

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac- remove Filt
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PressCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

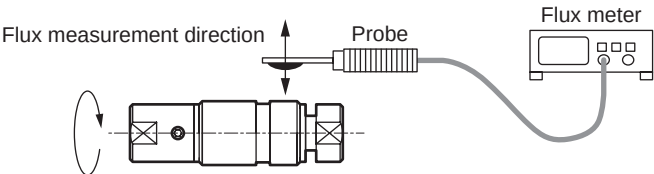
1 Leakage flux

[Measuring instrument]

Flux meter
Probe

[Measuring method]

- (1) Touch the probe to each measurement point on the FBU2.
(2) Rotate the FBU2 at center shaft standards, and measure max. flux density.



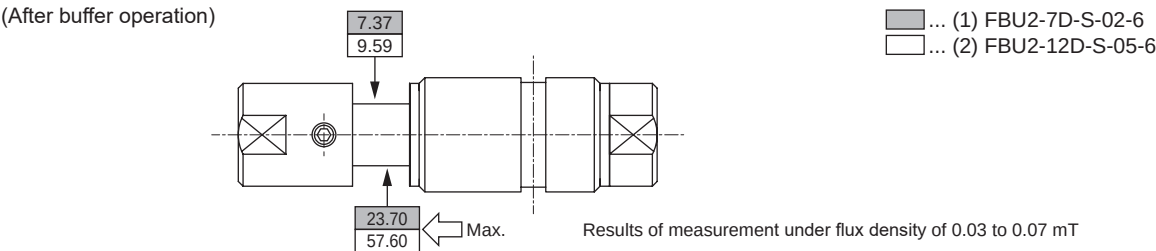
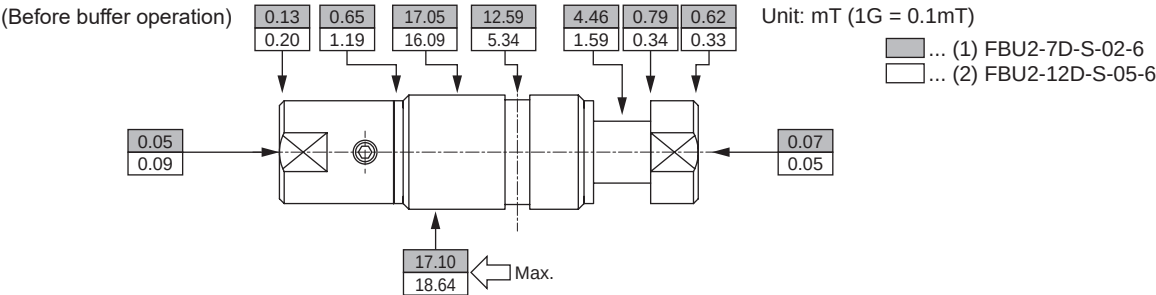
[Target]

- (1) FBU2-7D-S-02-6
(2) FBU2-12D-S-05-6
(3) FBU2-12D-S-05-16

[Results]

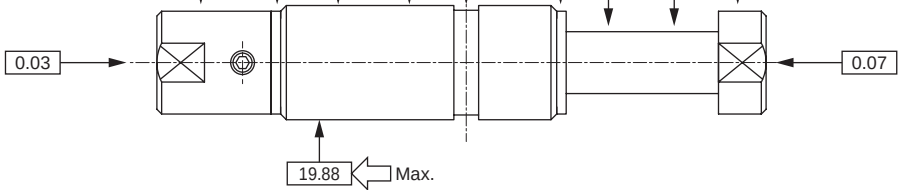
· Magnetic flux at each position

- (1) FBU2-7D-S-02-6
(2) FBU2-12D-S-05-6

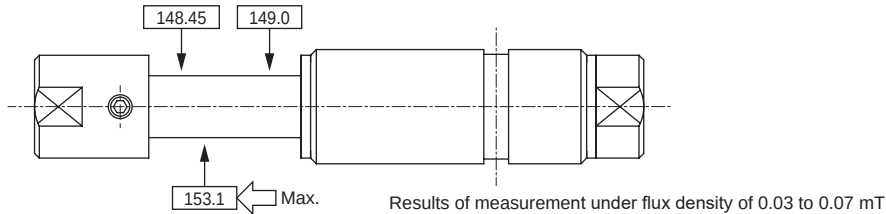


(3) FBU2-12D-S-05-16

(Before buffer operation) 0.26 1.79 19.76 16.10 15.59 1.71 0.20 0.19 0.22 Unit: mT (1 G = 0.1 mT)

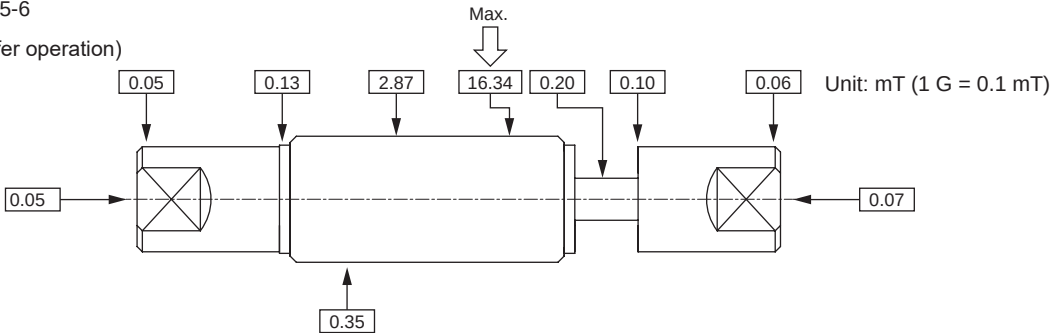


(After buffer operation)

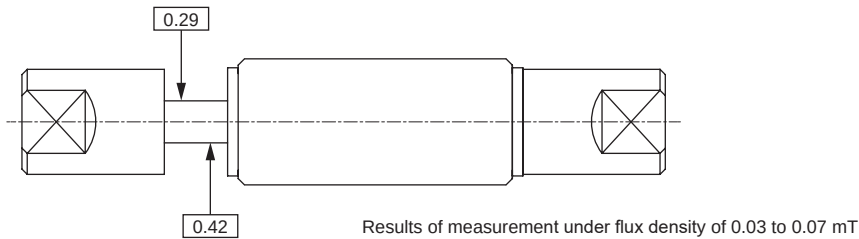


(4) FBU2-SU-05-6

(Before buffer operation)



(After buffer operation)



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TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

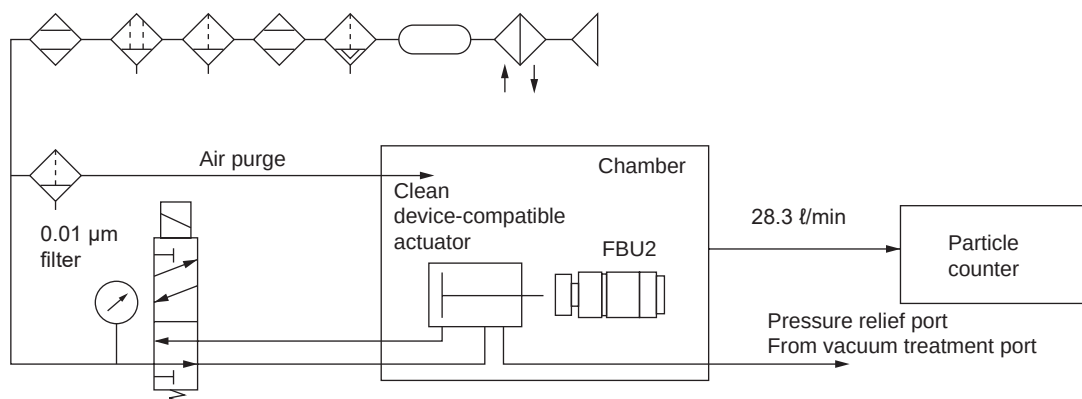
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VacF/R
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Silncr
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Air Unit
PresCompn
Electro
Press SW
ContactSW
AirSens
PresSW
Cool
Air Flo
Sens/Ctrl
WaterRtSens
TotAirSys
(Total Air)
TotAirSys
(Gamma)
Gas
generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg
etc
Ending

2 Dust generation rate

[Measuring instrument]

Particle counter : Laser dust monitor
Min. measurable particle diameter : 0.1 μm
Intake : 28.3 ℓ/min

[Test circuit]



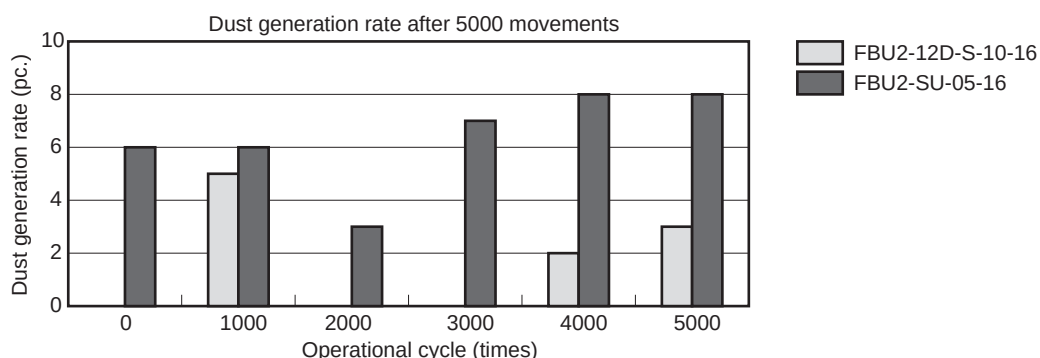
[Measuring method]

- (1) Set a test sample in a stainless steel antistatic chamber.
 - (2) Send clean air through a 0.01 μm filter at the same flow rate as the particle counter intake rate (28.3 ℓ/min).
 - (3) Confirm that the particle counter value is 0 in the immobile state.
 - (4) Move the test sample, and measure particles generated during movement.
- * A sealed chamber is used so that particles other than those generated from the test sample do not enter the chamber.
* Confirm that the dust generation rate of the clean device-compatible actuator (vacuum treatment) to be used is 0 before starting.

[Measuring conditions]

- Air quality
 - For purging : "Grade 1.2.1" + 0.01 μm gas filter
- FBU2 operation speed : 50 mm/s
- Operation conditions : Install with no load parallel to the purge flow
- Measurement frequency: One minute measurement /1,000 movements
- Sample : FBU2-12D-S-10-16
FBU2-SU-05-16

[Results]



FBU2-12D-S-10-16

Particle diameter	Operational cycle					
	0	1000	2000	3000	4000	5000
0.1 μm or more	0	5	0	0	0	2
0.2 μm or more	0	0	0	0	1	0
0.3 μm or more	0	0	0	0	1	1
0.5 μm or more	0	0	0	0	0	0
1.0 μm or more	0	0	0	0	0	0
2.0 μm or more	0	0	0	0	0	0
Total dust generation rate	0	5	0	0	2	3

FBU2-SU-05-16

Particle diameter	Operational cycle					
	0	1000	2000	3000	4000	5000
0.1 μm or more	6	6	3	7	8	8
0.2 μm or more	0	0	0	0	0	0
0.3 μm or more	0	0	0	0	0	0
0.5 μm or more	0	0	0	0	0	0
1.0 μm or more	0	0	0	0	0	0
2.0 μm or more	0	0	0	0	0	0
Total dust generation rate	6	6	3	7	8	8

3 Stop position precision (X-Y)

[Measuring instrument]

Laser position sensor

[Measuring method]

Measure X-Y positioning accuracy when manually moving the full stroke

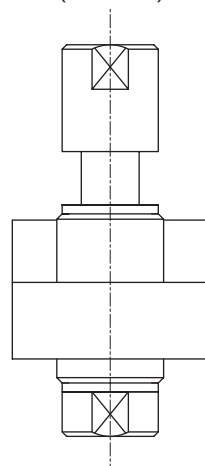
Load : No load
Installation direction : Downward
Degree of vacuum : Non-vacuum
Piping : None

[Target]

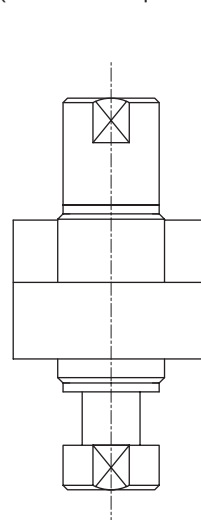
FBU2-7D-S-02-6
FBU2-7D-HV-02-6
FBU2-12D-S-05-16
FBU2-12D-HV-05-6

[Measuring overview fig.]

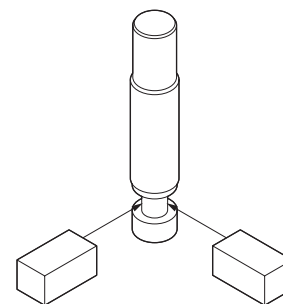
Buffer operation
(full stroke)



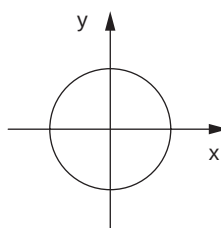
Return
(Extended end position)



[Measuring method]

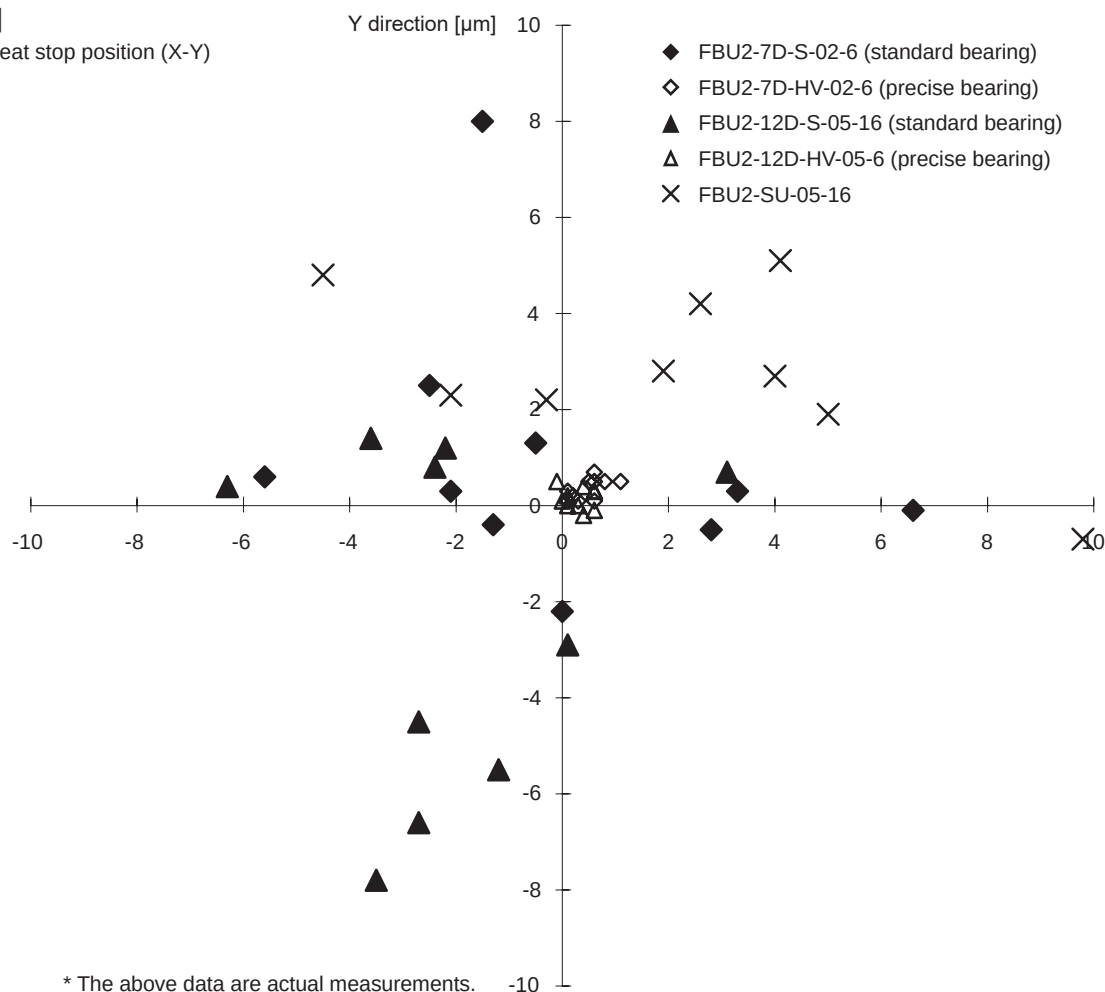


Laser position sensor



[Results]

Repeat stop position (X-Y)



* The above data are actual measurements.

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