

# High Power Cylinder

# RHC Series

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

## How to Order

**RHC B 20 - - M9BW - C -**

**High power cylinder**

**Mounting type**

B	Basic type
L	Axial foot type
F	Rod side flange type
G	Head side flange type

**Bore size**

20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

**Port type**

Nil	Rc
TN	NPT

**Cylinder stroke (mm)**

\* Refer to page 352 for standard strokes.

**Auto switch**

Nil	Without auto switch (Built-in magnet)
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\* For the applicable auto switch model, refer to the table below.

**Made to Order**

Refer to page 352 for details.

**Auto switch mounting bracket<sup>Note</sup>**

Note) This symbol is indicated when the D-A9□ or M9□ type auto switch is specified. This mounting bracket does not apply to other auto switches (D-C7□ and H7□, etc.) (Nil)

**Number of auto switches**

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

## Applicable Auto Switches

Refer to pages 941 to 1067 for further information on auto switches.

Appendix 4 Auto switch																		
Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model			Lead wire length (m)				Pre-wired connector	Applicable load			
					DC	AC	Applicable bore size (mm)			0.5 (Nil)	1 (M)	3 (L)	5 (Z)			None (N)		
							ø20 to ø63	ø80, ø100										
							Perpendicular	In-line	In-line									
Solid state auto switch	—	Grommet	—	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	—	●	●	●	○	—	○	IC circuit		
				3-wire (PNP)			—	G59	—	—	—	—	—	—				
				2-wire			M9PV	M9P	—	—	—	—	—	—				
		Connector	—	3-wire (NPN)			—	—	G5P	—	—	—	—	—	—	—		
				2-wire			M9BV	M9B	—	—	—	—	—	—				
				3-wire (NPN)			—	H7C	—	—	—	—	—	—				
	Diagnostic indication (2-color indicator)	Terminal conduit	Yes	3-wire (NPN)	5 V, 12 V		—	G39			—	—	—	●	—	—	IC circuit	
				2-wire			—	K39			—	—	—	—	●	—	—	
				3-wire (NPN)			M9NVV	M9NV	—	●	●	●	○	—	○	IC circuit		
		Grommet	—	3-wire (PNP)			—	—	G59W	—	—	—	—	—	—			
				2-wire			M9PWV	M9PW	—	●	●	●	○	—	○			
				3-wire (PNP)			—	—	G5PW	—	—	—	—	—	—			
	Water resistant (2-color indicator)	—	—	3-wire (NPN)	5 V, 12 V		M9BWV	M9BW	—	●	●	●	○	—	○	—		
				3-wire (PNP)			M9NAV <sup>*1</sup>	M9NA <sup>*1</sup>	—	○	○	●	—	○	IC circuit			
				2-wire			M9PAV <sup>*1</sup>	M9PA <sup>*1</sup>	—	○	○	●	—	○				
		With diagnostic output (2-color indicator)	—	3-wire (NPN)			M9BAV <sup>*1</sup>	M9BA <sup>*1</sup>	—	○	○	●	—	○		—		
2-wire				—		G5BA <sup>*1</sup>	—	●	—	●	○	—	○					
4-wire (NPN)				—		H7NF	G59F	—	●	—	●	○	—	○				
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	5 V	—	A96V	A96	—	●	—	●	—	—	—	IC circuit		
				100 V			A93V <sup>*2</sup>	A93	—	●	—	●	—	—	—			
				100 V or less			A90V	A90	—	●	—	●	—	—	—			
				100 V, 200 V			—	B54	—	●	—	●	—	—	—			
				200 V or less			—	B64	—	●	—	●	—	—	—			
				24 V or less			—	C73C	—	●	—	●	—	—	—			
		Connector	No	2-wire	24 V		12 V	—	C80C	—	—	●	—	●	—	—	—	IC circuit
								—	A33	—	—	—	—	—	—	—	—	—
								—	A34	—	—	—	—	—	—	—		
								100 V, 200 V	—	A44	—	—	—	—	—	—		
								—	B59W	—	—	—	—	—	—			
								—	—	—	—	—	—	—	—			

\*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.

Consult with SMC regarding water resistant types with the above model numbers.

\*2 1 m type lead wire is only applicable to D-A93.

\* Lead wire length symbols: 0.5 m ..... Nil (Example) M9NW  
1 m ..... M (Example) M9NWM  
3 m ..... L (Example) M9NWL  
5 m ..... Z (Example) M9NWZ  
None ..... N (Example) H7CN

\* Solid state auto switches marked with "○" are produced upon receipt of order.

\* D-A9□/M9□/M9□/VV/D-M9□(V) types cannot be mounted.

\* Do not indicate suffix "N" for no lead wire on D-A3□/A44/G39/K39 models.

\* Since there are other applicable auto switches than listed, refer to page 364 for details.

\* For details about auto switches with pre-wired connector, refer to pages 1014 and 1015.

\* D-A9□/M9□/M9□/VV auto switches are shipped together (not assembled). (Only auto switch mounting brackets are assembled before shipped.)

REA

REB

REC

Smooth

Low Speed

MQ

RHC

RZQ

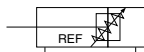
D-□

-X□

# RHC Series



## Symbol



**Made to Order**  
(Refer to pages 1069 to 1262 for details.)

Symbol	Specification
-XC3	Special port location*
-XC6	Made of stainless steel
-XC93	Water resistance + Stable lubrication function**

\* ø20 to ø40 only

\*\* ø32, ø40 only

## Specifications

Bore size (mm)	20	25	32	40	50	63	80	100
Fluid	Air							
Proof pressure	1.5 MPa							
Maximum operating pressure	1.0 MPa							
Minimum operating pressure	0.05 MPa							
Ambient and fluid temperature	-10 to 60°C (No freezing)							
Piston speed	50 to 3000 mm/s							
Cushion	Air cushion							
Maximum energy absorption (J)	7	12	21	33	47	84	127	196
Effective cushioning stroke (mm)	80	80	80	80	80	80	80	80
Lubrication	Not required (Non-lube)							
Stroke length tolerance	Up to 1000 st: $^{+1.4}_0$ , 1001 to 1500 st: $^{+1.8}_0$							
Mounting	Basic type, Axial foot type, Rod/Head side flange type							

## Stroke

Bore size (mm)	Minimum stroke (Recommended) <sup>(1)</sup>	Standard stroke <sup>(2)</sup>	Max. stroke
20	250	up to 700	1500
25	250	up to 700	1500
32	250	up to 1000	1500
40	250	up to 1000	1500
50	250	up to 1200	1500
63	250	up to 1200	1500
80	250	up to 1400	1500
100	250	up to 1500	1500

Note 1) Strokes shorter than the recommended minimum stroke (1 to 249 st) can be manufactured, but cushion capability may not be satisfied since the effective cushion stroke for this cylinder is long.

Note 2) Stroke exceeding the standard stroke length is not subject to the guarantee.

## Mounting Bracket Part No.

Mounting bracket	Qty.	Bore size (mm)								Description
		20	25	32	40	50	63	80	100	
Axial foot	Note) 2	RHC-L020	RHC-L025	RHC-L032	RHC-L040	RHC-L050	RHC-L063	RHC-L080	RHC-L100	ø20 to ø40 : Foot x 2, Mounting nut x 1 ø50 to ø100: Foot x 2, Bracket mounting bolt x 8, Spring washer x 8
Flange	1	RHC-F020	RHC-F025	RHC-F032	RHC-F040	RHC-F050	RHC-F063	RHC-F080	RHC-F100	ø20 to ø40 : Flange x 1 ø50 to ø100: Flange x 1, Bracket mounting bolt x 4, Spring washer x 4

Note) Order 2 foot brackets for a cylinder.