OM-EN-EB7P-3.20
September, 2024

EcoBooster®

Operation Manual

Type EB7P

FUJI BC ENGINEERING

Contents

FOR YOUR SAFETY

⚠WARNING Improper use of the equipment may cause serious injury or death.

⚠CAUTION Improper use of the equipment may cause injury or material damages.

⚠WARNING

- ●EcoBooster is the device for Micro lubrication system to cut metals. Do not use for other purposes.
- ●When flammable oil such as volatile oil is used, it may catch a fire.
- ●Air pressure should be less than 0.8MPa. When it was over 0.8 MPa, it may damage tubing and other devices.
- ●Do not expose to a material, such as strong acid, strong alkali, corrosive gas. They may damage tubing and other devices.

⚠CAUTION

- ●Use Bluebe LB-7 or LB-10 type oil. When other oil is used, it may damage the device.
- ●Do not fill the oil over H line. Drain the overflow oil from the drain valve.

Background Information
EcoBooster has been specifically designed to dispense controlled amount of Bluebe oil for variety of machining applications. Use of non-genuine oil in the system may result in damage to the unit.

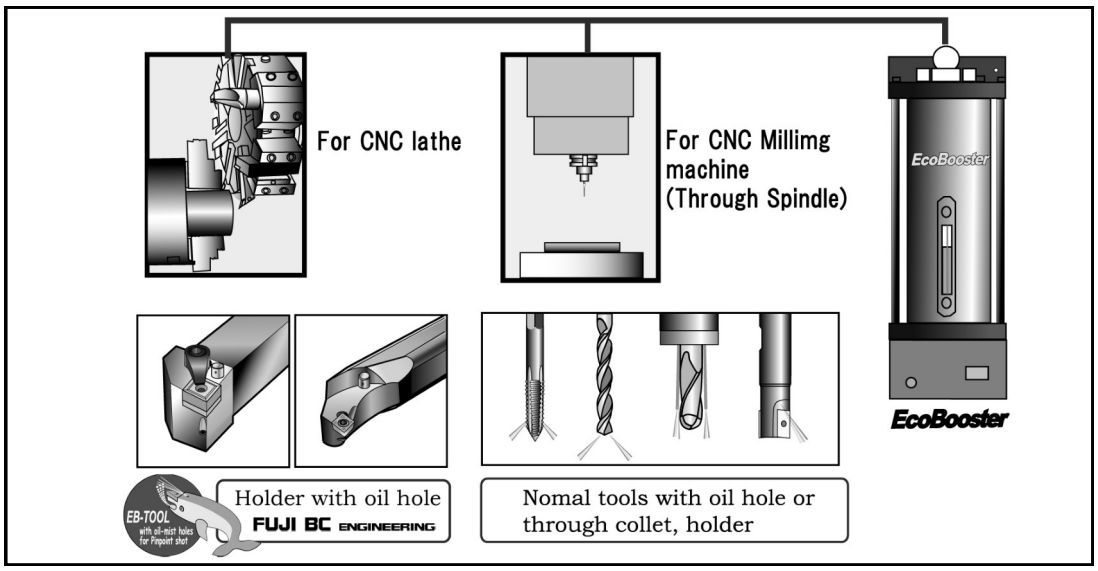
SPECIFICATION

○ Maximum working pressure	0.8 MPa
○ Working pressure range	0.4 ～ 0.8 MPa
○ Tank capacity	1,200mL
○ Oil consumption	2 ～ 70 mL/hour（Depend on use condition）
○ Pump strokes	0.125 Hz ～ 0.5 Hz (Max)
○ Mounting	M6 (2 holes)
○ Mist outlet	1 place (Φ12 tube connector)
○ For input connect	OIL DETECTOR (in Tank)
○ For output connect	EB OPRATION SOLENOID VALVE
○ Dry weight	8kg

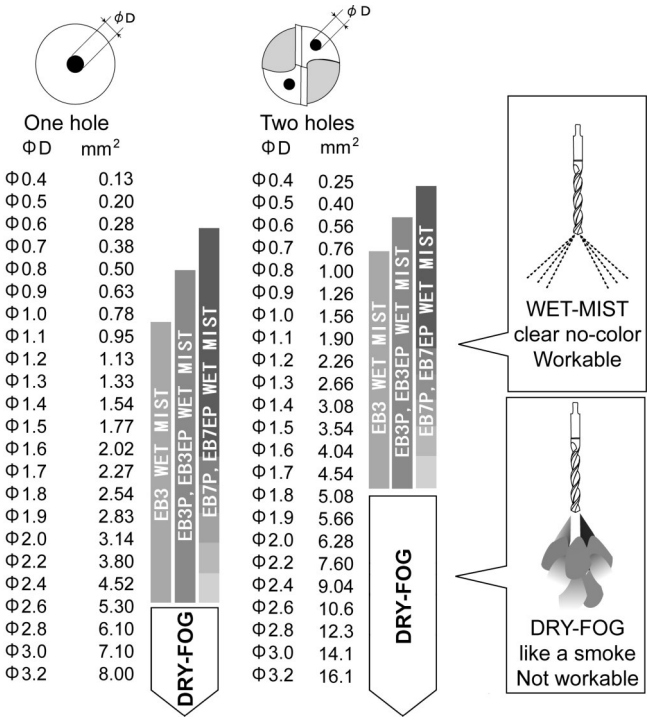
SET UP OF OIL DETECTOR

Oil level may vary due to the change of air pressure and other reasons. Specific gravity of oil may also change due to the volume of air in the oil. Under these conditions ,the use of "timer" is highly recommended. Alarm signal of oil detector (float switch) shall be activated only when the signal stays at the same condition for a certain period.
Recommendation of timer set up: 15 minutes for EB7P

Recommended tools



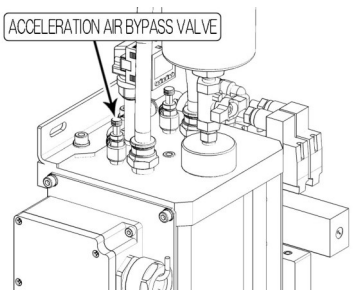
Cutting tool / Holder	Total cross section area
Gap(sukima) through	0.3 mm² < Total cross sectional area < 2.0 mm²
Collett through nozzle	
Drill with oil hole	
Tap with oil hole	
Milling tool with oil hole	
Bluebe ***EB-TOOL***	Optimized for *EcoBooster*



Recommended oil hole diameter

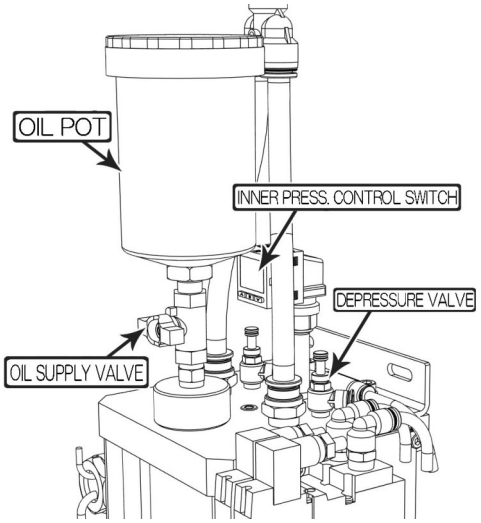
Dry mist does not adhere to the inside of piping or spindle but it must be liquefied at the cutting point. Oil hole diameter need to be between 0.3mm² to 2mm² in diameter to obtain the workable condition of EB7P.

Open Acceleration air bypass valve when oil hole diameter is more than 2mm². (Supported cross sectional area within 5mm².)



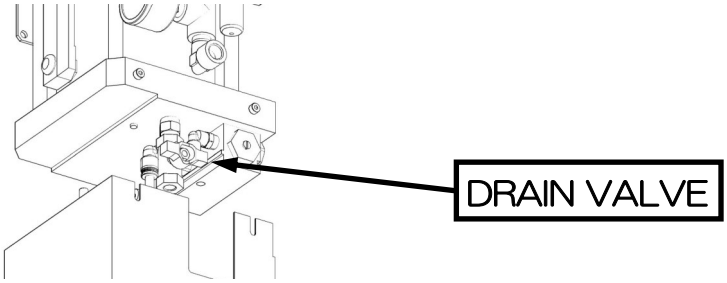
HOW TO USE

PROCEDURE TO FILL THE OIL



⚠CAUTION
Depressurize oil tank (EB body) before filling the oil by the DEPRESSURE VALVE.

1. For your safety, be sure to stop the operation of the EcoBooster when oil is refilled.
2. Depressurize the oil tank before filling the oil by the DEPRESSURE VALVE.
3. Check if the tank is completely depressurized.
4. Remove the OIL POT cap.
   Do not allow any dust in the OIL POT.
5. Fill up the OIL POT.
   The capacity of the OIL POT is about 300ml.
6. Supply oil from OIL POT to the tank by opening the OIL SUPPLY VALVE.
7. When the filling level is not enough, repeat 5 & 6 again.
8. Do not fill oil over the H-level.
   When the filling level is over the H-level, drain the oil from drain valve.
9. When oil is filled, tighten the OIL POT cap and shut off the OIL SUPPLY VALVE & the DEPPRESSURE VALVE.



Air Supply

Working pressure range 0.4MPa～0.8MPa
Keep the minimum air pressure while operating the EcoBooster.
To avoid the trouble of the applicator, supply air has to be filtered, water-free and oil-free.

Air Control

a) Mist air
   When the solenoid valve for controlling mist air line is ON, it always supplies constant amount of dry mist (micro lubricant droplets).
   Inner pressure control switch control the solenoid valve ON/OFF.
   See the “ICONFIGURATION OF INNER PRESSURE CONTROL SWITCH” to set the pressure switch.

b) Acceleration air
Inner air pressure changes when the size of oil hole of the tools changes. When oil hole get larger, inner air pressure decreases. When inner pressure get lower and need more air to generate dry mist, acceleration air start to work together with the Mist air.
See the "CONFIGURATION OF INNER PRESSURE CONTROL SWITCH" to set the pressure switch.

Furthermore, EB7P has the air bypass line (manual adjustment) to add more air to hold the necessary air pressure level in the chamber. If inner pressure switch indicates the figure lower than set value at n-1, open the air bypass line to boost the reading between n-1 and (n-1+H1). If reading stays under the n-1 value, it means the oil hole of that particular tool is too big. It is suggested to set the tool which has biggest oil hole and run the applicator to test if air pressure can be adjusted. If not, hole need to be plugged and drilled again for smaller hole.
However, please keep in mind that too much of additional air supply may disturb creating the mist in the chamber.

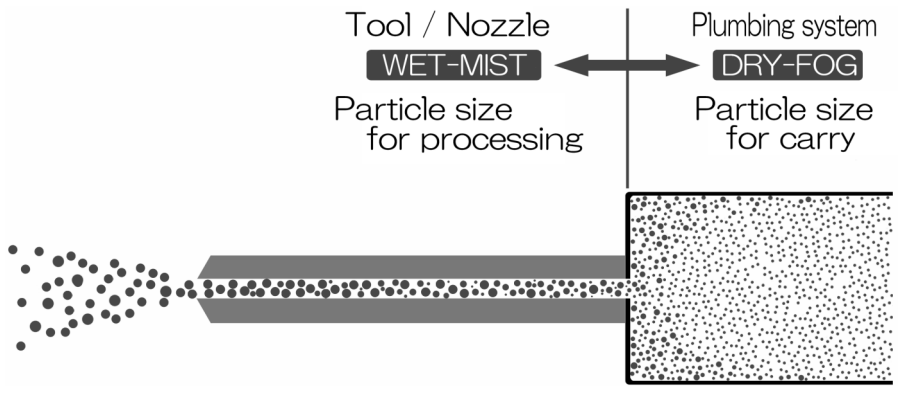
Caution: If you see white smoke at the tip of the cutting tool, it means the size of hole is too big. Make the oil hole smaller. Acceptable size of oil hole is 0.3—2.0 mm^2 in total.

FREQUENCY GENERATOR
This device controls the pumping cycle. The standard cycle of the pump is one stroke per two second. Adjustment is made by changing the position of the indicator using a screw driver. Time the sound interval. Sound of 1 times / 2 sec. is for maximum dispense volume and 1 time / 8 sec. is for minimum volume.

OIL CONSUMPTION
Oil consumption is determined by the combination of frequency generator and oil hole size of the tool. Standard consumption is 4ml per one hour. Oil consumption depends on cutting condition and size of oil hole of tools. From 2ml to 20ml per on hour is normal range of consumption.

Key factor to smart use.

Dry Fog does not adhere to the inside of piping or spindle but it must be liquefied to Wet-Mist at the cutting point. Therefore, it is necessary to narrow the tool oil hole, and to liquefy Dry fog. Refer to "Recommended tools" for details.



CONFIGURATION OF INNER PRESSURE CONTROL SWITCH

Why Inner Pressure control switch required.

EcoBooster generates dry mist in the unit (chamber) by utilizing difference pressure of supplied air and that of tank inside. Basically, the
hole of cutting tools has been changed, pressure of tank inside is changed so inner pressure must be maintained with oil holes of cutting tool changed every time. Inner Pressure control switch offers above issue to keep the difference of pressure constant with cutting tools changed.

Here shows pressure switch configuration.
The configuration value depends on supplied air pressure. Please read “How to configure inner pressure switch” in detail.

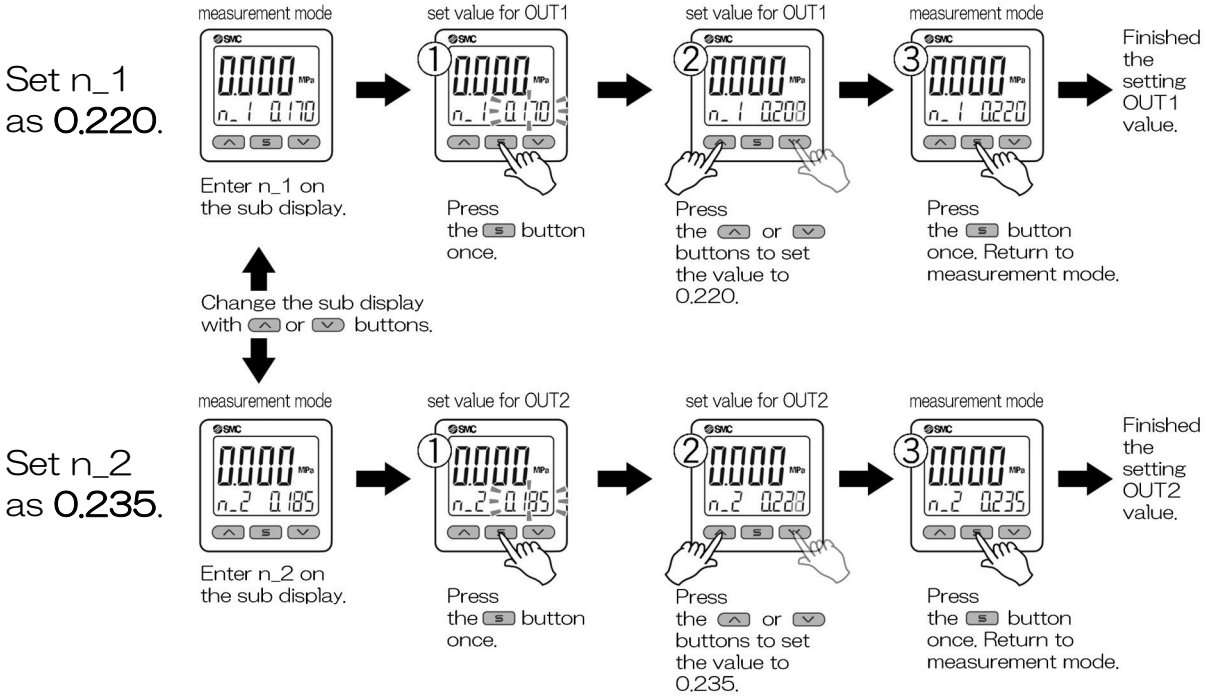
Example ▶

	Acceleration Air OUT1		Mist Air OUT2	
Air Supply	n_1	H_1	n_2	H_2
0.4 MPa	0.170	0.020	0.185	0.015
0.5 MPa	0.220	0.020	0.235	0.015
0.6 MPa	0.320	0.020	0.335	0.015
0.7 MPa	0.440	0.020	0.435	0.015
0.8 MPa	0.540	0.020	0.535	0.015

Be sure to set the value as indicated according to the given air supply pressure. See the setting procedure at next page.

How to set INNER PRESSURE CONTROL SWITCH

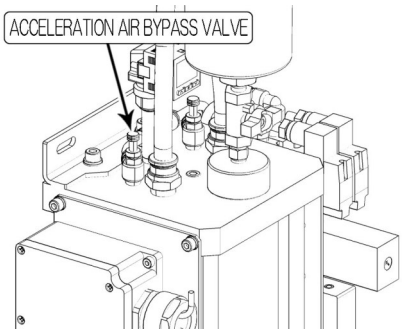
Example for Supply air pressure of 0.5MPa

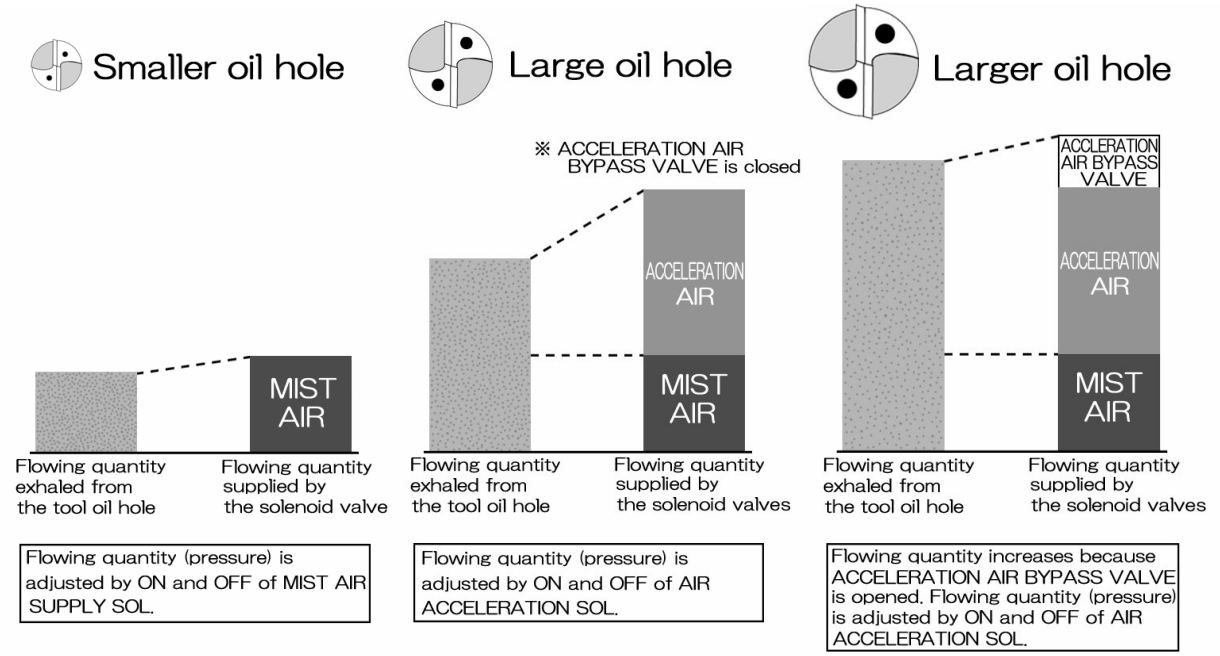


※ Please look at the Digital Pressure Switch operation manual attached at the end.

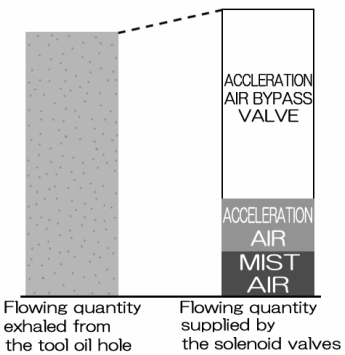
ACCELERATION AIR BYPASS VALVE SETTING

Flow quantity of mist is increases when oil hole diameter is larger. And inner pressure is goes down to maintain the proper differences between air supply and inner pressure, additional air need to be supplied by ACCELERATION AIR BYPASS VALVE .
Use the large oil hole diameter among tolls at ATC to set up the inside pressure of EcoBooster. Open the ACCELERATION AIR BYPASS VALVE until the value of INNER PRESS. CONTROL SW. stays within the set value.
If ACCELERATION AIR BYPASS VALVE was adjusted once, it is not necessary to adjust ACCELERATION AIR BYPASS VALVE as long as the large oil hole tool in ATC is not changed. EcoBooster will control the inner pressure automatically according to the tools in ATC.



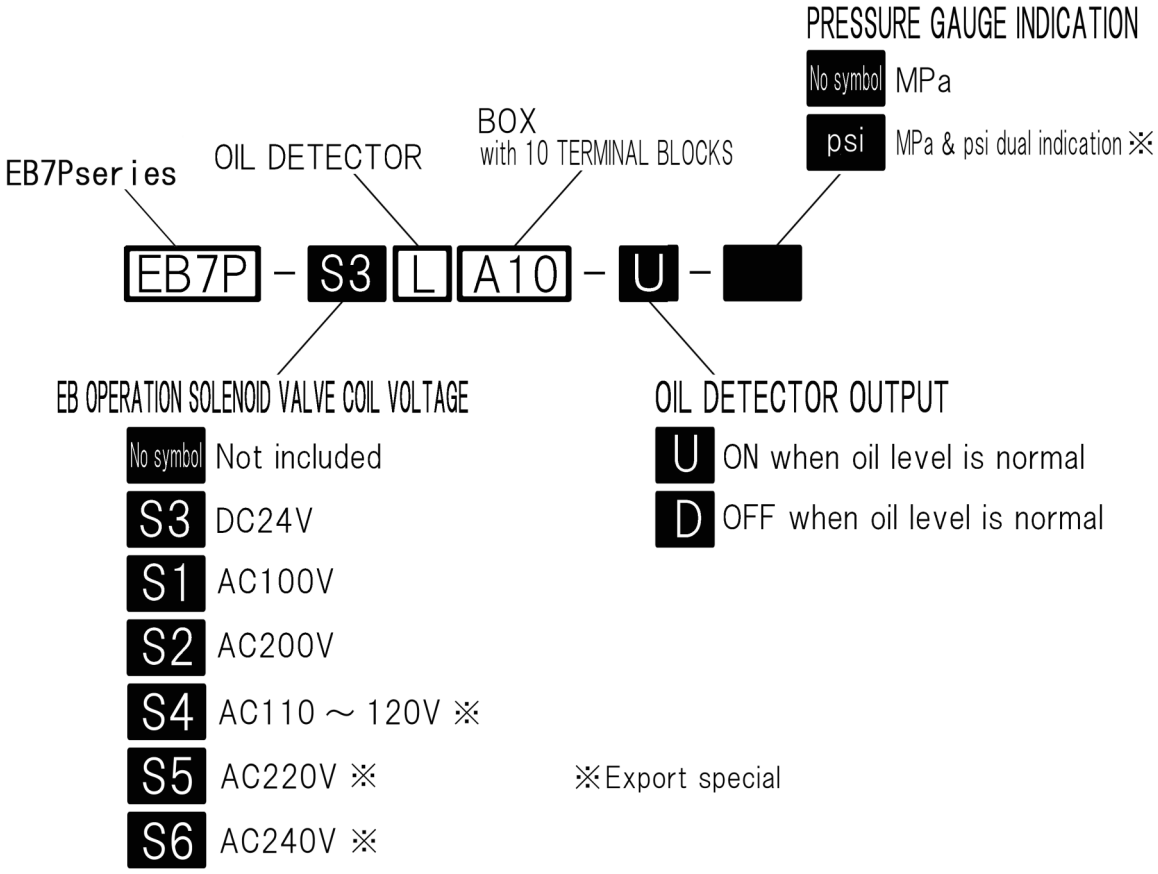


Open ACCELERATION AIR BYPASS VALVE too much, if so・・・



The air supplied by the ACCELERATION AIR BYPASS VALVE is not to make mist. It helps to maintain pressure in the chamber when necessary. When the ACCELERATION AIR BYPASS VALVE is opened too much, pressure in the chamber can be maintained by air but it doesn't make mist. As a result, mist quantity decreases.
It is important to set the ACCELERATION AIR BYPASS VALVE at the minimum requirement that can maintain proper pressure in the chamber. Concretely, adjust the AIR ACCELERATION SOL to turn off once every 3 to 5 seconds.

EB7P TYPE SELECTION GUIDE



A standard type : EB7P-S3LA10-U

Other types : EB7P-S3LA10-D ,
EB7P-S1LA10-U , EB7P-S1LA10-D ,
EB7P-S2LA10-U , EB7P-S2LA10-D ,
EB7P-LA10-U , EB7P-LA10-D ,
EB7P-S4LA10-U ※ , EB7P-S4LA10-D ※ ,
EB7P-S5LA10-U ※ , EB7P-S5LA10-D ※ ,
EB7P-S6LA10-U ※ , EB7P-S6LA10-D ※ ,
EB7P-S3LA10-U-psi ※ , EB7P-S3LA10-D-psi ※ ,
EB7P-S1LA10-U-psi ※ , EB7P-S1LA10-D-psi ※ ,
EB7P-S2LA10-U-psi ※ , EB7P-S2LA10-D-psi ※ ,
EB7P-LA10-U-psi ※ , EB7P-LA10-D-psi ※ ,
EB7P-S4LA10-U-psi ※ , EB7P-S4LA10-D-psi ※ ,
EB7P-S5LA10-U-psi ※ , EB7P-S5LA10-D-psi ※ ,
EB7P-S6LA10-U-psi ※ , EB7P-S6LA10-D-psi ※

Types not mentioned above are applicable only for the machine manufacturer.

RECOMMENDED LUBRICANTS

Viscosity of oil is important factor to generate micro lubricant droplets. Also from the safer work condition view point, we recommend the following oil to use.

Bluebe LB-7, or LB-10 (in JAPAN)
Accu-lube LB-6000 (in USA, Europe)

WARRANTY

EcoBooster is backed with One-year Limited Warranty against defects in workmanship and/or materials. Warranty applies only when used under normal operating conditions. Warranty does not applied if a lubricant other than recommended oil is used.

CONTACT

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616 East Industrial St. DeWitt, Iowa 52742
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GERMANY ACCU-LUBE MFG. GMBH
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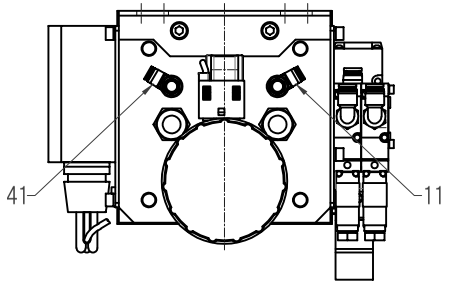
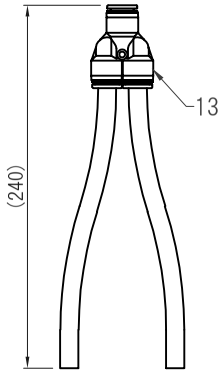
TEL: 91-8455-224700 FAX: 91-8455-224705

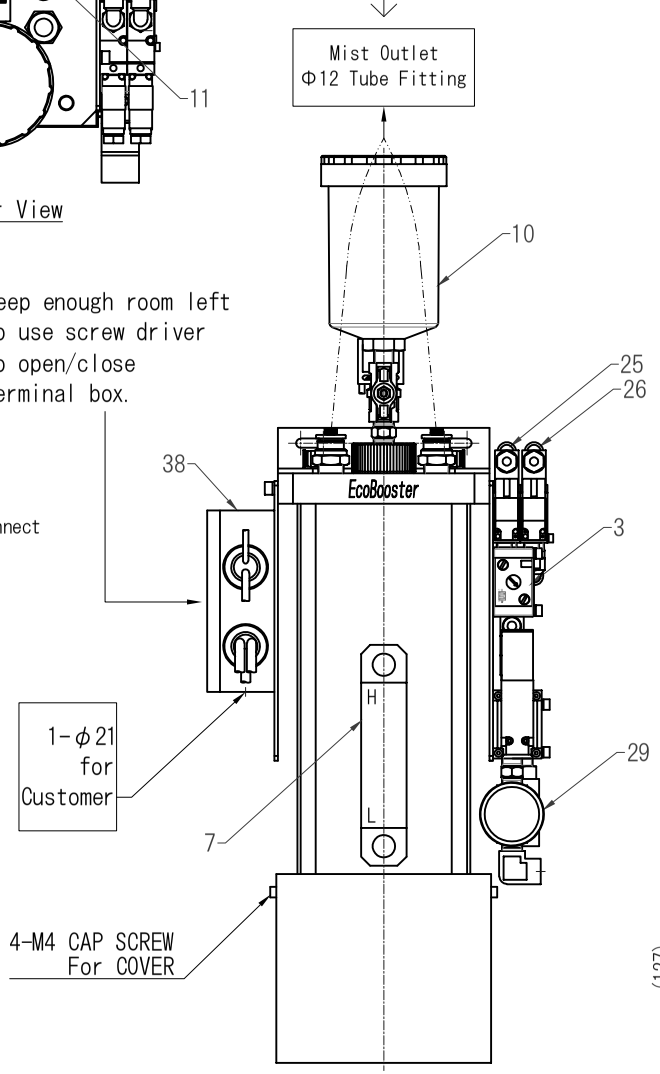


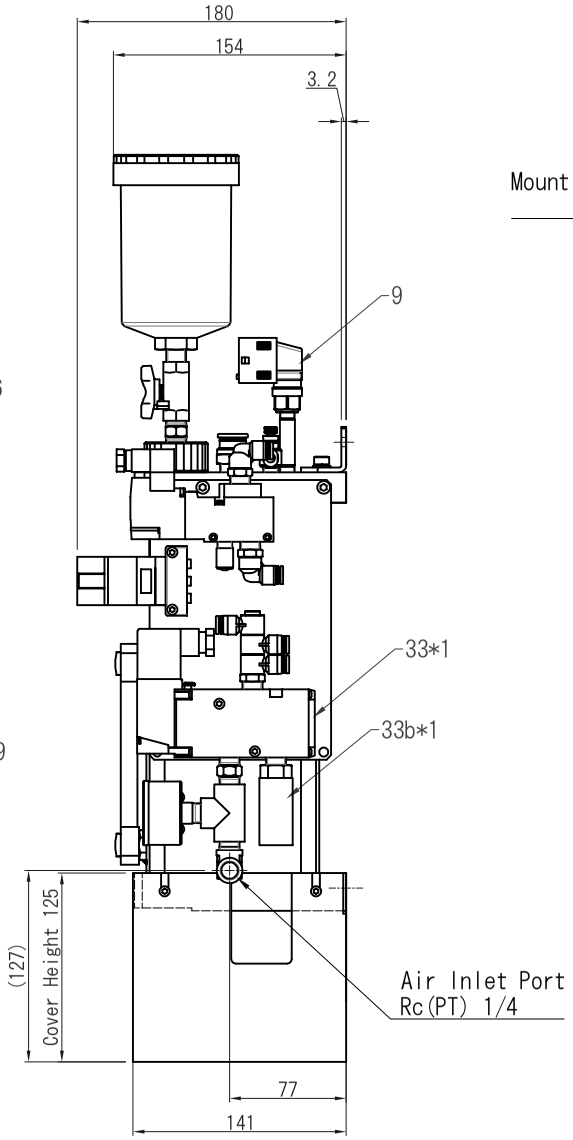
A:Upper View

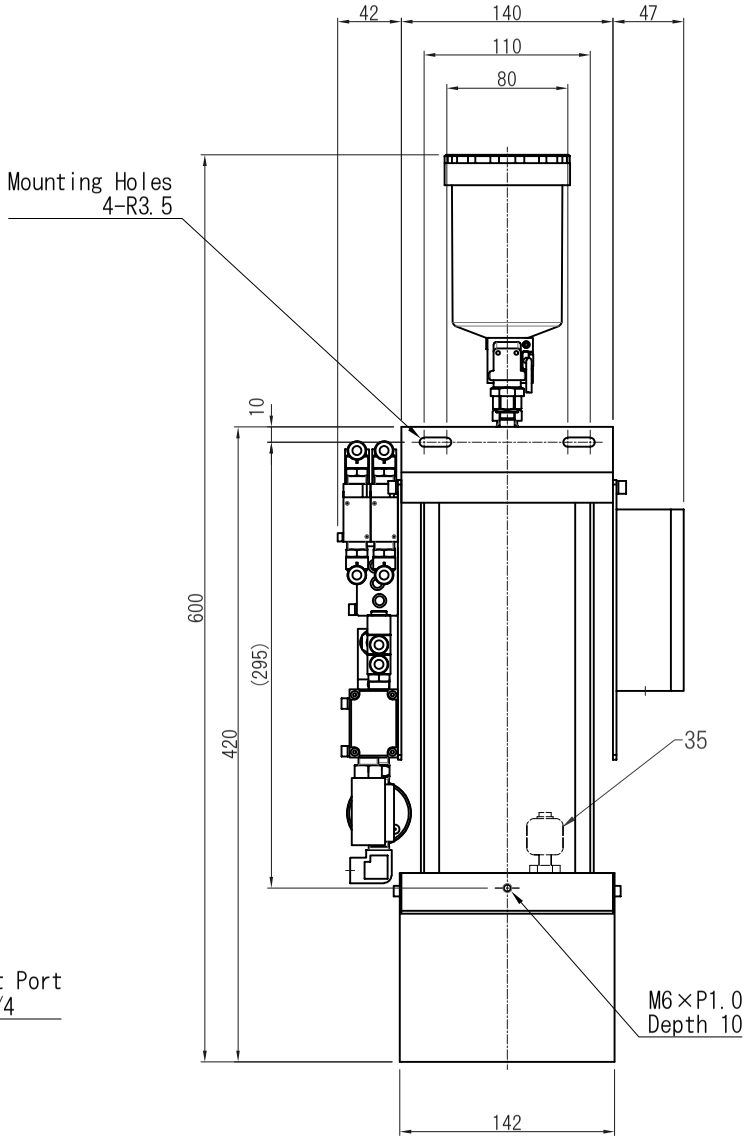
Install and keep EcoBooster vertically.
Keep enough room on the top and bottom of EcoBooster to fill lubricant, set piping, remove bottom cover and drain lubricant.



Accessories:
Union Y Φ12 Tubes (Connect to Mist outlet)





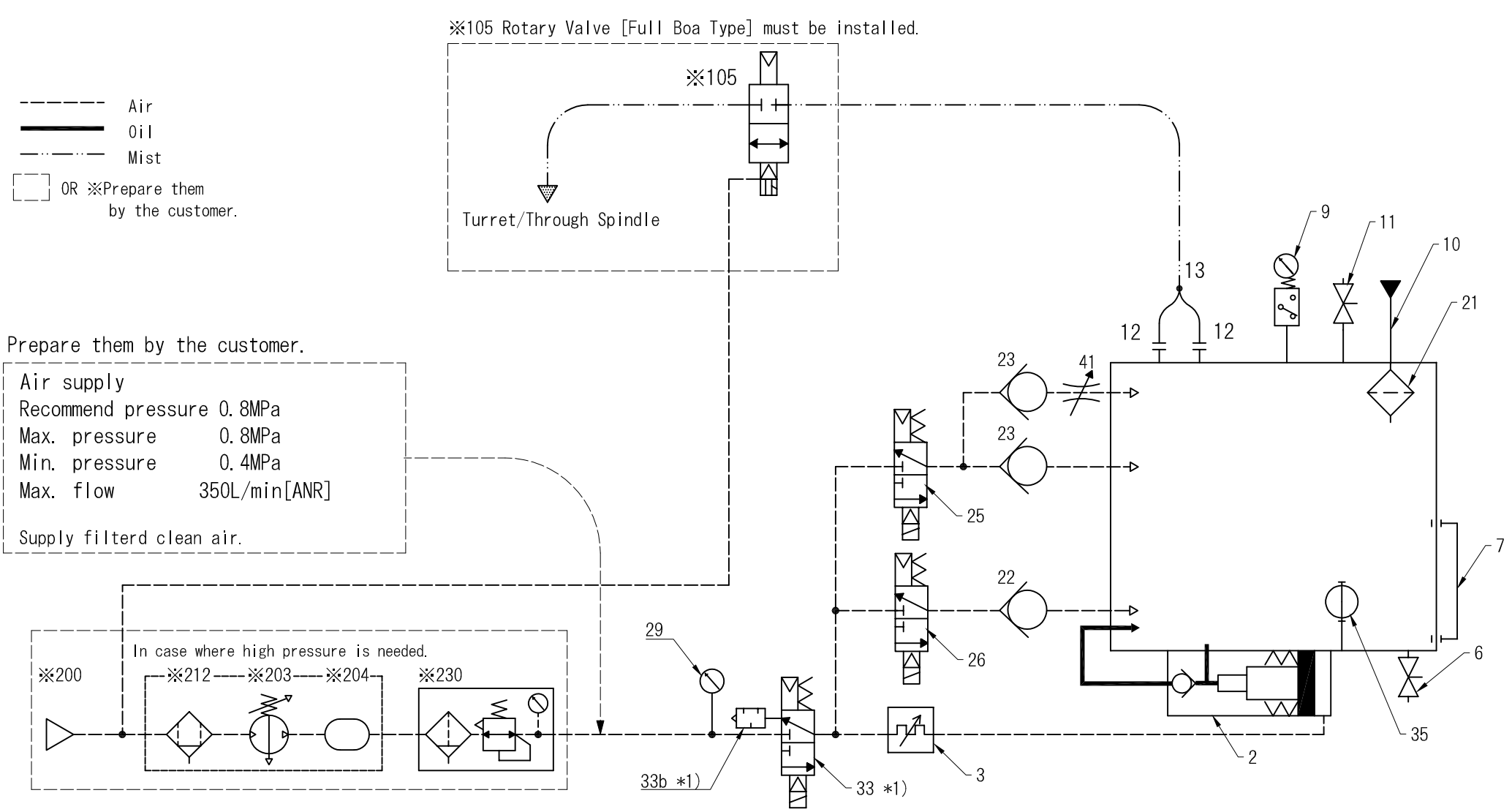


*1) Solenoid valves (Item 33 and 33b) to operate EB are not equipped when model number does not offer "S□".

PAPER SIZE : A4

REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	TITLE
	'20.09.10	INOUE	技術 '20.09.11 前野	エンジBC技研 '20.09.11 伊藤学	開発 '20.09.17 井上	EcoBooster EB7P Outline
	FUJI BC ENGINEERING CO.,LTD				3RD ANGLE PROJECTION	SCALE 1:5 / DRAWING CODE EN-EB7P-01-STD3.10

※105 Rotary Valve [Full Boa Type] must be installed.



※ They are not included in EcoBooster.

*1) Solenoid valves (Item 33 and 33b) to operate EB are not equipped when model number does not offer "S□".

PAPER SIZE : A 4

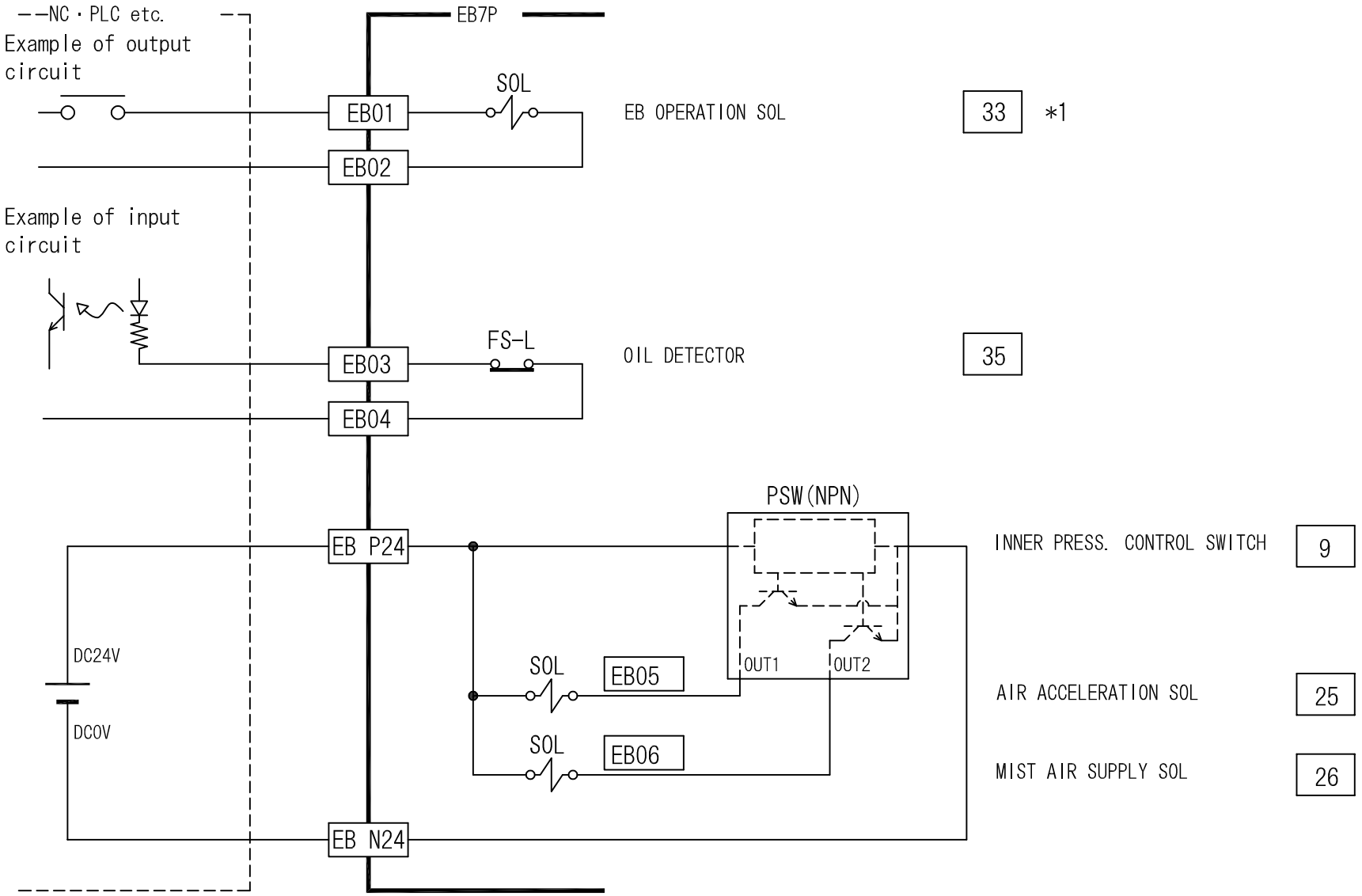
REVISIONS	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	TITLE
	'18.06.06	INOUE	MAENO	SAKAI	GOTO	Ecobooster EB7P Flow Sheet
	FUJI BC ENGINEERING CO.,LTD				3RD ANGLE PROJECTION	SCALE: – / DRAWING CODE: EN-EB7P-02-STD3.01

EcoBooster EB7P Parts List

Drawing Code: EN-EB7P-03-STD3.20 '24.08.20

No.	ITEM	Q'ty	MAKER	TYPE	REMARKS
2	BX PUMP	1	FUJI BC	7250	
3	FREQUENCY GENERATOR	1	FUJI BC	9707	
6	DRAIN	1	KITZ	TKT1/8	
7	OIL LEVEL GAUGE	1	KYOWA	KHR-120A-M10	
9	INNER PRESS. CONTROL SW	1	SMC	ISE20C-X-M-C01L-W	2 NPN OUTPUT
10	OIL SUPPLY	1	FUJI BC	EB7CAP	OIL POT:300mL
11	DEPRESSURE VALVE	1	PISCO	JNC6-01	
12	MIST OUTLET	2	PISCO	PC12-03	
13	UNION Y	1	PISCO	PY12	
21	OIL FILTER	1	FUJI BC	102TNK2103	
22	CHECK VALVE	1	PISCO	CVU6-6FN	MIST AIR LINE
23	CHECK VALVE	2	PISCO	CVU6-6FN	ACCELERATION AIR LINE
25	SOLENOID VALVE(AIR ACCELERATION)	1	SMC	VQZ312K-5YZB1-02	DC24V
26	SOLENOID VALVE(MIST AIR)	1	SMC	VQZ312K-5YZB1-02	DC24V
29	PRESSURE GAUGE	1	SMC	GA46-10-02	Air supply
33	EB OPERATION SOLENOID VALVE ※	1	SMC	VP542K-5DUE1-02A VP542K-1DZE1-02A VP542K-2DZE1-02A	DC24V AC100V AC200V
33b	SILENCER ※	1	SMC	ANA1-02	
35	FLOAT SWITCH(OIL DETECTOR)	1	NOHKEN	OLV-5	
38	TERMINAL BOX	1	TOYOGIKEN	BOXTM-1002	10 TERMINAL BLOCKS
41	ACCELERATION AIR BYPASS VALVE	1	PISCO	JNC6-01	
				Prepare it by the customer.	
105	Rotary valve (Air operated type 2 port valve)		CKD	CHB-V1-10-0L-☐ (☐ : Coil voltage)	(We recommend it.)
200	Air supply				
203	Booster regulator		SMC	VBA40series	〃
204	Air tank		SMC	VBAT20/38series	〃
212	Mist separator		SMC	AFM30series	〃
230	Filter regulator		SMC	AW30series	〃

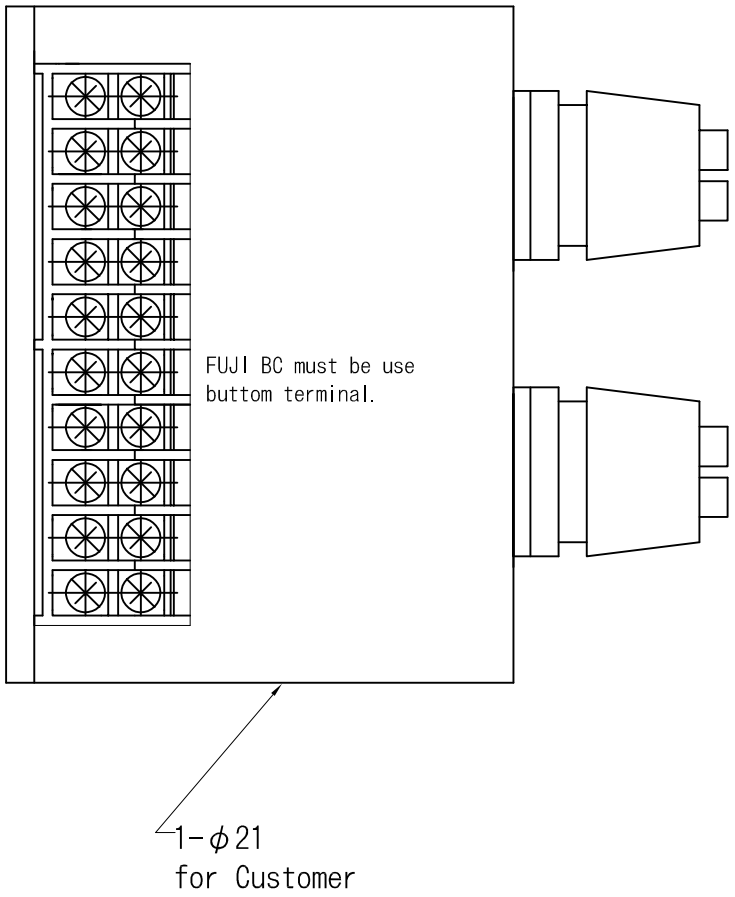
※Solenoid valves (Item 33 and 33b) to operate EB are not equipped when model number does not offer "S☐".



*)Wiring of each device connect to terminal box.
The number in the square shows the product number in the drawing.
*1) Solenoid valves (Item 33) to operate EB are not equipped when model number does not offer "S□".

CHANGE	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	TITLE
A	'18.01.17	INOUE	MAENO	SAKAI	GOTO	EcoBooster EB7P wiring

FUJI BC ENGINEERING CO.,LTD	3RD ANGLE PROJECTION	SCALE	DRAWING CODE
		FREE(NTS)	EN-EB7P-04-STD3.00



WIRING NUMBER

EB01	EB OPERATION SOL *1
EB02	
EB03	OIL DETECTOR
EB04	
EB P24	DC24V (INNER PRESS. CONTROL SWITCH, SOL)
EB P24	
EB P24	
EB05	INNER PRESS. CONTROL SWITCH OUT1, ACCELERATION SOL
EB06	INNER PRESS. CONTROL SWITCH OUT2, MIST AIR SUPPLY SOL
EB N24	DC 0V (INNER PRESS. CONTROL SWITCH)

*1) Solenoid valves (Item 33 and 33b) to operate EB are not equipped when model number does not offer "S□".

CHANGE	DATE	DESIGNED	DRAWN	CHECKED	APPROVED	TITLE	
A	'18.01.17	INOUE	MAENO	SAKAI	GOTO	EcoBooster EB7P terminal block layout	
						SCALE	DRAWING CODE
	FUJI BC ENGINEERING CO., LTD			3RD ANGLE PROJECTION		FREE(NTS)	EN-EB7P-10-STD3.00

【Digital Pressure Switch Operation Manual】

April 1, 2021 FUJI BC ENGINEERING M. MAENO

Setting of EcoBooster INNER PRESSURE CONTROL SWITCH

	Acceleration Air OUT1		Mist Air OUT2	
Air Supply	n_1	H_1	n_2	H_2
0.4MPa	0.170	0.020	0.185	0.015
0.5MPa	0.220	0.020	0.235	0.015
0.6MPa	0.320	0.020	0.335	0.015
0.7MPa	0.420	0.020	0.435	0.015
※0.8MPa	0.520	0.020	0.535	0.015

Example for Supply Air Pressure of 0.4MPa

※ EB7EP AC Solenoid Type and EB3P, EB3EP Maximum Pressure : 0.7MPa

Adapted from SMC Co., Ltd. home page

Model : ISE20C-X/Y-M-C01L-W

Display unit : MPa
Display color : Nomally red

OUT1 Output mode : Hysteresis
Normal/Reveresed Output : Reveresed
Response time : 1.5ms

OUT2 Output mode : Hysteresis
Normal/Reveresed Output : Reveresed
Response time : 1.5ms

OUT1 Set value n_1 : 0.170 MPa
Hysteresis H_1 : 0.020 MPa

OUT2 Set value n_2 : 0.185 MPa
Hysteresis H_2 : 0.015 MPa

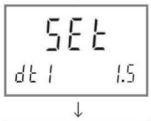
Setting Procedure 1 (3-step setting) The usual procedure. Other settings are set at the shipping time from FUJI BC ENGINEERING.

Setting items : OUT1, OUT2 Set value [n_1, n_2]

Mode	Display	Operation procedure
Preparation, measurement mode	0.000 n_1 0.500	Connect 12 to 24 VDC power supply. Go to measurement mode.
Entering the set value [n_1] for OUT1	0.000 n_1 0.500	Enter OUT1 set value [n_1] on the sub display with ▲ or ▼ buttons.
	0.000 n_1 0.170	Press the Ⓢ button once. Go to the setting of set value [n_1] for OUT1. Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
	0.000 n_1 0.170	Press the Ⓢ button once. Return to measurement mode.
Entering the set value [n_2] for OUT2	0.000 n_2 0.500	Enter OUT2 set value [n_2] on the sub display with ▲ or ▼ buttons.
	0.000 n_2 0.185	Press the Ⓢ button once. Go to the setting of set value [n_2] for OUT2. Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
	0.000 n_2 0.185	Press the Ⓢ button once. Return to measurement mode.
	Settings complete.	

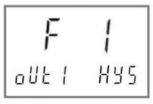
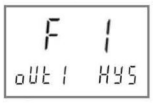
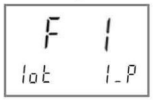
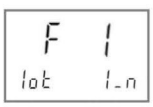
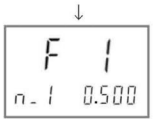
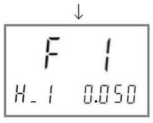
Setting Procedure 2 (Simple setting) Perform this procedure if you have changed the Hysteresis or Response time by mistake.

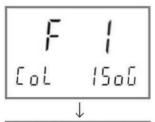
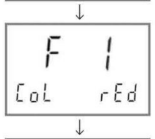
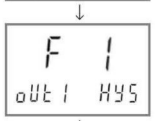
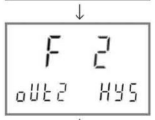
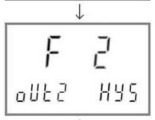
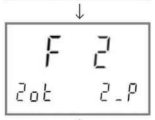
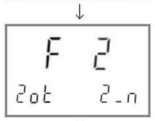
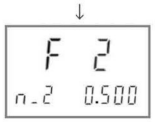
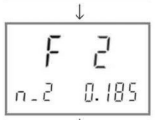
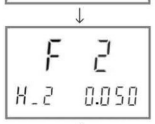
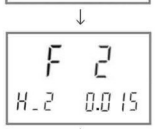
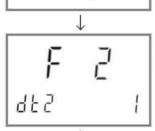
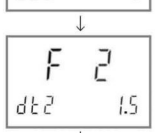
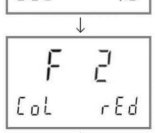
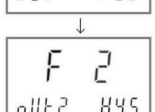
Setting items : OUT1, OUT2 Set value [n_1, n_2]、Hysteresis [H_1, H_2]、Response time

Mode	Display	Operation procedure
Preparation, measurement mode		Connect 12 to 24 VDC power supply. Go to measurement mode.
Entering the set value [n_1] for OUT1		Hold down the Ⓢ button for at least 1 seconds, but no more than 3 seconds [SEt] will be shown on the main display.
		Release the button while [SEt] is showing on the display. The main display will show the current pressure value and the left sub display will show the set value [n_1]. The set value will be blinking on the right sub display. Go to the setting of set value [n_1] for OUT1.
		Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
Setting of hysteresis [H_1] for OUT1		Press the Ⓢ button once. Go to hysteresis [H_1] settings for OUT1.
		Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
Setting response time for OUT1		Press the Ⓢ button once. Go to response time settings for OUT1.
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
Entering the set value [n_2] for OUT2		Hold down the Ⓢ button for at least 1 seconds, but no more than 3 seconds [SEt] will be shown on the main display.
		Press the Ⓢ button once. Go to the setting of set value [n_2] for OUT2.
		Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
Setting of hysteresis [H_2] for OUT2		Press the Ⓢ button once. Go to hysteresis [H_2] settings for OUT2.
		Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
Setting response time for OUT2		Press the Ⓢ button once. Go to response time settings for OUT2.
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
Measurement mode		Hold the Ⓢ button for 2 second or longer. Return to measurement mode.
	Settings complete.	

Setting Procedure 3 (Function Settings) Perform this procedure if you have restored SMC default settings.

Setting items : OUT1, OUT2 Output mode、Normal/Reversed output、Set value [n_1, n_2]、Hysteresis [H_1, H_2]、Response time、Display color

Mode	Display	Operation procedure
Preparation, measurement mode		Connect 12 to 24 VDC power supply. Go to measurement mode.
↓		
Function selection mode		Hold down the Ⓢ button for at least 3 seconds, but no more than 5 seconds [F 0] will be shown on the main display. Release the button when [F 0] is displayed to return to function selection mode.
↓		
Display unit settings		Display [F 0] by pressing the▲ or ▼ button in function selection mode. Press the Ⓢ button once. Go to display unit settings.
↓		
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
↓		
		Press the Ⓢ button once. Return to function selection mode.
↓		
Setting output mode for OUT1		Display [F 1] by pressing the▲ or ▼ button in function selection mode. Press the Ⓢ button once. Go to output mode settings for OUT1.
↓		
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
↓		
Setting of nomal/reversed output for OUT1		Press the Ⓢ button once. Go to normal/reversed output settings for OUT1.
↓		
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
↓		
Entering the set value [n_1] for OUT1		Press the Ⓢ button once. Go to the setting of set value [n_1] for OUT1.
↓		
		Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
↓		
Setting of hysteresis [H_1] for OUT1		Press the Ⓢ button once. Go to hysteresis [H_1] settings for OUT1.
↓		
		Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
↓		
Setting response time for OUT1		Press the Ⓢ button once. Go to response time settings for OUT1.
↓		
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
↓		

Display color settings		Press the Ⓢ button once. Go to display color settings.
	↓	
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
	↓	
		Press the Ⓢ button once. Return to function selection mode.
	↓	
Setting output mode for OUT2		Display [F 2] by pressing the▲ or ▼ button in function selection mode. Press the Ⓢ button once. Go to output mode settings for OUT2.
	↓	
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
	↓	
Setting of nomal/reversed output for OUT2		Press the Ⓢ button once. Go to normal/reversed output settings for OUT2.
	↓	
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
	↓	
Entering the set value [n_2] for OUT2		Press the Ⓢ button once. Go to the setting of set value [n_2] for OUT2.
	↓	
		Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
	↓	
Setting of hysteresis [H_2] for OUT2		Press the Ⓢ button once. Go to hysteresis [H_2] settings for OUT2.
	↓	
		Press the ▲ or ▼ button to change the set value on the right side of the sub display (see left).
	↓	
Setting response time for OUT2		Press the Ⓢ button once. Go to response time settings for OUT2.
	↓	
		Press the ▲ or ▼ button to change the value on the right side of the sub screen (see left).
	↓	
Display color settings		Press the Ⓢ button once. Move to display colour settings; this is the same as that of OUT1, which has already been set.
	↓	
		Press the Ⓢ button once. Return to function selection mode.
	↓	
Measurement mode		Hold the Ⓢ button for 2 second or longer. Return to measurement mode.
	↓	
	Settings complete.	
	↓	
Zero-clear		Press the▲ and ▼ buttons simultaneously for around 1 second under atmospheric pressure. This will reset the displayed value to zero.

■[F99] Reset to default settings

If the product settings are uncertain, the SMC default values can be restored.

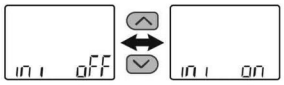
<Operation>

Press the ▲ or ▼ button in function selection mode to display [F99].

Press the S button. ▼ Move on to reset to default settings.

Reset to default settings

Press the ▲ or ▼ button to select reset to default settings.



Unused

Reset to the default setting

[oFF] (not use) is selected
Press the S button to set.

Return to function selection mode.

[on] (reset to default settings) is selected
Press the S and ▼ buttons simultaneously for 5 second or longer.
All settings are returned to the default values. Return to function selection mode.

[F99] Reset to default settings completed

Return to 【Digital Pressure Switch Operation Manual】、
Perform Setting Procedure 3 (Function Settings).