

ULTRA COMPACT MQL APPLICATOR for MICRO MANUFACTURING

1mL per hour lubrication. Chip removal. Micro-scale precision machining

MICRO MANUFACTURING
BEYOND PRECISION
HIGH LUBRICITY

ULTRA COMPACT MQL APPLICATOR



INSTALLATION and OPERATING INSTRUCTIONS



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MICRO MANUFACTURING meets MicroBooster.

MicroBooster μ offers a best-practice solution for ultra-precision machining and desktop machines. It discharges stable micro-droplets and atomized lubricant at up to 1mL/h. Our genuine MQL-dedicated lubricants maximize performance and are environmentally friendly.

Safety Precautions

1. Use only the genuine lubricant Bluebe **LB-10**.
Using any lubricant other than the specified genuine product may cause equipment failure.
2. Use only the dedicated nozzle supplied by our company.
The unit may not operate properly if a non-designated nozzle is used.

Warranty

The warranty for this Product begins on the date the Company first delivers the Product to the customer. The equipment main unit is covered for one (1) year only when the Company's designated lubricant is used.

Maintenance parts are covered for six (6) months from the date of replacement when replaced by the Company. If a part is replaced during the equipment warranty period, the longer of the remaining equipment warranty or the six-month parts warranty will apply. If disassembly, modification, adjustment, or replacement is performed by the customer, by an agent not authorized by the Company, or by any other third party, the equipment and parts warranty will not apply. However, maintenance parts supplied by the Company are warranted only for initial defects reported within thirty (30) days after receipt. Machining results—including accuracy, surface finish, cutting performance, and tool life—are not covered by this warranty, as such results depend heavily on factors other than the equipment itself. The Company is not liable for indirect damages or lost profits.

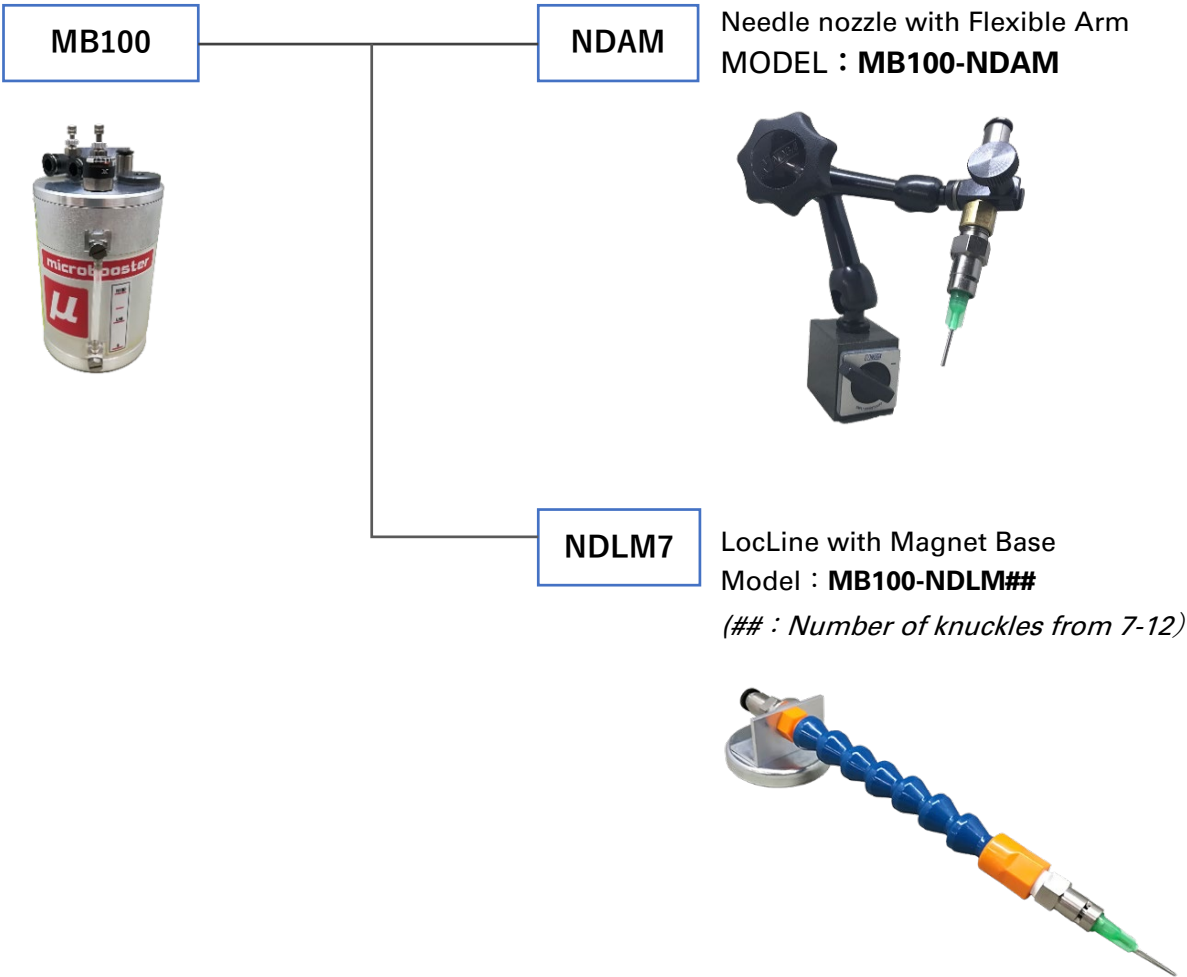
Specifications

SPECIFICATIONS	DETAIL
Supply Air	Remove dirt, oil content and moisture
Supply Pressure	0.3~0.5MPa
Air Flow rate	40L/min(ANR) : 0.5MPa
Operating temperature	+5~+40°C
Lubricant	Bluebe LB-10 (Available as LB-6000)
Tank Capacity	100mL (Operating Range : 50 ~ 100mL)
Discharge rate	Maximum 1mL/h
Supply Air port	Φ6mm Fittings
Outlet	Φ6mm Fitting
Nozzle	Dedicated nozzle
NET Weight	Approx. 0.7kg

Standard Accessories / Included items

How to select MicroBooster

Select dedicated nozzle from two types.

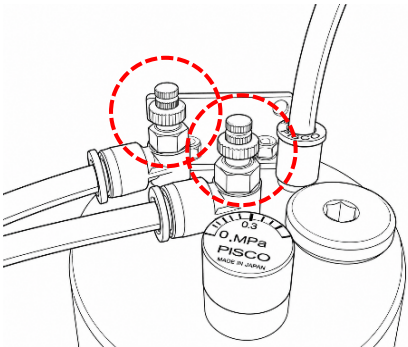


CONTENTS (*Equipped nozzle vary on specification.)

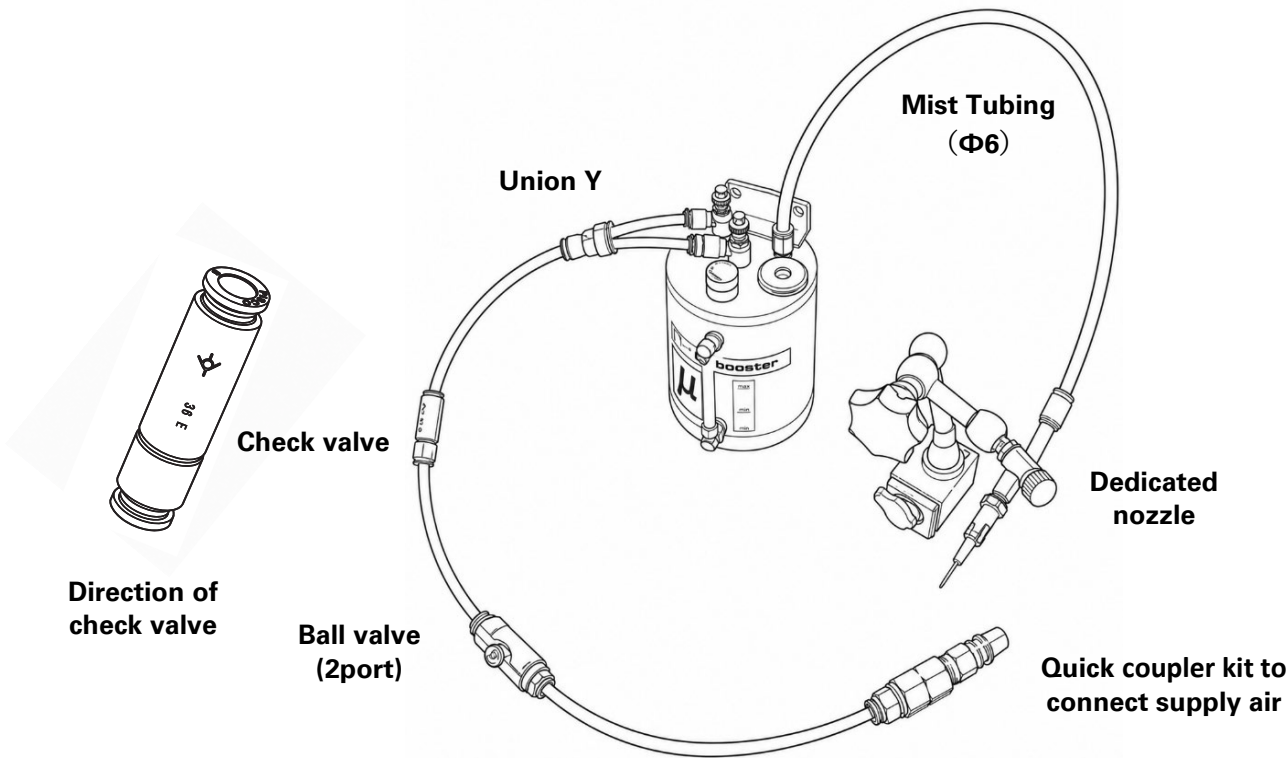
			
MB100 Unit	Nozzle* (NDAM)	Nozzle* (NDLM)	Φ6 SoftNylon tubing 2m
			
Ball Valve(2port) BVU20-0606	Φ6 Fitting Union-Y PY6M	Check Valve CVU6-6	Quick coupler kit to connect air supply

INSTALLATION GUIDE

Air Line Installation Procedure

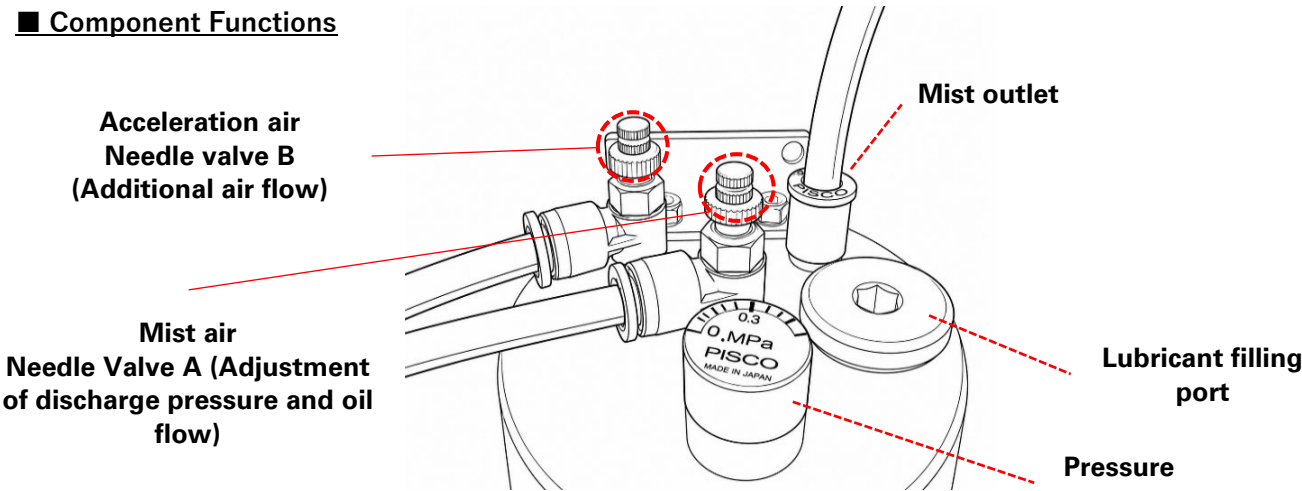


- 1. Make sure that the needle valve on the top of the unit is fully closed. Turn the valve clockwise to close it.
 - 2. Refer to the air piping diagram (shown below) when making the connections.
- ※Attach the $\Phi 6$ fitting to the dedicated nozzle before making the connection.



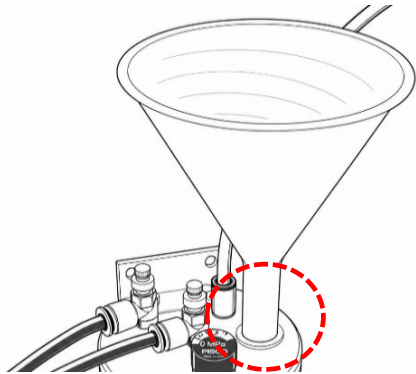
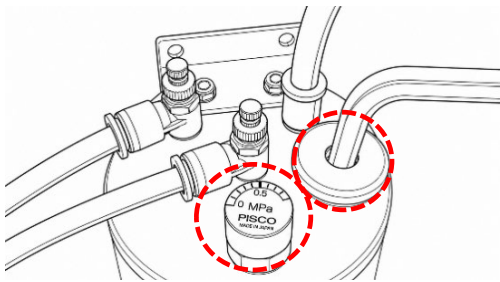
Piping of MicroBooster.

Component Functions



Component Functions of MicroBooster

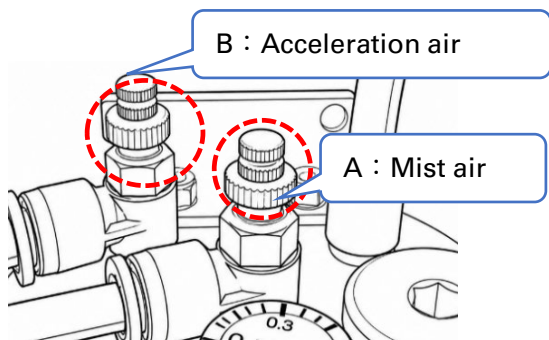
■ Refilling the Lubricant



1. Make sure the pressure gauge reads **0MPa**
2. Open the oil filling port using a 6 mm hex wrench
3. Fill with the specified lubricant (using a funnel)

Set the lubricant amount to the value shown below
L line<liquid level < 100mL
4. Close the filling port
5. Connect the supply air

■ Adjusting the discharge rate



The lubricant discharge rate is adjusted using Needle Valves A and B



B: Acc. air
CLOSE

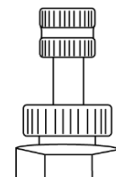


A: Mist air
CLOSE

- 【Discharge rate】 **0 mL/h**
- Needle Valves A and B: Fully closed

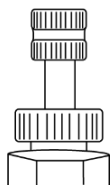


B: Acc. air
CLOSE

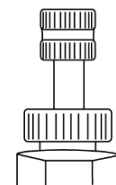


A: Mist air
OPEN

- 【Discharge rate】 **1 mL/h (max)**
- Opening Needle Valve A generates the mist



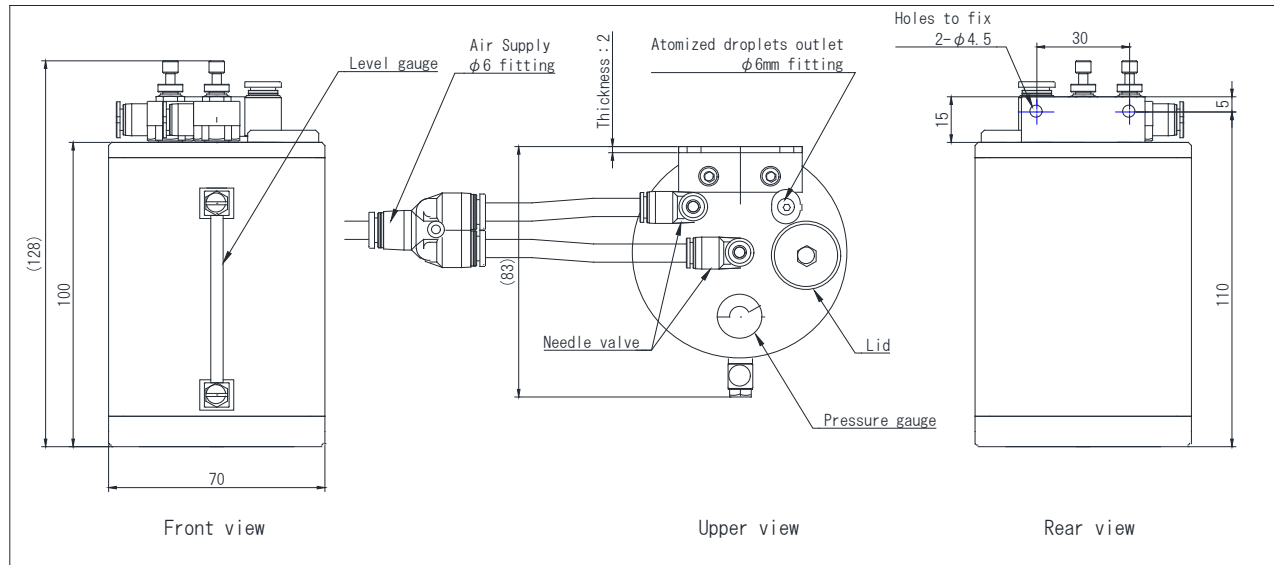
B: Acc. air
OPEN



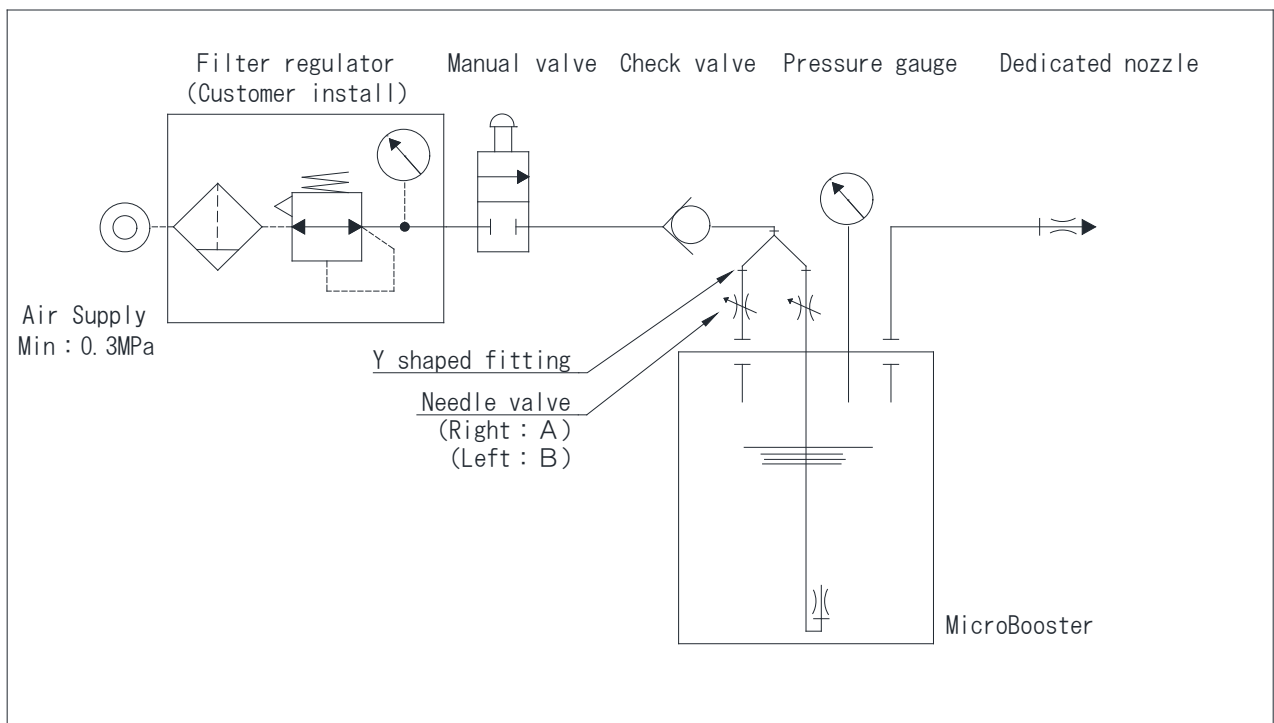
A: Mist air
OPEN

- 【Discharge rate】 **< 1 mL/h**
- Opening Needle Valve B increases the air flow.
 - The mist amount (density) decreases.

■ **DIMENSIONS (mm)**



■ **SCHEMATICS**



■ **REPLACEMENT PARTS (MB100)**

※Customer Replaceable Unit ONLY.

No.	Item	Designation	Company	Reference
1	$\Phi 6$ Fitting	POC6-M5M	PISCO	Outlet
2	$\Phi 6$ throttle valve	JNC6-M5	PISCO	Needle Valve A/B
3	Pressure gauge	GPC15-M5	PISCO	Pressure gauge
4	$\Phi 6$ Union-Y	PY6M	PISCO	Y shaped fitting
5	Check valve	CVU6-6	PISCO	Union Straight
6	SoftNylon Tubing	TS0604B	SMC	Air/Lubricant line
7	Ball Valve	BVU20-0606	PISCO	Manual valve
-	Needle nozzle 18G-T6	MBNZL-18G-T6	FUJI BC	Dedicated nozzle for MB100
-	LocLine Nozzle(MG)	MBLLMB-R1/8x18G-T6-7	FUJI BC	Dedicated nozzle for MB100

Troubleshooting

■ Symptom: No Air Output

	Possible cause	Corrective action
1	Clogged needle valve	Open and close the needle valve repeatedly.
2	Lubricant solidified inside the unit	Flush the unit with the genuine lubricant.
3	Damaged air line	Replace the air line.
4	Check valve installed in the wrong direction / defective	Install the check valve in the correct direction or replace it.

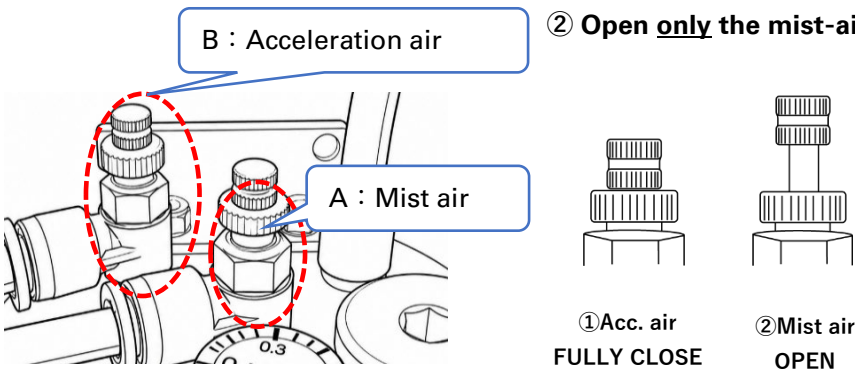
■ Symptom: No Oil Output (Air comes out)

Check the following

- ☐ Check for oil leakage from the oil gauge, fittings, or connectors.
- ☐ Ensure that both needle valves are not fully closed.

■ How to determine whether the MB100 has a fault when No Oil is discharged

- ① **Fully close the acceleration-air needle valve.**
- ② **Open only the mist-air valve.**



- ③ Supply air and operate the MB100.

- ④ **Check whether mist is discharged from the nozzle or hose for several minutes.**

※You may also disconnect the $\phi 6$ tube from the nozzle and check whether mist is discharged directly from the $\phi 6$ tube.

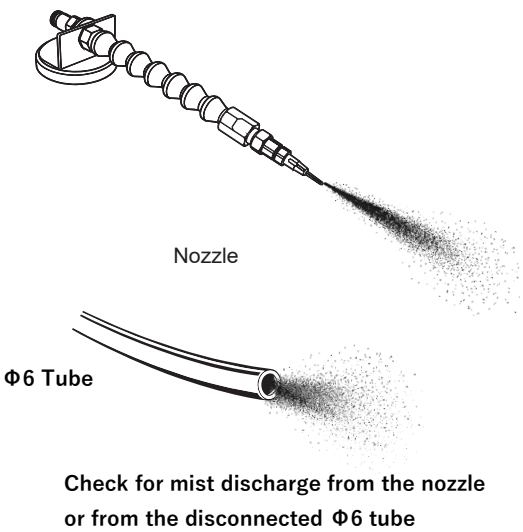
※Note: Initial mist discharge may be caused by residual oil droplets inside the hose. Please confirm that mist continues to be discharged for several minutes

※If the unit is operating normally, you will also hear a bubbling sound from the unit.

▶Mist is discharged: The unit is functioning normally.

▶No mist discharge: A possible fault in the unit.

If you require further assistance, please contact our company.





Bluebe

M **Quel**
エムキューエル

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最新の製品情報はホームページをご覧ください。 www.fuji-bc.com

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The specifications and operational details described in the manuals and others are subject to change for performance improvement or other reasons without notice.