



**HEAD OFFICE & FACTORY**

#486 JINGWANG-RO IWOL-MYEON,  
JINCHEON-GUN, CHUNGBUK-DO,  
S.KOREA, 27817



**A GLOBAL, PROFESSIONAL SOLUTION  
PROVIDER FOR THE COMPONENTS OF  
WATER FILTRATION SYSTEMS,  
WATER PURIFIERS AND REFRIGERATORS**

RO MEMBRANES, FITTINGS, TUBING,  
SOLENOID VALVES, WATER FILTERS,  
MODULE SYSTEMS

AN EXPERT ON DEVELOPING AND MANUFACTURING  
CUSTOMIZED COMPONENTS & PRODUCTS

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[www.mcmcm.com](http://www.mcmcm.com)

## An Expert on Developing and Manufacturing Customized Components & Products



### WHO WE ARE

MCM is proud to be a member of the CHUNGHO Group, the most reliable name in Korea, in the field of health-related home appliances.

CHUNGHO Group dreams of a well-being society free from various types of pollution, where people can drink pure water, breathe fresh air and enjoy clean and healthy lifestyle.

CHUNGHO Group manufactures water purifiers, air purifiers, bidets, water softeners and other components with a focus primarily on clean water and air.

MCM, one of the affiliates of CHUNGHO Group, was established in 2009. We are developing a variety of components and products such as RO membranes, fittings, tubing, solenoid valves, and water filters, thus growing to become a renowned name in the water solutions industry.

### BEST CHOICE

MCM is equipped with fully automated production systems for all products. Our fully automated assembly line systems guarantee high quality and reliable products. We have invested a great amount of time and effort to reach our level of competitive prices and great quality products. In addition, we provide a wide range of products and their portfolios to customers with the very best solutions for customized models (OEM & ODM).

### R&D

MCM aims to become a top-tier global player in the water solutions industry by achieving the world's highest quality and utilizing the most advanced materials, which will lead to modified, enhanced and innovative products. We are constantly investing in R&D to meet the demands of customers and strengthen our developmental capabilities.

## MCM RO MEMBRANE FOR HOME DRINKING WATER

### MCM RO Membrane for Water Filtration Systems



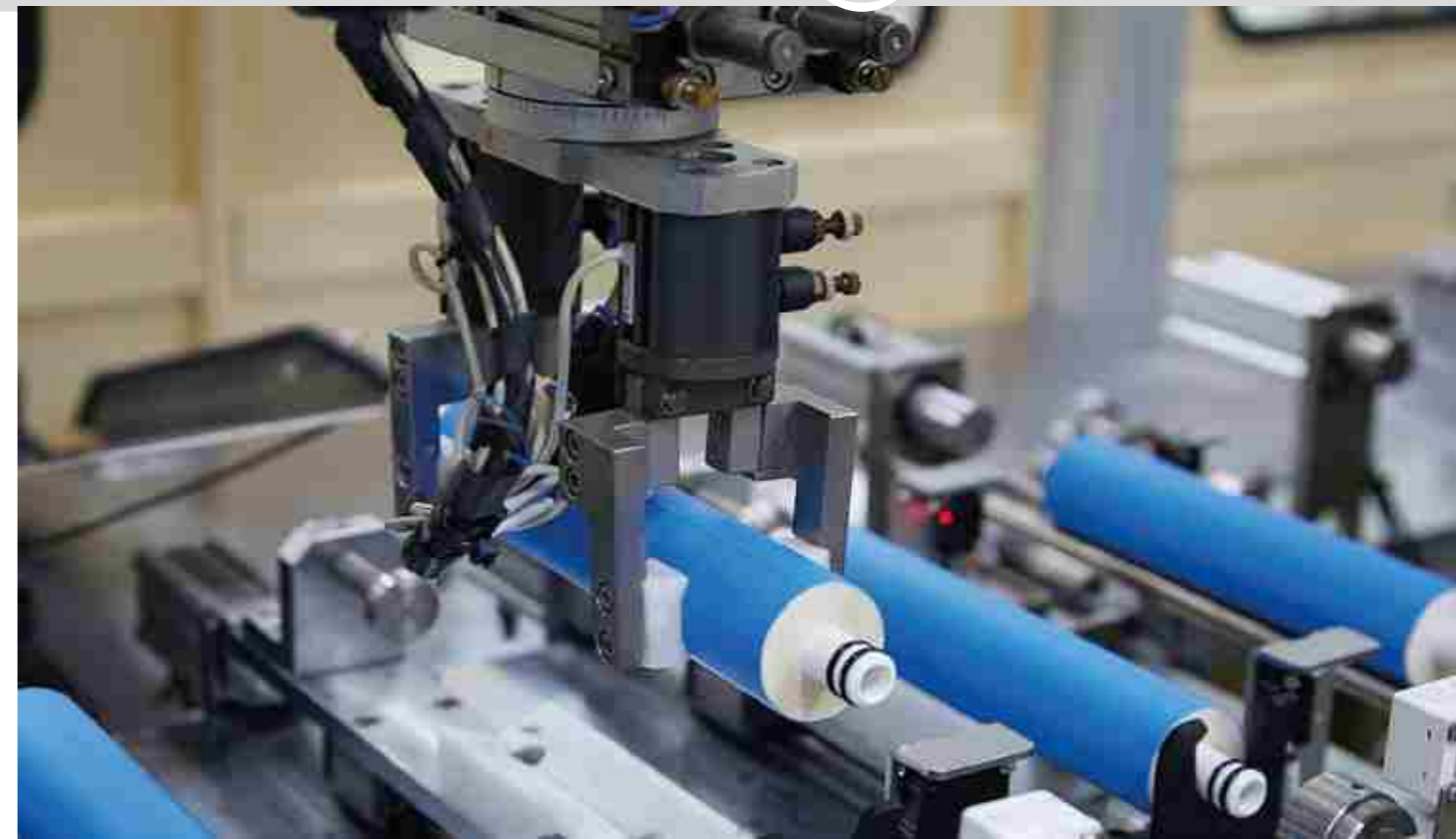
### Operating Limits

Membrane Type	Polyamide Thin-Film Composite
Max. Operating Temperature	113°F (45°C)
Max. Operating Pressure	125psig (8.6bar)
Max. Feed Flow Rate	2.0gpm (7.6lpm)
pH Range, Continuous Operation	3.0~10.0
Max. Feed Silt Density Index	<5
Free Chlorine Tolerance	<0.1ppm



### Material Info.

- Membrane Sheet : USA
- Membrane Feed Spacer : NSF approved
- Membrane Tube : ABS
- O-rings : NSF42 approved
- Adhesive : Isocyanate based methylene bisphenyl diisocyanate from USA



### Advantages

1. Membranes are supplied in a dry condition to customers for a longer shelf life (12 months).
2. Membrane sheets are made in the USA.
3. Longer and more stable membrane life time.
4. Membranes are manufactured by fully automated machines for consistent high quality.
5. An expert on customized design.

### Guidelines before use / Guidelines after installation

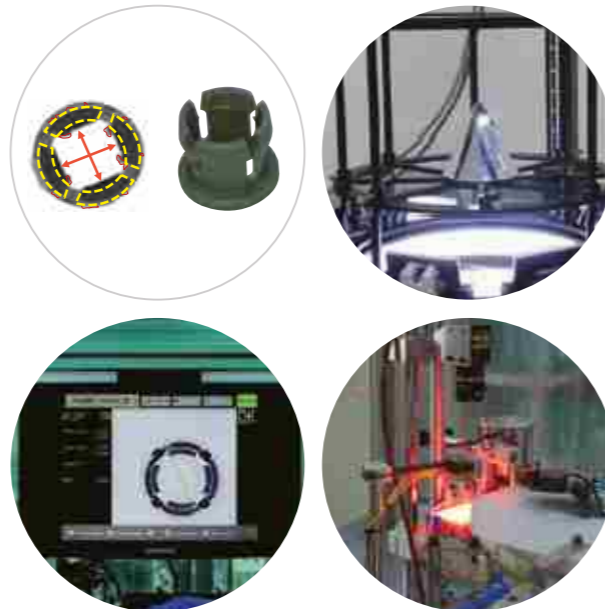
1. The first water that permeates through must be discarded. Do not use or drink.
2. Keep membrane wet at all times.
3. If the operating limits and guidelines laid out in these specifications are not strictly followed, the limited warranty may not be covered.
4. To prevent biological growth during prolonged system shutdowns, it is recommended that the membrane be immersed in a preservative solution.
5. The membrane shows some resistance to damage from short-term chlorine (hypo-chlorite) exposure. Continuous exposure, however, may damage the membrane, so it should be avoided.
6. Customers are fully responsible for the effects of incompatible chemicals and lubricants on the membrane. Failure to heed related guidelines may limit the warranty on the membranes.

Comfortable grip, High Flow, and Zero-leak

## MCM EXPRESS-FIT SPECIAL FEATURES

### Vision Inspecting System

A Vision inspection system automatically measures the shape of collets by scanning them from 8 sides and examines them for any defects, such as burrs around the teeth and imprecise measurements between the teeth. In particular, it can detect 100% of unfinished or out-of-range ID/ODs and automatically sort them out.



### Fully- Automated System

MCM has fully-automated production lines. This guarantees consistent, high quality products.

#### AUTOMATIC PRODUCTION LINE



#### OUTGOING INSPECTION SYSTEM



Leak Test



Air Pressure Leak Test

## Easy Installation System

MCM's express-fit fittings are designed for easy connection and disconnection

### INSTALLATION

#### CONNECTION



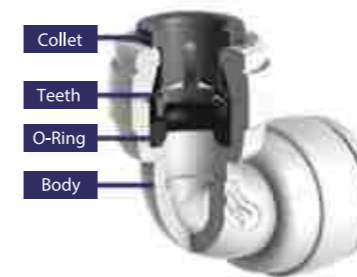
1. Place the tubing in a vertical position and insert it slightly into the body
2. Push the tubing until it stops
3. Pull to check if it is in place

#### DISCONNECTION



1. Push down the collet
2. Pull the tubing to remove it

## FEATURES OF MCM EXPRESS-FITTING



Streamlined body shape for smooth flow rates  
Quality approved by global names  
Cutting-edge production facilities and inspection systems

### FEATURES

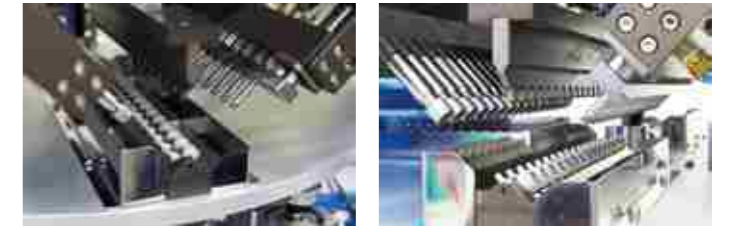
- FDA Compliant, NSF58 / 61
- Stainless steel teeth for strong tubing grip
- NBR / EPDM O-Ring
- 100% leak test during production

APPLICATIONS	MARKETS	COMPATIBLE TUBING
<ul style="list-style-type: none"> <li>- Watercoolers</li> <li>- Refrigerators</li> <li>- Beverage Dispensers</li> </ul>	<ul style="list-style-type: none"> <li>- Water Filtration System</li> <li>- Home Appliances</li> <li>- Bottling</li> </ul>	<ul style="list-style-type: none"> <li>- Polyethylene</li> <li>- PERT Tube</li> </ul>




Comfortable grip, high flow, and zero-leaks


## Water Filtration Systems, Water Purifiers and Refrigerators




### CROSS

	COLOR	CODE	TUBE
	Gray	CRA1414G01	1/4


### RIGID ELBOW

	COLOR	CODE	TUBE	THREAD	O-RING TYPE
	Gray	LMM1414G01	1/4	1/4	NPT
		LMM1438G01	1/4	3/8	NPT
		LMM3838G01	3/8	3/8	NPT


### TUBE TO HOSE STEM

	COLOR	CODE	TUBE	STEM
	Gray	SHA1414G01	1/4	1/4


### TUBE TO HOSE ELBOW

	COLOR	CODE	TUBE	STEM
	Gray	LHA1414G01	1/4	1/4


### PLUG

	COLOR	CODE	STEM
	Gray	PGA1414G01	1/4
		PGA3838G01	3/8

### END STOP

	COLOR	CODE	TUBE
	Gray	ESA1414G01	1/4


### REDUCER


	COLOR	CODE	TUBE	STEM
	Gray	RDA5114G01	1/4	5/16
		RDA3814G01	1/4	3/8


### U-BEND


	COLOR	CODE	TUBE	TUBE
	Gray	UBA3838G01	3/8	3/8


### FEMALE ADAPTER

	COLOR	CODE	TUBE	THREAD	UNS-RUBBER SEAL
	Gray	FAA1471G01	1/4	7/16	UNS

	COLOR	CODE	TUBE	THREAD	G-RUBBER SEAL
	Gray	FAA1434G01	1/4	3/4	G


	COLOR	CODE	TUBE	THREAD	BRASS INSERT
	Gray	FAB1434G01	1/4	3/4	BSP

	COLOR	CODE	TUBE	THREAD	NPTF-WITHOUT RUBBER SEAL
	Gray	FAA1414G01	1/4	1/4	NPTF


	COLOR	CODE	TUBE	THREAD	BSPP-RUBBER SEAL
	Gray	FAA1412G01	1/4	1/2	BSPP
		FAA1412G01	5/16	1/2	BSPP

## VALVE PRODUCTS

### PRESSURE LIMITING VALVE

	COLOR	CODE	TUBE	TUBE	
	Gray	PLA1414G21	1/4	1/4	350kpa
		P5A1414G01	1/4	1/4	550kpa
		PLB1412G01	1/4	1/2	350kpa, (Thread) BSP, Brass

### STR CHECK VALVE

	COLOR	CODE	TUBE	TUBE	
	Gray	SCA1414G21	1/4	1/4	
		SCA1414G25	1/4	1/4	With Cover
		SCA5151G01	5/16	5/16	
		SCA5114G01	5/16	1/4	

### SHUT OFF VALVE

	COLOR	CODE	TUBE	TUBE
	White	HVA1414W01	1/4	1/4 (Single Lever)

## LLDPE : Linear Low Density Polyethylene

MCM's LLDPE tubing is used in many different water filtration units, such as beverage dispensers, refrigerators, water coolers and water purifiers. LLDPE is applicable in wide temperature ranges, and it offers excellent dimensional stability, uniformity, resistance to various chemical and economical system solutions.



### Features

- Meets FDA compliance standards and NSF61 & 372 requirements for food contact
- Made from 100% virgin resin material
- Chemically resistant and flexible
- Economical system solution
- Wide range of available colors
- Diameter 100% inspected



CODE	SIZE (CODE)	COLORS (CODE)	APPLICATION : WATER FILTRATION ONLY	CERTIFICATION	MAXIMUM PRESSURE AND TEMPERATURE RANGE
TBLL14 + Color	1/4" (14)	Blue (B) White (W)	Cold and intermittent hot water applications	NSF 61 & 372 FDA compliant ROHS WRAS	20°C(70°F) 15bar / 230psi 65°C(150°F) 8bar / 120psi
TBLL38 + Color	3/8" (38)	Gray (G) Orange (O) Natural (N)	Water purifications Water conditions Potable water		
TBLL51 + Color	5/16" (51)	Black (K)	Low pressure		

## 100% Automated production & inspection

- Fully automated System
- Quality Stability of Vacuum Chamber
- Auto Alignment Winding System / Tension Control
- Outside Diameter Inspection System
- Surface Inspection System



TWIN TUBING



## PERT TUBING

### PERT : Polyethylene of Raised Temperature

MCM's PERT Tubing provides excellent hydrostatic strength at high temperatures and very high burst pressures. It is suitable for use in all hot & cold water applications and is especially suited to meeting drinking water requirements. The most important advantage of PERT is that it is not only "purer" but also "flexible".

#### -Advantages

Safety of potable water and long-term reliability, resistance to corrosion, tuberculation, resistance to deposits of chlorine and chloramine, flexibility for speed installations, freeze-break resistance

### Features

- Meets FDA compliance standard and NSF 61 & 372 requirements for food contact
- Made from 100% virgin resin material
- High mechanical strength
- Exceptional thermal stability
- Durability : Long Life Span

CODE	SIZE(CODE)	COLORS(CODE)	APPLICATION : WATER FILTRATION ONLY	CERTIFICATION	MAXIMUM PRESSURE AND TEMPERATURE RANGE
TBPE14 + Color	1/4" (14)	Blue (B) White (W) Gray (G) Orange (O) Natural (N) Black (K)	Cold and intermittent hot Water applications	NSF 61 & 372 FDA compliant ROHS WRAS	20°C(70°F) 15bar / 230psi 65°C(150°F) 8bar / 120psi
TBPE38 + Color	3/8" (38)		Water purifications		
TBPE51 + Color	5/16" (51)		Water conditions		
TBPE31 + Color	3/16" (31)		Potable water Low pressure		

#### ADVANTAGE

- No pin hole on the tube, no scratches
- Control in/out diameter ±0.1mm
- Outside diameter & surface 100% inspected



#### FACILITY

- Optimal equipment for F&B tube production
- Fully automated system, from raw material to end products



All types of Valves available, including CUSTOMIZED MODELS

## PCF TYPE WATER VALVE



RATED VOLTAGE	DUTY CYCLE / COIL CLASS	USABLE FLUID / PRESSURE	AMBIENT TEMPERATURE
AC 110V AC 220V	Intermittent 2 UEW (E Class)	Tap water or purified water 0.2 ~ 8.0 kgf/cm <sup>2</sup>	0 ~ 40 °C
TYPE	Inlet / Outlet construction	ELECTRIC CONNECTOR	FLAME- RETARDANT
High Pressure Direct Type	PCF	#187 / 250 Terminal Wire Harness	V0

## FITTING & INSERT TYPE WATER VALVES



RATED VOLTAGE	DUTY CYCLE / COIL CLASS	USABLE FLUID / PRESSURE	AMBIENT TEMPERATURE
AC 110V AC 220V	Intermittent 2 UEW (E Class)	Tap water or purified water 0.2 ~ 8.0 kgf/cm <sup>2</sup>	0 ~ 40 °C
TYPE	Inlet / Outlet construction	ELECTRIC CONNECTOR	FLAME-RETARDANT
High Pressure Direct	1/4", 5/16" Fitting	#187 / 250 Terminal Wire Harness	V0

## HIGH & LOW PRESSURE SOLENOID VALVE



RATED VOLTAGE	DUTY CYCLE / COIL CLASS	USABLE FLUID / PRESSURE	AMBIENT TEMPERATURE
DC 12V DC 24V	Intermittent 2 UEW (E Class)	Tap water or purified water 0.2 ~ 8.0 kgf/cm <sup>2</sup>	0 ~ 40 °C
TYPE	Inlet / Outlet construction	ELECTRIC CONNECTOR	FLAME- RETARDANT
High Pressure Pilot Low Pressure Direct	1/4" Fitting	#187 / 250 Terminal Wire Harness	V0

## HIGH FLOW & LOW PRESSURE SOLENOID VALVE



RATED VOLTAGE	DUTY CYCLE / COIL CLASS	USABLE FLUID / PRESSURE	AMBIENT TEMPERATURE
DC 12V DC 24V	Intermittent 2 UEW (E Class)	Hydraulic Pressure 0 ~ 700 mmAq	0 ~ 40 °C (POM) 0 ~ 98 °C (Noryl)
TYPE	Inlet / Outlet construction	ELECTRIC CONNECTOR	FLAME- RETARDANT
Low Pressure Direct	Ø 9.0 Silicon	#187 / 250 Terminal Wire Harness	V0

## Refrigerator Water Filter System

### 3 STAGE FILTER SYSTEM



Stainless Water Tank

#### CAN Seaming Type

Temperature : 33-100°F  
 Pressure : 20 - 120psi  
 Capacity : 1000cc~1500cc  
 Material : STS304 (suppression of bacterial growth)  
 Salt Spray Test : 500Hrs



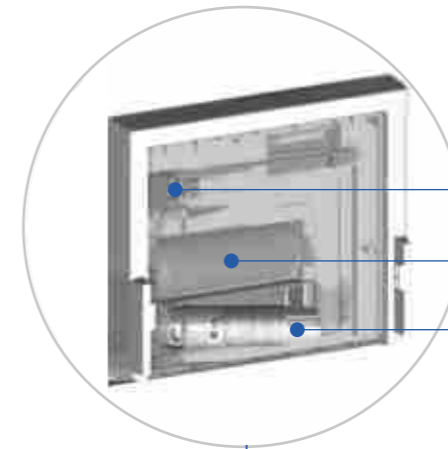
2 Point Seaming

1 Point Seaming & Deep Drawing



Dispenser Refrigerator

### Module Filter System



Dispenser Refrigerator

2 Way Water Valve



Water Tank



Water Filter & Head



Replacement Filter