



For General Applications

PORT SIZE	MODEL	SECONDARY PR RANGES IN	REGULATING MECHANISM KG/SQ. CM.	PR. ADJ.	GAUGE PORT CONNECTION	PANEL MOUNTING	OVERALL HT. IN MM	FLOW RATE IN SCFM	REMARKS
1/8"	S R07	0.7,2.1,3.5,7.0	Diaphragm	Knob	1/8"	Std.	75	14	
	S R07	0.7,2.1,3.5,7.0	Diaphragm	Knob	1/8"	Std.	75	16	
1/4"	S R11	3.5,8.75,10.0,17.5	Diaphragm	Knob/T Handle	1/8"	Std.	123	80	
	S R13	2.1,3.5,8.75,10,17.5	Diaphragm	Knob/T Handle	1/8"	Specify	145	56	Plug-in System
3/8"	S R11	3.5,8.75,10.0,17.5	Diaphragm	Knob/T Handle	1/8"	Std.	123	84	
	S R13	2.1,3.5,8.75,10,17.5	Diaphragm	Knob/T Handle	1/8"	Specify	145	94	Plug-in System
1/2"	S R13	2.1,3.5,8.75,10,17.5	Diaphragm	Knob/T Handle	1/8"	Specify	145	210	Plug-in System
3/4"	S R13	2.1,3.5,8.75,10,17.5	Diaphragm	Knob/T Handle	1/8"	Specify	145	210	Plug-in System
1"	S R17	2.1,3.5,8.75,10,17.5	Diaphragm	Knob/T Handle	1/4"	Specify	180	400	
	S R17	2.1,3.5,8.75,10,17.5	Diaphragm	Knob/T Handle	1/4"	Specify	180	400	
1 1/2"	S R18	Pilot Operated	Diaphragm	Pilot Regulator	1/4"	NO	180	1345	
	S R18	Pilot Operated	Diaphragm	Pilot Regulator	1/4"	NO	180	2110	

\* Flow rates given in the table are at a supply pressure of 10 bar and 1 bar drop inlet sec. Pr. of 6 bar.

• Technical know-how, design and drawings originally from C.A. Norgren Co. USA

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# FRLs \* G 1/8 - G 2

## OIL FOG LUBRICATORS



For Simple Piping System

PIPE SIZE	MODEL	RESERVOIR CAPACITY	RESERVOIR BOWL	FLOW RATE (SCFM)		OVERALL HT. IN MM	REMARKS
				MAX	MIN		
1/4"	S L13	0.2 Litre	Polycarbonate, Metal	70	2.0	225	Constant density, Plug-in System
3/8"	S L13	0.2 Litre	Polycarbonate, Metal	152	2.3	225	Constant density, Plug-in System
1/2"	S L13	0.2 Litre	Polycarbonate, Metal	194	3.3	225	Constant density, Plug-in System
3/4"	S L13	0.2 Litre	Polycarbonate, Metal	194	3.3	225	Constant density, Plug-in System
1"	S L17	0.2 Litre	Polycarbonate, Metal	434	7.6	315	Constant density, Directly ported
1 1/2"	S L17	0.2 Litre	Polycarbonate, Metal	434	7.6	315	Constant density, Directly ported

\* Flow rates given in the table are at 6 bar supply pressure and 1 bar pressure drop

## MICRO FOG LUBRICATORS



For use where there are Lengthy Complex Piping Systems and Multiple Points of Application

PIPE SIZE	MODEL	RESERVOIR CAPACITY	RESERVOIR MAKE	OVERALL HT. IN MM	FLOW RATE (SCFM)		REMARKS
					MAX	MIN	
1/8"	S L07	17 ml.	Polycarbonate, Metal	130	16	0.5	Miniature
	S L07	17 ml.	Polycarbonate, Metal	130	16	0.5	Miniature
1/4"	S L11	100 ml.	Polycarbonate, Metal	170	37	2.5	Compact Threaded Port
	S L13	200 ml.	Polycarbonate, Metal	225	70	2.0	Plug-in System
3/8"	S L11	100 ml.	Polycarbonate, Metal	170	74	4.0	Compact Threaded Port
	S L13	200 ml.	Polycarbonate, Metal	225	152	2.3	Plug-in System
1/2"	S L13	200 ml.	Polycarbonate, Metal	225	194	3.3	Plug-in System
3/4"	S L13	200 ml.	Polycarbonate, Metal	225	194	3.3	Plug-in System
1"	S L17	1 litre.	Metal	315	434	7.6	Large flow
1 1/2"	S L17	1 litre.	Metal	315	434	7.6	Large flow

\* Flow rates given in the table are at 6 bar supply pressure and 1 bar pressure drop

## FILTER-REGULATORS



For General Applications

PIPE SIZE	MODEL	FILTER ELEMENT	BOWL	DRAINS	SEC. PR. RANGE IN KG/SQ CM	REGULATING MECHANISM	PR. ADJ	GAUGE PORT CONN.	OVERALL HT. IN MM	FLOW RATE IN SCFM	REMARKS
1/8"	S B07	5,25,100	Polycarbonate or metal	Manual & Auto	0.7, 2.1, 3.5, 7.0	Diaphragm	Knob	1/8"	164	13	Miniature, AD works on flow changes
	S B07	5,25,100	Polycarbonate or metal	Manual & Auto	0.7, 2.1, 3.5, 7.0	Diaphragm	Knob	1/8"	164	14	Miniature, AD works on flow changes
1/4"	S B11	5,25,50	Polycarbonate or metal	Manual & Auto	3.5, 8.75, 10.0, 17.5	Diaphragm	Knob / T' Handle	1/8"	227	70	
	S B13	5,25,50	Polycarbonate or metal with SG	Manual & Auto	2.1, 3.5, 8.75, 10.0, 17.5	Diaphragm	Knob / T' Handle	1/8"	275	49	Plug-in System
3/8"	S B11	5,25,50	Polycarbonate or metal with SG	Manual & Auto	3.5, 8.75, 10.0, 17.5	Diaphragm	Knob / T' Handle	1/8"	227	73	
	S B13	5,25,50	Polycarbonate or metal with SG	Manual & Auto	2.1, 3.5, 8.75, 10.0, 17.5	Diaphragm	Knob / T' Handle	1/8"	275	82	Plug-in System
1/2"	S B13	5,25,50	Polycarbonate or metal	Manual & Auto	2.1, 3.5, 8.75, 10.0, 17.5	Diaphragm	Knob / T' Handle	1/8"	275	185	Plug-in System
3/4"	S B13	5,25,50	Polycarbonate or metal with SG	Manual & Auto	2.1, 3.5, 8.75, 10.0, 17.5	Diaphragm	Knob / T' Handle	1/8"	275	203	Plug-in System

SG - Sight Glass \* Flow rates given in the table are at 10 bar supply pressure and 1 bar drop in secondary pressure of 6 bar

• Technical know-how, design and drawings originally from C.A. Norgren Co. USA

# ACTUATORS

## ISO - ROUNDLINE CYLINDERS - SCMI



These Cylinders conform to ISO-6432 standard specification and are made up of stainless cylinder tubes which resist corrosion and abrasion.

They are double acting cylinders of high strength, double crimped end cap design with buffer cushioning.

These cylinders are available with comprehensive selection of mountings for fixed or flexible installation.

Standard Models: - Bore dia. 16mm - 25mm - Stroke 25mm - 900mm.

Special versions like single acting, normally extended / normally returned, male thread/female thread, single rod/double rod, etc. are also available on request.

Maximum Operating Pressure : 1 - 10 kgf/cm<sup>2</sup>

Ambient Temperature range : 5°C - 60°C.

## ISO - VDMA PROFILE CYLINDER - SCQP

These Cylinders conform to ISO 6431, VDMA 24562 specification and are available in Double Acting Magnetic with adjustable cushioning.

Standard Models: - Bore dia. 32mm to 100mm - Stroke 50mm to 3000mm

Special versions like dual rod/adjustable/male thread are also available on request.

Reed Switches can be mounted flush with the profile barrel and a comprehensive range of standard mountings are also available.

Maximum Operating Pressure : 0.5 - 10 kgf/Cm<sup>2</sup>

Ambient Temperature : 5 - 60°C

These cylinders are available with comprehensive selection of mountings for fixed or flexible installation.



## COMPACT CYLINDERS - SCJT



These are Double Acting Cylinders with buffer cushioning and one third the basic length of a corresponding ISO/VDMA model.

These cylinders are ultra compact, light weight, space-saving type.

Standard Models : Bore dia. 12 - 100mm Stroke 5 - 300mm

Special versions like single acting, normally extended/normally returned, male thread/female thread, single rod/double rod, etc. are also available on request.

Max. Operating Pressure : 0.5 - 10 kgf/Cm<sup>2</sup>

Ambient Temperature : 5°C - 60°C

Reed Switches can be mounted flush with the profile barrel.

## OVAL - MICRO CYLINDERS - SCMOC

An innovative range from size 8mm to 25mm (8, 10, 12, 16, 20, 25)

Wide choice of magnetic sensors, reed or solid state.

The flat oval design matching piston shape prevents rotation of rod (self guidance)

Dimensions for cylinder are compatible with ISO standard.

Mounting are identical for round oval cylinders with ISO 6432  
(Piston as standard goes automatically with magnet)

Max. Operating Pressure : 1 - 10 kgf/cm<sup>2</sup>

Ambient Temperature : -10°C - 60°C





## OTHER PRODUCTS



Pisco Fittings



CONT<sup>®</sup> Air Bellows



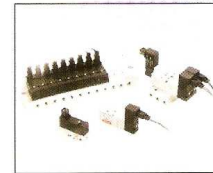
Flow control valve



Direct-operated Type Solenoid valve



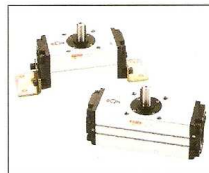
Diaphragm series Solenoid valve



Miniature Solenoid valve



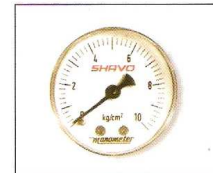
Twin Guide Cylinder



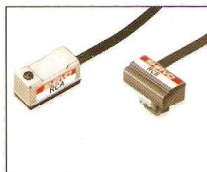
Rotary Actuator



Pneumatic swing clamping cylinder



Pressure Gauge



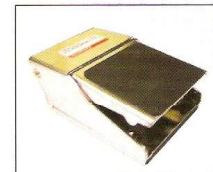
Sensor Switch RCA/RCB



Sensor Switch RCE1



Silensor



Foot valve

Manufactured by  
**SHAVO NORGREN (INDIA) PVT. LTD.**

