



# KITZ MICRO FILTER PRODUCTS CATALOG

AIR GUN

AIR GUN PP

INLINE FILTER

WATER GUN

AIR DRYER

**KITZ**

KITZ MICRO FILTER CORPORATION

# About hollow fiber membrane

## About hollow fiber membrane

The hollow fiber membrane is hollow like a straws.

Diameter is a few hundreds microns and thickness is a few tens microns.

The hollow fiber membrane is used in a lot of fields like water purifiers, the dialysis treatment, and waste water treatment, etc.

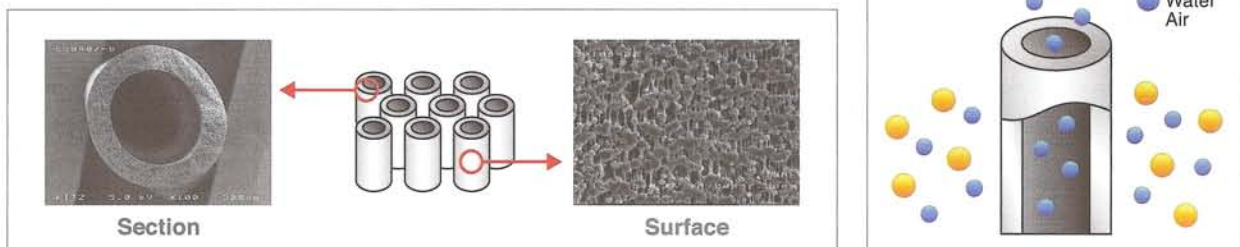
## Structure of hollow fiber membrane

The hollow fiber membrane produced by Kitz Micro Filter is made by Polypropylene.

There is innumerable microporosity in the surface of the hollow fiber and the thickness direction.

This microporosity removes small particles and bacteria of fluid.

The flow direction is the inside from the outside of the fiber.



## Features of hollow fiber membrane

### 1 Excellent filtration accuracy

The filtration accuracy is 0.01 $\mu$ m.

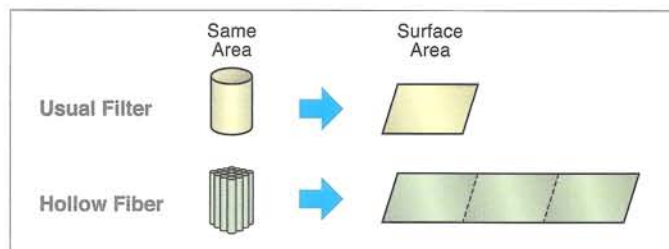
### 2 A compact design is possible

The hollow fiber membrane does not need a support like other filters.

Therefore, the filter cartridge can be made compact.

### 3 Long filter life

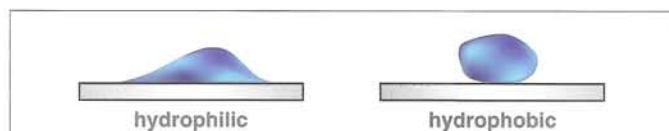
The filter life becomes long, because the hollow fiber membrane can have a lot the membrane area per unit area. The membrane area of the hollow fiber membrane becomes large 2-3 times the membrane area compared with a usual filter.



### 4 Hydrophobic

PP(Polypropylene) is hydrophobic.

PP can remove water drop in the fluid.







# UNIPORE AIR GUN

(ABS body type)

UNIPORE AIR GUN is built-in hollow fiber filter cartridge into tip. The particle retention of this filter is 0.01um. And, this filter is cartridge types that can be exchanged. UNIPORE AIR GUN does not use the metallic part, and are all made of the resin. Weight is light, it is easy to use and can use in long time works. UNIPORE AIR GUN has some optional parts of coil hose and bushing. It is possible to connect to piping easily by using these.

## Features

0.01μm Hollow fiber Filter

Compact and light weight

Oil free

Exchange filter type

All resin

## Benefits

Clean air is obtained

High flow rate

Easy to use

For clean room

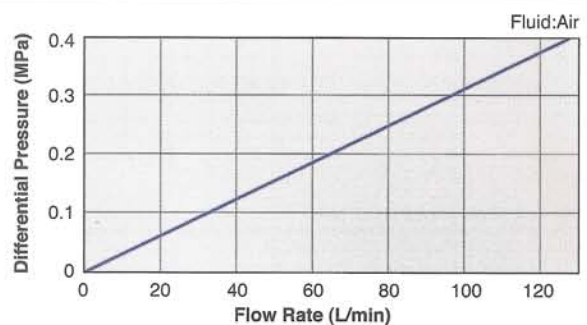
Eco-specification

Light weight

## Specifications

Fluid	Compressed air, Nitrogen
Operation Temperature	5°C~50°C
Maximum Operation Pressure	0.4MPa
Filtration Area	80cm <sup>2</sup>
Particle Retention	0.01μm
Weight	Body 120g
	Filter 11.5g
	Coil Hose 260g
	Hose Nipple 5g

## Flow Characteristics



## Applications

- Compressed air and Nitrogen blow
- Rinsing equipment and Print board
- Precision machinery, Micro electric parts



Compressor



Print board



Micro electric parts



Precision machinery



Production line

## Concrete Example

### Air blow of workspace

- As a air blow tool in the fume hood
- Blow the waterdrop off on glass after wash work
- Blow the waterdrop off on container after wash work in wash place

### Removal of particle

- Cleaning of machine
- Cleaning of print writing board

## Product Code

Main gun unit	Product code	Contents
Air Gun unit for clean room use	CAGN-14	Gun body (ABS) Filter cartridge Spare cartridge Plug Hose nipple
Air Gun unit for general	AGN-14	

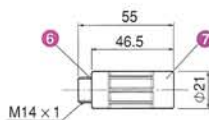
Option	Product code	Contents
For clean room use	CAGNC-80N1-14	Filter cartridge 2pcs
For general use	AGNC-80N1-14	
Coil hose	HOSE-1	Coil hose(PU)
Socket	TS-2NZP	Socket with Rc1/4
	TS-3NP	Socket with Rc3/8
	TS-4NP	Socket with Rc1/2

## Order example

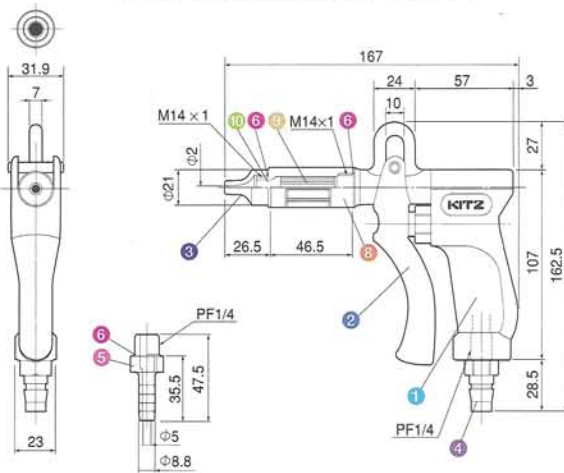
- Case1: Connection with a hose that you have.  
**CAGN-14+your hose+your connector**
- Case2: Connection with femal screw of Rc1/4  
**CAGN-14+HOSE-1+TS-2NZP**

## Dimensions

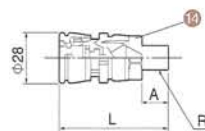
### UNIPORE Air Gun:CAGN-14



Filter Cartridge:CAGNC-80N1-14



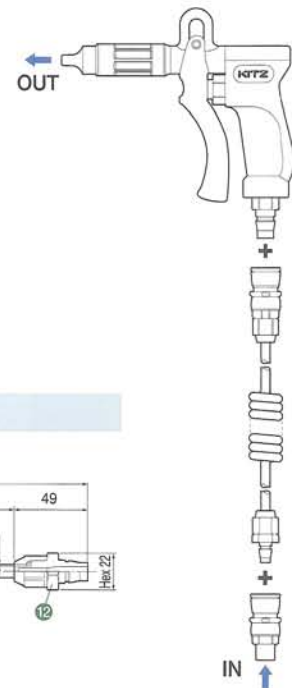
### Socket (Option)



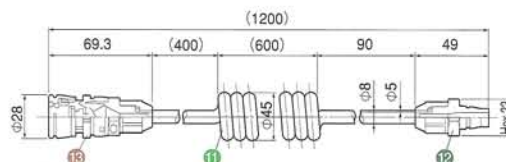
Code	A	L	R(PT)
TS-2NZP	14.5	60.3	R1/4
TS-3NP	14.5	61.8	R3/8
TS-4NP	16.5	63.8	R1/2

### Connect Configuration (KITZ Recommend)

The socket has Lock function and a check valve inside.



### Coil Hose (Option):HOSE-1



Available range:4m

★Enclosed hose nipple is for hose usage. Remove the plug from body and connect.

## Materials

1	Body	ABS	6	O-ring	Fluoro Rubber	11	Hose	Polyurethane
2	Trigger	Polypropylene	7	Exchange filter		12	Plug	POM
3	Nozzie	Polyamide	8	Filter case	Polyarylate	13	Socket	POM/SUS304
4	Plug	Polyamide	9	Filter media	Polypropylene	14	Socket	POM/SUS304
5	Hose nipple	Polyamide	10	Filter potting	Polyurethane			





# UNIPORE AIR GUN

(Polypropylene body type)

UNIPORE AIR GUN PP body type is built-in hollow fiber filter cartridge into tip. The particle retention of this filter is 0.01 $\mu$ m. And, this filter is cartridge types that can be exchanged. Manufactured of polypropylene has a high medicine-proof performance. UNIPORE AIR GUN does not use the metallic part, and are all made of the resin. Weight is light, it is easy to use and can use in long time works. UNIPORE AIR GUN has some optional parts of coil hose and bushing. It is possible to connect to piping easily by using these.

## Features

0.01 $\mu$ m Hollow fiber Filter

Compact and light weight

Oil free

Exchange filter type

All resin

## Benefits

Clean air is obtained

High flow rate

Easy to use

For clean room

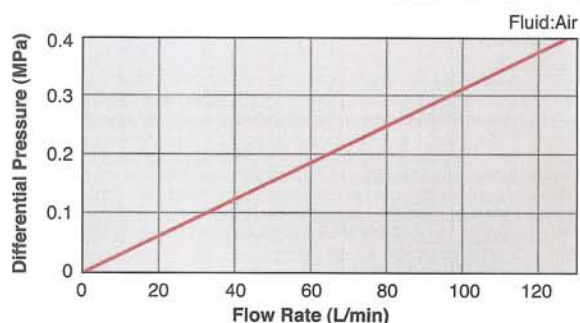
Eco-specification

Light weight

## Specifications

Fluid	Compressed air, Nitrogen
Operation Temperature	5°C~50°C
Maximum Operation Pressure	0.4MPa
Filtration Area	80cm <sup>2</sup>
Particle Retention	0.01 $\mu$ m
Weight	Body 102g
	Filter 11.5g
	Coil Hose 250g
	PP bushing 10g

## Flow Characteristics



## Applications

- Compressed air and Nitrogen blow
- Rinsing equipment and Print board
- Precision machinery, Micro electric parts



## Concrete Example

### Air blow of workspace

- As a air blow tool in the fume hood
- Blow the waterdrop off on glass after wash work
- Blow the waterdrop off on container after wash work in wash place

### Removal of particle

- Cleaning of machine
- Cleaning of print writing board

Product Code

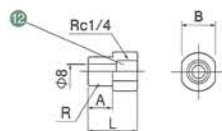
Option		Product code	Contents
For clean room use		CAGNC-80N1-14	Filter cartridge 2pcs
Coil hose		HOSE-P-1	Coil hose (Polyolefin) One-touch fitting (R1/4 x 2pcs)
Socket		BZ03-02M	Bushing R3/8 with Rc1/4
		BZ04-02M	Bushing R1/2 with Rc1/4

- **Case1:** Connection with a hose that you have.  
**CAGN-P-14+your hose+your connector**
- **Case2:** Connection with femoral screw of Rc1/4  
**CAGN-P-14+HOSE-P-1**
- **Case3:** Connection with femoral screw of Rc3/8  
**CAGN-P-14+HOSE-P-1+BZ03-02M**

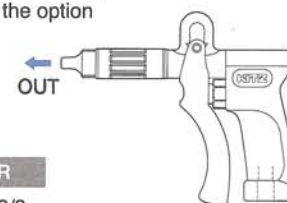
## Dimensions

### PP Bushing (Option)

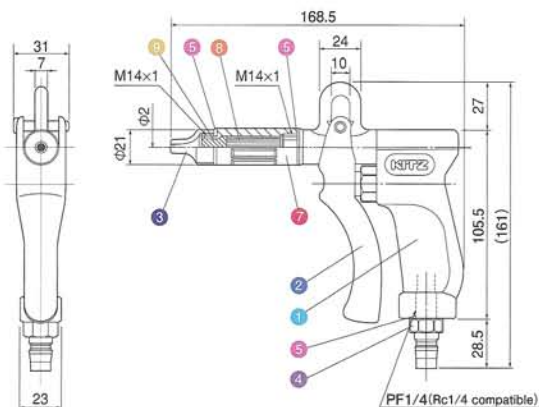
If the connection of the piping side is 3/8 or 1/2, please use the bushing of the option 



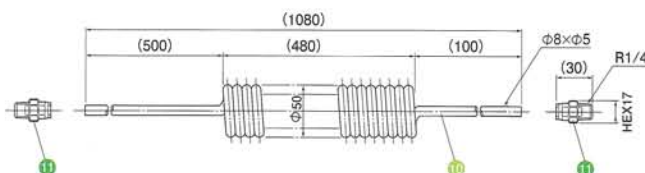
Filter Cartridge:CAGNC-80N1-14



Code	A	B	L	R
BZ03-02M	14	19	28	R3/8
BZ04-02M	18	22	32	R1/2



**Coil Hose (Option):**HOSE-P-1



Available range:3m



## Materials

6	Exchange filter		
	7	Filter case	Polyarylate
	8	Filter media	Polypropylene
	9	Filter potting	Polyurethane
10	Hose	Polyolefine	

11	Fitting	Polypropylene/SUS/EPDM
12	Bushing	Polypropylene



# In-line filter for compressed air

Our filters use the hollow fiber membrane made of the polypropylene of hydrophobic. So they can remove not only bacteria and particle but also drop of water. Pore size of filter has high filtration precision in 0.01 $\mu$ m. They have longer life with the compact which is the good point of the hollow fiber. We have various filter lineup. It is possible to select by a connection method and flow rate.

## Line up

	NHM	KBS	IRF	DRY
				
Flow rate	~70L/min	~80L/min	~300L/min	~500L/min
Connection	One touch tube fitting Screw connection	Tube fitting	Screw connection	Screw connection

## Features

High performance

Hollow Fiber Membrane

Compact Design

Hydrophobic

## Benefits

The excellent Particle Removal Efficiency

Long Service Life

High Flow Rate and Low Pressure Drop

Small Space installation in Plants and Equipments

Removal of the drain

## Applications

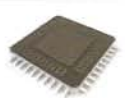
- Compressed air and Nitrogen
- Rinsing equipment and Print board
- Precision machinery, Micro electric parts



Compressor



Print board



Micro electric parts



Precision machinery



Production line



Analytical equipment

## Concrete Example

### Foreign matter removing

- Foreign matter removal of compressor air
- Foreign matter removal of factory compress air piping
- Foreign matter removal of use point
- Foreign body removal in tube piping of transportation device suck pad

### Removal of drop of water (drain)

- Drop of water removal of compressor air

### Removal of bacteria in supply air

- Filter in piping of medical unit and dental unit

### Protection of equipment

- Protection of instrument for analysis and precision instrument

### Filtration of the gas for product filling

- Filtration of the nitrogen gas for filling

# New Hi-mini Air Filter

## NHM Series



### Specifications

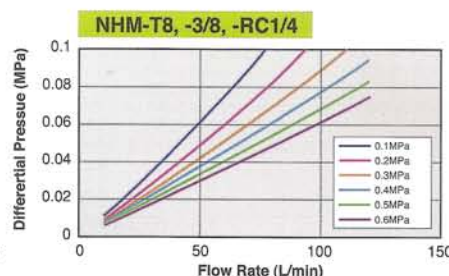
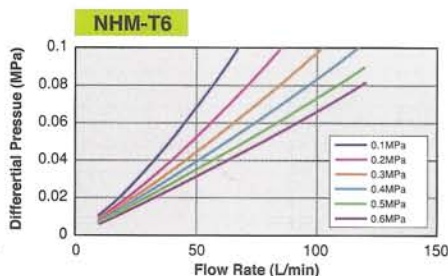
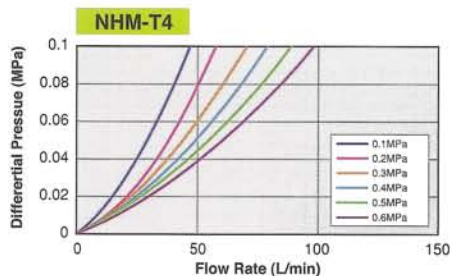
		Screw connection type		One touch tube connection type		
Product code		NHM-3/8	NHM-RC1/4	NHM-T4	NHM-T6	NHM-T8
Pipe connection Caliber		PT3/8	Rc1/4	φ4 OD	φ6 OD	φ8 OD
Operating Temperature		5°C~50°C				
Max Operating Pressure		0.8MPa				
Fluid		Compressed air, Nitrogen				
Weight		9g	84g	15g		
Filter area		80cm²				
Pore size		0.01μm				
Flow rate		70L/min				
Material	Case	Nylon66+Glass fiber	Polycarbonate			
	Filter media	Polypropylene				
	Potting	Polyurethane				
	Connection	/	SUS303	PBT+Stainless steel		
	O-ring	/	NBR			

### Product Code

Item	Product code	Contents
	NHM-3/8	2 filter elements (PT3/8)
	NHM-RC1/4	2 filter elements (Rc1/4)

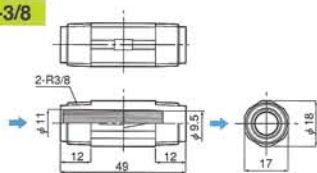
Item	Product code	Contents
	NHM-T4	2 filter elements (4mm tube)
	NHM-T6	2 filter elements (6mm tube)
	NHM-T8	2 filter elements (8mm tube)

### Flow Characteristics

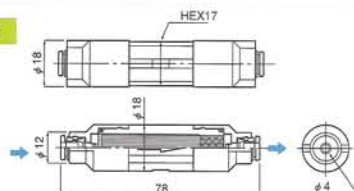


### Dimensions

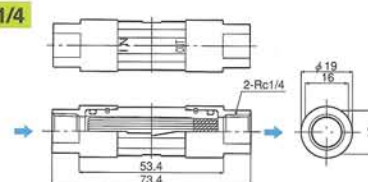
NHM-3/8



NHM-T4



NHM-RC1/4





# In-Line Filter

## KBS Series

### Specifications

Pipe connection Caliber	1/4" tube	
Operating Temperature	5°C~50°C	
Max Operating Pressure	0.5MPa	
Fluid	Air and Nitrogen	
Weight	17g	
Filter area	170cm <sup>2</sup>	
Pore size	0.01μm	
Flow rate	80L/min	
Material	Case	Polycarbonate
	Filter media	Polypropylene
	Potting	Polyurethane

### Product Code

Item	Product code	Contents
	KBS-1	2 filter elements (1/4" tube)



## IRF Series

### Specifications

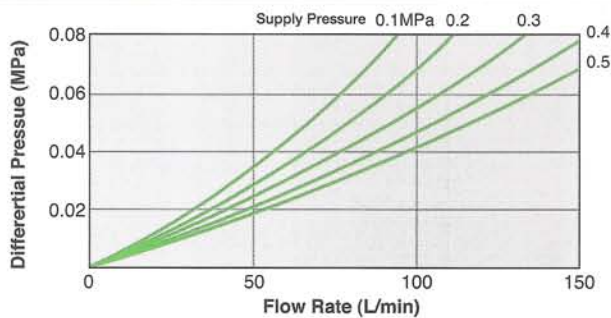
Pipe connection Caliber	RC1/4	
Operating Temperature	5°C~50°C	
Max Operating Pressure	1.0MPa	
Fluid	Air and Nitrogen	
Weight	60g	
Filter area	1100cm <sup>2</sup>	
Pore size	0.01μm	
Flow rate	300L/min	
Material	Case	Nylon66+Glass fiber
	Filter media	Polypropylene
	Potting	Polyurethane
	O-ring	FKM

### Product Code

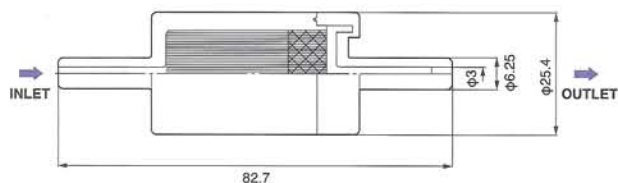
Main gun unit	Product code	Contents
Clean room use	CIRF11-N1RC-1/4	1 filter element
General use	IRF11-N1RC-1/4	



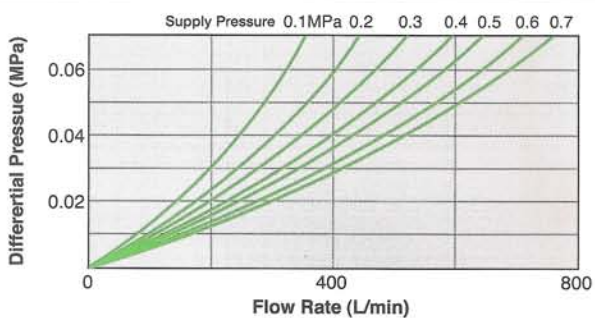
### Flow Characteristics



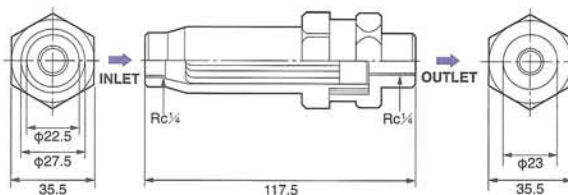
### Dimensions



### Flow Characteristics



### Dimensions



# Dry Filter



## Specifications

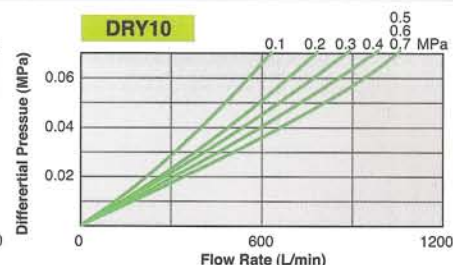
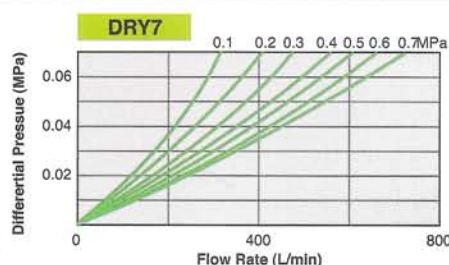
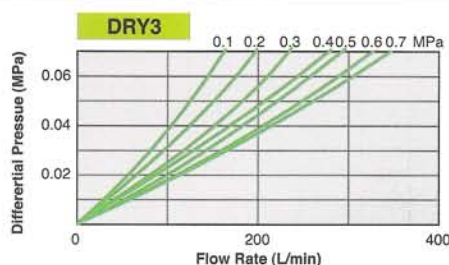
Product code		DRY3-1/4	DRY7-1/4	DRY7-3/8	DRY10-1/2	DRY10-3/4
			DRYA7-1/4	DRYA7-3/8	DRYA10-1/2	DRYA10-3/4
Pipe connection Caliber		Rc3/8	Rc1/4	Rc3/8	Rc1/2	Rc3/4
Operating Temperature		5°C~50°C				
Max Operating Pressure		0.98MPa				
Fluid		Compressed air, Nitrogen				
Weight		0.17kg	0.23kg		0.58kg	
Filter area		300cm²	700cm²		1000cm²	
Pore size		0.01μm				
Flow rate		150L/min	300L/min		500L/min	
Material	Head	Aluminum				
	Filter media	Polypropylene				
	Potting	Polyurethane				
	Filter case	Polycarbonate				
	Bowl	Polycarbonate				
	Bowl guard	Polyethylene				

## Product Code

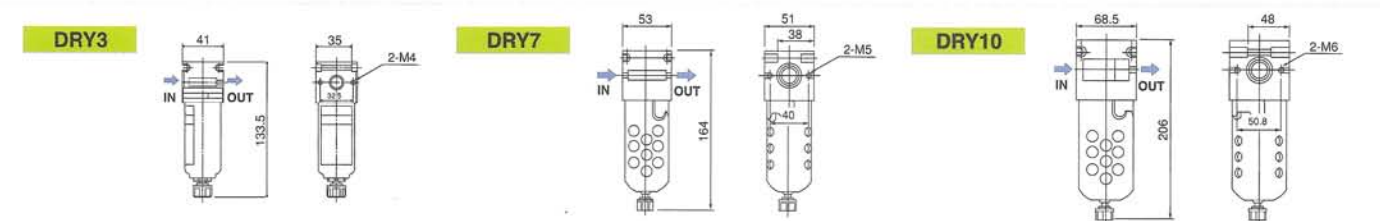
Item	Product code	Contents
	DRY3-1/4	Manual drain type
	DRY7-1/4	Manual drain type
	DRY7-3/8	Auto drain type
	DRYA7-1/4	
	DRYA7-3/8	Auto drain type

Item	Product code	Contents
	DRY10-1/2	Manual drain type
	DRY10-3/4	
	DRYA10-1/2	Auto drain type
	DRYA10-3/4	
Exchange filter	Product code	
	DRYC3	For DRY3
	DRYC7	For DRY7
	DRYC10	For DRY10

## Flow Characteristics



## Dimensions







# WATER GUN

## (Hand spray for pure water)

**Water Gun** is designed for pure water spray. This material is all resin. Weight is light, it is easy to use and can use in long time works. High chemical compatibility and less metallic elution. It is not including filter. We prepare four kinds of nozzles. (Two type is option parts)

### Features

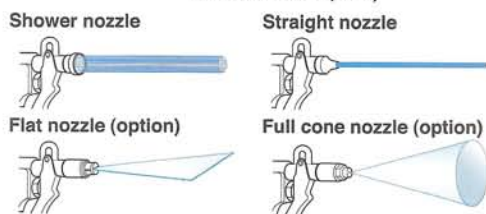
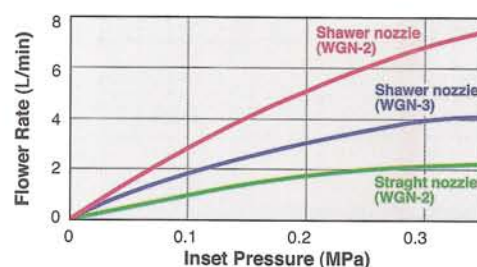
Precision cleaning product (All resin type)	No elution of the metal ion and no problem of rust
Wide choice of nozzle forms	The injection configuration of hope can be selected (Option)
Ergonomical design	Easy to use
All resin	Light weight

### Benefits

### Specifications

Product code	WGN-1	WGN-2	WGN-3	HOSE-WP-1
Product name	Water Gun	Water Gun with blade hose	Water Gun with anti-bacterial growth function	Coil hose
Operating Temperature	5°C~40°C			
Max Operating Pressure	0.4MPa			
Fluid	Pure Water only			
Weight	100g	600g	670g	220g
Other Specification		Blade hose 4m (OD13.5mm/ID 8mm)	Blade hose: 4m (OD13.5mm/ID 8mm) Inner tube: 7.1m (OD 3mm/ID 2mm)	Fitting 1/4PT

### Flow Characteristics



### Applications

- Production line on display
- Semiconductor and various manufacturing
- Pure water supply machine



### Concrete Example

- Spray rinse for wet benches and work processing stations
- Print boards
- Chemical and analytical equipment
- Spray rinse in medical service

Product Code

Main gun unit		Product code	Contents
Water gun		WGN-1	Gun body Straight nozzle Shower nozzle Hose nipple
Water gun with Blade hose		WGN-2	Gun body Straight nozzle Shower nozzle Blade hose and fitting
Water gun with anti-bacterial growth function		WGN-3	Gun body Straight nozzle Shower nozzle Blade hose and fitting Tee and Inner tube

Option		Product code	Contents
Coil hose		HOSE-WP-1	Coil hose (Polyolefin) Fitting (R1/4 x 2pcs)
Blade hose fitting		WGN-J1/4	Fitting R1/4
		WGN-J3/8	Fitting R3/8
		WGN-J1/2	Fitting R1/2
Flat nozzle		WGN-VJ-14	Flat nozzle
Full corn nozzle		WGN-FJ-14	Full cone nozzle

### Order example

- **Case1:** Connection with a hose that you have.

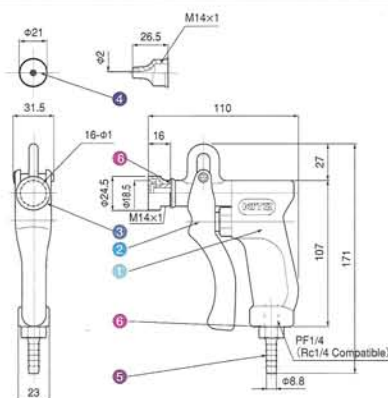
WGN-1+your hose  
+your connector  
WGN-2+WGN-J1/4  
WGN-1+HOSE-WP-1

■ **Case2:** Connection with femoral screw of Rc1/4

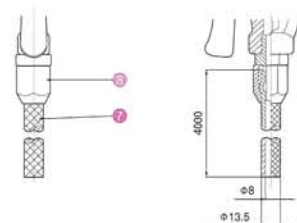
- **Case3:Connection with coil hose**

## Dimensions

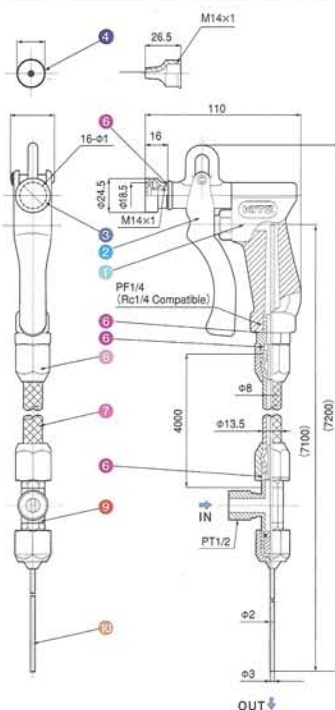
## WGN-1



## WGN-2

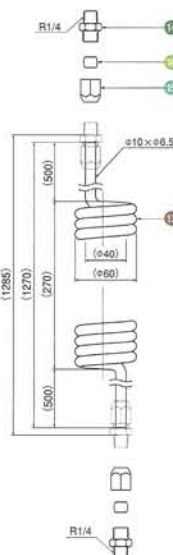


## WGN-3

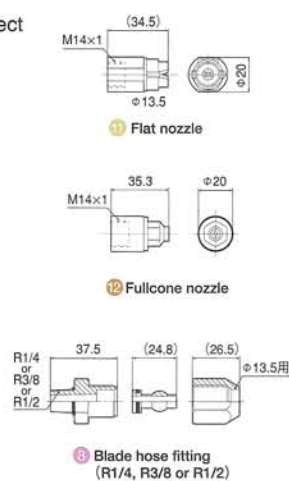


## HOSE-WP-1

Remove hose nipple from WGN-1 and connect this coil hose to the ternaie screw port.



### OPTION



## Materials

1	Body	Polypropylene
2	Trigger	Polypropylene
3	Shower nozzle	Polypropylene
4	Straight nozzle	Polypropylene
5	Hose nipple	Polypropylene
6	O-ring	Fluoro rubber

7	Blade hose	PVC
8	Blade hose fitting	Polypropylene
9	Tee	Polypropylene/FKM
10	Inner tube	PFA
11	Flat nozzle	Polypropylene/PVDF
12	Full cone nozzle	Polypropylene/PVDF

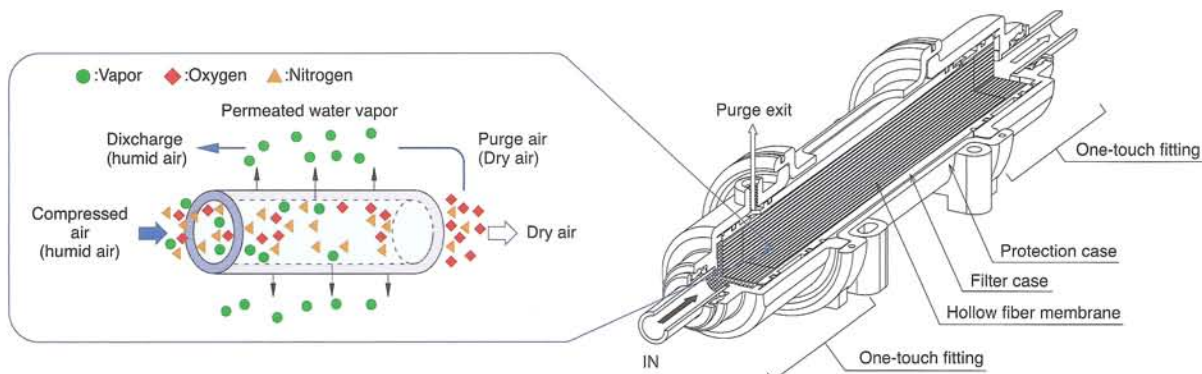
13	Coil hose	Polyolefin
14	Hose connector	Polypropylene
15	Nut	Polypropylene
16	Sleeve	Polypropylene



# Ultra-compact Dehumidification Filter

## The Principle of Dehumidification

### Construction Drawing



The high polymer hollow fiber membrane can remove water molecules from nitrogen and oxygen molecules. Water molecules permeate through the wall of hollow fiber membranes and exhausted outside the module. Nitrogen and Oxygen pass through inside of the fibers and come out as dry air. It is possible to dehumidify it continuously by returning a part of dry air (purge air).

## Line up



### Flow rate

IAD3

1~30L/min

IAD10

1~100L/min

IAD20

1~200L/min

## Features

Compact Design

Variety Kinds of Fitting.

Power Sources Not Required

## Benefits

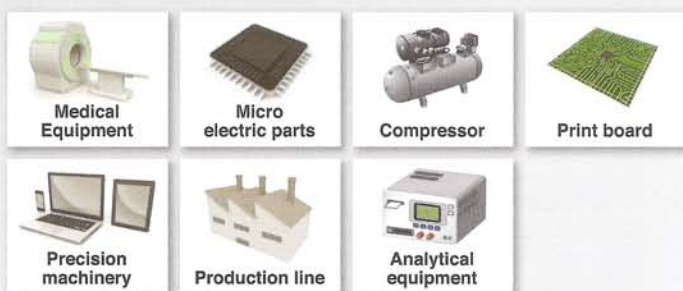
Small Space instalation in Plants and equipments.

Quick and Convinient filter change  
One-touch tube connection type

You can use it in the explosion proof area.

## Applications

- Precision Measuring Instruments
- Semiconductor Manufacturing Equipment
- Air Operation Equipment
- Ozone Generators
- Dental/Medical Equipment
- Analysis Equipment etc.



## Concrete Example

### The moisture outflow prevent

- dew condensation in piping by a difference in temperature
- Clinging of fine particle by moisture

### Moisture mixing prevention

- Analysis of the gas ingredient
- Oxygen concentrate machine and ozonizer

### Dehumidification of specific space


- Diffused reflection and diffusion measures in laser device
- Prevention of counting moisture as a particle
- Explosion-proof environment


**The longevity of the absorbent such as zeolite is extended**


## Specifications

Product code		IAD3	IAD10	IAD20
Operating Temperature		5°C ~ 50°C		
Max Operating Pressure		0.1 ~ 0.7MPa		
Fluid		Compressed air, Nitrogen		
Weight		28g	100g	250g
Flow rate		1 ~ 30L/min	1 ~ 100L/min	1 ~ 200L/min
Connection IN/OUT		One touch tube fitting		Screw
	Size	φ4, φ6	φ6, φ8	Rc3/8
	Purge port	M5	M5	Rc1/8
Purge method		Inner line purge		Outside line purge
Material	Case	Polycarbonate		
	Filter media	Polyimido		
	Potting	Polyurethane		
	Connection	PBT+SUS	PBT+Glass fiber+SUS	
	O-ring	NBR	FKM	
	Protection case		PBT+Glass fiber	
	Steady pin, Bolt nut		SUS	

## Product Code

IAD3 series		Connection size		
		φ4	φ6	
Purge air rate (Inner purge)	STD	IAD3-N35-T4	IAD3-N35-T6	
	Low Purge	IAD3-N20-T4	IAD3-N20-T6	

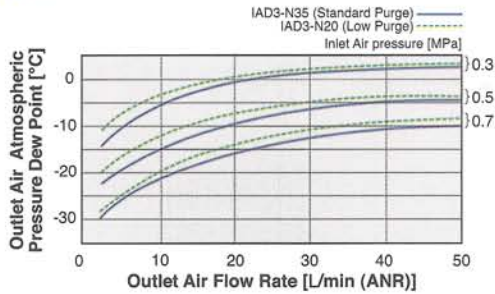
IAD20 series		Connection size	
		Rc3/8	
Purge air rate		IAD20-G-3/8	
Outside purge			Adaptor R1/8 2pcs Adaptor R3/8 2pcs

IAD10 series		Connection size		
		φ6	φ8	
Purge air rate	STD	IAD10-N65-T6	IAD10-N65-T8	
	Low Purge	IAD10-N40-T6	IAD10-N40-T8	
Outside purge		IAD10-G-T6	IAD10-G-T8	

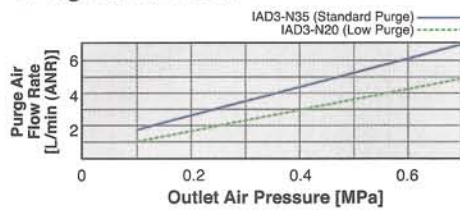


## IAD3 series

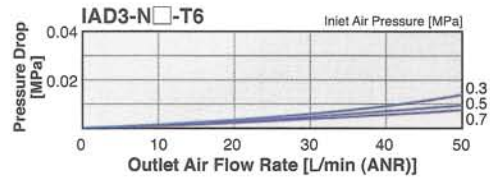
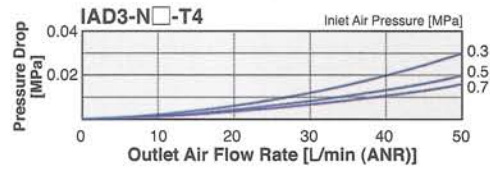
### Dehumidification Characteristics



### Purge Air Flow Rate

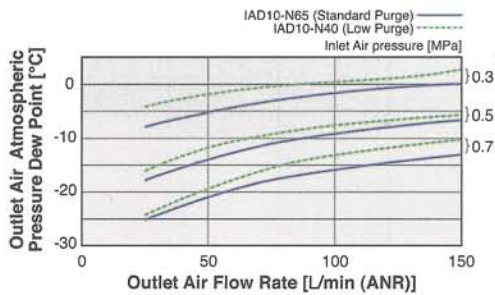


### Flow Characteristics (Pressure Drop)

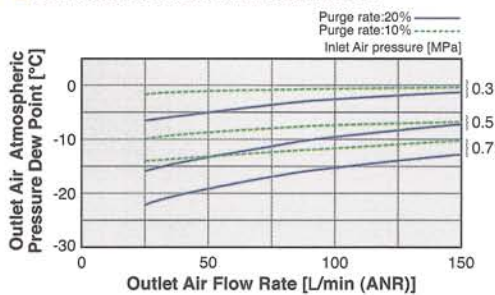


## IAD10 series

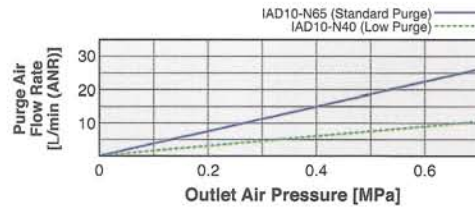
### Dehumidification Characteristics



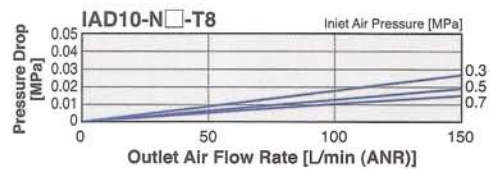
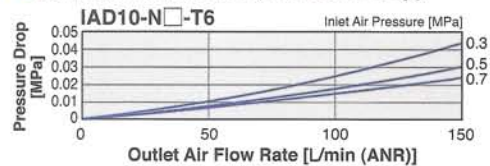
### Dehumidification Characteristics



### Purge Air Flow Rate

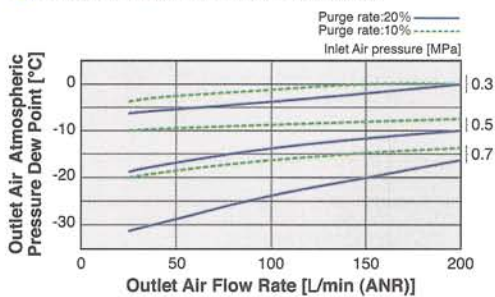


### Flow Characteristics (Pressure Drop)

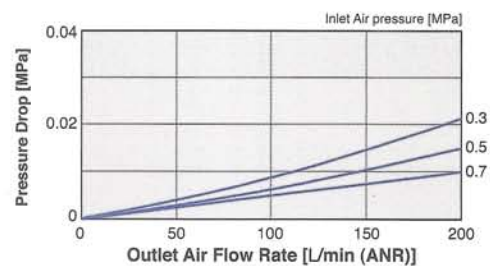


## IAD20 series

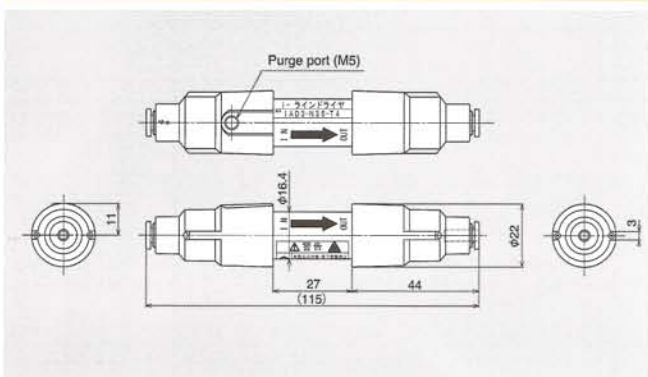
### Dehumidification Characteristics



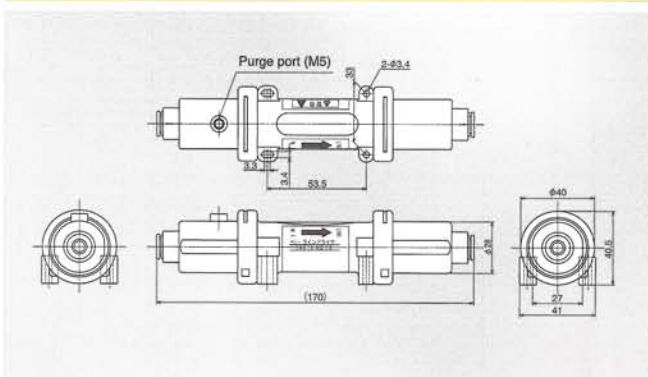
### Flow Characteristics (Pressure Drop)



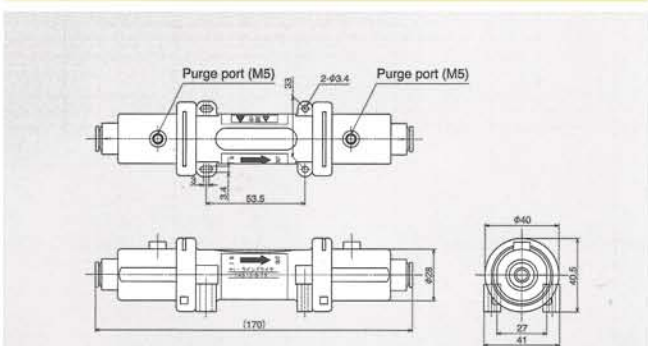
## IAD3-N- T6



### IAD10-N (Inner line purge type)

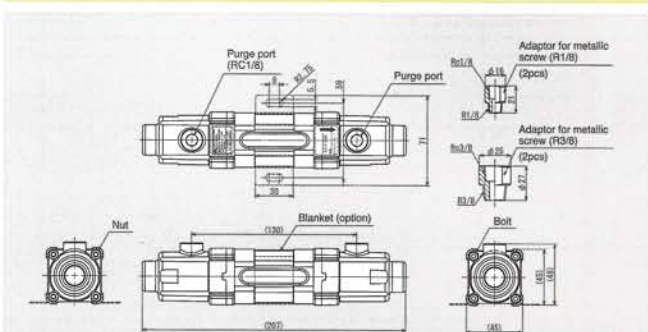


### IAD10-G-T (Outside line purge type)



Purge air rate can be adjusted by preparing separately and adding the flow regulating valve.

## IAD20-G-3/8



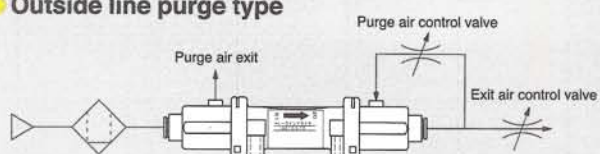
Purge air rate can be adjusted by preparing separately and adding the flow regulating valve. When you connect with a metallic screw, please use the accessory adapter.

### Recommended circuit

- Inner line purge type



● **Outside line purge type**



Diverge the piping of the exit side, and connect for purge air entrance.

**KITZ MICRO FILTER CORPORATION**

3-10-5, NIHOMBASHI, CHUO-KU, TOKYO 103-0027, JAPAN

Phone:+81-3-6262-1930 FAX:+81-3-6262-1960 Homepage:<http://www.kitzmf.com/english/>