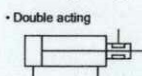


Brake cylinder (medium bore size)/can be disassembled,
double acting type/double acting with solenoid valve

JSM2/JSM2-V Series

• Bore size: 20, 30, 40 mm bore

JIS symbol



Specifications

Descriptions		JSM2			JSM2-V		
Bore size mm		20 dia.	30 dia.	40 dia.	20 dia.	30 dia.	40 dia.
Actuation		Double acting			Double acting/with solenoid valve		
Working fluid		Compressed air					
Max. working pressure MPa		0.7			0.6		
Min. working pressure MPa	Brake section	0.35					
	Cylinder part	0.10					
Withstanding pressure MPa		1.05					
Ambient temperature °C		-10 to 60 (to be unfrozen)			-10 to 50 (to be unfrozen)		
Port size	Brake section	M5	Rc1/8		M5	Rc1/8	
	Cylinder part	Rc1/8					
Stroke length tolerance mm		^{+1.0} ₀ (to 200)			^{+1.2} ₀ (to 1000)		
Working piston speed mm/s		50 to 500					
Cushion		None					
Lubrication		Not available					
Stop accuracy mm		±1.0 (300mm/s no load)					
Holding force N		186	431	765	186	431	765
Allowable energy absorption J		0.024	0.05	0.093	0.024	0.05	0.093

Note: This product can not absorb a large energy generated by an external load. We recommend to use an external shock absorber together.

Note: Refer to "Pneumatic valves" CB-23S about details of valves.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
20 dia.	25, 50, 75, 100, 125, 150 175, 200, 250, 300	700	15(10)
30 dia.			When one switch is installed, refer to the value in ().
40 dia.			

• For types with switch, minimum stroke length varies depending on installation method. Refer to the below table.

Min. stroke length of types with switch

• Min. stroke length may differ depending on installation method of switch. Refer to below table.

Rough sketch	When different surface installation		When same surface installation	
	Grommet	Terminal box	Grommet	Terminal box
20 dia.	15mm	15mm	30mm	32mm mount A
30 dia.				80mm mount B
40 dia.				

Note 1: When one switch is installed, the minimum stroke length is 10mm.

Switch specifications

Descriptions	Proximity 2 wire			Proximity 3 wire	
	R1	R2	R2Y (2 color)	R3	R3Y (2 color)
Applications	Programmable controller, relay, small solenoid valve	Programmable controller		Programmable controller, relay, IC circuit, solenoid valve	
Power voltage	—————	—————		DC4.5V to 28V	
Load voltage/current	AC85V to 265V 5 to 100mA	DC10 to 30V 5 to 30mA	DC30V or less		
			200mA or less	150mA or less	
Light	LED (ON lighting)		Red/green LED (ON lighting)	LED (ON lighting)	Red/green LED (ON lighting)
Max. shock resistance	980m/s ² {100G}				

Descriptions	Reed 2 wire			
	R0	R4	R5	R6
Applications	Relay, programmable controller	High capacity relay, solenoid valve	Programmable controller, relay, IC circuit (without indicator light), serial connection	Programmable controller (DC self hold type)
Power voltage	—	—	—	—
Load voltage/current	DC $\frac{1}{2}$ V, 5 to 50mA AC110V, 7 to 20mA AC220V, 7 to 10mA	AC110V, 20 to 200mA AC220V, 10 to 200mA	DC5/12/24V, 50mA or less AC110V, 20mA or less AC220V, 10mA or less	DC24V, 5 to 50mA
Light	LED ON lighting	Neon light OFF lighting	None	LED ON lighting
Max. shock resistance	294m/s ² {30G}			

Note 1: Please refer to Ending 1 about other switch specifications.

Valve specifications (brake release)

Descriptions	Specifications		
Rated voltage (V)	AC100V(50/60Hz)	AC200V(50/60Hz)	DC24V
Starting current (A)	0.056/0.044	0.034/0.026	0.075
Holding current (A)	0.028/0.022	0.017/0.013	
Power consumption (W)	1.8/1.4	2.1/1.6	1.8
Voltage fluctuation range	±10%		
Insulation class	Class B molded coil		

• Note 1: AC100/200V coil is available for AC110/220V (60Hz).

Cylinder mass

(Unit: kg)

Bore size (mm)	Product mass when stroke length (S)=0mm					Switch mass		Valve mass	Additional mass per S = 10mm
	Basic type (00)	Alxial foot type (LB)	Flange type (FA)	Clevis type (CA)	Trunnion type (TA/TB)	Grommet	Terminal box		
20 dia.	0.58	0.73	0.64	0.71	0.63	0.04	0.03	0.07	0.01
30 dia.	1.14	1.40	1.29	1.35	1.24	0.04	0.03		0.014
40 dia.	1.91	2.17	2.06	2.13	2.07	0.04	0.03		0.02

(E.g.) JSM2-V-LB-20-100-2-RO-D

When S = 0mm, product mass is 0.73kg
 Additional mass at S = 100mm is $0.01 \times \frac{100}{10} = 0.1\text{kg}$
 Mass of two switches is 0.08kg
 Product mass is 0.73kg + 0.1kg + 0.08kg = 0.9kg

With brake
Brake cylinder (medium bore size)

JSM2/JSM2-V Series

How to order

Without switch

JSM2-V - LB - 20 - 50 - 1 - P I

With switch

JSM2-V - LB - 20 - 50 - 1 - R0 - R - P I

A Model

B Mounting style

C Bore size

D Stroke length

E Valve voltage

F Switch model No.

G Switch quantity

H Option

I Accessory

A Model

Double
acting
JSM2
With solenoid
valve
JSM2
- V

Symbol	Descriptions			V			
B Mounting style							
00	Basic type		●	●			
LB	Axial foot type		●	●			
FA	Rod side flange type		●	●			
CA	Eye bracket		●	●			
TA	Rod side trunnion type		●	●			
TB	Head side trunnion type		●	●			
C Bore size (mm)							
20	20 dia.		●	●			
30	30 dia.		●	●			
40	40 dia.		●	●			
D Stroke length (mm)							
25/50/75/100/125/150/175/200/250/300							
E Valve voltage							
1	AC100V(50/60Hz)			●			
2	AC200V(50/60Hz)			●			
3	DC24V			●			
F Switch model No.							
Grommet type	Terminal box type		Contact	Display	Lead wire		
	Standard type	Splash-proof					
R1 *	R1B	R1A	Proximity	1 color indicator	2 wire	●	●
R2 *	R2B	R2A		2 color indicator		●	●
R2Y *	R2YB	—		2 color indicator	3 wire	●	●
R3 *	R3B	R3A		1 color indicator		●	●
R3Y *	R3YB	—		2 color indicator		●	●
R0 *	R0B	R0A	Reed	1 color indicator	2 wire	●	●
R4 *	R4B	R4A				●	●
R5 *	R5B	R5A				●	●
R6 *	R6B	R6A				●	●
*Lead wire length							
Blank	1m (standard)					●	●
3	3m (option)					●	●
5	5m (option)					●	●
G Switch quantity							
R	One on rod side					●	●
H	One on head side					●	●
D	Two					●	●
T	Three					●	●
4	With 4 switches (If more than 4 switches, indicate switch quantity.)					●	●
H Option							
		Max. ambient	Instant. max.				
J	Bellows	100 °C	200 °C			●	●
L	Bellows	250 °C	400 °C			●	●
M	Piston rod material change (stainless steel)					●	●
P	Same port position					●	●
U	Brake cover					●	●
I Accessory							
I	Rod eye					●	●
Y	Rod clevis					●	●
B2	Clevis bracket					●	●

Caution for model No. selection

Note 1: Low hydraulic type is available as custom order.
In model No., JSM2 -H and JSM2-VH are provided.

<Example of model number>

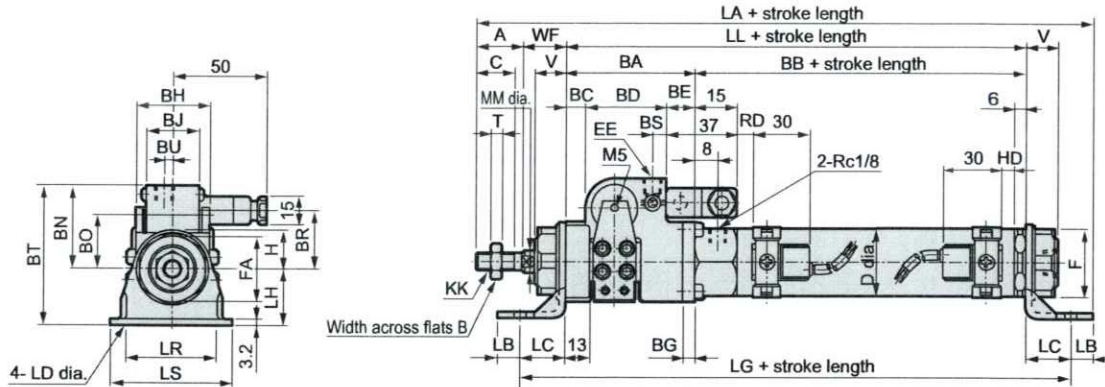
JSM2-V-LB-20-50-1-R0-R-PI

Model: Medium bore size brake cylinder with solenoid valve

- A Model : With solenoid valve
- B Mounting style : Axial foot type
- C Bore size : 20mm
- D Stroke length : 50mm
- E Valve voltage : AC100V
- F Switch model No: Reed switch R0
- G Switch quantity : One on rod side
- H Option : Same port position
- I Accessory : Rod eye

Dimensions

• Axial foot type (LB)

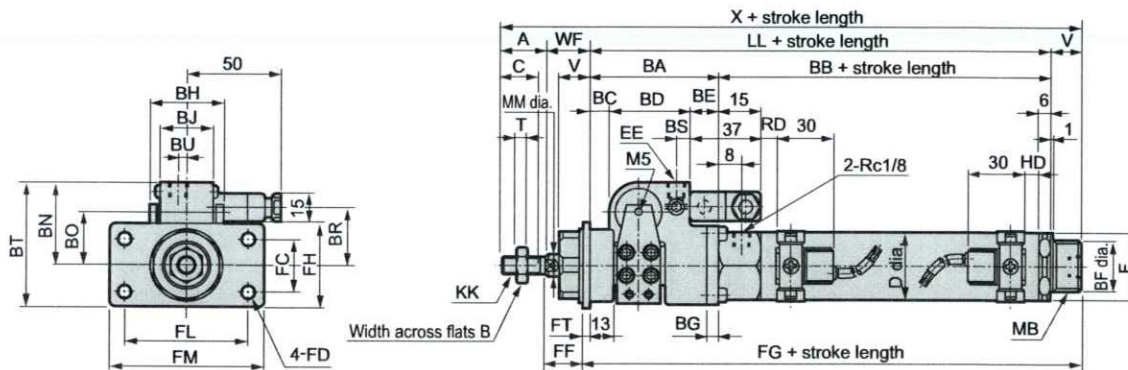


• Note 1: Brake section exhaust port size is as same as EE dimensions.

Note 2: Please refer to Page 885 about dimensions with bellows.

Symbol	Axial foot type (LB) basic dimensions																			
Bore size (mm)	A	B	BA	BB	BC	BD	BE	BG	BH	BJ	BT	BN	BO	BR	BS	BU	C	D	EE	F
20 dia.	20	13	58	66	9	30	19	5	30	21	62	37	19	29	4	3.8	18	25	M5	26
30 dia.	23	17	67	72	9.5	38.5	19	6	37	28	73.5	45	22	34.5	7	7	20	35	Rc1/8	35
40 dia.	25	19	74	74	8	48	18	8	44	32	84.5	55.5	25	39.5	7	7	22	45	Rc1/8	46
Symbol										Mounting dimensions								With switch		
Bore size (mm)	FA	H	KK		LL	MM	T	V	WF	LA	LB	LC	LD	LG	LH	LR	LS	HD	P	RD
20 dia.	26	15	M8 X 1.0		124	10	5	14	24	196	10	18	6	160	25	30	44	7.5	28	7.5
30 dia.	35	20	M10 X 1.25		139	12	6	16	23	220	12	23	7	185	30	46	62	10.5	34	10.5
40 dia.	35	20	M12 X 1.5		148	14	7	16	23	231	12	23	7	194	30	46	62	11.5	39	11.5

• Rod side flange type (FA)



• Note 1: Brake section exhaust port size is as same as EE dimensions.

Note 2: Please refer to Page 885 about dimensions with bellows.

Symbol	Rod side flange type (FA), basic dimensions																				
Bore size (mm)	A	B	BA	BB	BC	BD	BE	BF	BG	BH	BJ	BT	BN	BO	BR	BS	BU	C	D	EE	F
20 dia.	20	13	58	66	9	30	19	18	5	30	21	54	37	19	29	4	3.8	18	25	M5	26
30 dia.	23	17	67	72	9.5	38.5	19	26	6	37	28	65.5	45	22	34.5	7	7	20	35	Rc1/8	35
40 dia.	25	19	74	74	8	48	18	26	8	44	32	76.5	55.5	25	39.5	7	7	22	45	Rc1/8	46

Symbol											Mounting dimensions								With switch		
Bore size (mm)	KK		LL	MB		MM	T	V	WF	X	FC	FD	FF	FG	FH	FL	FM	FT	HD	P	RD
20 dia.	M8 X 1.0		124	M18 X 1.5		10	5	14	24	182	20	6	20.8	141.2	34	40	54	3.2	7.5	28	7.5
30 dia.	M10 X 1.25		139	M26 X 1.5		12	6	16	23	201	28	7	18.5	159.5	44	64	80	4.5	10.5	34	10.5
40 dia.	M12 X 1.5		148	M26 X 1.5		14	7	16	23	212	28	7	18.5	168.5	44	64	80	4.5	11.5	39	11.5