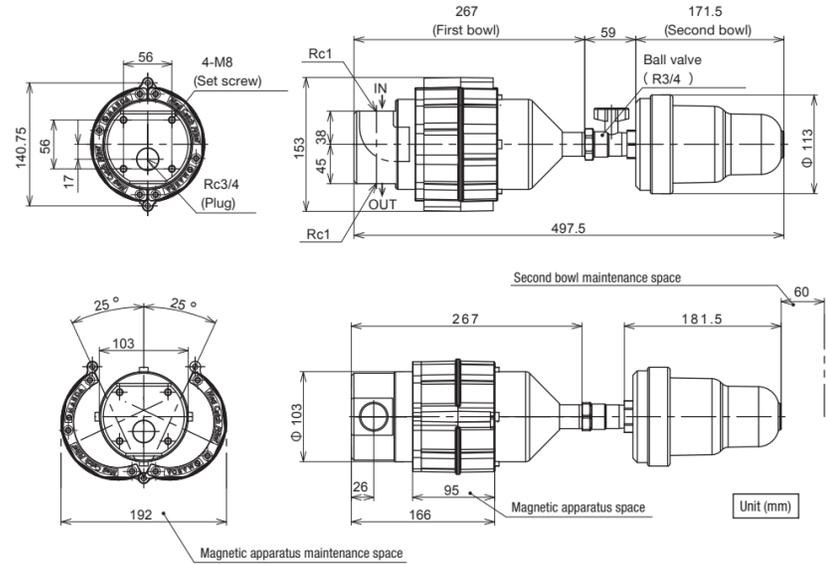


Mag Catch Filter®

Specifications

Filter model	MGCF-100
Applicable fluids	Water and oil
Maximum pressure (Mpa)	1.2
Maximum temperature (°C)	50
Maximum flow rate (ℓ/min)	70
Collecting capacity (g)	500
Connection diameter (inch)	Rc1
Weight (kg)	4.2

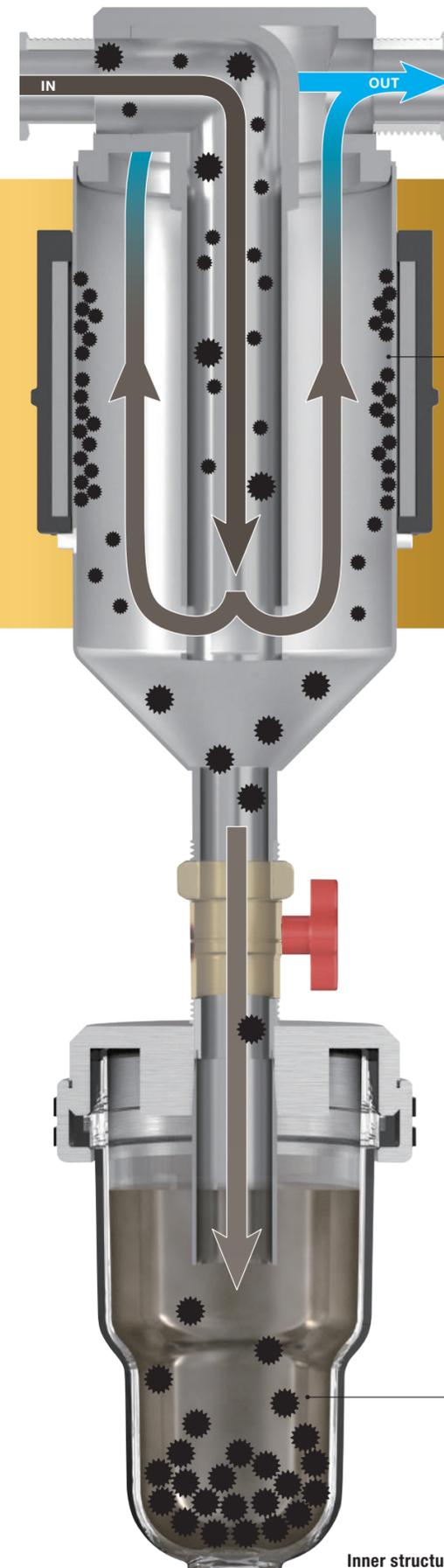
Dimensional drawing



Mag Catch Filter®

Magnet Filter Removes Fine Iron Powder from Fluid

Mag Catch Filter®



A powerful magnet case is mounted on the main body.

Fine particles collected by magnetic force!

Neodymium magnets – with a magnetic force 10 times stronger than a normal magnet – adopted (about 14,000 gauss).



Just remove the bowl for easy disposal!

Large particles sink to the bottom by their own weight.

Inner structure

Handling the Magnet

⚠ DANGER

• Do not disassemble the magnet case.

Since the magnet case of this product uses a neodymium magnet (approx. 14,000 gauss), which has 10 times or more of the magnetic force of a normal magnet, **mishandling the magnet case is very dangerous.**

- Do not bring the magnet close to a person with an electronic medical device implanted, such as a pacemaker. Normal operation of such a medical device may be impaired, exposing the person with the medical device to serious danger.

- Extremely strong attraction force works between magnets or between the magnet and magnetic materials (materials that attract magnets, such as iron, steel, metallic tools, metal fittings, nickel products and cobalt products). Be careful not to allow your hand, fingers or part of the body to get caught. Also, impact during attraction may cause the scattering pieces of magnet to enter the eye, resulting in severe injury.

⚠ CAUTION

- Do not bring the magnet close to magnetic media (IC cards such as credit card and magnetic train ticket), precision instruments (watch, etc.) or electronic devices (mobile phone, computer, etc.). Doing so may cause the data to be destroyed or malfunction.
- Keep the magnet at least 30 cm away from magnetic materials. Since the attraction force is extremely strong, a dangerous situation may occur.
- Do not make a strong impact on the magnet. If the magnet is attracted to another magnet or a magnetic material with a strong impact, the magnet itself may be cracked or the treated surface may be peeled, resulting in significant deterioration in the intrinsic performance of the magnet.
- If oil, moisture or dirt is stuck to the magnet, wipe them off with a dry waste cloth. The magnet may rust due to the moisture, etc., attached on the peeled part of the treated surface.
- Contact Maeda Sales Office if the magnet is removed by disassembling the magnet case, or a broken magnet comes off from the magnet case.

Selection

⚠ WARNING

- The specifications of Mag Catch Filter differ depending on the model. When selecting a product, ensure that the maximum pressure, maximum temperature, etc., are within the ranges of specifications. Be careful in particular when using the product in a line where surge pressure or water hammer occurs.

Installation

⚠ CAUTION

- The material used for the second bowl is PET (Polyethylene Terephthalate). Refer to the Instruction Manual for more information of the second bowl chemical resistance.
- Applicable fluids for use are water and oil.
- Do not expose the product to direct sunlight in environments at temperatures of 50°C or higher.
- For maintenance and inspections, release the residual pressure inside of the Mag Catch Filter. If the residual pressure remains in the filter even when the circulation pump is stopped, install a ball valve or cheese on a pipe at the front and back of the filter so that the residual pressure can be released.
- For installation, check the arrow attached on the first bowl that guides the IN orientation and OUT orientation. Installation in the reverse orientation will cause malfunction. Mount the product vertically so that the second bowl faces downward.
- The Mag Catch Filter is a heavy item. Do not hold it with one hand or drop it at your feet.
- Keep at least 30 cm of space under the Mag Catch Filter for maintenance (consideration for workability).
- Do not use this product outside of specifications.

Maintenance and Inspections

⚠ CAUTION

- **Refer to the Instruction Manual for maintenance.** Incorrect handling may result in damage to or malfunction of devices and equipment.
- **Check the second bowl for cracks, damage, and other deterioration once per month.** If cracks, damage, or other deterioration are found, replace the second bowl with a new one to prevent further damage. Periodically check the second bowl for dirt. If the second bowl is dirty, use a mild household detergent to clean it. Using other types of cleaners or solvents may cause damage.
- **Maintenance** Wait enough time until the temperature of the fluid returns to normal to prevent burns even in the state where the machine is stopped (the fluid in the circulation circuit remains stationary). Well consider to wear protective clothing or protective glasses. Incorrect handling of fluids is dangerous. Observe the product specifications. Only qualified and experienced personnel who have enough knowledge about fluid equipment should perform the maintenance.
- **Inspection before maintenance** Be sure to stop the supply pressure (pump OFF) before maintenance. (Pressure zero condition)
- **Inspection after maintenance** After installation or maintenance, supply the fluid and ensure there is no leakage. If leakage is found, do not use the product. Check again if the product is installed correctly.
- **Prohibition of Disassembly and Modification** Do not disassemble the product in situations other than maintenance. Do not modify the product, either.
- **Replacement timing of the second bowl** The approximate service life of this product is 5 years under normal usage conditions after which the risk of damage due to deterioration increases. Replace both the second bowl and O-ring within 5 years of initial use.

- 0.05 μm
- Easy maintenance
- No consumables

Fine iron powder collected from fluid and discarded.

Applications

- Cutting
- Grinding
- Shaving
- Electric discharge machining
- Cleaning machine

To website showing product demo video



In cooperation with: Machining Division, Honsha Plant, TOYOTA MOTOR CORPORATION

<Distributor>

<Manufacturer and distributor>

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*Some of the specifications, etc., may be subject to change without notice due to product improvements.



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Mag Catch Filter®

Easy maintenance (2 steps)

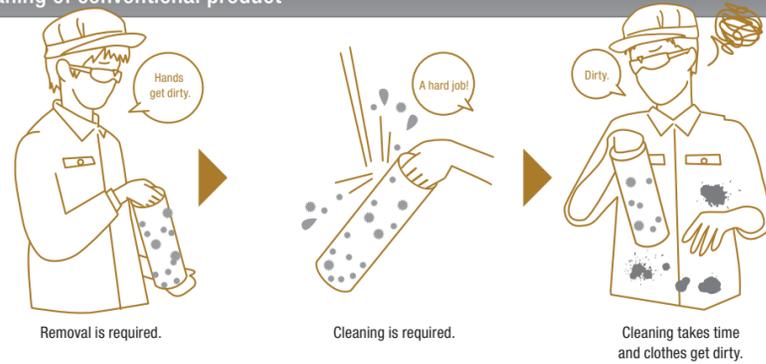
Reduction of unnecessary work time

No consumables

No running costs since there are no replacement parts

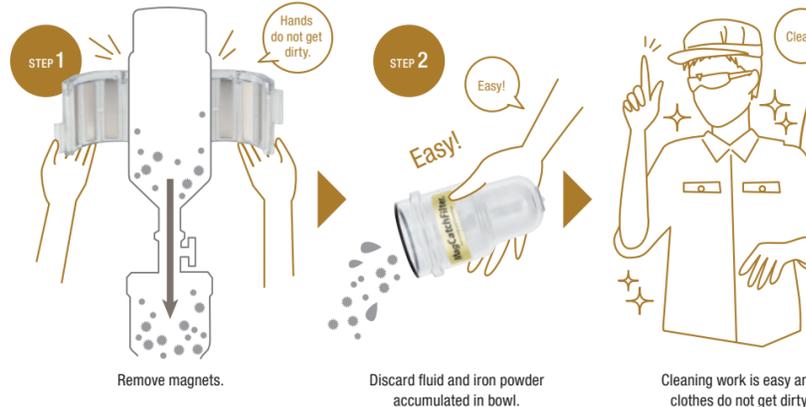
Comparison with conventional product

Cleaning of conventional product



A thorough cleaning is not possible, and cleaning takes time and effort.

Cleaning of Mag Catch Filter

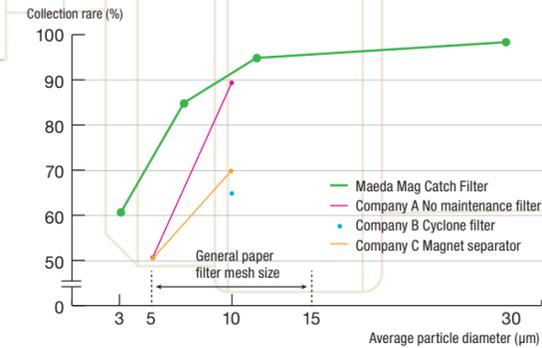


Maintenance is easy. No cleaning is required. Time is shortened.

Point 01

Collection performance of Mag Catch Filter

- One pass collection efficiency of 3 – 5 μm particles Approximately 60%
- One pass collection efficiency of 5 – 10 μm particles Approximately 85%
- One pass collection efficiency of 10 μm or larger particles Approximately 95%



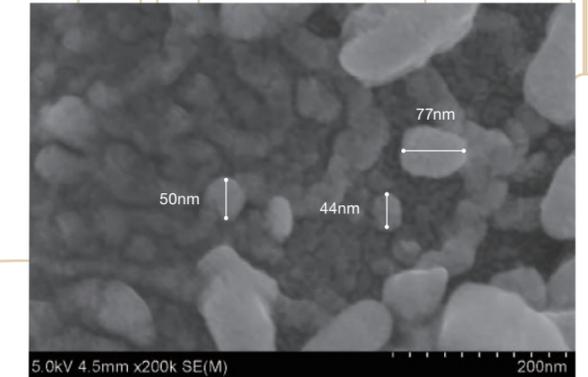
Our company's test conditions: Liquid: oil (grinding fluid) Flow rate: 45L/min Connection diameter: 25A (Note) The numerical values stated are the results of testing. These are not guaranteed performance values.

Point 02

The minimum diameter of collected particles 0.05μm

Collecting nano-sized fine iron powder with powerful magnetic force

*Electron micrograph of particles collected by Mag Catch Filter



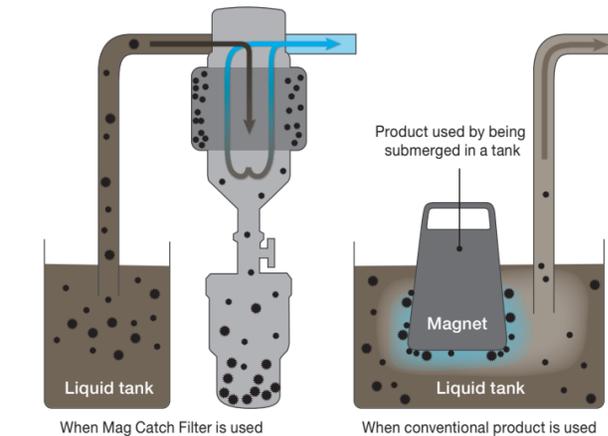
$\frac{1}{1000} \text{ mm} = 1\mu\text{m}$ $\frac{1}{1000} \mu\text{m} = 1\text{nm (nanometer)}$

(Note) The numerical value stated is the minimum diameter of collected particles. This is not a guaranteed performance value.

Point 03

Magnetic force exerted to entire liquid

Fine iron powder collected efficiently because of an in-line type connected in the pipe system.



Point 04

Designed for low pressure loss

The pressure loss is small because a fluid channel about 6 times larger than the pipe area is secured in the collection zone even when the maximum number of particles are collected.

