

# High Capacity & Simple Choices

## 5 Port Solenoid Valves

### SY3000/5000/7000/9000

#### Low power consumption: 0.5W

(Current value: 21mA at 24VDC)

Low power consumption enables direct operation by a PLC, and cost savings are realized through the use of a smaller power supply and switching elements and the elimination of relay cards.

[An energy saving type [0.22W] is also available. Refer to page 1.2-177 for details.]

#### Compact design with high flow capacity of 1668.6 to 2944.5 N/min with the same body width

The same size cylinder can be driven with a valve one physical size smaller than a conventional type, contributing greatly to both space and cost savings.

Valves to drive cylinders of sizes  $\phi 6$  to  $\phi 200$

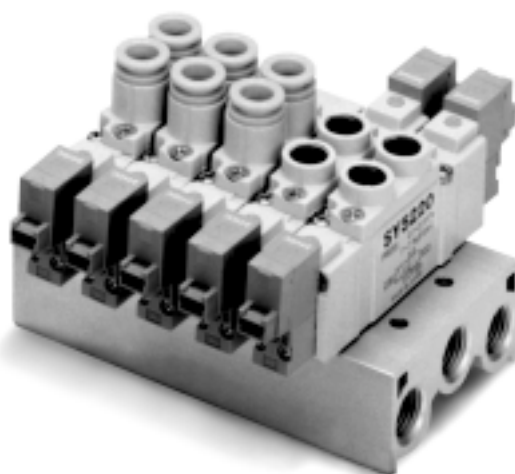
Pressure: 0.5MPa, Load factor: 50%

Base mounted (sub-plate)	Cylinder speed N/min	Cylinder speed mm/s	Cylinder bore size mm															
			Series CJ2				Series CM2				Series MB/CA1				Series CS1			
			$\phi 6$	$\phi 10$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	$\phi 125$	$\phi 140$	$\phi 160$	$\phi 180$	$\phi 200$
SY3000	294.5	150																
		300																
		450																
		600																
		750																
SY5000	687	150																
		300																
		450																
		600																
		750																
SY7000	1177.8	150												*	*			
		300										*	*					
		450									*	*						
		600									*	*						
		750								*	*							
SY9000	2748.2	150												*	*	*		
		300											*	*	*			
		450										*	*	*				
		600									*	*	*					
		750								*	*	*						

The speed of CJ2 and CM2 cylinders is controlled by a fixed orifice built into the cylinder.

\* Cylinder speeds are for extension of the cylinder.

\* The "\*" symbol indicates conditions with SGP (steel piping).



#### Long life exceeding 50 million cycles

(Based on SMC life test conditions.)

Long life is achieved by a new pilot design, guide rings that prevent main valve eccentricity, and a stronger return force.

# SY3000/5000/7000/9000 Body Ported Type Single Valve

## How to Order

SY 5 1 20 — 5 L — — — 01 — — — Q

### Series

3	SY3000
5	SY5000
7	SY7000
9	SY9000

### Type of actuation

1	2 position single 
2	2 position double 
3	3 position closed centre 
4	3 position exhaust centre 
5	3 position pressure centre 

### Rated voltage

DC specifications	
5	24VDC
6	12VDC
V	6VDC
S	5VDC
R	3VDC
9	Less than 50 VDC

### AC specifications (50/60Hz)

1	100VAC
2	200VAC
3	110VAC [115VAC]
4	220VAC [230VAC]
9	Less than 250 VAC



Note 1) "D", "DO", "Y" and "YO" are only available in 24VDC and 12VDC in case of DC.

Note 2) "D", "DO", "Y" and "YO" are not available for SY3000.



Contact SMC for other voltages (9)



Protective class class I (Mark: )..... DIN terminal type



Protective class class III (Mark: )..... Grommet, L and M plug connector



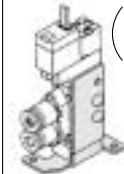
Note) When single body ported solenoid valves are ordered, manifold mounting bolts and gaskets are not included. Order them separately, if necessary. (Refer to page 1.2-65 for details.)

### Thread

—	Rc (PT)
N	NPT
T	NPTF
F	G (PF)

### Bracket

Nil: Without bracket  
F1: With foot bracket  
(2 position single type only)



F2: With side bracket



\* SY9000 does not use brackets.

### A/B port size

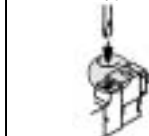
Symbol	Port size	Applicable series
M5	M5	SY3000
C4	ø4 One-touch fitting	
C6	ø6 One-touch fitting	
01	1/8	SY5000
C4	ø4 One-touch fitting	
C6	ø6 One-touch fitting	
C8	ø8 One-touch fitting	SY7000
02	1/4	
C8	ø8 One-touch fitting	
C10	ø10 One-touch fitting	SY9000
02	1/4	
03	3/8	
C8	ø8 One-touch fitting	SY9000
C10	ø10 One-touch fitting	
C12	ø12 One-touch fitting	

### Manual override

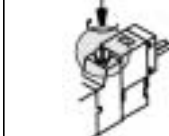
Nil: Non-locking push type



D: Push-turn locking slotted type



E: Push-turn locking lever



### Indicator light/Surge voltage suppressor

For electrical entry G, H, L, M

Nil	Without indicator light/surge voltage suppressor
S	With surge voltage suppressor
Z	With indicator light/surge voltage suppressor
U	With indicator light/surge voltage suppressor (non-polar type)



Note 1) "U" is available for DC only.

For electrical entry D

Nil	Without indicator light/surge voltage suppressor
S	With surge voltage suppressor (non-polar type)
Z	With indicator light/surge voltage suppressor (non-polar type)

Note 1) "DOZ" is not available.

Note 2) For AC, there is no "S" specification, since it is integrated with the rectifier.

### Electrical entry

24V, 12V, 6V, 5V, 3VDC				24V, 12VDC 100V, 110V, 200V, 220VAC
Grommet	L type plug connector	M type plug connector		DIN terminal
G: Lead wire length 300mm 	L: With lead wire (length 300mm) 	M: With lead wire (length 300mm) 	MN: Without lead wire 	(Except SY3000) D: With connector Y: With connector (DIN 43650C) 
H: Lead wire length 600mm 	LN: Without lead wire 	LO: Without connector 	MO: Without connector 	DO: Without connector YO: Without connector (DIN 43650C) 



Note 1) "LN" and "MN" include 2 sockets.

Note 2) "D" and "DO" are not available for SY3000.