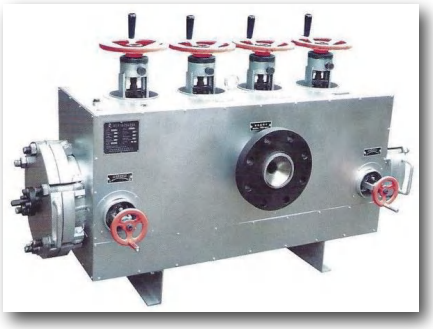
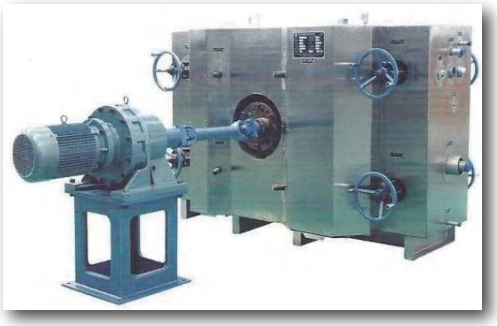
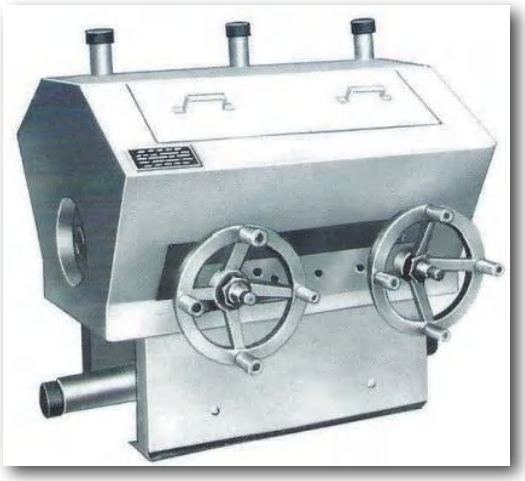
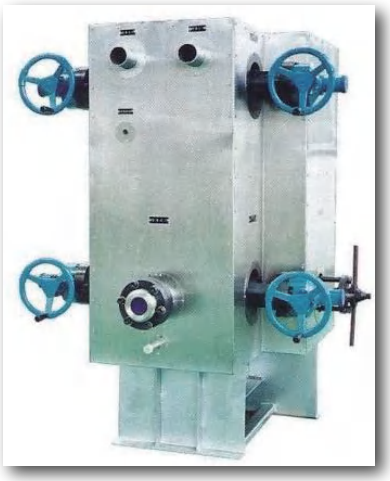
Futai Machinery Co., Ltd.

CPF PRODUCT SERIES



Your Partner Specialized in Quality Devices

PRODUCTS CONTENTS

APPLICATION OF CPF PRODUCTS 1

PF4 CPF 2-STAGE MELT FILTER 2

PF2-P CPF DIRECTLY SPINNING POLYMER FILTER 4

PF2T VERTICAL 2-HOUSINGS CONTINUOUS PROCESS FILTRATION SYSTEM 7

PF2 VERTICAL TYPE 2-HOUSINGS CPF 9

PF2C CPF SERIES SMALL EXTRUDER MELT FILTER FOR COLORFUL YARN SPINNING 11

PF2H CPF SERIES HORIZONTAL MELT FILTER 13

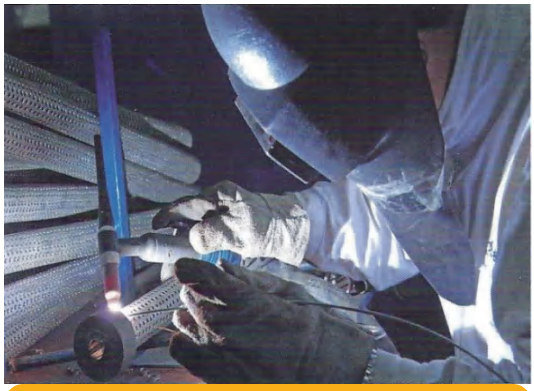
POLYMER METL JACKET VALVE SERIES 14



PROFESSIONAL TEAM



SPECIALIZATION PRODUCING

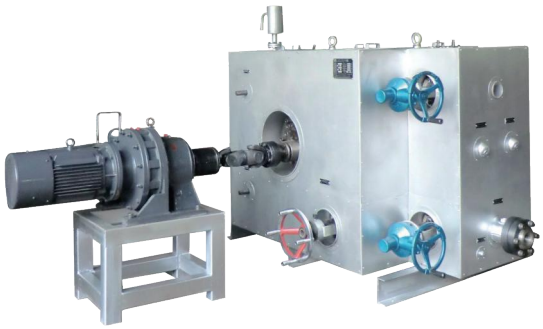


HIGH QUALITY CONTROL

APPLICATION OF CPF PRODUCTS

1. Polymer Industry: PET, PA (PA6, PA66, etc.), Pre-Polymerization, Final-Polymerization.
2. Filament Yarn: POY,PA, PP, Composite Fiber, especially for microfilament, Fiber, Differential Fiber, Special Fiber, Profiled Filament, Colorful Fiber and etc.
3. Recycled PET Bottle Flake Chips to POY.
4. PSF Chip Spinning.
5. PSF Bottle Chip Spinning.
6. Spun bonded Non-Woven, including both PP and PET.
7. Spun bonded Non-Woven, Regenerated Material added.
8. PP Filament Yarn, PP monofilament.
9. PET Monofilament for zipper.
10. BOPP, BOPET Stretched Membrane.
11. Prill, Granulation.

PF4 CPF2-STAGE MELT FILTER



Product Description

Futai Filter is the first and leading designer and developer of PF4 CPF 2-Stage Melt filter Series based on the new technical characteristics of spinning by Recycled Materials (Such as PET Bottle Flakes and Forms)

Technical Details

With the increasing demand for high filtration results, simply increasing the filter area continue to show its limitation. For indirectly spinning, due to the restriction of the supply capacity of the extruder, it becomes impossible for the users to complete the switching procedure because of the big filter area; thus, they have to stop the entire line during the switching. As a result, the spinning quality declines sharply because of the over-degradation caused by the long switching and refilling time.

2-stage melt filter complete the filtration process level by level and stage by stage based on the impurities' distribution in the raw material. The filter area for the initial stage is within the range of regular type filter, while the filter area for the fine stage can be increased by more than twice. Thus, by using the 2-stage filtering technic, the problem is solved. the final filtration results is improved greatly , which provides the necessary foundation for PET-POY/PSF.

1 extra set of Metering Pump is required to be used between the 2 filter stages to increase the pressure for the melt filter. With it, the pressure can be increases gradually,which makes the final output pressure more stable. It also helps decrease the Extruder output pressure and extend the life cycle of the Screw Extruder.

Product Application and Technical Advantages

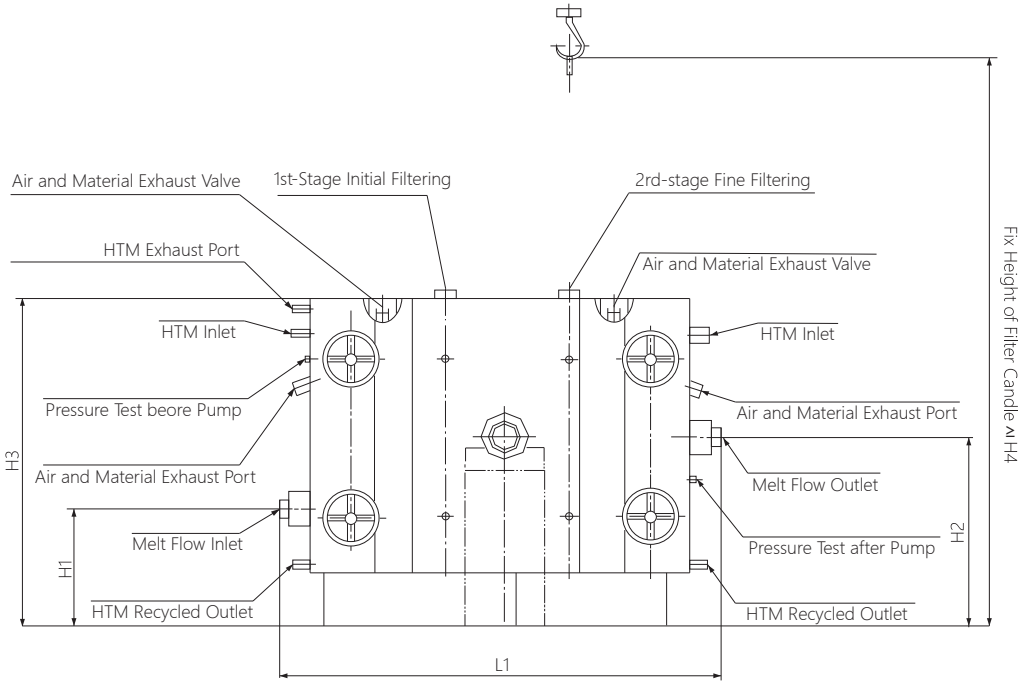
Our 2-Stage Melt Filter is now extensively used in all kinds of fields at thousands of the end users' factories, including PSF, Filament Yarn, POY, FDY, Non-Woven, Composite Fiber, Colorful Yarn, Differential Yarn and other chemical fiber.

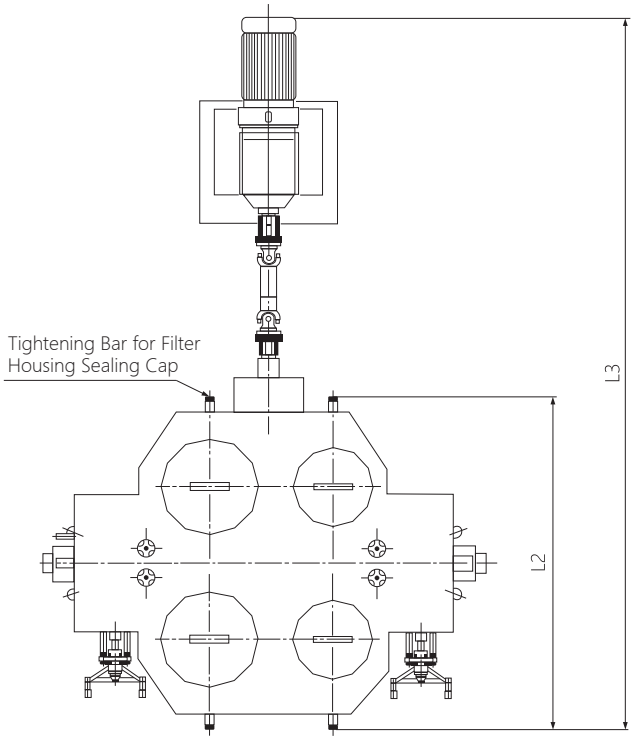
It has been proved that the 2-stage Melt Filter, compared to the regular type, has the following main technical advantages:

1) Increase the possibility of Pre-Spinning, especially helpful in extending the life cycle of spinning pack. It can extend it more than 2-3 times based on the filtration rate of the filter candles.
2) Increase the possibility of Pre-Spinning, thus increase the winding speed.
3) Increase the final product completion rate.
4) Lower Raw Material cost greatly by using recycled material in the chips.
5) KEY equipment in Recycled PET POY/PSF spinning.

PF4 CPF Series Data Form (Filament Yarn)

Mode	Applicable Screw Bar	FilterArea(m^2) Initial Filter	FilterArea(m^2) Fine Fiter	Filter Element (Initial Filter)	Filter Element (Fine Filter)	Designed Flow Rate(kg/h)
PF4T-15-9.5B	φ180	15	9.5	φ58×750×19units	φ58×650×15units	1000-1200
PF4T-12-7.0B	φ170	12	7	φ58×650×19units	φ50×650×15units	700-900
PF4T-12-5.5B	φ160	12	5.5	φ58×650×19units	φ50×500×15units	550-750
PF4T-9.5-5.5B	φ150	9.5	5.5	φ58×500×19units	φ50×500×15units	450-650
PF4T-5.5-2.5B	φ120	5.5	2.5	φ50×500×15units	φ35×485×13units	250-350

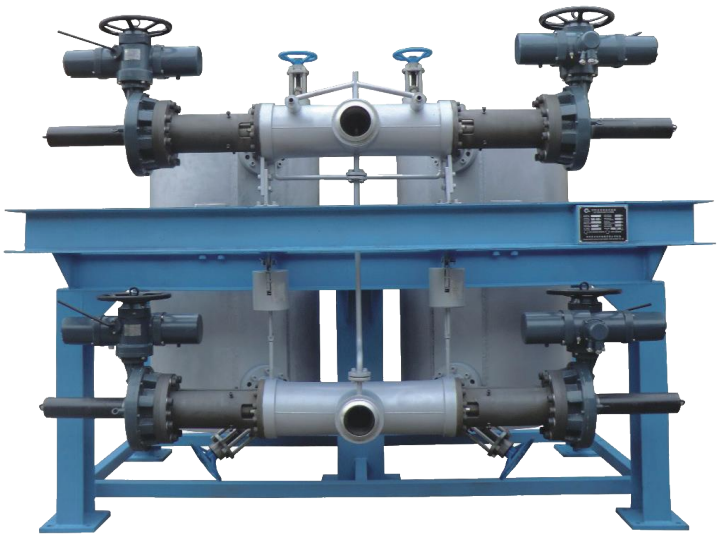




PF4 CPF Series Data Form (Staple Fiber)

Mode	Applicable Screw Bar	Filter Area(m²) Inltial Filter	Filter Area(m²) Fine Fiter	Filter Element (Initial Filter)	Filter Element (Fine Filter)	Designed Flow Rate(kg/h)
PF4-15-9.5B	φ180	15	9.5	φ58×750×19units	φ58×650×15units	1000-1200
PF4-12-7.0B	φ170	12	7.0	φ58×650×19units	φ50×650×15units	700-900
PF4-12-5.5B	φ160	12	5.5	φ58×650×19units	φ50×500×15units	550-750
PF4-9.5-5.5B	φ150	9.5	5.5	φ58×500×19units	φ50×500×15units	450-650

PF2-P CPF DIRECTLY SPINNING POLYMER FILTER



Product Description

This Product has been developed to more than 10 models with filtering area ranging from 19m²-80m². Futai Filter is one of the few company that can develop, design and manufacture this polymer filter in CPF Industry.

Application

Production of PRE and Final-POLYMERIZATION with range 2-400000t/y.

Technical Advantages

1) Product Structure: It adopts innovative product design which saves the investment cost and ensures easy operation and maintenance, and proves to have outstanding energy-saving effects.
2) Product Technology: The switch valve adopts new materials and new technology which ensures reliable sealing effects and easy operation.

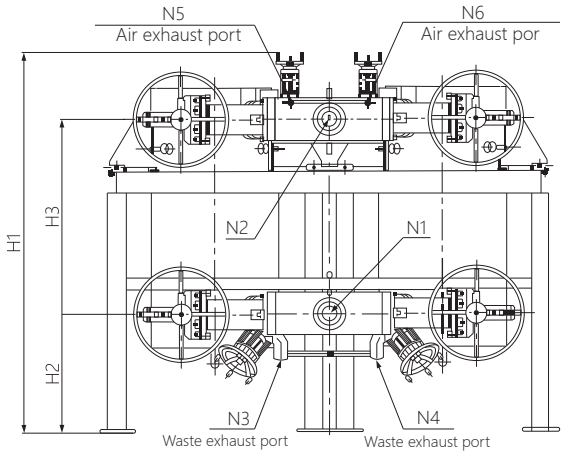
Main Technical Parameters

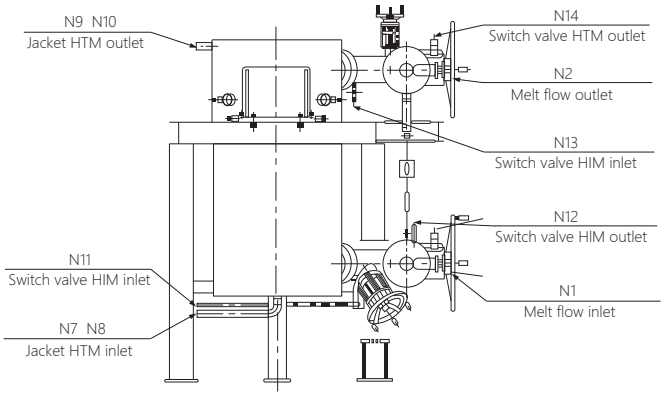
Working Medium: Polymer Melt
Filter Flow: 120-600t/d
Designed Working Pressure: 1.6Mpa(Pre-Polymerization)22 Mpa (Final-Polymerization)
Designed Working Temperature:330℃
Filtration Rate: Per customer request
Filter Area:19-80m²
Max. Pressure Difference before and after Filtering:1Mpa (Pre-Polymerization)10Mpa(Final-Polymerization)
Melt Tube Inlet and Outlet DN: DN65-125
Wire Mesh Material: Metal Fiber Sintered Felt
Heating Method: Liquid Phase or Air Phase Circulation Heating

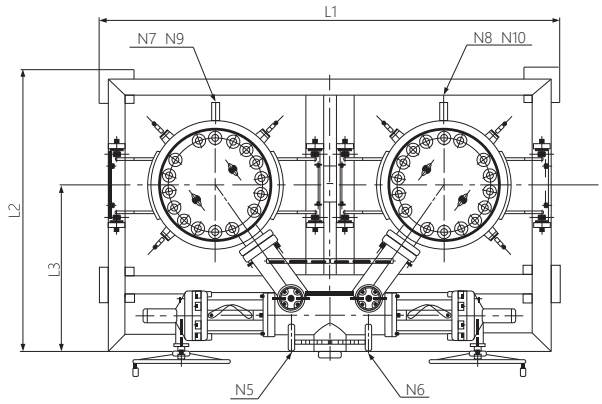


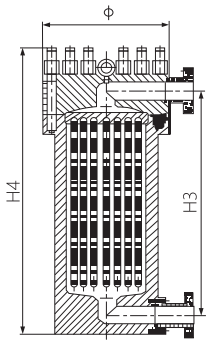
CPF SPAREPARTS

PF2-FP CPF SERIES FINAL-POLYMERIZATION FILTER







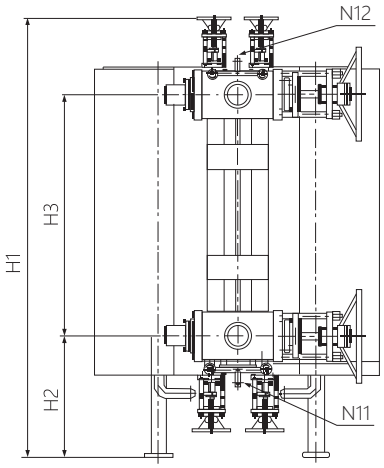


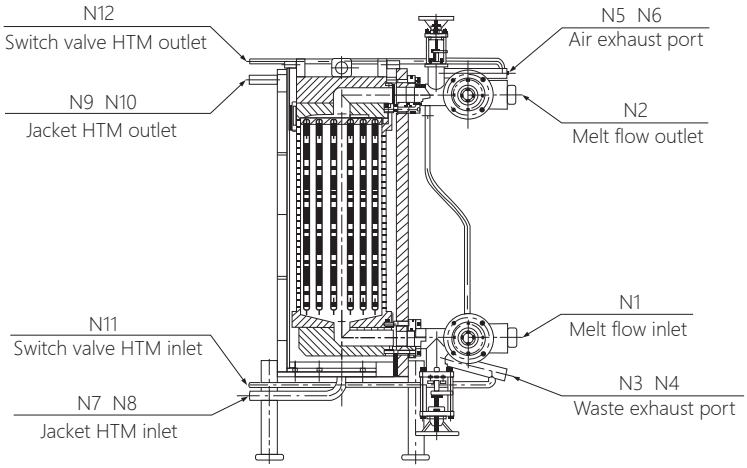
Fiter housing structure drawing

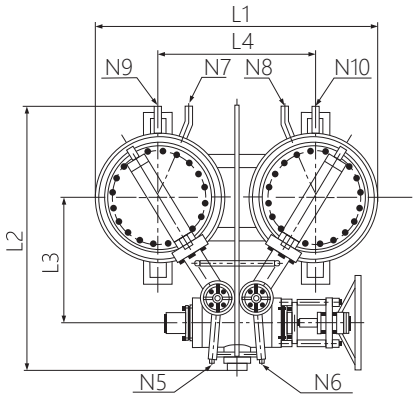
PF2-FP CPF Series Data Form

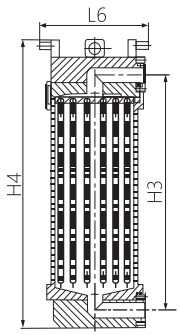
Mode	Melt Pressure(Mpa)	Allowed Temp.(℃)	Filter Area(m²)	Melt Pipe DN (φ/mm)	Flow Rate(kg/h)	Allowed Pressure Difference (Mpa)	Jacket Designed Pressure (Mpa)
PF2-FP-19	22	330	19×2	DN65	40-70	8	0.8
PF2-FP-23	22	330	23×2	DN65	60-90	8	0.8
PF2-FP-31	22	330	31×2	DN80	80-120	8	0.8
PF2-FP-37	22	330	37×2	DN80	120-190	8	0.8
PF2-FP-48	22	330	48×2	DN100	200-300	8	0.8
PF2-FP-61	22	330	61×2	DN100	300-400	8	0.8
PF2-FP-80	22	330	80×2	DN125	420-600	8	0.8
PF2-FP-95	22	330	95×2	DN125		8	0.8

PF2-PP CPF SERIES PRE-POLYMERIZATION FILTER









Filter housing structure drawing

PF2-PP CPF Series Data Form

Mode	Melt Pressure(Mpa)	Allowed Temp.(℃)	Filter Area(m²)	Melt Pipe DN (φ/mm)	Flow Rate (kg/h)	Allowed Pressure Difference (Mpa)	Jacket Designed Pressure (Mpa)
PF2-PP-19	1.6	330	19	DN65	80	1	0.8
PF2-PP-23	1.6	330	23	DN65	120	1	0.8
PF2-PP-31	1.6	330	31	DN80	170	1	0.8
PF2-PP-37	1.6	330	37	DN80	240	1	0.8
PF2-PP-48	1.6	330	48	DN100	300	1	0.8
PF2-PP-61	1.6	330	61	DN100	420	1	0.8
PF2-PP-80	1.6	330	80	DN125	600	1	0.8
PF2-PP-95	1.6	330	80	DN125		1	0.8

PF2T VERTICAL
2-HOUSINGS CONTINUOUS PROCESS FILTRATION SYSTEM



Product Description

It is designed and manufactured based on the specific technical and engineering requirements for the production of different FILAMENT YARN in different fields..

Application

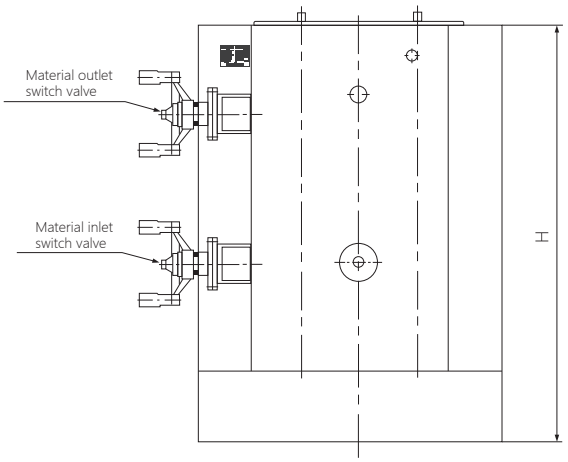
Applicable for spinning Polyester Yarn(POY, FDY, Fine Denier Filament),PP POY, Non Woven, PA/Nylon POY, All kinds of Composite Yarn; Model Selection is based on the different technical and engineering requirements of Polyester/PA(Nylon), Filament Yarn/Non Woven, Clean Chip Spinning or Recycled Material (PET Bottle Flake) Spinning.

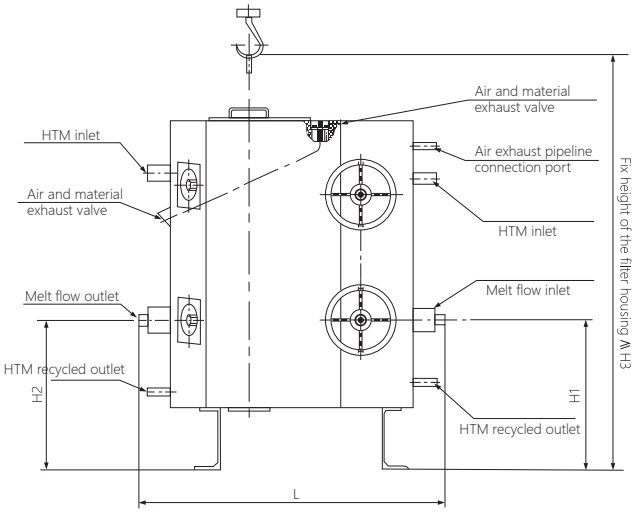
Technical Advantages

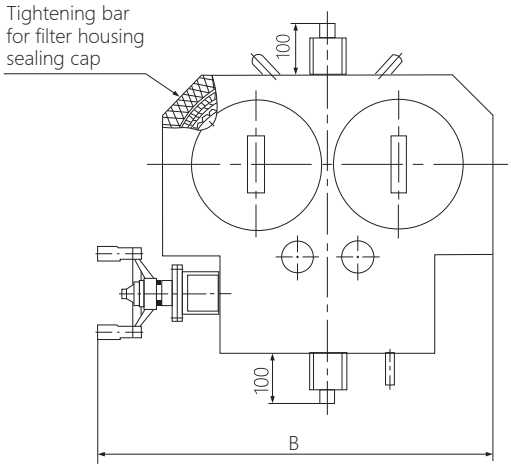
1) Heating Effects: Reasonable heating structure design ensures steady,fast heating, exceptional heat-preservation effect and short heating time. It can meet the requirements of both Regular yarn or Special yarn spinning.
2) Pre-Heating System: No pre-heating is required for filter housing. It can reach the working temperature within 5-8 hours after being installed inside the filter machine.
3) Operation System: Filter housing can be lifted up and installed up- straight inside the machine directly.
4) Structure Features: Melt flow: from Bottom in and from top out; from Outside in and from Inside out. Air and Material Exhaust Valves are installed on the top of the Melt Outlet. Continuous Switch Valves are adopted to avoid the problem of floating fiber and ensure the steady pressure difference. It is easy for operation and maintenance.
5) Patented Key Product Structure:2-Wheel 3-Way Switch Valve ensures non-stop switching between two cylinders. The filtering area can be multiplied by openning up both two cylinders by using the switch valve.

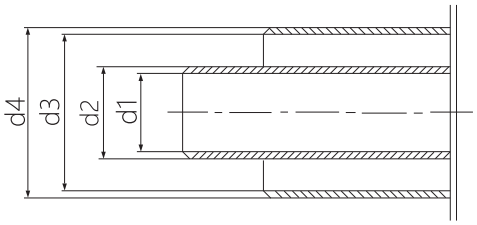
Main Technical Parameters

Max. Working Pressure:20Mpa
Max. Working Temperature:310℃
Allowed Jacket Pressure:0.25Mpa
Max. Pressure Difference before and after Filtering:6Mpa
Single Cylinder Filter Area:0.5~19m^2
Filtration Rate:5um~60um
Melt Tube DN:φ20~80mm
Melt Tube Connection: Welded in field or connected by Flange
HTM Medium: Biphenyl or HTM
Heating Method: HTM Recirculation Heating or Electrical Heating





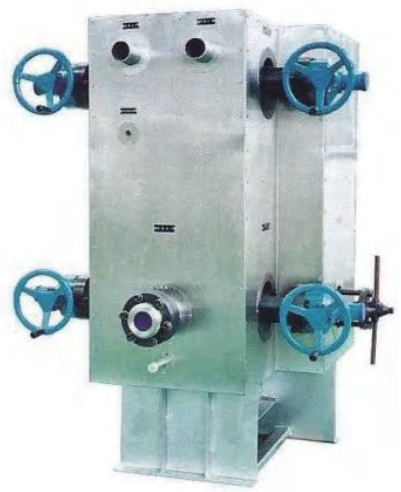




PF2T CPF Series Data Form

Mode	L	B	H	H1	H2	FIX Height (H3/mm)	Inlet&Outlet DN (ϕ/mm)	Filter Area(m²)	Applicable Screw Bar(ϕ/mm)	Designed Flow Rate (kg/h)	Filter Housing	Filter Element	Total Weight(kg)
PF2T-0.5B	900	1050	1350	Height Per Customer's Site		2200	22	2×0.5	65	40--80	φ158×565	φ35x425 x4unit/PC	660
PF2T-1.05B	900	1050	1350			2200	30	2×1.05	90	100--180	φ172×600	φ35x425 x7unit/PC	690
PF2T-1.26B	900	1050	1390			2240	30	2×1.26	105	150--220	φ178×640	φ35x485 x7unit/PC	770
PF2T-1.8B	950	1140	1390			2240	40	2×1.8	120	220--320	φ235×620	φ35x425 x12unit/PC	980
PF2T-1.95B	950	1140	1390			2240	40	2×1.95	130	250--350	φ235×620	φ35x425 x13unit/PC	990
PF2T-2.34B	1030	1200	1430			2330	40	2×2.34	135	330--420	φ235×690	φ35x485x13unit/PC	1290
PF2T-2.7B	1150	1200	1440			2350	50	2×2.7	150	400--500	φ260×690	φ35x485 x15unit/PC	1320
PF2T-3.5B	1150	1250	1440			2350	50	2×3.5	160	500--650	φ285×695	φ35x485 x19unit/PC	1450
PF2T-4.0B	1150	1250	1500			2400	50	2×4.0	170	600--750	φ285×735	φ35x525 x19unit/PC	1500
PF2T-4.5B	1150	1250	1550			2400	50	2×4.5	180	650--900	φ285×785	φ35x575x19unit/PC	1550
PF2T-5.5B	1200	1300	1500			2350	50	2×5.5	190	800--1000	φ350×755	φ50x500 x15unit/PC	1650

PF2 VERTICAL TYPE 2-HOUSINGS CPF



Product Description

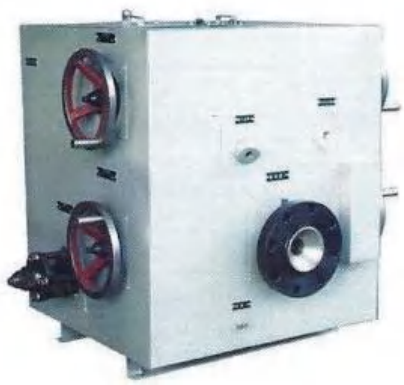
This Product Series adopted Self-Sealed Structure. It helps solving the problems of poor sealing performance and short service life caused by traditional screwing system. "It reaches the advanced level in PSF field".

Application

PSF of all kinds, all kinds of Zipper Monofilament, specifically for Recycled Bottle Flake Chip Spinning and Foam Chip Spinning.

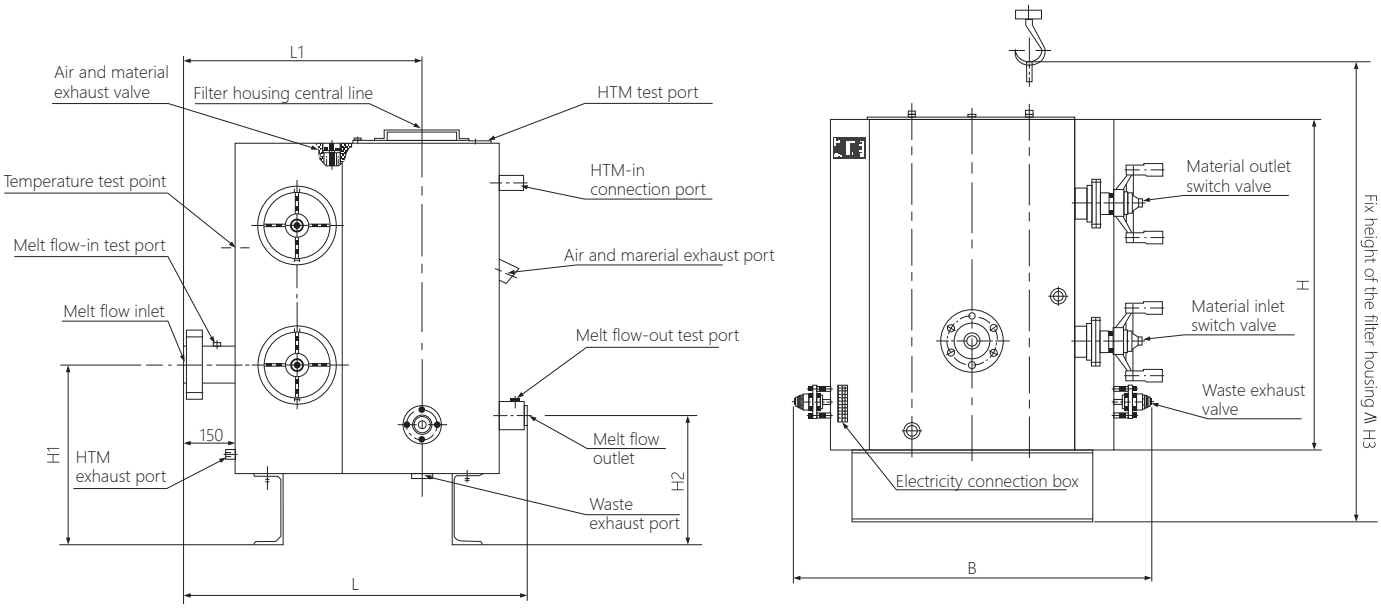
Technical Advantages

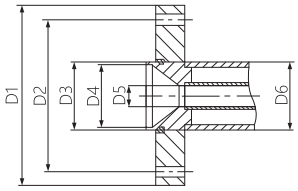
1) Technical Structure: it adopts the operation system of Bottom-Top, Outside-In, Air and Material Exhaust on the top of melt outlet, Waste Exhaust at the bottom of filter housing. This design ensures: no dead angel for melt flow; air and wastes can be removed completely; convenient switching procedure and maintenance; steady pressure difference. It also avoids the problem of floating yarn.
2) Product Structure: It developed Self-Sealed (Patented) Structure independently: No Screw Bolt, Reliable sealing results, no leakage of the melt, easy operation.
3) Heating Effects: Even and steady heating, superior Heat-Preservation effects, saves energy by more than 25%. It can meet the requirements of both regular yarn and special yarn spinning.
4) Patented Key Technology:2-Wheel 3-Way Switch Valve ensures non-stop switching between two cylinders, easy operation and maintenance. Air and Waste Exhaust with large DN ensures smooth waste exhaustion process. The waste can be reused at high value.



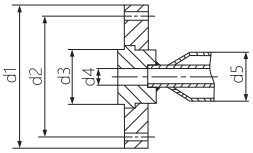
Main Technical Parameters

Max. Working Pressure: 16Mpa
Max. Working Temperature:310℃
Allowed Jacket Pressure:0.25Mpa
Max. Pressure Difference before and after Filtering:6Mpa
Single Cylinder Filter Area:1.05~19m^2
Filtration Rate: 100-350Mesh
Melt Tube DN: φ20~100mm
HTM Medium: Biphenyl or HTM
Heating Method: Recirculation Heating or Electrical Heating
Heating Power:5~20KW/220V





Flange connection witn screw bar



Flange connection with spinning bean(Welded at the site)

PF2 Vertical Type Data Form

Mode	L	B	H	H1	H2	FIX Height (H3/mm)	Inlet&Outlet DN(ϕ/mm)	Filter Area(m²)	KW Heating Power(KW)	Filter Element	Designed Flow Rate (kg/h)	Applicable Screw Bar(φ/mm)	Total Weight(kg)
PF2-1.05B	1000	1200	1220	Height Per Customer's Site		2000	30	1.05	6.2	φ35x425 x7units/PC	70--100	45	900
PF2-1.26B	1000	1200	1280			2050	30	1.26	6.2	φ35x485 x7units/PC	100--140	55	950
PF2-1.8B	1060	1260	1250			2100	40	1.8	8.6	φ35x425 x12units/PC	140--200	65	1000
PF2-2.5B	1060	1260	1300			2200	40	2.5	8.6	φ50x500 x7units/PC	200--250	80	1100
PF2-3.5B	1100	1300	1340			2250	40	3.5	9	φ58x500 x7units/PC	250--350	90	1200
PF2-4.5B	1220	1410	1420			2350	50	4.5	9	φ50x500 x13units/PC	300--400	105	1500
PF2-5.5B	1250	1410	1450			2400	50	5.5	10.2	φ50x500 x15units/PC	400--500	120	1800
PF2-6.5B	1320	1650	1450			2400	68	6.5	12	φ58x500 x13units/PC	500--600	135	2000
PF2-7.5B	1360	1660	1490			2400	68	7.5	12.8	φ58x500 x15units/PC	600--700	150	2200
PF2-9.5B	1380	1670	1510			2450	68	9.5	12.8	φ58x500x19units/PC	700--800	160	2500
PF2-12B	1380	1670	1660			2600	68	12	15.2	φ58x650 x19units/PC	800--1050	170	2800
PF2-15B	1380	1670	1760			2800	68	15	15.2	φ58x750 x19units/PC	1050--1200	190	3100

PF2C CPF SERIES SMALL EXTRUDER MELT FILTER FOR COLORFUL YARN SPINNING



Application

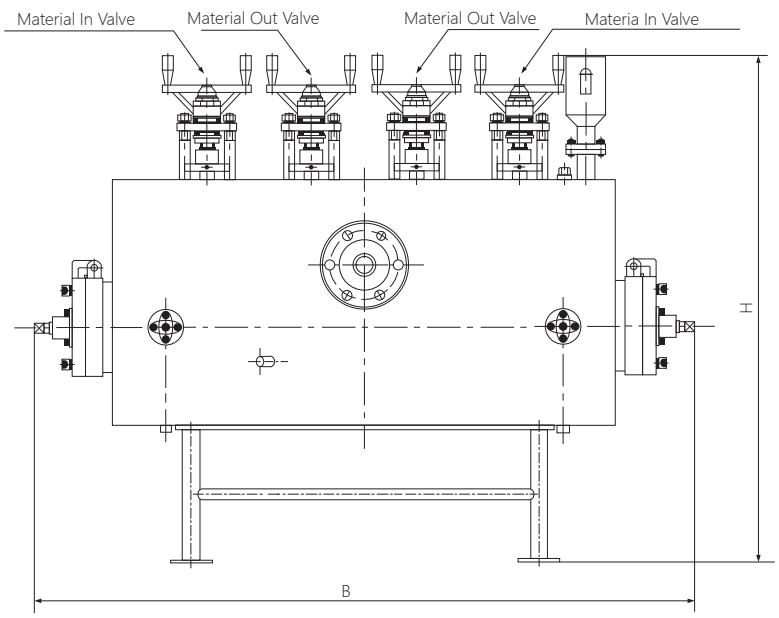
Colorful Yarn Spinning (Screw Bar with Small Size)

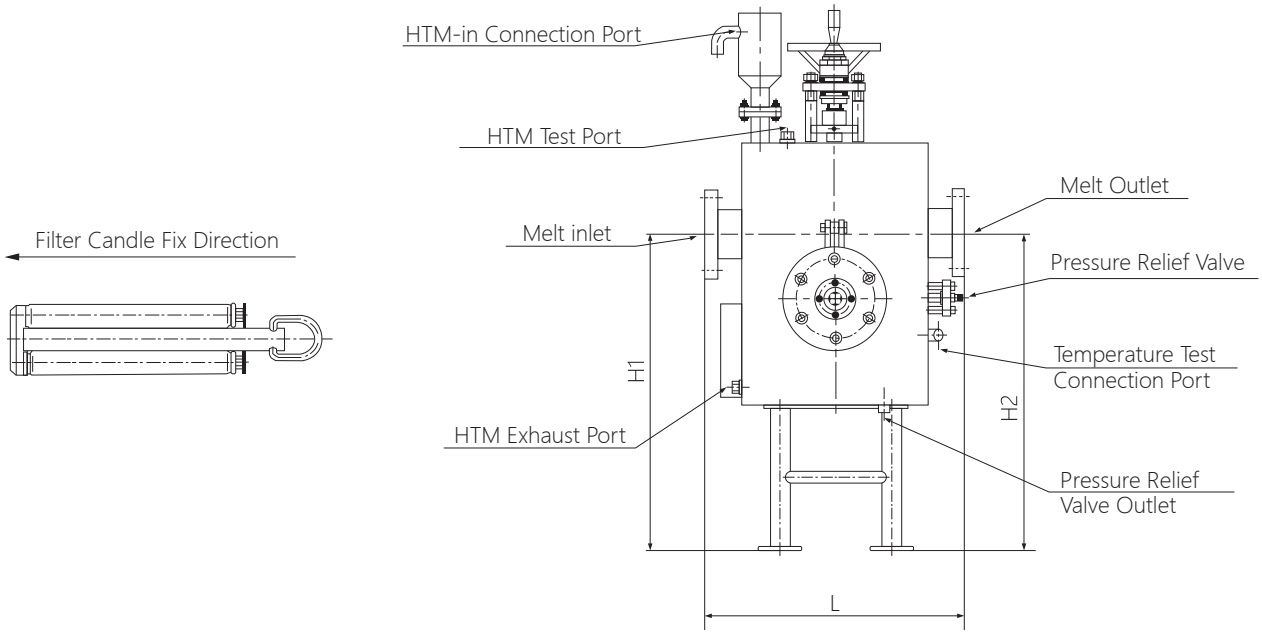
Technical Advantages

1) Structure: Horizontal Structure, easy to be installed in even small factory.
2) Filtration Result: Melt can be cleaned and filtered entirely when running through the filter elements.
3) Waste-Exhaust Result: The Melt can be filtered thoroughly due to the short waste exhausting period and the problem of slow waste exhaust procedure caused by the low temperature requirement for colorful yarn spinning can be solved effectively.
4) Operation: Easy Lifting-up and Installment of Filter Elements; Easy operation for the Jacket Valve.

Main Technical Parameters

Max. Working Pressure	16Mpa
Max. Pressure Difference before and after filtration	6Mpa
Jacket Designed Pressure	0.25Mpa
Designed Temperature	310℃
Single Cylinder Filter Area	1.05-3.5m^2
Filtration Rate	120Mesh-350Mesh
Melt Pipeline DN	φ30-50
Filter Medium	biphenyl or HTM
Heating Method	HTM Circulation Heating or Electronic Bar Heating
Heating Power	5-20KW/220V





PF2C CPF Series Data Form

Mode	L	B	H	H1	H2	Inlet&Outlet DN(ϕ/mm)	Filter Area(m²)	Applicable Screw Bar(ϕ/mm)	Designed Flow Rate (kg/h)	Filter Element	Total Weight (kg)
PF2C-2.5B	700	1900	1450	Height Per Customer's Site		30	2.5	φ90	200--250	φ50x500 x7units/PC	1100
PF2C-3.5B	750	1950	1500			40	3.5	φ105	250--300	φ58x500 x7units/PC	1200
PF2C-4.5B	850	2000	1600			50	4.5	φ120	300--400	φ50x500 x13units/PC	1500
PF2C-5.5B	950	2100	1700			50	5.5	φ135	400--500	φ50x500 x15units/PC	1800

PF2H CPF SERIES HORIZONTAL MELT FILTER



Production Description

POY, PP Non-Woven and other CPF field.

Main Technical Parameters

Max. Working Pressure:20Mpa
Max. Working Temperature:310℃
Allowed Jacket Pressure:0.25Mpa
Max. Pressure Difference before and after Filtering:6Mpa
Single Cylinder Filter Area:0.5~4.5m²
Filtration Rate:5um~60um
Melt Tube DN: φ20~58mm
Melt Tube Connection: Welded in filter or Welded by Flange
HTM Medium: Biphenyl or HTM
Heating Method: HTM Recirculation Heating or Electrical Heating

PF2H CPF Series Data Form

Mode	L	B	H1	H2		Filter Area(m²)	Filter Element	Inlet&Outlet DN(φ/mm)	Applicable ScrewBar(φ/mm)	Designed Flow Rate (kg/h)	Total Weight(kg)
PF2H-0.5B	700	880	550	1050	Height Per Customer's Site	2×0.5	φ35x215 x7units	22	65	40--80	480
PF2H-1.05B	910	880	550	1050		2×1.05	φ35x425 x7units	30	90	100--180	550
PF2H-1.26B	970	880	550	1050		2×1.26	φ35x485 x7units	30	105	150--220	600
PF2H-1.5B	1010	880	550	1050		2×1.5	φ35x525 x7units	30	120	180--250	650
PF2H-1.8B	930	1110	680	1320		2×1.8	φ35x425 x12units	40	120	220--320	800
PF2H-1.95B	930	1110	680	1320		2×1.95	φ35x425 x13units	40	130	250--350	800
PF2H-2.34B	990	1110	680	1320		2×2.34	φ35x485 x13units	50	135	330--420	850
PF2H-2.7B	990	1140	700	1420		2×2.7	φ35x485 x15units	50	150	400--500	900
PF2H-3.0B	1030	1140	700	1420		2×3.0	φ35x525 x15units	50	150	450--600	950
PF2H-3.5B	1060	1160	700	1450		2×3.5	φ35x485x19units	60	160	500--650	1050
PF2H-4.0B	1100	1160	700	1450		2×4.0	φ35x525 x19units	60	170	600--750	1200
PF2H-4.5B	1150	1160	700	1450		2×4.5	φ35x575 x19units	60	180	650--900	1300

POLYMER MELT JACKET VALVE SERIES

Main Technical Parameters

Designed Melt Pressure:1Mpa-25Mpa
Designed Jacket Pressure:0.8Mpa;
Designed Temperature:330℃;
Main Engineering Tube DN:25-250mm
Jacket DN:50-300mm
Connection Way: Flange Connection, Welded in field or others.



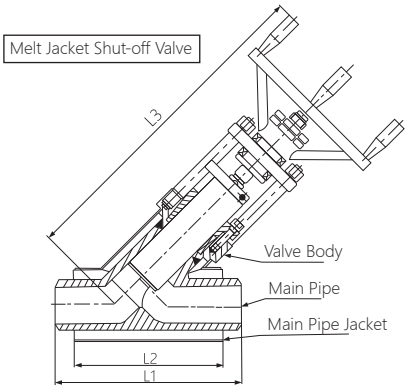
Melt Jacket Stop Valve



Melt Jacket Sampling Valve



Melt Jacket Valve

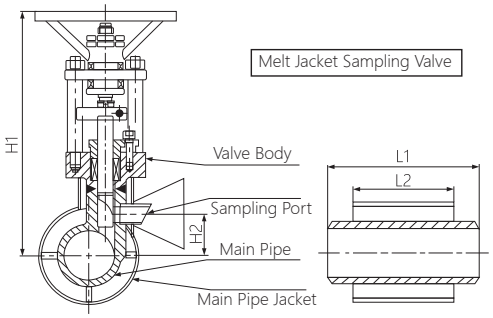


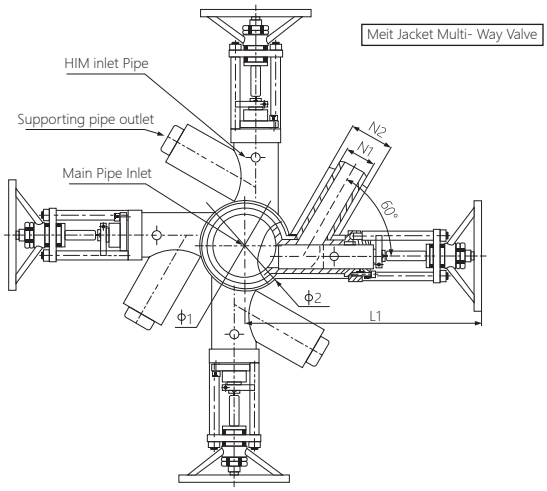


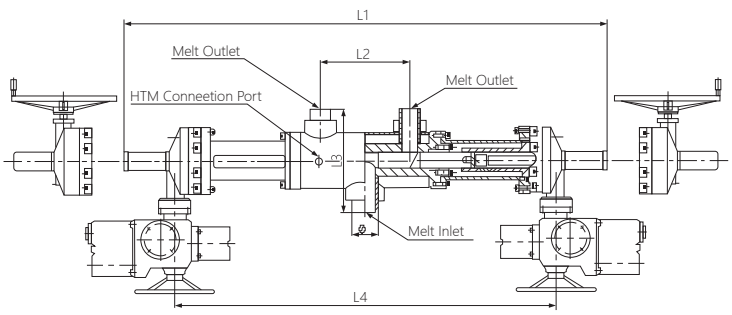
Melt Electronic Multi-Way Valve



Melt Jacket 3-Way Valve









Futai not only provide high-quality standardized CPF filtration systems, but also innovate, design, and provide customers with professional and reliable services, provide convenience in daily operation and maintenance, save costs and time, and meet the needs of customers with high standards.

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