



# Water Separators

Models | A30006WS to A31500WS

Flow Rates 6 SCFM (10 Nm<sup>3</sup>/hr) to 1500 SCFM (2550 Nm<sup>3</sup>/hr)

**Removes up to 99% of bulk water when tested in accordance with ISO 12500-4**

Integrating into Walker Filtration's compressed air filtration range, the Alpha Water Separator combines proven Alpha centrifugal technology with a new forward thinking housing design to deliver market leading water removal efficiencies – eliminating 99% bulk water with continuously low differential pressure.

The custom engineered centrifugal module features unique vanes to eliminate points of low efficiency, and a vortex arrestor to stop re-entrainment - ensuring minimal operating pressure loss and maintaining excellent liquid removal, even at low velocities.

No replacement components are required, making Walker Filtration's Water Separators a viable and cost effective solution for removing bulk water from compressed air.



**Unique Centrifugal Module**

Removes 99% of bulk water even at low velocities



**Externally Accessible Drain Valve**

Eliminates the need to access inside the water separator housing when servicing the drain



**Modular Construction**

Low cost connecting kits and new filter head design enables easy close coupling assembly

- **Energy Saving** Water Separators operate with consistently low differential pressure reducing both energy consumption and operating costs
- **Flexible Installation** Modular design and accessible fixings enable simple close coupling assembly
- **Cost Effective** No replacement components required
- **Externally Accessible Drain Valve** Drain valve can be removed externally on larger models
- **Product Safety in Mind** Guaranteed safe housing closure with rotational safety stop
- **Corrosion Protection** Internal and external electrophoretic painting followed by a tough exterior polyester powder coating

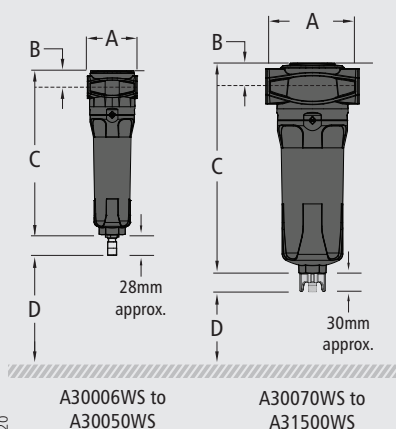


# Technical Specification

Filter model	Pipe size inches	Inlet flow rate*		Dimensions mm				Weight Kg
		Nm <sup>3</sup> /hr	SCFM	A	B	C	D	
A30006WS	1/8	10	6	50	17	157	60	0.3
A30015WS	1/4	25	15	50	17	157	60	0.3
A30025WS	1/4	42	25	70	23	231	70	0.6
A30032WS	3/8	54	35	70	23	231	70	0.6
A30050WS	1/2	85	50	70	23	231	70	0.6
A30070WS	1/2	119	70	127	32	285	80	1.7
A30125WS	3/4	212	125	127	32	285	80	1.7
A30175WS	1	297	175	127	32	285	80	1.7
A30280WS	1 1/4	476	280	140	41	476	85	3.0
A30320WS	1 1/2	544	320	140	41	476	85	3.0
A30400WS	1 1/2	680	400	170	53	508	100	4.9
A30700WS	2	1189	700	170	53	508	100	4.9
A30850WS	2 1/2	1444	850	220	70	420	100	8.0
A31500WS	3	2550	1500	220	70	420	100	8.0

\* Rated flow at 7 barg, reference conditions at 1 bar (a) 20°C

Grade	WS	
Minimum recommended operating temperature - automatic drain	1°C	34°F
Maximum recommended operating temperature - automatic drain	80°C	176°F
Maximum working pressure - automatic drain	16 barg	232 psig
Minimum recommended operating temperature - manual drain	1°C	34°F
Maximum recommended operating temperature - manual drain	120°C	248°F
Maximum working pressure - manual drain	20.7 barg	300 psig
Typical pressure loss at rated flow	55 mbar	0.8 psig



## Technical Notes

- Water Separators are fitted as standard with normally open float operated automatic drain valves, ADVS16 on models A30006WS to A30050WS and ADVSE16 on models A30070WS to A31500WS. Standard filters operate at 16 barg (232 psig) at 80°C (176°F). Normally closed automatic drain valves (ADVS16C) are available for low flow applications. A 20.7 barg (300 psig) range at 120°C (248°F) is available when supplied with a manual drain valve (MDV25 / MDVE25).
- Connecting kits are required to connect Water Separators to models A30006 to A31500 - see price guide.
- Wall mounting brackets are available for all models - see price guide.
- Threaded connections are Rp (BSP Parallel) to ISO 7-1 or NPT to ANSI/ASME B1.20.1 if supplied within North America. Rc (BSP Taper) to ISO 7-1 also available.
- For NPT threads, add the suffix N, e.g., A30070NWS, and for Rc threads add the suffix C, e.g. A30070CWS.





# PRO XF Water Separators

Redefining Compressed Air Filtration | Water Separators

Flow rates 700 scfm (1189 Nm<sup>3</sup>/hr) to 1500 scfm (2549 Nm<sup>3</sup>/hr)

The PRO XF Water Separator uses centrifugal force to remove 99% of bulk water found in compressed air systems to avert water contamination. PRO XF Water Separators enhance the reliability of a compressed air system, eliminate the problem of costly downtime and are tested in accordance with ISO 8573-9.

Designed as part of the PRO XF range, the PRO XF Water Separator can be used individually or multi-banked with PRO XF Filter Modules to create a space-saving and cost effective filtration solution.

The centrifugal module has been custom engineered to feature unique vanes to eliminate points of low efficiency, and a vortex arrestor to stop re-entrainment - ensuring minimal operating pressure loss and maintaining excellent liquid removal, even at low velocities.

Available in 2", 2 1/2" and 3" threaded and DN80 and DN100 flanged housings, for operating pressures up to 16 barg. No replacement components are required for the PRO XF Water Separator, making it a viable, cost effective solution to removing bulk water from compressed air.

**Removes 99%  
of bulk water  
when tested in  
accordance with  
ISO 8573-9**



#### Unique Centrifugal Module

Removes 99% of bulk water even at low velocities



#### Externally Accessible Drain valve

Eliminates the need to access inside the filter housing when servicing the drain



#### Threaded & Flanged Connections

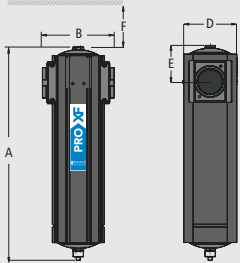
2", 2 1/2", 3" threaded and DN80 and DN100 flanged housings

- **Energy Saving** Operates with consistently low differential pressure, reducing both energy consumption and operating costs
- **Cost Effective** No replacements components are required
- **Space Saving Modular Construction** The PRO XF Water Separator can be installed individually or banked to PRO XF Filter Modules using slim line connectors and one set of inlet and outlet ports
- **Corrosion Protection** Internally and externally EP coated
- **Externally Accessible Drain Valve** Drain valve can be removed externally, without having to gain access to the internal of the filter. Simply unscrew from the bottom and remove

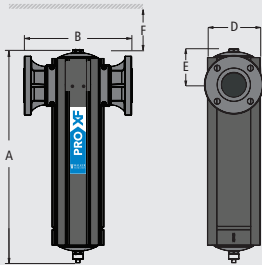
For further information please visit [www.walkerfiltration.com](http://www.walkerfiltration.com)

# Technical Specification

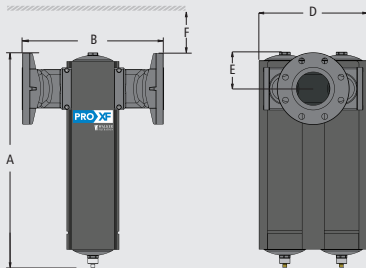
## PRO XF Water Separator



Model XF200WS - XF300WS



Model XF300FWS



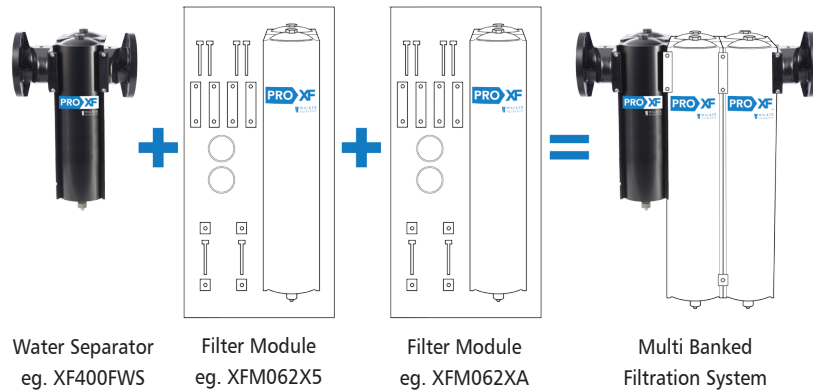
Model XF400FWS

Water Separator	Pipe Size	Inlet flow rate*		Dimensions mm						Weight Kg
		Nm <sup>3</sup> /hr	SCFM	A	B	C	D	E	F	
XF200WS	2"	1189	700	650	232	171	217	116	300	11.8
XF250WS	2 1/2"	1444	850	650	232	171	217	116	300	11.8
XF300WS	3"	2549	1500	650	232	171	217	116	300	11.8
XF300FWS	DN80 / 3"	2459	1500	650	352	171	217	116	300	15.7
XF400FWS	DN100 / 4"	5097	3000	650	457	343	N/A	116	300	29.3

Grade	WS	
Maximum recommended operating temperature	120°C	248°F
Minimum recommended operating temperature	1.5°C	35°F
Maximum working pressure	16 barg	232 psig

All PRO XF Water Separators can be multi-banked to PRO XF Filter Modules to create compact and space saving filtration solutions.

Example: Air Purity Classification 1,-,1



For more information on the full PRO XF range please see the PRO XF product brochure or visit [www.walkerfiltrationlaunches.com/proxf](http://www.walkerfiltrationlaunches.com/proxf)

## Technical notes

- Water Separators and Coalescing Filters are fitted with float operated automatic drain valves. When high quantities of liquids are anticipated, Walker Filtration recommends the use of electronic drain valves with Water Separators.
- Water Separators can be multi banked to appropriate PRO XF Filter Modules using the slim-line connectors that are supplied with each Filter Module.
- Flanged connections are DN80 PN16 (3") and DN100 PN16 flanged (4"), or ANSI B16.5 class 150 (3") and 300lb (4"). Filters supplied as standard, i.e. XF341F, will be supplied with DN type flanges. For 3" ANSI 150lb and 4" ANSI 300lb Flanges add the suffix 'P' to the part number e.g XF341FPXA.
- Threaded connections are Rp (BSP parallel) to ISO 7/1 or NPT to ANSI B2.1 if supplied within North America. For NPT connections add the suffix 'N' e.g. XF241NXA.



**Walker Filtration Ltd**  
Birtley Road, Washington,  
Tyne & Wear, NE38 9DA,  
United Kingdom.

t: +44 (0) 191 417 7816  
f: +44 (0) 191 415 3748  
e: [sales@walkerfiltration.co.uk](mailto:sales@walkerfiltration.co.uk)  
[www.walkerfiltration.com](http://www.walkerfiltration.com)

**Walker Filtration Inc**  
4748 Pacific Avenue,  
Erie, PA 16506,  
USA.

t: +1 814 836 2900  
f: +1 814 836 7921  
e: [usa@walkerfiltration.com](mailto:usa@walkerfiltration.com)  
[www.walkerfiltration.com](http://www.walkerfiltration.com)

**Walker Filtration PTY Ltd**  
16-18 Lindon Court,  
Tullamarine, Victoria, 3043,  
Australia.

t: +61 (0) 3 9330 4144  
f: +61 (0) 3 9330 4177  
e: [sales@walkerfiltration.com.au](mailto:sales@walkerfiltration.com.au)  
[www.walkerfiltration.com.au](http://www.walkerfiltration.com.au)

**Walker Filtration Ltd Japan**  
Hulic Gaienmae Building, 6F  
2-7-26 KitaAoyama, Minatoku  
Tokyo, 107-0061, Japan.

t: +81 (0)3 6890 6911  
f: +81 (0)3 6685 2974  
e: [japan@walkerfiltration.com](mailto:japan@walkerfiltration.com)  
[www.walkerfiltration.com](http://www.walkerfiltration.com)



**iB Series**



# iB-Cyclone

PAT. PEND. *G thread specifications*

**Introducing the high-speed  
cyclone type drain separator!**

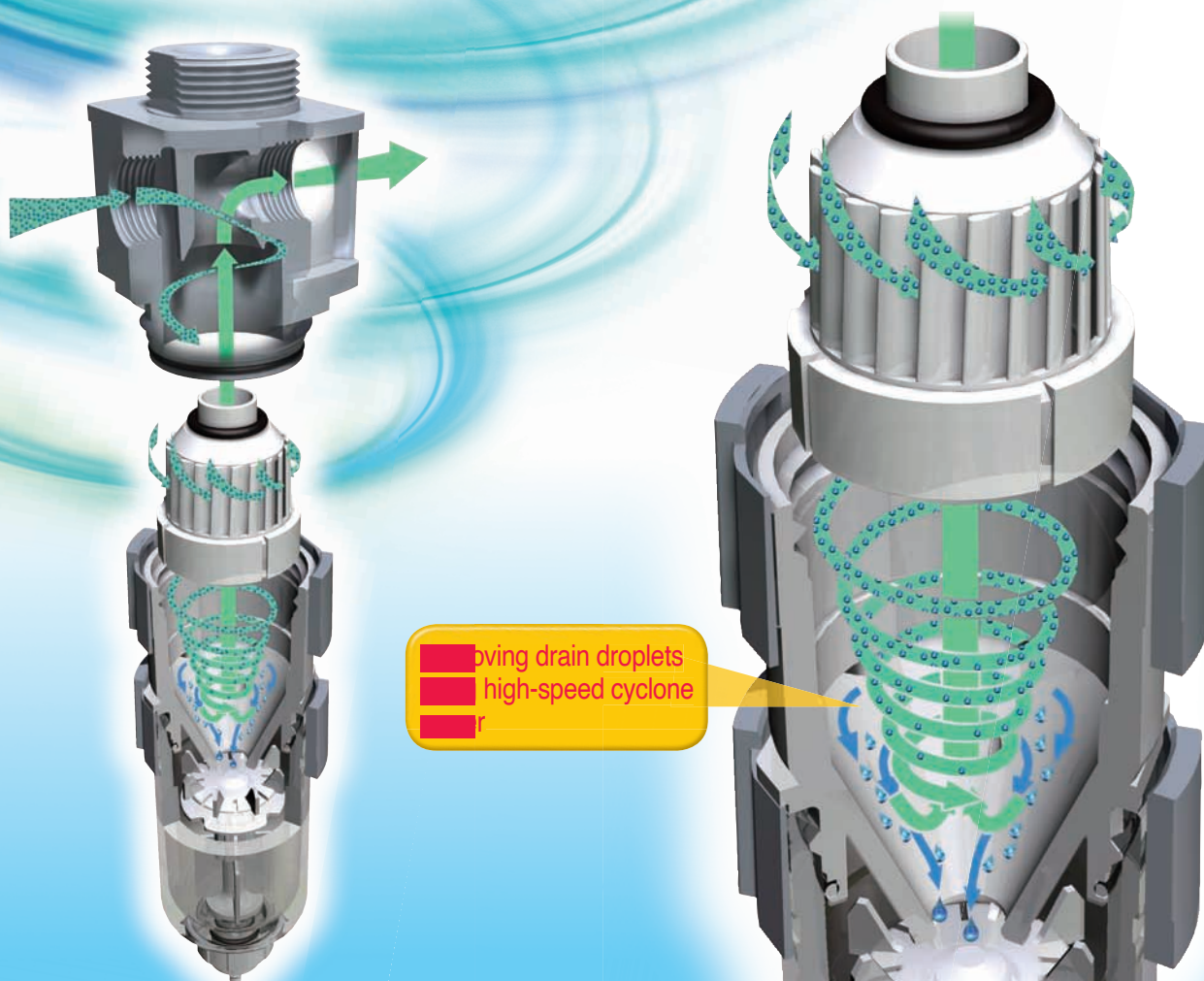


Conceptual image of drain separation



# iB-Cyclone

PAT. PEND.



Superior water separation performance

Half the size and over 99%<sup>Note</sup> drain separation ratio compared to other devices. Note: According to Koganei measurement standards.

Cyclone system

**High-speed cyclone** drain separator uses the power of centrifugal separation (patent pending).

Maintainability improved

Maintenance free because an element is not used.  
Select NO type or NC type auto drain.

Wide range of flow rates

Excellent water separation performance in a wide range of flow rates.

Compatible in a wide range of environments

Specifications for ozone resistance, NCU specifications (copper free) are standard.



**CAUTION**

Read the handling instructions and precautions on page ⑤ before using this product.



**CAUTION** Read the safety precautions on page ③ before using this product.

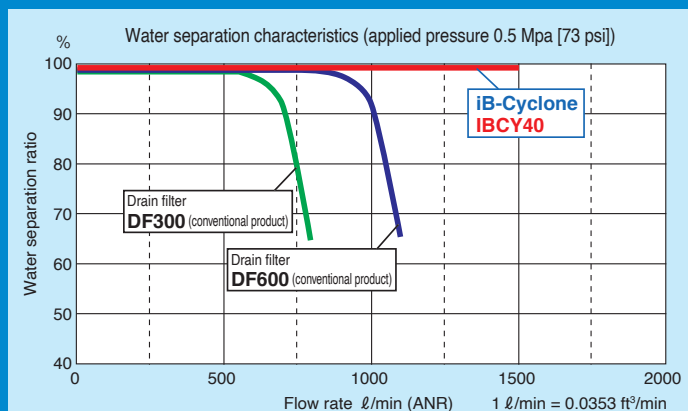
## User issues

- Having trouble removing drain in piping
- Changing elements and other maintenance is difficult.



Koganei provides solutions to user problems with the **iB-Cyclone**, which delivers new value and worth to customers.

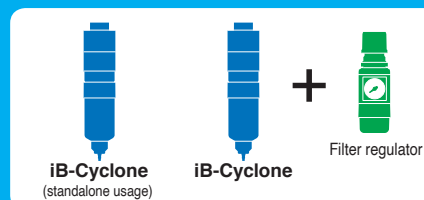
The iB-Cyclone uses a high-speed cyclonic system to maintain water(drain) separation rates even if the flow is increased. Separation performance is always steady, from small to large flow rates.



\*Water (drain) separation compared with other Koganei drain filter (reference).

## iB-Cyclone application example

- Removing drain in sub-lines and from various equipment
- Removing primary-side drain from filters and regulators
- Pre-processing of the air supply going to the membrane dryer
- Removing drain from equipment extremities



## Variations and Options

IBCY30



IBCY40



IBCY50



With metal cover  
IBCY40-F21-□-□-BG  
IBCY50-F21-□-□-BG

Note 1: Metal cover cannot be attached to the IBCY30.

Note 2: Metal cover cannot be attached when iB-Cyclones are connected in a series of in modules.



Auto drain type  
NO (Normally open)  
NC (Normally closed)



Drain cock with fitting



Bracket  
8Z-CBK







Before selecting and using the products, please read all the Safety Precautions carefully to ensure proper product use.

The Safety Precautions described below are to help you use the product safely and correctly, and to prevent injury or damage to you, other people, and assets.

Always adhere to the following safety regulations: ISO4414 (Pneumatic fluid power - General rules and safety requirements for systems and their components) and JIS B 8370 (General rules relating to systems).

**The directions are ranked according to degree of potential danger or damage: “DANGER!”, “WARNING!”, “CAUTION!”, and “ATTENTION!”**

 <b>DANGER</b>	Indicates situations that can be clearly predicted as dangerous. Failure to avoid the situation creates the risk of death or serious injury. It could also result in damage or destruction of assets.
 <b>WARNING</b>	Indicates situations that, while not immediately dangerous, could become dangerous. Failure to avoid the situation creates the risk of death or serious injury. It could also result in damage or destruction of assets.
 <b>CAUTION</b>	Indicates situations that, while not immediately dangerous, could become dangerous. Failure to avoid the situation creates the risk of minor or semi-serious injury. It could also result in damage or destruction of assets.
 <b>ATTENTION</b>	While there is little chance of injury, this content refers to points that should be observed for appropriate use of the product.

## ■ This product was designed and manufactured for use in general industrial machinery.

- When selecting and handling equipment, the system designer or another person with sufficient knowledge and experience should always read the Safety Precautions, catalog, User's Manual and other literature before commencing operation. Improper handling is dangerous.
- After reading the Instruction Manual, catalog, and other documentation, always store them in a location that allows easy availability for reference to users of this product.
- Whenever transferring or lending the product to another person, always attach the catalog, instruction manual, and other information to the product where they are easily visible in order to ensure that the new user can use the product safely and properly.
- The danger, warning and caution items listed under these Safety Precautions do not cover all possible contingencies. Read the catalog and instruction manual carefully, and always keep safety first.



## DANGER

- Do not use the product for the purposes listed below:
    1. Medical equipment related to maintenance or management of human lives or bodies.
    2. Machines or equipment designed for the purpose of moving or transporting people.
    3. Critical safety components in mechanical devices.

This product has not been planned or designed for purposes that require high levels of safety. Using the product in any of the ways described above creates the risk of loss of human life.
  - Do not use the product in locations with or near dangerous substances such as flammable or ignitable substances. This product is not explosion-proof. Doing so creates the risk of ignition and fire.
  - When mounting the product and workpiece, always firmly support and secure them in place. Falling, dropping, or abnormal operation of the product creates the risk of personal injury.
  - Never attempt to modify the product. Abnormal operation can lead to injury.
  - Never attempt inappropriate disassembly, assembly, or repair of the product relating to basic construction, or to its performance or functions. This can lead to injury, etc.
  - While the product is in operation, avoid touching it with your hands or otherwise approaching too close except for specified operations. Also, do not attempt to make any adjustments to internal or attached mechanisms, or to perform any type of adjustment (disconnecting tubes or sealed plugs, adjustment of the product's mounting position, etc.) while the product is in operation.
- Falling, dropping, or abnormal operation of the product creates the risk of personal injury.



## WARNING

- Because KOGANEI products are designed for use under a wide variety of conditions, decisions concerning conformance with a particular system should be made upon the careful evaluation of a person in charge of system design.
- Assurances concerning expected system performance and safety are the responsibility of the designer who decides system conformity. Be sure to use the latest catalogs and technical materials to study and evaluate specification details, to consider the possibility of machine breakdown, and to configure a system that ensures fail-safe safety and reliability.

- Do not use the product in excess of its specification range. Doing so creates the risk of product breakdown, loss of function, or damage. It could also drastically reduce operating life.
- Before supplying air to the device and before starting operation, always conduct a safety check of the area of machine operation. Unintentional supply of air creates the risk of injury due to contact with moving parts.
- Do not allow the product to be thrown into fire. Doing so creates the risk of explosion, resulting in the release of toxic gasses.
- Do not sit on the product, place your foot on it, or place other objects on it. Doing so creates the risk of injury due to tripping or the product tipping over or falling, resulting in product damage and abnormal, erratic, or runaway operation.
- Before conducting maintenance, inspection, repair, replacement, or any other similar procedure, always completely cut off all air connections and confirm that residual pressure inside the product or in piping connected to the product is atmospheric pressure. In particular, be aware that residual air will still be in the compressor or storage tank.
- The actuator may move abruptly if residual air pressure remains inside the piping, causing injury.
- Use safety circuits or create system designs that prevent damage to machinery or injury to personnel when the machine is shut down due to an emergency stop or electrical power failure.
- Always check the catalog and other reference materials for correct product piping. Improper piping creates the risk of abnormal operation of the actuator.
- When the device not used for long periods (over 30 days), it is possible that the contacting parts may have become stuck leading to slow operation or sudden movements, and it will create the risk of injury. Check for proper operation a minimum of once every 30 days.
- Do not use the product at the beach in direct sunlight, near mercury lamp, or near equipment that generates ozone. Ozone causes rubber components to deteriorate resulting in reduced performance, or a limitation or stop of functions.
- Do not use any type of medium that is not specifically stipulated in the specifications. Using a non-specified medium could lead to short term loss of function, sudden degradation of performance, and a reduced operating life.
- In initial operations after the equipment has been idle for 48 hours or more, or has been in storage, there is a possibility that contacting parts may have become stuck, resulting in equipment operation delays or in sudden movements. Before these initial operations, always run a test to check that operating performance is normal.



- Do not use the product in locations that are subject to direct sunlight (ultraviolet rays); locations with high humidity and temperature, dust, salt, or iron powder. Do not use fluids in the product or use the product in an environment that includes corrosive fluids such as organic solvents, phosphate ester type hydraulic oil, sulfur dioxide, chlorine gas, acids, etc. It could lead to early shutdown of some functions, a sudden degradation of performance, and a reduced operating life. For information about materials, see Major Parts and Materials.
- Do not use in locations where there is a heat source nearby or that are subject to radiated heat.



## CAUTION

- When mounting the product, leave room for adequate working space around it. Failure to do so will make it more difficult to conduct daily inspections or maintenance, which could eventually lead to system shutdown or damage to the product.
- Do not scratch, dent, or deform the product by climbing on it using it as a scaffold, or placing objects on top of it. Doing so creates the risk of damage to or breakage of the product, resulting in operational shutdown or degraded performance.
- Always be sure to post an "operation in progress" sign during installation, adjustment, or other operations, to avoid unintended air supply. Unintentional supplying of air can cause sudden operation and may result in injury.
- Use in extremely dry air under temperatures lower than -20 °C [-4 °F] may affect the quality of the lubricating oil used. This creates the risk of degraded performance, loss of function, or other problems.



## ATTENTION

- When considering the possibility of using this product in situations or environments not specifically noted in the Catalog or Instruction Manual, or in applications where safety is an important requirement such as in an aircraft facility, combustion equipment, leisure equipment, safety equipment, and other places where human life or assets may be greatly affected, take adequate safety precautions such as the application with enough margins for ratings and performance or fail-safe measures. Be sure to consult us with such applications.
- Always check the catalog and other reference materials for product piping.
- Use a protective cover and other means to ensure that the operating parts of mechanical devices are isolated and do not come into direct contact with human bodies.
- Do not configure control of the system in a way that could cause workpieces to fall due to power failure.  
Configure control of the system to prevent workpieces, and other items from falling due to power failure or by emergency stop of mechanical devices.
- When handling the product, wear protective gloves, safety glasses, safety shoes etc.
- When the product can no longer be used or is no longer necessary, dispose of it appropriately as industrial waste.
- Pneumatic equipment can exhibit degraded performance and function over its operating life. Always conduct daily inspections of the pneumatic equipment, and confirm that all requisite system functions are satisfied, to prevent accidents from happening.
- For inquiries about the product, contact your nearest KOGANEI sales office or the KOGANEI overseas group. The addresses and telephone numbers are shown on the back cover of this catalog.



## Other

- Always observe the following items.
  1. When using this product in pneumatic systems, always use genuine KOGANEI parts or compatible parts (recommended parts).  
When conducting maintenance and repairs, always use genuine KOGANEI parts or compatible parts (recommended parts).  
Always observe the prescribed methods and procedures.
  2. Never attempt inappropriate disassembly or assembly of the product relating to basic configurations, or its performance or functions.

KOGANEI shall not be held responsible for any problems that occur as a result of these items not being properly observed.

## Warranty and General Disclaimer

1. Warranty Period  
KOGANEI warrants this product for a period of no more than 180 days after it is purchased.
2. Scope of Warranty and General Disclaimer
  - (1) The KOGANEI product warranty covers individual products. When a product purchased from KOGANEI or from an authorized KOGANEI dealer or KOGANEI distributor malfunctions during the warranty period in a way that is found to be attributable to KOGANEI responsibility, KOGANEI will repair or replace the product free of charge. Even if a product is still within the warranty period, its durability is determined by its operation cycles and other factors. Contact your nearest KOGANEI sales office or the KOGANEI overseas group for details.
  - (2) KOGANEI shall not be held responsible for any losses or for any damage to other machinery caused by breakdown, loss of function, or loss of performance of KOGANEI products.
  - (3) KOGANEI shall not be held responsible for any losses due to use or storage of the product in a way that is outside of the product specifications prescribed in KOGANEI catalogs and the instruction manual, and/or due to actions that violate the mounting, installation, adjustment, maintenance and other safety precautions.
  - (4) KOGANEI shall not be held responsible for any losses caused by breakdown of the product due to factors outside the responsibility of KOGANEI, including but not limited to fire, natural disaster, the actions of third parties, and intentional actions or errors by you.



### General Precautions

- Before performing piping work, thoroughly flush the inside of the pipes with compressed air.  
Machining chips, sealing tape, rust and other debris getting entered in during piping work may result in lowered performance and functionality or function stoppage.
- This product cannot be used when the medium or ambient atmosphere includes any of the following substances:  
Organic solvents, phosphate ester type hydraulic oil, sulfur dioxide, chlorine gas, fluorine gas, ozone, acids, or other corrosive gasses.
- The bowl material is polycarbonate. This product cannot be used in environments with the above gasses and fluids, nor threadlocking adhesive, leak detection fluid, hot water or where it may be exposed to them. This product cannot be used in direct ultra-violet light. See page 8 for details.
- Cover the unit or take other measures when using it in locations where it might be subject to excessive dust, dripping water, dripping oil, etc.
- Do not exceed the specified volume of water for the product. The water droplets may splash into the secondary side. See page 10 for information about separation characteristics.
- If mist or condensation forms in the product, it may splash into the secondary side.

### Operating environment and medium

#### ● Usable medium

- Use cleaned air (filtered to below 40  $\mu\text{m}$ ) for the medium. If you are considering using something other than cleaned air, contact the nearest Koganei sales office or overseas department.
- Air that is mixed with oil or solids cannot be used.



Using air that contains oil or solids may cause the product to stop functioning, may lower performance, or shorten the service life.



### Mounting and Piping



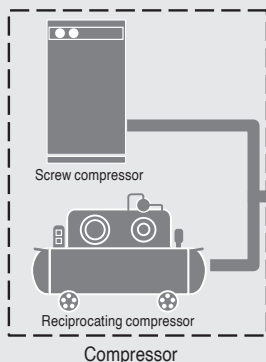
#### CAUTION

#### ● Direct installation on compressor

Do not install the product directly on a compressor. Use sufficient countermeasures for temperature control, and removing oils and solids before use.



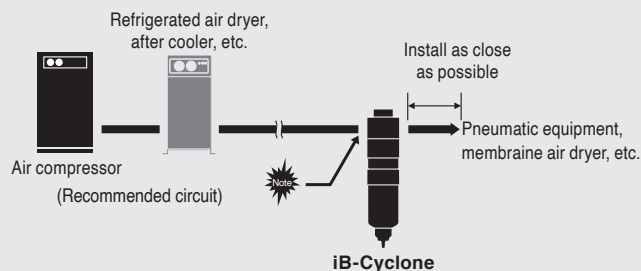
Not using countermeasures may cause the product's functions to stop after a short period and may reduce the product performance and service life.



Excessive oil or solids not allowed  
Operation in environment or with medium exceeding operating temperature range not allowed

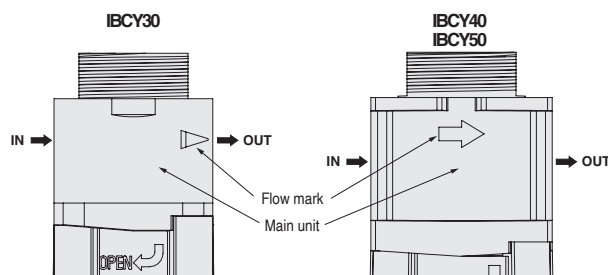


#### CAUTION iB-Cyclone cannot remove humidity.



- The iB-Cyclone is for removing drain. Steam in pressurized air cannot be removed (dehumidifying cannot be done). Use a membrane air dryer or something on the secondary side if dehumidifying is needed.
- Place a device to lower the supplying air from the ambient temperature, by using a refrigerated air dryer or after cooler in the air line so condensation does not occur in the secondary side of piping of the iB-Cyclone. Also, install the iB-Cyclone as close as to the using pneumatic equipment.

- Install in a location where the air supply and the ambient temperature is under 60 °C [140 °F].
- Install vertically so the piping connection portion is up and the drain outlet is down.
- Allow enough space to easily do maintenance tasks, such as turning the guard button and attaching and removing the bowl.
- Tighten the mounting ring to less than 5.0 N·m [3.71 ft·lbf] when installing the bracket.
- Connect the piping so the air flows in the direction of the arrow (flow mark) on the product. The drain removal function will be ineffective if the flow is reversed.



- Do not place any weight of the product's piping or apply excessive torque on the product. When tightening the piping, hold the main unit and tighten it to the torque recommended in the diagram below.

#### Recommended tightening torque

N·m [ft·lbf]

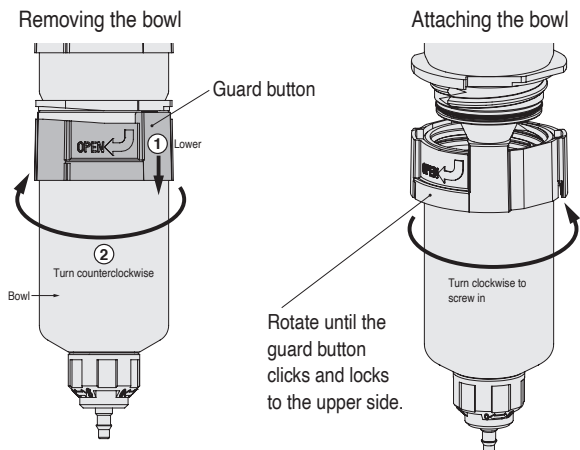
Connecting thread	1/8	1/4	3/8	1/2
Torque	7~9 [5.2~6.6]	12~14 [8.9~10.3]	22~24 [16.2~17.7]	28~30 [20.7~22.1]

- Large moment and vibration are easily transmitted from steel or non-flexible piping, place a flexible hose between the product and the piping to prevent this from affecting the product.

## ● Periodic maintenance

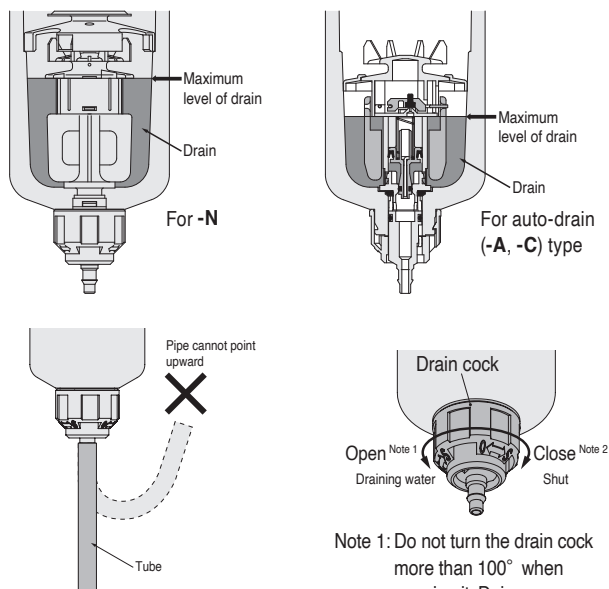
### Bowl

1. Do periodic inspections to look for cracks, scratches, or other deterioration in the bowl (clear plastic part).
2. If you find any cracks, scratches, or other deterioration, replace the bowl with a new one, because it may cause a breakdown. See page 9 for information about ordering bowls.
3. Replace the bowl with a new one if it becomes dirty or the transparency is reduced. To wash the bowl, use diluted household neutral detergent to wash it and then rinse it off with water.
4. Remove and replace the bowl as shown in the diagram below (release all pressure from inside the product before starting work).



### Drain cock

1. If the volume of drain is greater than that shown in the left side diagram below, the drain removal function is greatly reduced. Be sure to drain before the drain volume reaches the level shown in the left side diagram below. Turn the drain cock with your hand in the case.
2. A tube with an inner diameter of  $\phi 4$  [0.157 in] can be attached to the drain cock. Make sure the drain cock is closed (locked) before attaching the tube. Do not allow tubing to become severely bent or twisted in the vicinity of the fitting. Lateral force may damage the fitting. Do not point the pipe upward and use a pipe that is under 5 m [16.4 ft].
3. If you are using the auto-drain type, the drain that collects on the primary side is flushed all at once. If collected drain exceeds the maximum level in the right of the diagram below, it could lead to a malfunction. Be careful that it does not exceed the maximum level.

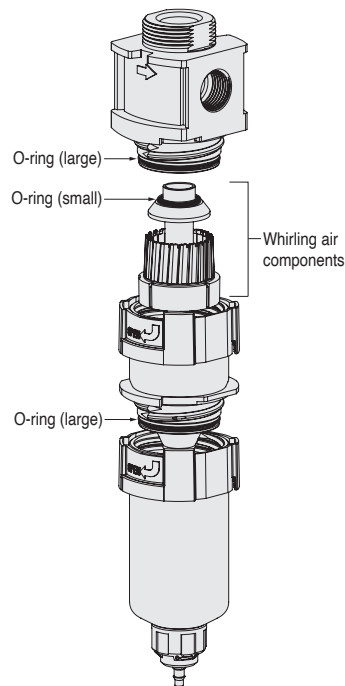


Note: Cut the end of the tube connected to the fitting straight across, and insert completely and securely as shown in the diagram. Also, after installing it, lightly pull it to confirm that it does not come out.

Note 1: Do not turn the drain cock more than 100° when opening it. Doing so may damage the drain cock.  
Note 2: When closing the drain cock, rotate it firmly until it clicks and locks.

### Whirling air components

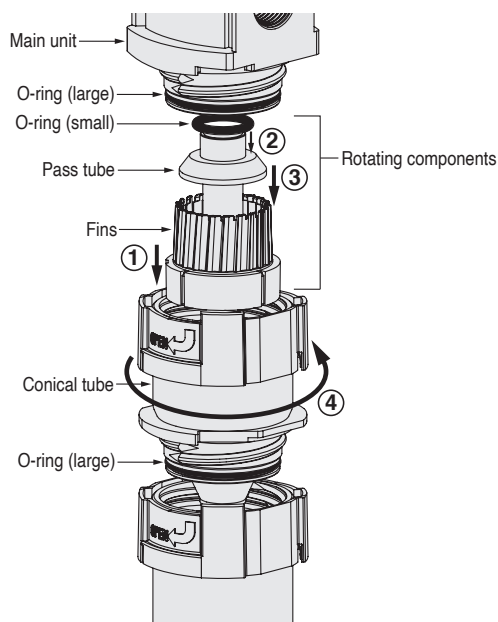
1. Dust collecting in the whirling air components reduces the separation function. If this happens, disassemble and wash the product to remove the dust as shown in the diagram below (release all pressure from inside the product before starting work).
2. Use a Seal Kit to replace the o-rings when reassembling the whirling air components. See page 9 for information about ordering Seal Kits.



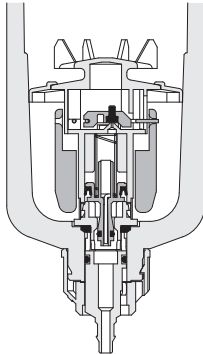
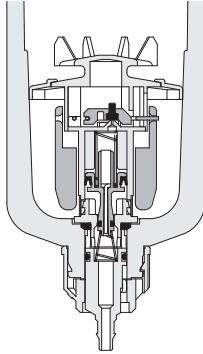
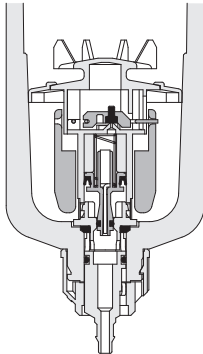
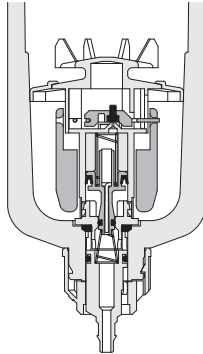
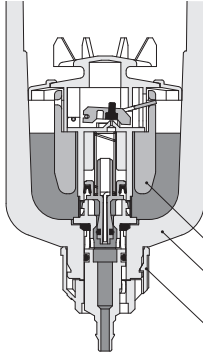
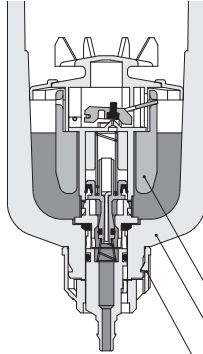
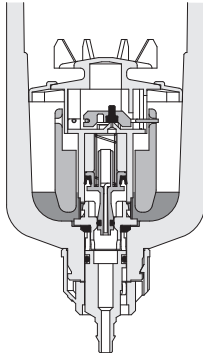
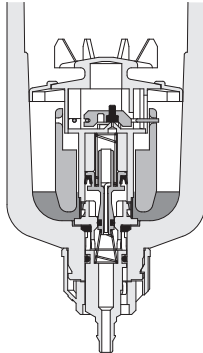
### Assembly method

Reassemble according to the following procedure.

- ① Insert the fins into the conical tube and press them in with your hand.
- ② Attach a new o-ring (small) to the pass tube.
- ③ Fit the pass tube to the fins (fit it so it touches the seating of the fins).
- ④ Replace the two o-rings (large) and connect the conical tube to the main unit.



## ● Explanation of operation of auto drain system

State	Type	NO type	NC type
Not pressurized	NO type	 <p>Open</p> <p>When unpressurized, the liquid outlet opens and the liquid drains naturally.</p>	 <p>Closed</p> <p>When unpressurized, the liquid outlet closes and the liquid cannot drain.</p> <p>Caution: The liquid does not drain when unpressurized, if there is a lot of liquid even in an unpressurized (low pressure) condition, it may be necessary to drain the liquid by hand.</p>
		 <p>Closed</p> <p>Air and liquid will be discharged from the liquid outlet until the pressure exceeds the minimum operating pressure (0.15 MPa [22 psi]). The air and liquid will stop after stored pressure exceeds the minimum operating pressure.</p> <p>Caution: A compressor with a small output may not reach full pressure, and there may be exhaust air until the minimum operating pressure is exceeded.</p>	 <p>Closed</p> <p>In the same way, when unpressurized, the liquid outlet closes and the liquid cannot drain.</p>
Draining the liquid	NO type	 <p>Open</p> <p>When the level of liquid in the bowl reaches a specified level, the float lifts and the liquid automatically drains.</p> <p>Caution: The liquid can be drained manually by turning the drain knob to the left. See page 6 for details.</p> <p>Float Bowl Drain knob</p>	 <p>Open</p> <p>When the level of drain in the bowl reaches a specified level, the float lifts and the liquid automatically drains.</p> <p>Note 1: Supply pressure is needed to operate the auto drain. A minimum of 0.15 MPa [22 psi] is needed for the supply pressure.</p> <p>2: The liquid can be drained manually by turning the drain knob to the left. See page 6 for details.</p> <p>Float Bowl Drain knob</p>
		 <p>Closed</p> <p>When the liquid drains, the float lowers and the liquid outlet closes, and the liquid stops draining.</p>	 <p>Closed</p> <p>When the liquid drains, the float lowers and the liquid outlet closes, and the liquid stops draining.</p>



## Handling instructions and Precautions

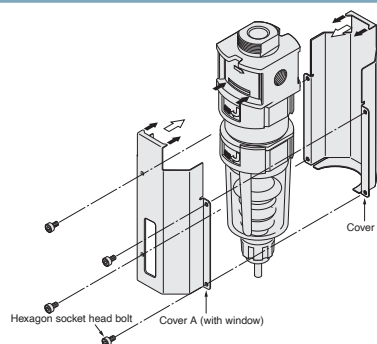
### ● Metal cover handling instructions

#### Mounting and removing the metal cover

Use the following procedure to mount the metal cover.

- ① Enclose the body of the iB-Cyclone between cover A and cover B as shown by the black arrows in the diagram on the right (the window can face either sides).
- ② Tighten the hexagon socket bolts in the 4 locations from the A cover side around 1.0 to 1.2 N·m [0.74 to 0.88 ft·lbf].

To remove the metal cover, remove the 4 hexagon socket bolts.



## Reference data

### ● About the chemical resistance of polycarbonate

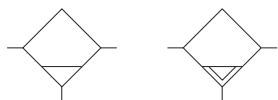
The chemicals in the following table degrade polycarbonate. They may damage the bowl and cause an accident. Do not allow the following chemicals into the compressed air or the environment around the product, do not allow them to contact the product. This does not mean that polycarbonate is chemically resistant to all chemicals not listed below.

Type	Classification	Chemical name	Application example
Inorganic compound	Acid	Hydrochloric acid, sulfuric acid, nitric acid, fluorine, phosphoric acid, chromic acid	Coating processing, acid degreasing, and pickling of metals
	Alkali	Caustic soda, caustic potash, hydrated lime, aqueous ammonia, sodium carbonate	Alkaline degreasing of metals
	Inorganic salt	Sodium sulfide, potassium nitrate, potassium dichromate, sodium nitrate	Dyes, rust inhibitor
Organic compounds	Aromatic hydrocarbons	Benzene, toluene, xylene, ethylbenzene, styrene	Paint thinner (benzene, toluene, xylene)
	Chlorinated aliphatic hydrocarbons	Methyl chloride, ethylene chloride, methylene chloride, acetylene chloride, chloroform, trichlene, tetrachloroethylene, carbon tetrachloride	Organic solvents for metal cleaning (trichlene, tetrachloroethylene, carbon tetrachloride)
	Chlorinated aromatic hydrocarbons	Chlorobenzene, dichlorobenzene, benzene hexachloride (BHC)	Agricultural chemicals
	Petroleum components	Solvent, naphtha, gasoline	Fuel
	Alcohol	Methyl alcohol, ethyl alcohol, cyclohexanol, benzyl alcohol	Anti-freezing agents
	Phenol	Carbolic acid, cresol, naphthol	Antiseptic solutions
	Ether	Methyl ether, methylethyl ether, ethyl ether	Brake fluid additive, detergent
	Ketones	Acetone, methyl ethyl ketone, cyclohexane, acetophenone	Cleaning solutions
	Carboxylic acid	Formic acid, acetic acid, butyl acid, acrylic acid, oxalic acid, phthalic acid	Dyes, aluminum processing solution (oxalic acid), paint base (phthalic acid)
	Phthalic acid ester	Dimethyl phthalate (DMP), diethyl phthalate (DEP), dibutyl phthalate (DBP), dioctyl phthalate (DOP)	Lubricants, synthetic hydraulic fluids, rust inhibitor additives, synthetic resin plasticizer
	Oxyacid	Glycolic acid, lactic acid, malic acid, citric acid, tartaric acid	Food preservatives, acidifiers
	Nitro compounds	Nitromethane, nitroethene, nitro ethylene, nitrobenzene	Paint medium, explosives
	Amine	Methylamine, dioctylamine, ethylamine, aniline, acetanilide	Brake fluid additive
	Nitrile	Acetonitrile, acrylonitrile, benzonitrile	Nitrile rubber materials

# iB-Cyclone

IBCY30-F21, IBCY40-F21, IBCY50-F21

## Symbol



Auto drain type



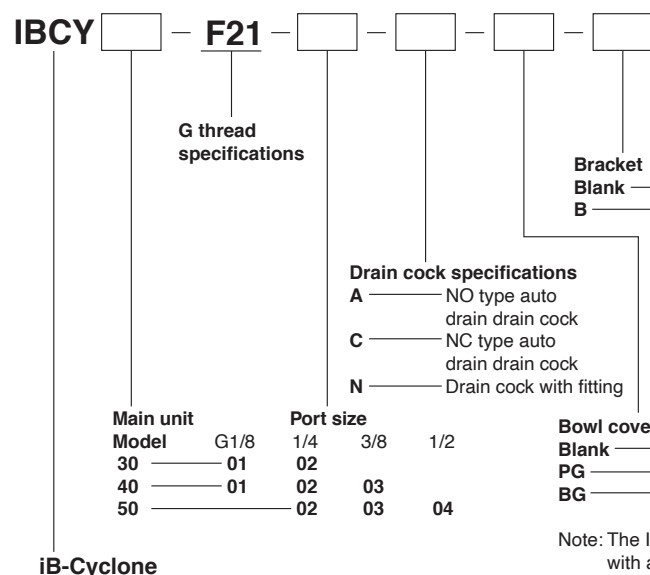
## Specifications

Item	Model	IBCY30-F21	IBCY40-F21	IBCY50-F21
Medium		Air (Air containing no oil or solids)		
Port size		G1/8, G1/4	G1/8, G1/4, G3/8	G1/4, G3/8, G1/2
Maximum operating pressure	MPa [psi]	1.0 [145]		
Proof pressure	MPa [psi]	1.5 [218]		
Operating temperature range (ambient and medium)	°C [°F]	0~60 [32~140]		
Water separation rate	%	99 or more		
Water collection volume (for -N)	mℓ	13	16	27
Maximum flow rate	ℓ/min [ft <sup>3</sup> /min] (ANR)	850 [30.0]	1500 [53.0]	2800 [98.8]
Materials used in major parts	Main unit	Die cast aluminum alloy		
	Bowl	Polycarbonate		
	Bracket	Steel plate (electroless nickel plated)		
Mass (standard product, maximum port size)	kg [oz]	0.15 [5.3]	0.20 [7.1]	0.30 [10.6]
Options		Bracket		

Note 1: According to Koganei measurement conditions.

2: Maximum flow rate in an environment with 0.5 MPa [73 psi] and 0.1 MPa [14.5 psi] pressure drop (maximum port size piping). Check the graphs of characteristics on each 10 page when making a decision.

## Order Codes



iB-Cyclone

### ● Metal cover assembly

**BG-IBCY**  

**Body size**  
 40 — for IBCY40  
 50 — for IBCY50



With 4 metal hexagon socket head bolts

### ● Order codes for brackets only

**8Z-CBK**

\* Common to all body sizes



### ● Maintenance parts

#### ● Bowl assembly

**BA-FRZB**   -   -  

**Bowl guard specifications**

**Blank** — NO bowl guard  
**PG** — With bowl guard

**Drain cock specifications**

**A** — NO type auto drain drain cock  
**C** — NC type auto drain drain cock  
**N** — Drain cock with fitting

**Body size**

30 — for IBCY30  
 40 — for IBCY40  
 50 — for IBCY50

\* If the body size is the same, you can purchase the bowl assembly and change the drain cock with another specification one.



Auto drain type



With fitting

#### ● Seal kit (o-ring (large) 2 pcs., o-ring (small) 1 pc.)

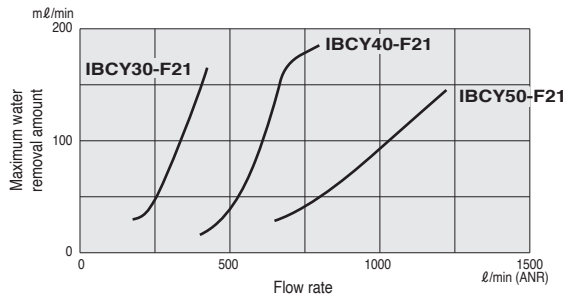
**SRK-IBCY**  

**Body size**

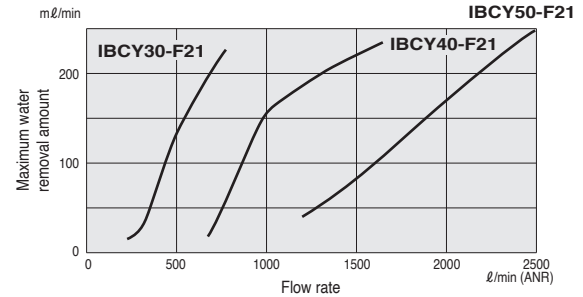
30 — for IBCY30  
 40 — for IBCY40  
 50 — for IBCY50

## Separation characteristics

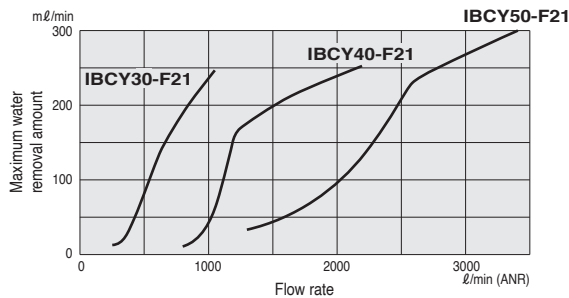
### ● 0.1 MPa [15 psi]



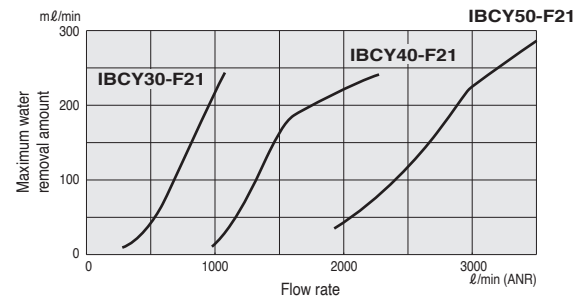
### ● 0.3 MPa [44 psi]



### ● 0.5 MPa [73 psi]



### ● 0.7 MPa [102 psi]

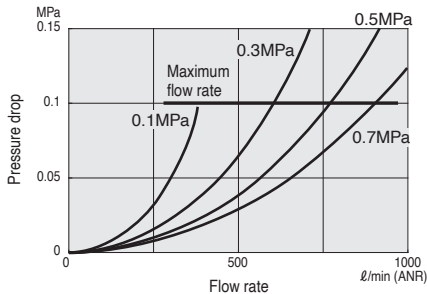


Note: The maximum amount of water removed from a volume of air in a process depends on the conditions of usage (this graph is not a guarantee). Use it as a guideline for your selection.

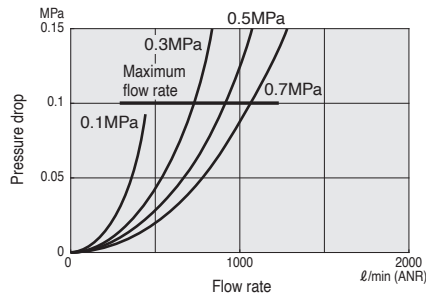
1 m<sup>3</sup>/min = 3.53 x 10<sup>-5</sup> ft<sup>3</sup>/min,  
1 L/min = 0.0353 ft<sup>3</sup>/min

## Flow rate characteristics

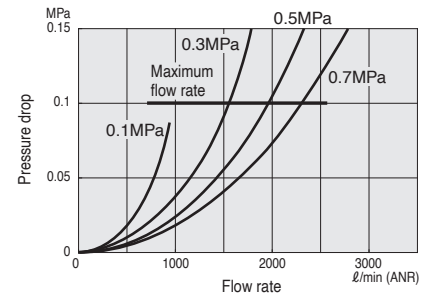
### IBCY30-F21-01



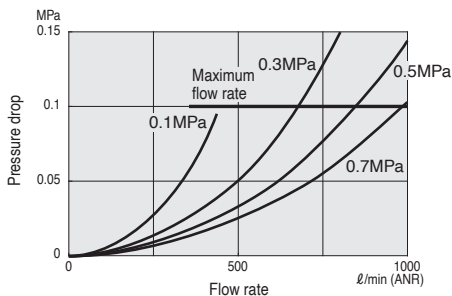
### IBCY40-F21-01



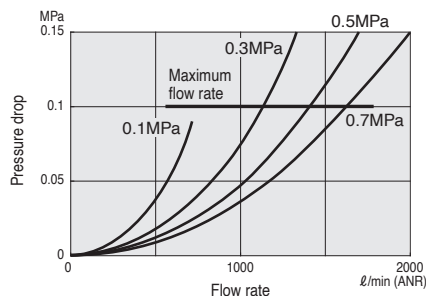
### IBCY50-F21-02



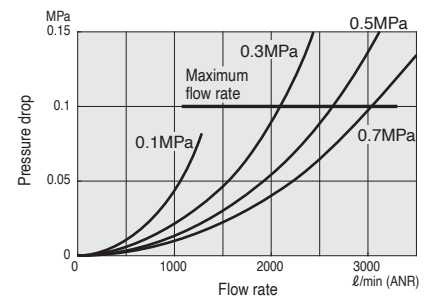
### IBCY30-F21-02



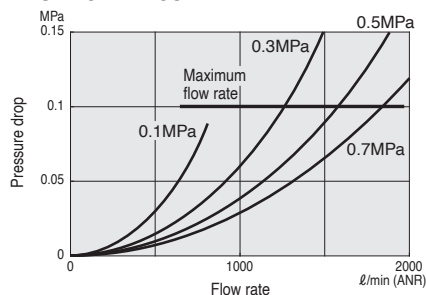
### IBCY40-F21-02



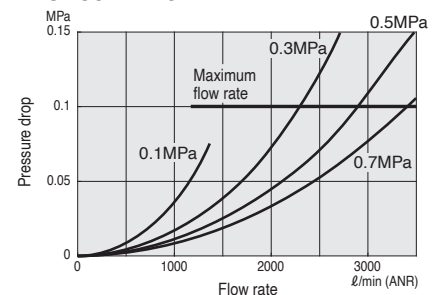
### IBCY50-F21-03



### IBCY40-F21-03

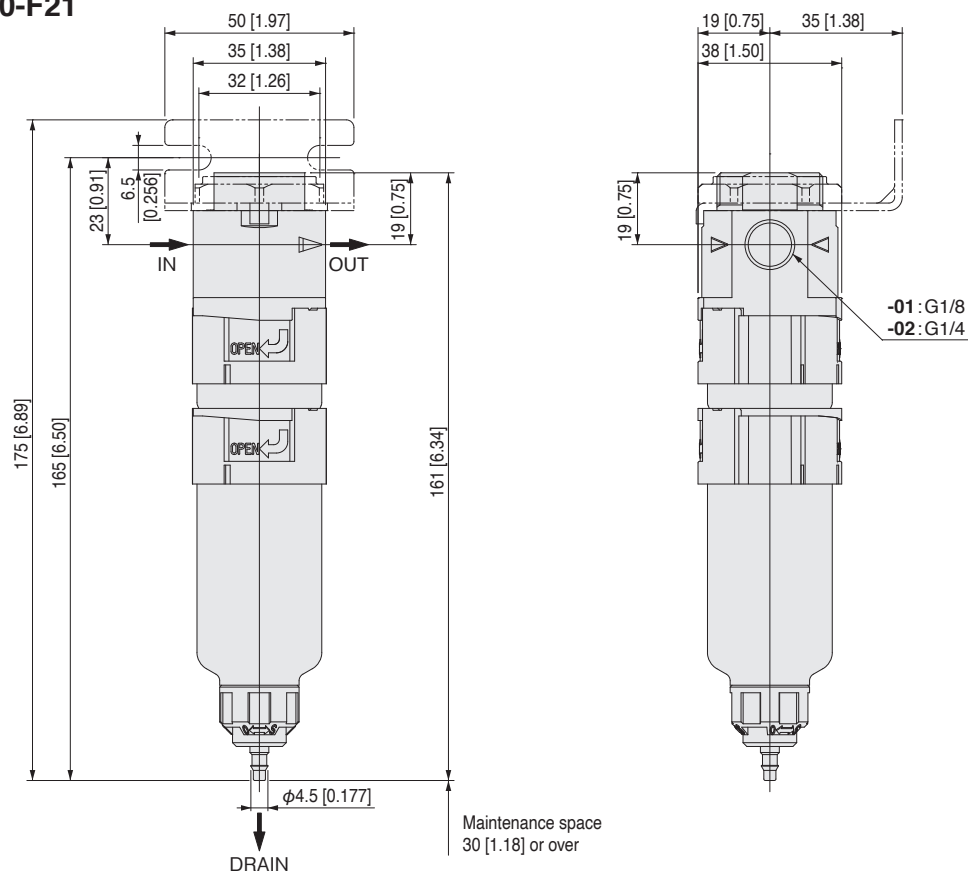


### IBCY50-F21-04

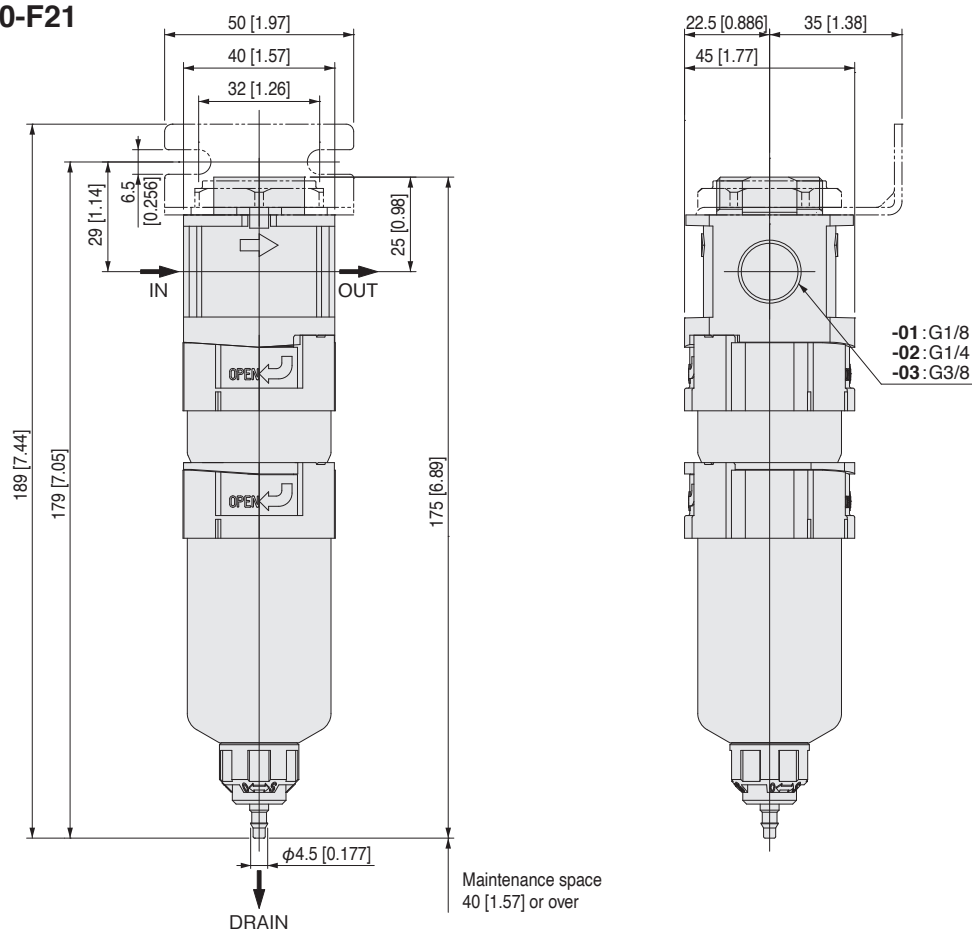


1 MPa = 145 psi  
1 L/min = 0.0353 ft<sup>3</sup>/min

## ● IBCY30-F21

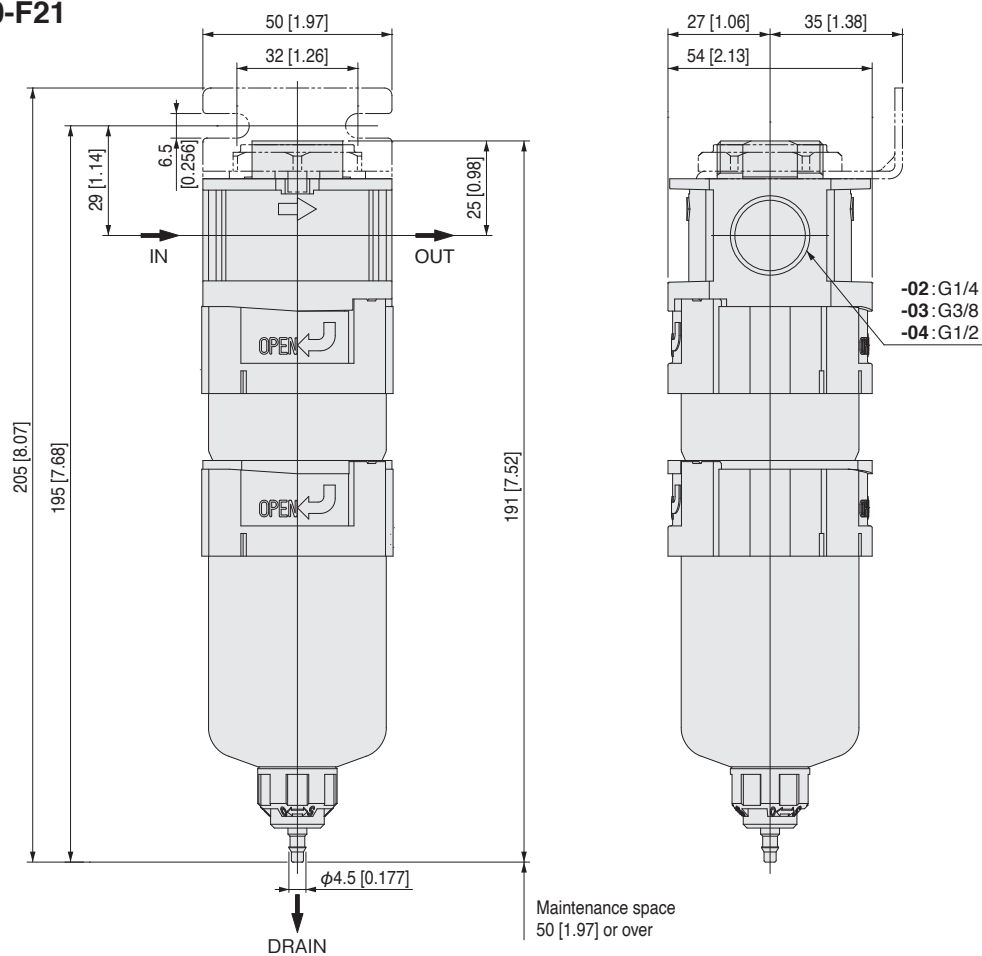


## ● IBCY40-F21



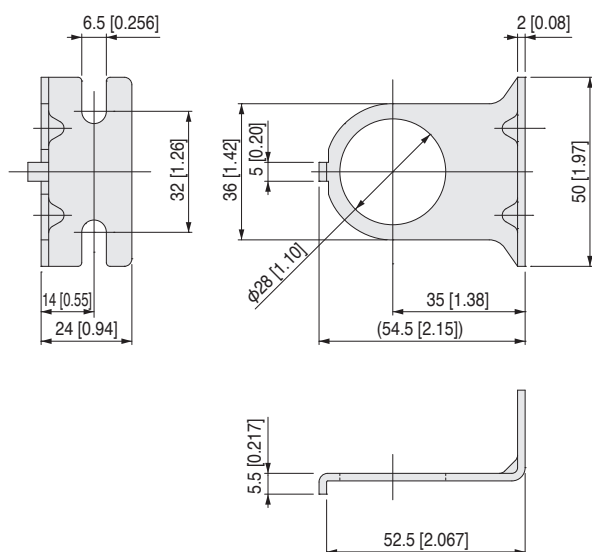


## IBCY50-F21

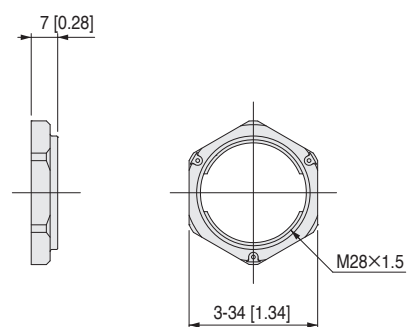


## 8Z-CBK

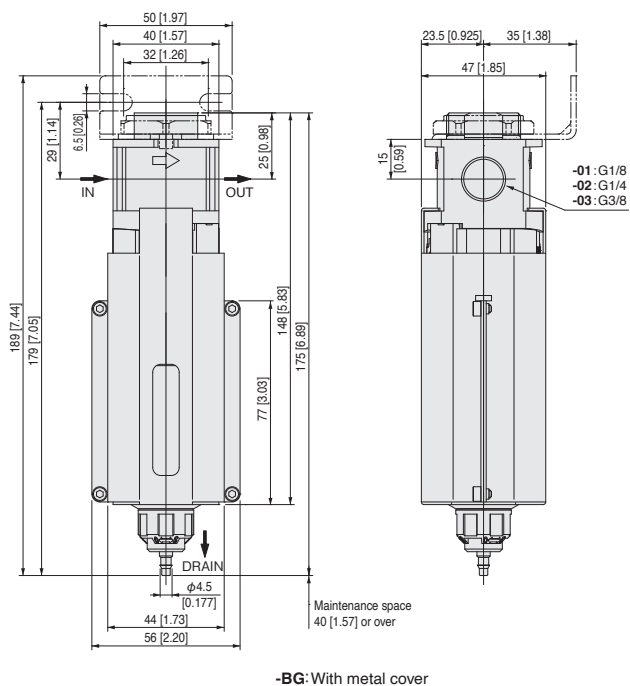
Bracket



Mounting ring

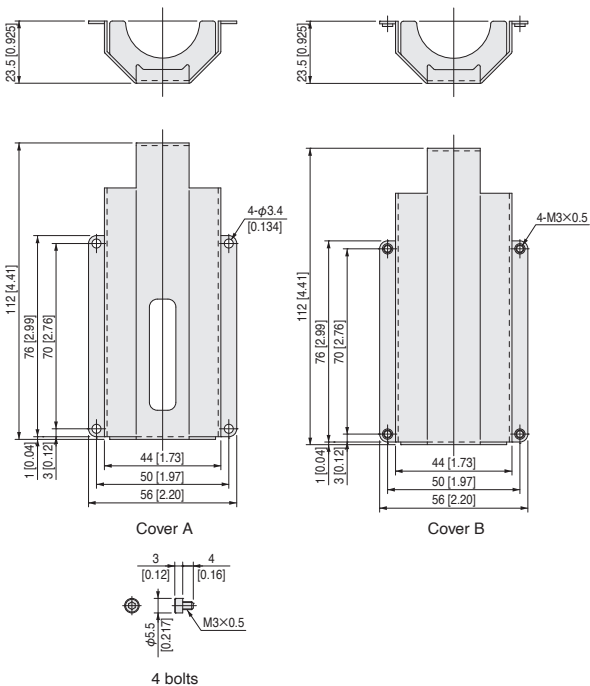


● IBCY40-F21-□-□-BG (With metal cover)

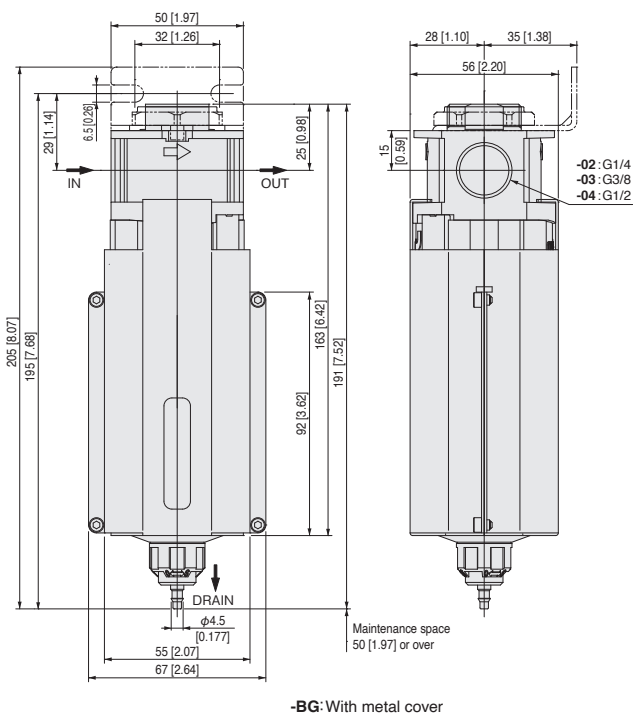


● BG-IBCY40

Metal cover

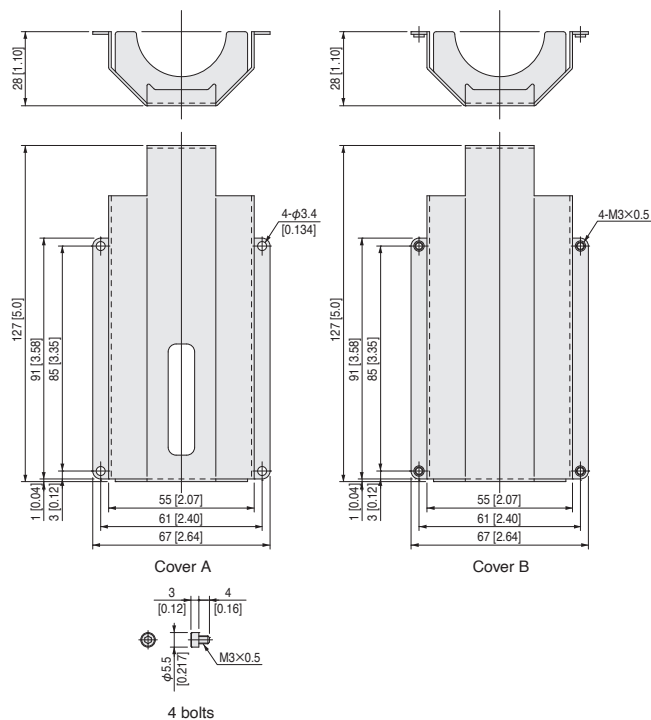


● IBCY50-F21-□-□-BG (With metal cover)



● BG-IBCY50

Metal cover



## This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

# Limited Warranty

KOGANEI CORP. warrants its products to be free from defects in material and workmanship subject to the following provisions.

**Warranty Period** The warranty period is 180 days from the date of delivery.

**Koganei Responsibility** If a defect in material or workmanship is found during the warranty period, KOGANEI CORP. will replace any part proved defective under normal use free of charge and will provide the service necessary to replace such a part.

**Limitations**

- This warranty is in lieu of all other warranties, expressed or implied, and is limited to the original cost of the product and shall not include any transportation fee, the cost of installation or any liability for direct, indirect or consequential damage or delay resulting from the defects.

- KOGANEI CORP. shall in no way be liable or responsible for injuries or damage to persons or property arising out of the use or operation of the manufacturer's product.

- This warranty shall be void if the engineered safety devices are removed, made inoperative or not periodically checked for proper functioning.

- Any operation beyond the rated capacity, any improper use or application, or any improper installation of the product, or any substitution upon it with parts not furnished or approved by KOGANEI CORP., shall void this warranty.

- This warranty covers only such items supplied by KOGANEI CORP. The products of other manufacturers are covered only by such warranties made by those original manufacturers, even though such items may have been included as the components.

The specifications are subject to change without notice.

URL <http://www.koganei.co.jp>

E-mail: [overseas@koganei.co.jp](mailto:overseas@koganei.co.jp)



## KOGANEI CORPORATION

### OVERSEAS DEPARTMENT

3-11-28, Midori-cho, Koganei City, Tokyo 184-8533, Japan  
Tel: 81-42-383-7271 Fax: 81-42-383-7276

### KOGANEI INTERNATIONAL AMERICA, INC.

39300 Civic Center Dr., Suite 280, Fremont, CA 94538, U.S.A.  
Tel: 1-510-744-1626 Fax: 1-510-744-1676

### SHANGHAI KOGANEI INTERNATIONAL TRADING CORPORATION

Room 2606-2607, Tongda Venture Building No.1, Lane 600, Tianshan Road,  
Shanghai, 200051, China  
Tel: 86-21-6145-7313 Fax: 86-21-6145-7323

### TAIWAN KOGANEI TRADING CO., LTD.

Rm. 2, 13F, No88, Sec. 2, Zhongxiao E. Rd., Zhongzheng Dist., Taipei City 100,  
Taiwan (ROC)  
Tel: 886-2-2393-2717 Fax: 886-2-2393-2719

### KOGANEI KOREA CO., LTD.

6F-601, Tower Bldg., 1005, Yeongde0-dong, Giheung-gu, Yongin-si, Gyeonggi-do,  
446-908, Korea  
Tel: 82-31-246-0414 Fax: 82-31-246-0415

### KOGANEI (THAILAND) CO., LTD.

3300/90, Tower B, Elephant Tower, 16th Fl., Phaholyothin Road, Chomphon,  
Chatuchak, Bangkok 10900, Thailand  
Tel: 66-2-937-4250 Fax: 66-2-937-4254

### KOGANEI ASIA PTE. LTD.

69 Ubi Road 1, #05-18 Oxley Bizhub, Singapore 408731  
Tel: 65-6293-4512 Fax: 65-6293-4513