

LCM
 LCR
 LCG
 LCW
 LCX
 STM
 STG
 STS/STL
 STR2
 UCA2
 ULK*
 JSK/M2
 JSG
 JSC3/JSC4
 USSD
 UFCD
 USC
 UB
 JSB3
 LMB
 LML
 HCM
 HCA
LBC
 CAC4
 UCAC2
 CAC-N
 UCAC-N
 RCS2
 RCC2
 PCC
 SHC
 MCP
 GLC
 MFC
 BBS
 RRC
 GRC
 RV3*
 NHS
 HRL
 LN
 Hand
 Chuk
 MecHnd/Chuk
 ShkAbs
 FJ
 FK
 SpdContr
 Ending



Air bearing actuator
Single acting/push
LBC Series

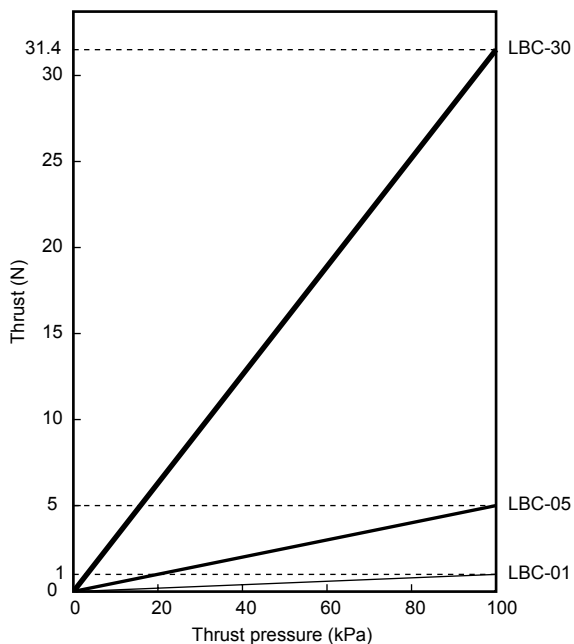


Specifications

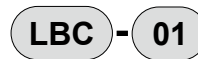
Item		LBC-01	LBC-05	LBC-30
Actuation		Single acting/push (*1)		
Working fluid		Clean compressed air (JIS B 8392-1: 2003 Grade 1.4.2 or equivalent)		
Working pressure MPa	Air bearing port	0.3 (≈44 psi, 3 bar) to 0.5 (≈73 psi, 5 bar)		
	Thrust port	0.002 (≈0.29 psi, 0.02 bar) to 0.1 (≈15 psi, 1 bar)		
Ambient temperature	°C	5 (41°F) to 35 (95°F)		
Proof pressure	MPa	0.75 (≈110 psi, 7.5 bar)		
Pressurized area	mm ²	10	50	314
Thrust range	N	0.02 to 1.0	0.1 to 5.0	0.6 to 31.4
Stroke length	mm	5 ⁺¹ ₀		30 ⁺¹ ₀
Allowable lateral load	N	1.2	0.8	4.0
Weight	g	50	45	345
Movable part weight (*2)	g	5	4.5	65
Bearing part air consumption (*3)	ℓ/min	2.5 or less	2.5 or less	7.5 or less

*1 : Rod return mechanism is not available.
 *2 : Movable part weight indicates the total weight of rod, stopper and cross headed flat head screw.
 *3 : Value when bearing pressure is 0.5 MPa

Thrust characteristics



How to order

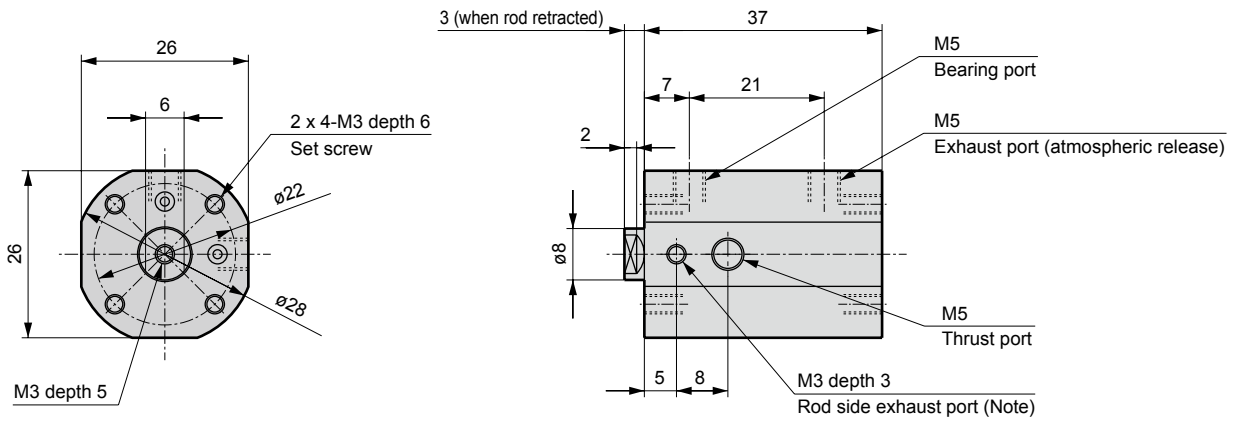


Code	Description
A	Thrust
01	1N
05	5N
30	30N

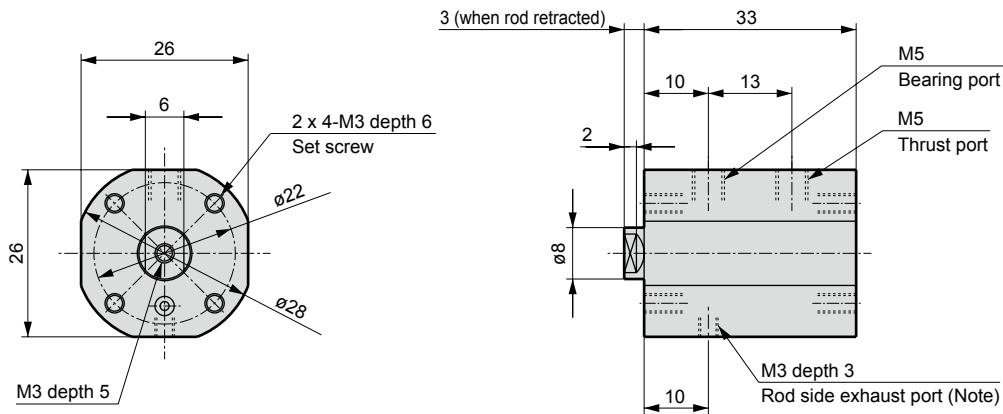
Dimensions



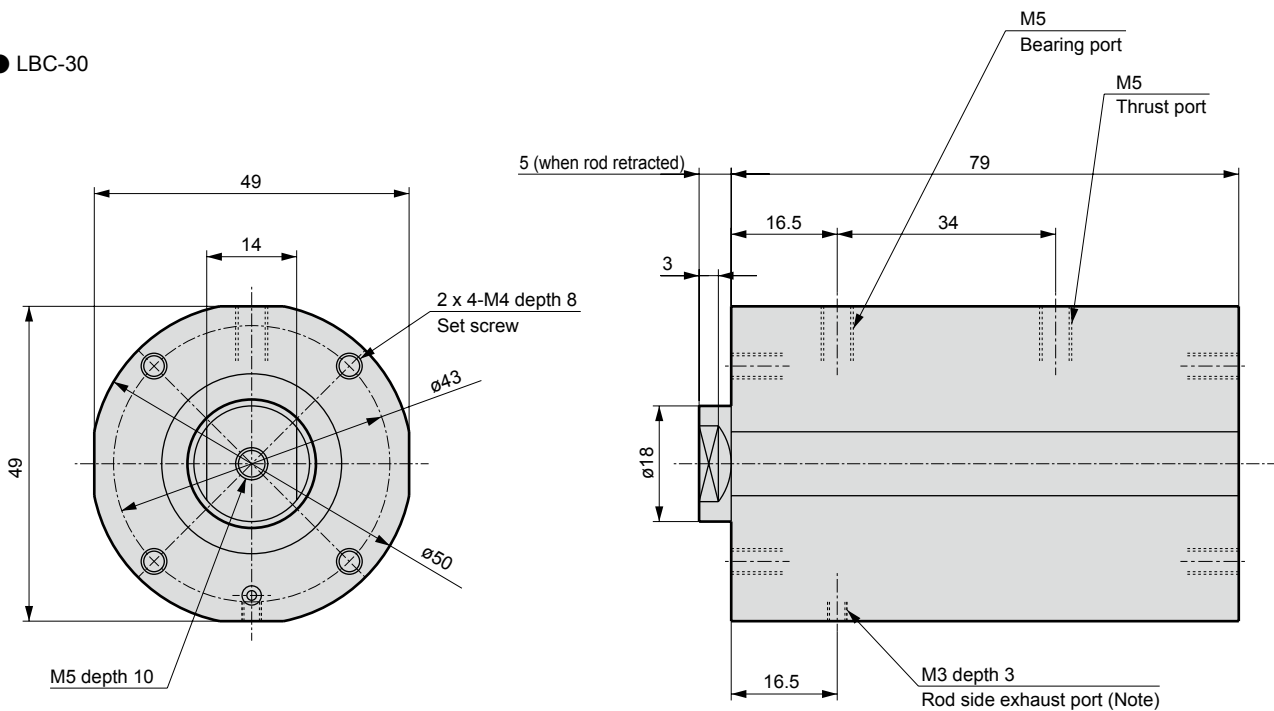
● LBC-01



● LBC-05



● LBC-30



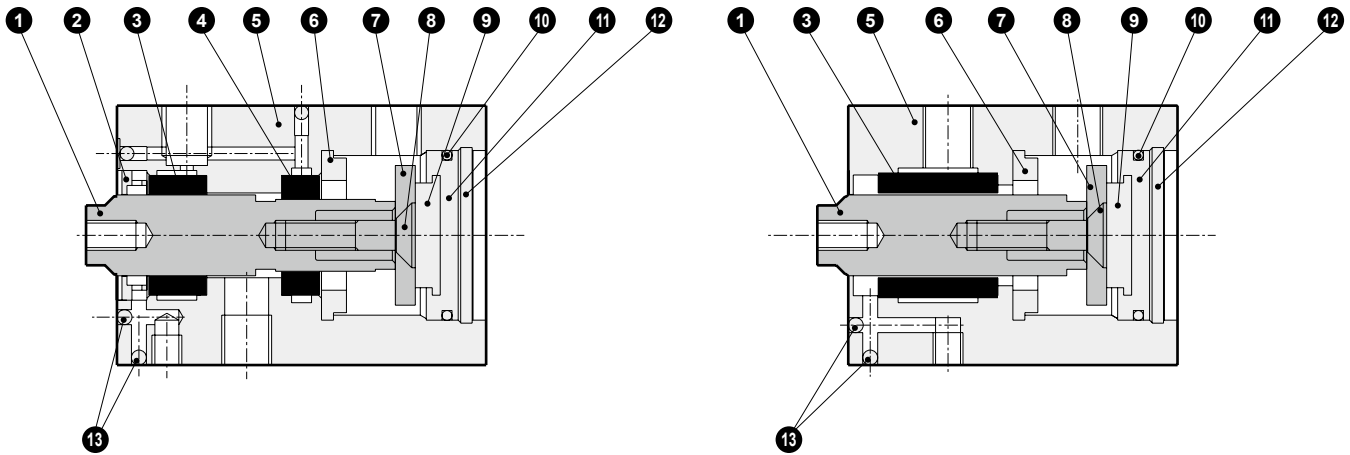
(Note) To prevent air leaks from the rod section, evacuate air from the rod side exhaust port using a vacuum generator.

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USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
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MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list

● LBC-01

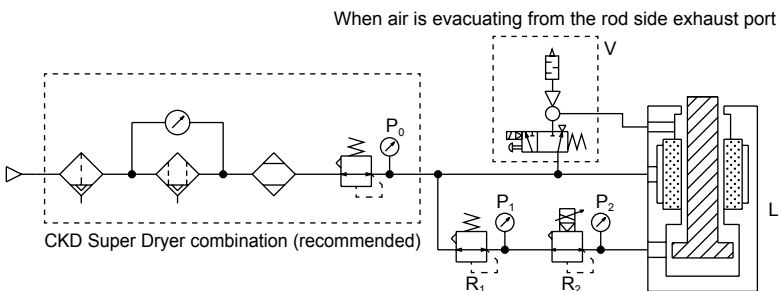
● LBC-05, 30



Cannot be disassembled

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Rod	Aluminum alloy		8	Cross headed flat head screw	Stainless steel	
2	Cap	Aluminum alloy	Alumite	9	Cushion rubber R	Urethane rubber	
3	Bush 1	Carbon graphite porous material		10	Gasket	Nitrile rubber	
4	Bush 2	Carbon graphite porous material		11	Base plate	Special aluminum	Chromate
5	Body	Aluminum alloy	Alumite	12	Snap ring for hole	Stainless steel	
6	Cushion rubber L	Urethane rubber		13	Steel ball	Stainless steel	
7	Stopper	Aluminum alloy	Alumite				

Circuits used



P_0 : Air bearing port supply pressure (0.3 to 0.5 MPa)
 P_1 : Electro pneumatic regulator supply pressure (0.2 MPa)
 P_2 : Thrust port supply pressure (0.002 to 0.1 MPa)
 R_1 : Regulator
 R_2 : Electro pneumatic regulator for LBC

ÉV25**-FL (Refer to pages 1001 to 1003 for details.)
 Details of customization
 · Control pressure 0 to 0.1 MPa (Control pressure accuracy is improved)
 · Fixed orifice (Pressure relief performance for low pressure range is improved)
 · Normally open (NO)
 (Prevents the rod from popping out when the power supply is turned OFF)

V : SELVACS (VSK)
 (Only when necessary to prevent air leak from the rod section)



Electro pneumatic regulator for LBC (made to order)

EV2500 Series

- Electro pneumatic regulator for air bearing actuator LBC
- Pressure control range: 0 to 0.1 MPa
- Actuation: NO

JIS symbol



Specifications

Item		EV2500-□08-FL			
Working fluid		Clean compressed air (JIS B 8392-1: 2012 Grade 1.3.2)			
Working pressure range		0.2 (≈29 psi, 2 bar) to 0.3 MPa (≈44 psi, 3 bar)			
Proof pressure		0.7 MPa (≈100 psi, 7 bar)			
Pressure control range		0 (≈0 psi, 0 bar) to 0.1 MPa (≈15 psi, 1 bar)			
Power supply voltage		24 VDC ± 10% (stabilized power supply with ripple rate 1% or less)			
Current consumption		0.1 A or less (0.6 A rush current when power is ON)			
Input signal (input impedance)		0 to 10 VDC (20 kΩ)	0 to 5 VDC (10 kΩ)	4 to 20 mADC or 1 to 5 VDC (250 Ω) *1	10 kΩ variable resistance or 0-10 VDC (20 kΩ)
Monitor output		1 to 1.8 VDC (none for 10 kΩ variable resistance input)			
Insulation resistance		100 MΩ (500 VDC) or more			
Withstand voltage		1500 VAC 1 min.			
Accuracy	Hysteresis	1% F.S. or less			
	Linearity	±0.5% F.S. or less			
	Resolution	0.5% F.S. or less			
	*2 Repeatability	0.5% F.S. or less			
Temperature characteristics	Zero point fluctuation	0.75% F.S./°C or less			
	Span fluctuation	0.35% F.S./°C or less			
Step response *3		0.6 s or less			
Vibration resistance		98 m/s ² or less (JISC60068-2-6)			
Operating ambient temperature range		5 to 50°C			
Mounting orientation		Free			
Port size		Rc1/4			
Weight		330 g			

*1 : When used with a signal voltage of 1 to 5 VDC, 4 to 20 mA of current flows into the EV interior from the signal source. Confirm specifications of the signal source before use.

*2 : The above characteristics are for FS 10 to 100% control pressure with a power supply voltage 24.0 VDC and a working pressure 0.3 MPa.

*3 : Working pressure: Max. working pressure and step feed: 50% F.S. → 100% F.S. 50%F.S. → 60%F.S. 50%F.S. → 40%F.S.

How to order

EV2500-0 08 - C11 B - FL298410

A Input signal

B Port size

C Other options
(Cable option)

C Other options
(Bracket option)

D (Identification number)

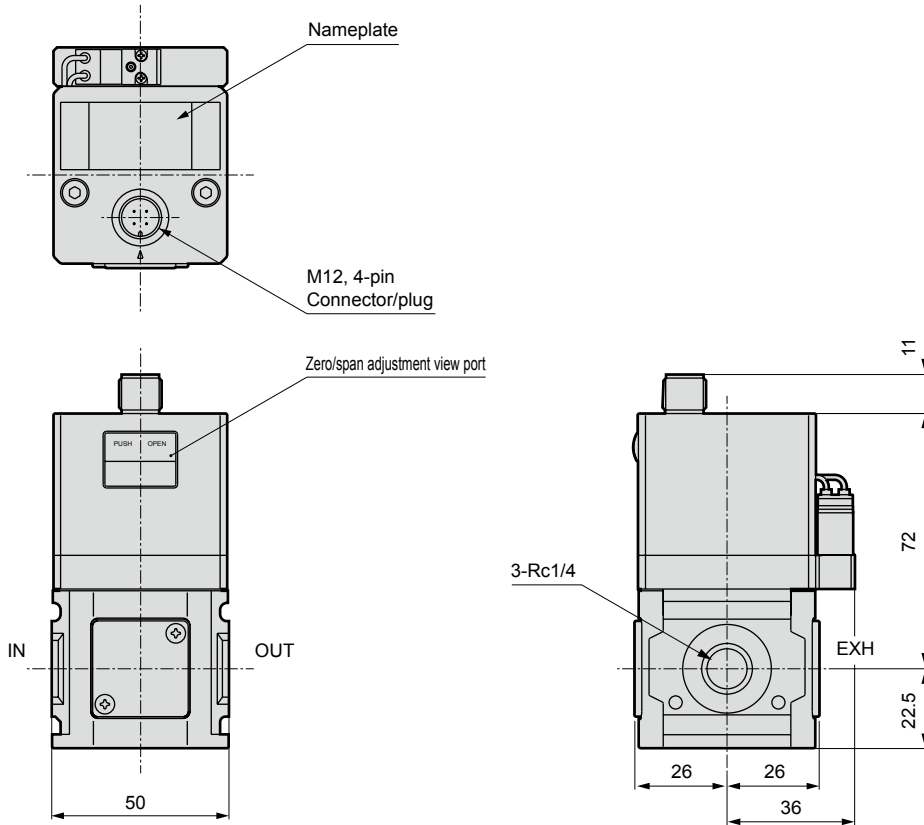
Code	Description
A Input signal	
0	0 to 10 VDC
1	0 to 5 VDC
2	4 to 20 mADC or 1 to 5 VDC
3	10 kΩ variable resistance or 0-10 VDC (connected to 10 VDC built-in power supply)
B Port size	
08	Rc1/4
C Other options	
Cable option	
Blank	None
C11	1 m attached
C13	3 m attached
Bracket option	
Blank	None
B	C type bracket attached
B4	B type bracket attached
D (Identification number)	
FL298410	For LBC-01
FL298411	For LBC-05
FL298412	For LBC-30

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JSC3/JSC4
USSD
UFCD
USC
UB
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCS2
RCC2
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HRL
LN
Hand
Chuk
MechHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

EV2500-FL Series

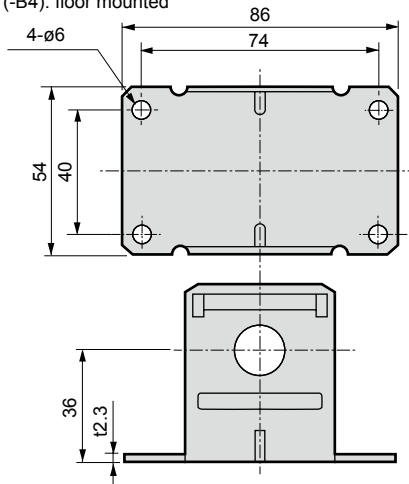
Dimensions

● EV2500-FL *****

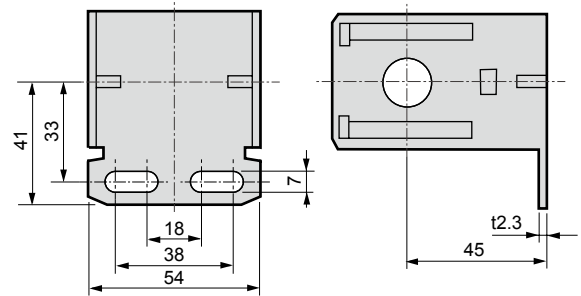


● Bracket option

B type bracket (-B4): floor mounted



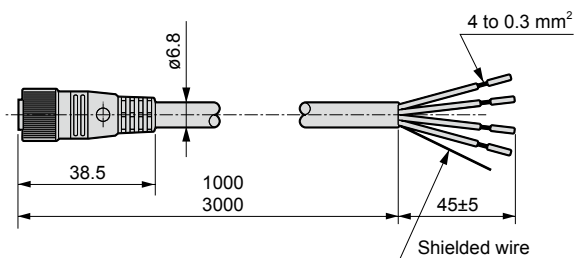
C type bracket (-B): wall mounted



Material : SPCC
Treatment: Zinc plated
Weight : 165g

Material : SPCC
Treatment: Zinc plated
Weight : 148 g

● Cable option



-C1* Shield/cable/connector

Pin No.	Insulator color	Applications	Type of input signal			
			0 to 10 V	0 to 5 V	4 to 20 mA 1 to 5 V	10 kΩVR (0 to 10 V)
1	Red	Power supply ⊕	24 V			
2	Green	—	Monitor output 1 to 1.8 V			VR input terminal
3	Black	Common	0 V			VR input terminal 0 V
4	White	Input signal	0 to 10 V	0 to 5 V	4 to 20 mA 1 to 5 V	VR output terminal (0 to 10 V)

If a cable connector is not used, the following recommended cable sockets (L type) can be used. Use a shielded wire cable.

Screw fixing ELWIK4012 Correns (Hirschmann)
Soldered XS2C-D422 OMRON Corporation

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- HCA
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- CAC-N
- UCAC-N
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