

# FILTER HOUSING SERIES

2022

**ecoeARTH**  
TECHNOLOGY

ECO EARTH TECHNOLOGY PTE LTD

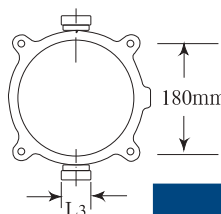
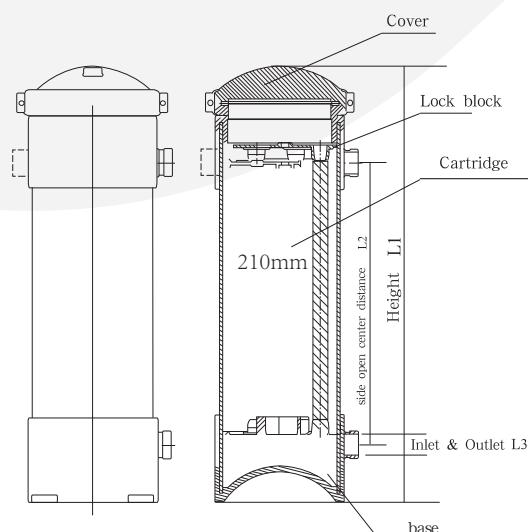


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# WDLPP5

## WDL PALL Filter Housing equipped with 5pcs PP cartridges inside :

- The material of filter housing is FRP which adopt the winding technical of Glass Fiber and reinforced plastics, make sure the strength of material stronger than stainless steel and PVC.
- Corrosion resistance, no leakage and could bear the high pressure and temperature.
- The internal structure of filter housing is novel and reasonable with seal support, installation guide and upper end cartridge positioning lock block . There are five hole positioning for sealing box, customer could use fastening nuts to adjust the sealing of it.
- Not only the body of filter housing material is FRP, but also the other accessories of filter are FRP except cartridge.
- The installation and change cartridge is very convenient, the customer do not need to use any tools because the filter housing built-in automatic positioning cartridges lock and is opened by manual type hoop.
- Reduce user operation time and greatly improves efficiency at the same time.



Unit:mm

	DIAMETER	HEIGHT	SIDE OPEN CENTER DISTANCE	INLET & OULET	FILTER FLOW	FILTER ACCURACY	Cartridge Height
WDLPP5-10	210	590	380	DN50	2T/H	1-100µm	10"
WDLPP5-20	210	840	630	DN50	3T/H	1-100µm	20"
WDLPP5-30	210	1090	880	DN50	5T/H	1-100µm	30"
WDLPP5-40	210	1340	1130	DN50	8T/H	1-100µm	40"

### Operational Principle :

PALL Filter is also known as a precision filter which used before UF (ultra-filtration). Using the formed cartridges to filtrate the original liquid under the action of pressure. Then will left the filter residue on the pipe wall and the filter liquid flows through the filter cartridge to achieve the purpose of filtration.

The filter aperture are also different due to the different material. This filter is a filtration between sand filtration (coarse filtration) and UF, the aperture is generally in the range of 0.5~100 µm.

Filter cartridge formed by melt injection process with a maximum working temperature of 60°C. They could removes the suspension, certain colloidal substances, and small particulate matter of the water.

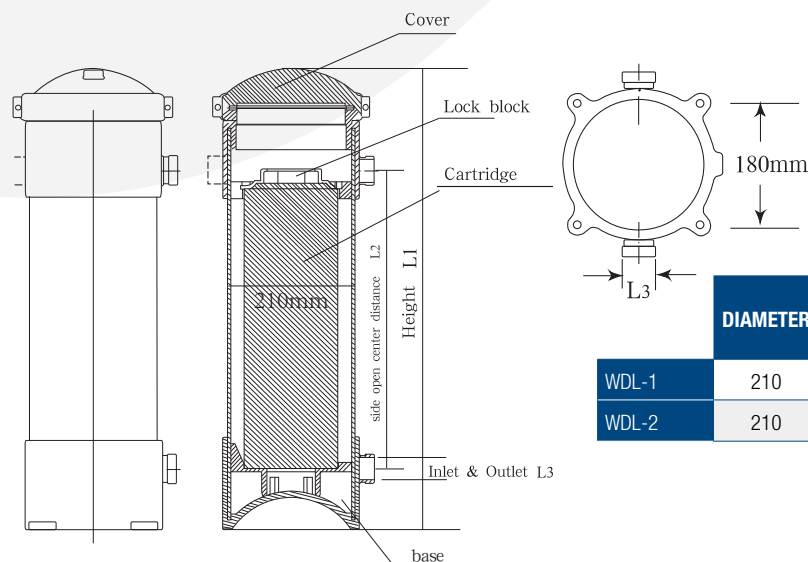
### ! Attention Notes:

- Filter cartridge should been install in place and make sure the nuts had been locked tight.
- Operation pressure mustn't exceed the rated range pressure.
- Open the air evacuation valve before starting.
- Close the air evacuation valve after air is exhausted.
- Change the new cartridge when the pressure difference exceeds the rated range.
- Regular replace the filter cartridges when they are very dirty.

# WDL-1/WDL-2

**Bag-Type Filter Housing equipped with 1pc  $\phi 180\text{mm}$  bag cartridge inside :**

- The material of filter housing is FRP which adopt the winding technical of Glass Fiber and reinforced plastics, make sure the strength of material stronger than stainless steel and PVC.
- Corrosion resistance, no leakage and could bear the high pressure and temperature.
- The internal structure of bag-type filter housing is novel and reasonable with an empty PP fixing support of the bottom which can the bag cartridge. Also has a bag cartridge positioning lock block in the top of the filter housing. The customers only need to rotate 60 degrees for install and fix the bag cartridge.
- Not only the body of filter housing material is FRP, but also the other accessories of filter are FRP except cartridge.
- The installation and change cartridge is very convenient, the customer do not need to use any tools because the filter housing built-in automatic positioning cartridges lock and is opened by manual type clamp.
- Reduce user operation time and greatly improves efficiency at the same time.



Unit:mm

	DIAMETER	HEIGHT	SIDE OPEN CENTER DISTANCE	INLET & OULET	FILTER FLOW	FILTER ACCURACY	Cartridge Height
WDL-1	210	740	530	DN50	10T/H	1-300 $\mu\text{m}$	450 mm
WDL-2	210	1140	930	DN50	20T/H	1-300 $\mu\text{m}$	810 mm

## Operational Principle :

Bag-Type Filter is al so known as a precision filter and mainly make up by filter cylinder body, filter topcover, bag cartridge strength net and fast opening structure and other accessories.

The fil ter liquid flows into the bag-ty pe filter housing from the upper inlet, the impurity particles will been intercepted by the cartridge and finally to get the qualified filtration liquid. Our filter housing is very easy to change the bag cartridges and it basi cally do not bring the many material consumption for customers.

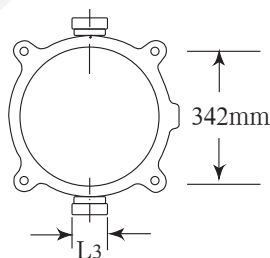
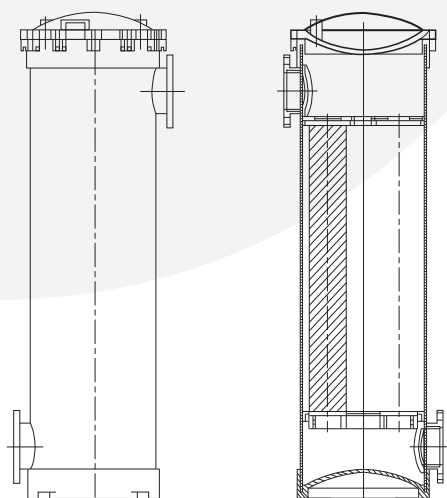
## ! Attention Notes:

- Bag filter cartridge should been install in place, rotate 60 degrees to fix lock block.
- Operation pressure mustn't exceed the rated range pressure.
- Open the air evacuation valve before starting.
- Close the air evacuation valve after air is exhausted.
- Change the new cartridge when the pressure difference exceeds the rated range.
- Regular replace the filter cartridges when they are very dirty.

# WDL-2-3

## **BAG FILTER Has 3PCS Standard NO.2 Bag Filter Cartridge Inside of it. :**

- Fully material of Filter Housing is FRP, other FRP inside accessories are all finished by SMC method. Non-corrosive, no leakage and could bear high pressure and high temperature.
- Filter internal structure design is unique, novelty and reasonable. The customers only need to revolve the filter cartridge then could be fixed because internal structure has its cartridge positioning function. You do not need to use any tools for change cartridge , it also decrease the time of change cartridge.
- I-DEAL NO.2 Filter is opening with SUS 316 suspension-screws, the design of suspension-screws will provide customers more convenient install and unlock and service.



Unit:mm

	DIAMETER	HEIGHT	SIDE OPEN CENTER DISTANCE	INLET& OULET	FILTER FLOW	FILTER ACCURACY	Filter Bag Model
WDL-2-3	420	1435	1170	DN125	30T/H	1-200μm	No.2 Bag

### **Operational Principle :**

I-DEAL Bag Filter is a kind of high pressure filter device. It is mainly consist of FRP filter housing, FRP housing cover, strengthen net basket, high-precision bag filter cartridge and other accessories. The filter liquid flows into filter bag from the inlet of the upper end of the filter. The filter bag itself is installed in the reinforcement net basket, and the liquid permeates through the filter bag of the required fineness grade to obtain qualified filtrate, and the impurity particles are intercepted by the filter bag. I-DEAL Bag filter has many advantages, such as reasonable structure, good sealing, strong circulation performance, simple operation and so on. In particular, the side leakage probability of the filter bag is small, the filtering accuracy can be guaranteed correctly, and the filter bag can be changed quickly, so that.

### **! Attention Notes:**

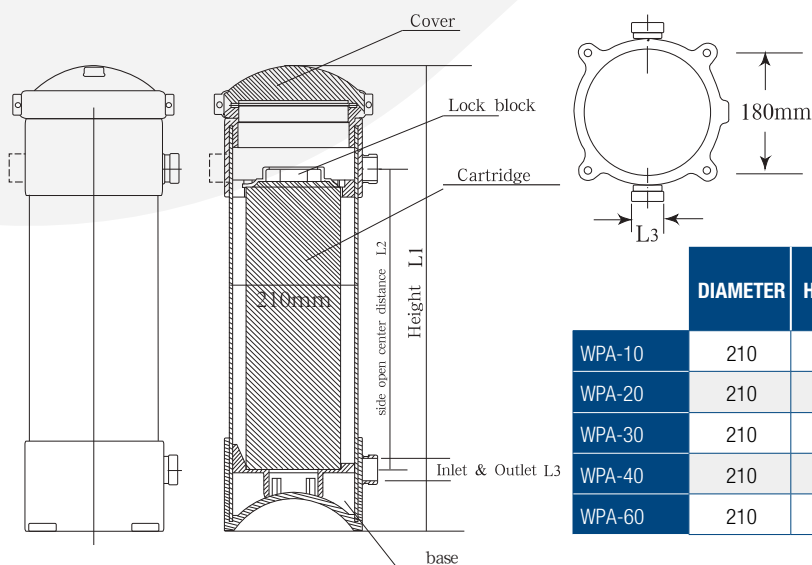
- A.** Filter bag fixation needs to be installed in place, lock block rotation 45 degrees
- B.** Working pressure can not exceed the rated range.
- C.** Open the exhaust valve before the start, air drain after closing the exhaust valve.
- D.** When the pressure difference exceeds the rated range, timely replacement of the filter material.



# WPA

## Big Flow Filter Housing equipped with 1pc PALL cartridge inside :

- The material of filter housing is FRP which adopt the winding technical of Glass Fiber and reinforced plastics, make sure the strength of material stronger than stainless steel and PVC.
- Corrosion resistance, no leakage and could bear the high pressure and temperature.
- The internal structure of filter housing is novel and reasonable with seal support, installation guide and upper end cartridge positioning lock block . The customer only need rotate 60 degrees and then can fix the cartridge.
- Not only the body of filter housing material is FRP, but also the other accessories of filter are FRP except cartridge.
- The installation and change cartridge is very convenient, the customer do not need to use any tools because the filter housing built-in automatic positioning cartridges lock and is opened by manual type hoop.
- Reduce user operation time and greatly improves efficiency at the same time.



Unit:mm

	DIAMETER	HEIGHT	SIDE OPEN CENTER DISTANCE	INLET & OULET	FILTER FLOW	FILTER ACCURACY	CARTRIDGE SIZE
WPA-10	210	590	380	DN50	8T/H	1-100μm	10"
WPA-20	210	840	630	DN50	15T/H	1-100μm	20"
WPA-30	210	1090	880	DN80	20T/H	1-100μm	30"
WPA-40	210	1340	1130	DN80	30T/H	1-100μm	40"
WPA-60	210	1840	1630	DN80	45T/H	1-100μm	60"

### Operational Principle :

Big Flow Filter is also known as a precision filter which used before UF (ultra-filtration). Using the formed folding cartridges to filtrate the original liquid under the action of pressure. Then will left the filter residue on the pipe wall and the filter liquid flows through the filter cartridge to achieve the purpose of filtration. The filter aperture are also different due to the different material. This filter is a filtration between sand filtration (coarse filtration) and UF, the aperture is generally in the range of 0.5~100 μm.

This type cartridge which made by folding process is large flux and can bear the maximum working temperature of 60°C. According to the external size, the same filter cartridges can be divided into different specifications . They could removes the suspension, certain colloidal substances, and small particulate matter of the water.

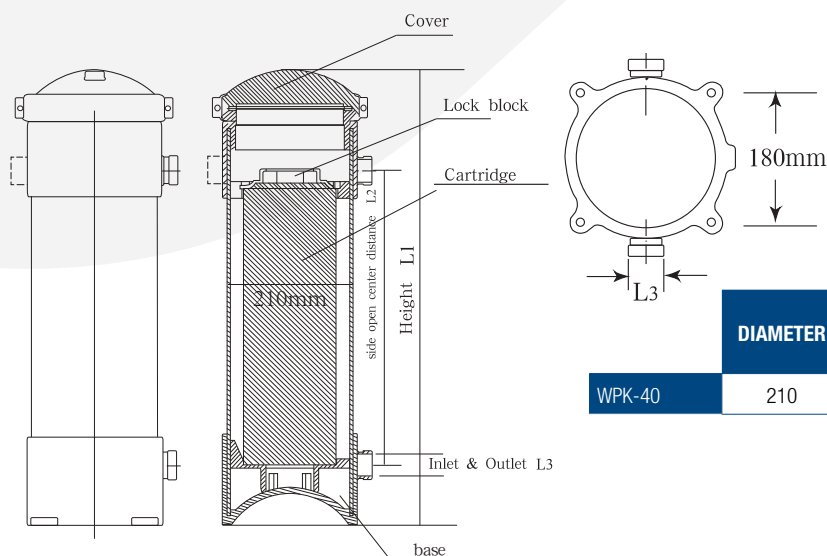
### ! Attention Notes:

- Bag filter cartridge should been install in place, rotate 60 degrees to fix lock block.
- Operation pressure mustn't exceed the rated range pressure.
- Open the air evacuation valve before starting.
- Close the air evacuation valve after air is exhausted.
- Change the new cartridge when the pressure difference exceeds the rated range.
- Regular replace the filter cartridges when they are very dirty.

# WPK-40

## **Big Flow PAKE Type Filter Housing equipped with 1pc 40" PAKE cartridge inside:**

- The material of filter housing is FRP which adopt the winding technical of Glass Fiber (SMC) and reinforced plastics , make sure the strength of material stronger than stainless steel and PVC.
- Corrosion resistance, no leakage and could bear the high pressure and temperature.
- The internal structure of filter housing is novel and reasonable with seal support, installation guide and upper end cartridge positioning lock block . The customer only need rotate 60 degrees and then can fix the cartridge.
- Not only the body of filter housing material is FRP, but also the other accessories of filter are FRP except cartridge.
- The installation and change cartridge is very convenient, the customer do not need to use any tools because the filter housing built-in automatic positioning cartridges lock and is opened by manual type hoop .Reduce user operation time and greatly improves efficiency at the same time.
- The surface of our filter housing is finished by film coating process.



Unit:mm

	DIAMETER	HEIGHT	SIDE OPEN CENTER DISTANCE	INLET& OULET	FILTER FLOW	FILTER ACCURACY
WPK-40	210	1470	1260	DN80	30T/H	1-200 μm

### **Operational Principle :**

Big Flow Filter is also known as a precision filter which used before UF (Ultra-filtration). Using the formed folding cartridges to filtrate the original liquid under the action of pressure. Then will left the filter residue on the pipe wall and the filter liquid flows through the filter cartridge to achieve the purpose of filtration. The filter aperture are also different due to the different material. This filter is a filtration between sand filtration (coarse filtration) and UF, the aperture is generally in the range of 0.5~100 μm.

This type cartridge which made by folding process is large flux and can bear the maximum working temperature of 60°C. According to the external size, the same filter cartridges can be divided into differ ent specifications. The y could removes the suspension, certain colloidal substances, and small particulate matter of the water.

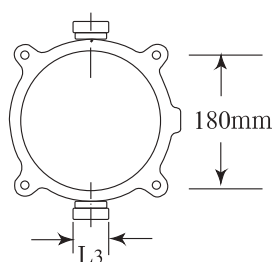
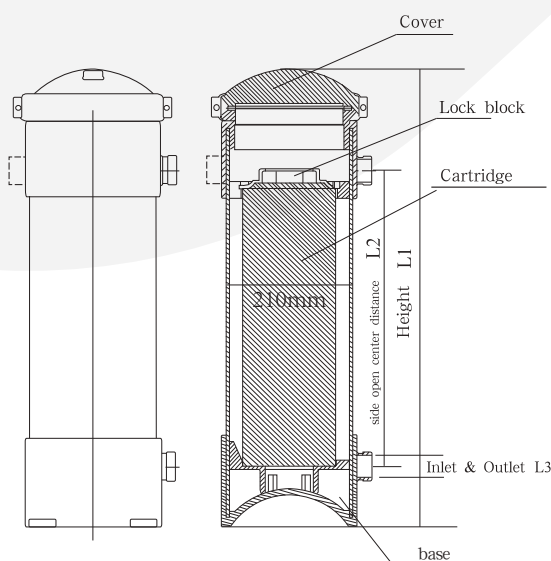
### **! Attention Notes:**

- Bag filter cartridge should been install in place, rotate 60 degrees to fix lock block.
- Operation pressure mustn't exceed the rated range pressure.
- Open the air evacuation valve before starting.
- Close the air evacuation valve after air is exhausted.
- Change the new cartridge when the pressure difference exceeds the rated range.
- Regular replace the filter cartridges when they are very dirty.

# W3M-40

## **Big Flow 3M Type Filter Housing equipped with 1pc 3M brand 40" cartridge inside:**

- The material of filter housing is FRP which adopt the winding technical of Glass Fiber (SMC) and reinforced plastics , make sure the strength of material stronger than stainless steel and PVC.
- Corrosion resistance, no leakage and could bear the high pressure and temperature.
- The internal structure of filter housing is novel and reasonable with seal support, installation guide and upper end cartridge positioning lock block . The customer only need rotate 60 degrees and then can fixed the cartridge.
- Not only the body of filter housing material is FRP, but also the other accessories of filter are FRP except cartridge.
- The installation and change cartridge is very convenient, the customer do not need to use any tools because the filter housing built-in automatic positioning cartridges lock and is opened by manual type hoop.Reduce user operation time and greatly improves efficiency at the same time.
- The surface of our filter housing is finished by film coating process.



Unit:mm

	DIAMETER	HEIGHT	SIDE OPEN CENTER DISTANCE	INLET & OULET	FILTER FLOW	FILTER ACCURACY
W3M-40	210	1340	1120	DN80	30T/H	1-100μm

### **Operational Principle :**

Big Flow Filter is also known as a precision filter which used be fore UF (Ultra-filtration). Using the formed folding cartridges to filtrate the original liquid under the action of pressure. Then will left the filter residue on the pipe wall and the filter liquid flows through the filter cartridge to achieve the purpose of filtration.

The filter aperture are also different due to the different material. This filter is a filtration between sand filtration (coarse filtration) and UF, the aperture is generally in the range of 0.5~100 μm.

This type cartridge which made by folding process is large flux and can bear the maximum working temperature of 60°C. According to the external size, the same filter car tridges can been divided into different specifications. They could removes the suspension, certain colloidal substances, and small particulate matter of the water.

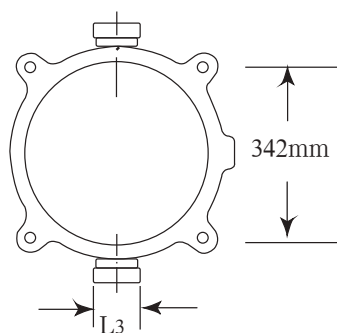
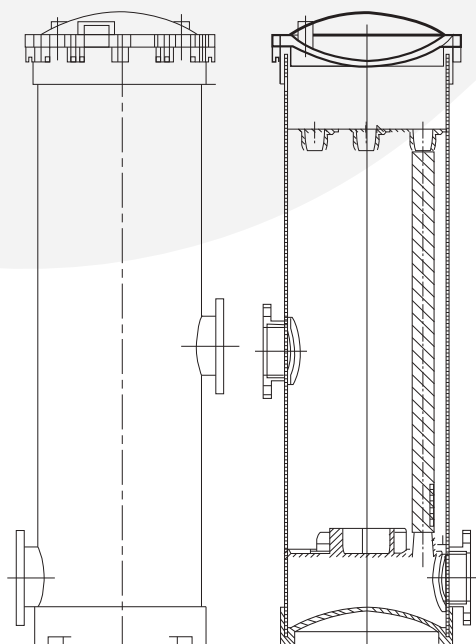
### **! Attention Notes:**

- Bag filter cartridge should been install in place, rotate 60 degrees to fix lock block.
- Operation pressure mustn't exceed the rated range pressure.
- Open the air evacuation valve before starting.
- Close the air evacuation valve after air is exhausted.
- Change the new cartridge when the pressure difference exceeds the rated range.
- Regular replace the filter cartridges when they are very dirty.

# WPP-40-22

***FILTER Has 22PCS 40" PP Filter Cartridges Inside of it.***

- Fully material of Filter Housing is FRP, other FRP inside accessories are all finished by SMC method. Non-corrosive, no leakage and could bear high pressure and high temperature.
- Filter internal structure design is unique, novelty and reasonable. The customers only need to revolve. The filter cartridge then could be fixed because internal structure has its cartridge positioning function. You do not need to use any tools for change cartridge, it also decrease the time of change cartridge.
- I-DEAL this model Filter is opening with SUS 316 suspension-screws, the design of suspension-screws will provide customers more convenient install and unlock and service.



Unit:mm

	DIAMETER	HEIGHT	SIDE OPEN CENTER DISTANCE	INLET& OULET	FILTER FLOW	FILTER ACCURACY	Filter Bag Model
WPP-40-22	420	1500	350	DN80	25T/H	1-100μm	40"

## ***Operational Principle :***

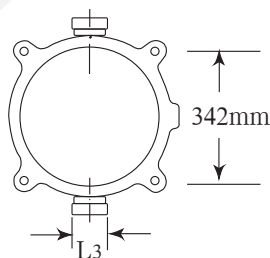
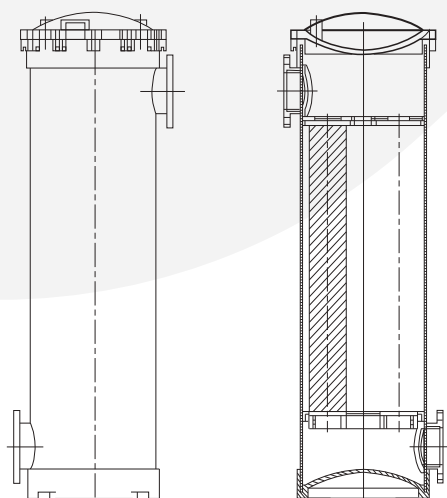
I-DEAL PALL Filter is also known as the precision filter. It is a kind of pressure filter device, which adopts the filter material formed by melting and spraying. Under the action of pressure, the original liquid passes through the filter material, the filter slag is left on the pipe wall, and the filtrate flows out through the filter material, so as to achieve the purpose of filtration. Because of the different filter material, the filtration pore size is also different. Precision filtration is a kind of filtration between sand filtration (rough filtration) and ultra-filtration. The filtration pore size is generally in the range of 0.5 ~ 100 μm. The same form of filter material, according to the size of the shape can be divided into different specifications. The filter material formed by folding process has a large flux and a maximum working temperature of 60 °C. Precision filtration can remove suspended matter, some colloidal matter and small particles from water.



# WPK-40-4

**PAKE(PRECISION) FILTER Has 4pcs (PAKE) 40" filter cartridges. Pressure Level: 150PSI**

- Fully material of Filter Housing is FRP, other FRP inside accessories are all finished by SMC method. Non-corrosive, no leakage and could bear high pressure and high temperature.
- Filter internal structure design is unique, novelty and reasonable. The customers only need to revolve. The filter cartridge then could be fixed because internal structure has its cartridge positioning function. You do not need to use any tools for change cartridge , it also decrease the time of change cartridge.
- NO.2 Filter is opening with SUS 316 suspension-screws, the design of suspension-screws will provide customers more convenient install and unlock and service.



Unit:mm

	DIAMETER	HEIGHT	SIDE OPEN CENTER DISTANCE	INLET& OULET	FILTER FLOW	FILTER ACCURACY	Cartridge Height
WPK-40-4	420	1550	1300	DN125	70T/H	1-100µm	1008

## Operational Principle :

I-DEAL Large Flow PAKE Filter is also known as precision filter, a pressure filter device, which works with folded cartridges. Under the action of pressure, the original liquid passes through the filter material, the filter slag is left on the pipe wall, and the filtrate flows out through the filter material. In order to achieve the purpose of filtration. Because of the different filter material, the filtration pore size is also different. Precision filtration is a kind of filtration between sand filtration (rough filtration) and ultra-filtration. The filtration pore size is generally in the range of 0.5 ~ 100 µm.

The same kind of filter cartridge, according to the size of the shape could be divided into different specifications. The filter material formed by folding process has a large flux and a maximum working temperature of 60 °C. Precision filtration can remove suspended matter, some colloidal matter and small particles from water.

## ! Attention Notes:

- A. Filter bag fixation needs to be installed in place, lock block rotation 45 degrees
- B. Working pressure can not exceed the rated range.
- C. Open the exhaust valve before the start, air drain after closing the exhaust valve.
- D. When the pressure difference exceeds the rated range, timely replacement of the filter material.

# COUPLINGS

The main design of I-DEAL winding clamp is applied to low pressure microfiltration, ultrafiltration, reverse osmosis, sewage treatment system and other pipe connections, using FRP material plasticity, bolt nut selection 304/316L material.

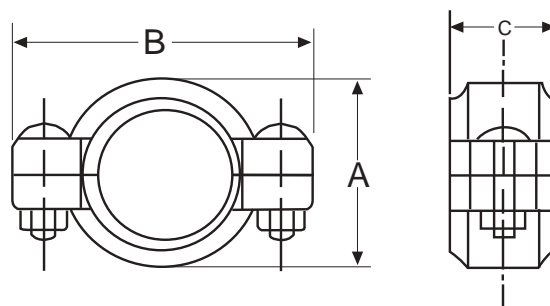
**Size specification:** 1 "to 4" (DN25 to DN100)

**Maximum working pressure:** 300 psi (21bar)

**Shell:** Made of FRP material.

**Rubber Sealing Rings:** The structure form of the sealing ring adopts the "C" type sealing structure, the material is EPDM.

**Bolt nuts:** The use of international Standard Model carriage bolts, bolt nut material for 304/316L stainless steel.



	Pipe diameter size	Maximum Size	A Boundary Dimension	B Boundary Dimension	C Boundary Dimension
DN25/1"	33.40 mm	300psi / 20.67bar	68.40 mm	98.00 mm	42.00 mm
DN40/1.5"	48.30 mm	300psi / 20.67bar	80.00 mm	115.20 mm	44.00 mm
DN50	57.00 mm	300psi / 20.67bar	96.40 mm	130.00 mm	44.00 mm
DN50/2"	60.30 mm	300psi / 20.67bar	96.40 mm	130.00 mm	44.00 mm
DN65	73.00 mm	300psi / 20.67bar	108.00 mm	146.20 mm	45.40 mm
DN65/2.5"	76.10 mm	300psi / 20.67bar	108.00 mm	146.20 mm	45.40 mm
DN80/3"	88.90 mm	300psi / 20.67bar	132.00 mm	172.40 mm	48.20 mm
DN100	108.00 mm	300psi / 20.67bar	158.00 mm	192.00 mm	52.00 mm
DN100/4"	114.30 mm	300psi / 20.67bar	158.00 mm	192.00 mm	52.00 mm

### 1. Higher compressive strength

Due to the use of no damage (no cutting process), so that the entire joint pipe wall thickness is consistent, There is no weak point, which improves the compressive performance of the whole joint.

### 2. Better sealing

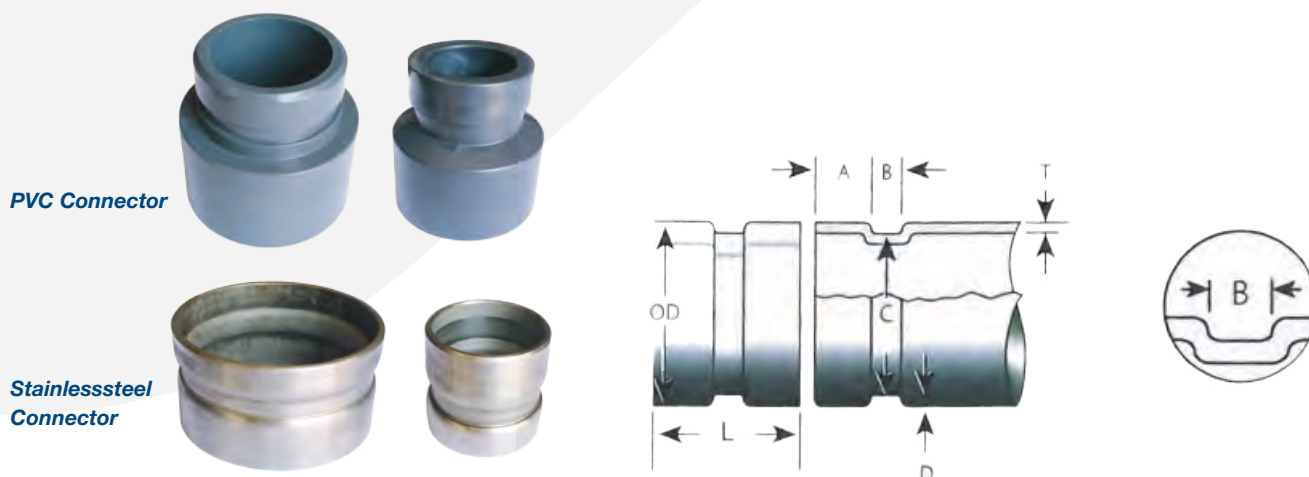
The non-Damage joint outer circle adopts the mindless grinding process, the surface is smooth, can combine perfectly with the rubber seal ring, greatly improves the sealing performance of the whole structure.

### 3. Beautiful appearance

No damage groove joints All production processes are uniform standards, more aesthetic.

4. **Length, pipe wall thickness** can be customized according to different needs.

5. **Materials** can be selected according to different user needs stainless steel (304, 316L, bidirectional stainless steel), carbon steel, copper and other metals.



	Pipe Outside Diameter			Gasket Seat Ring	Groove Width	Groove Diameter		D	L
	Basic Size	Max	Min	$\pm 0.76$ $\pm 0.03$	$\pm 0.76$ $\pm 0.03$	Max	Min	Groove Depth <i>reference value</i>	Length <i>reference value</i>
DN40	48.3 mm	48.7 mm	47.8 mm	15.5 mm	7.3 mm	45.1 mm	44.4 mm	1.8 mm	45 mm
DN50/1"	27 mm	57.3 mm	56.6 mm	15.5 mm	7.3 mm	53.1 mm	52.5 mm	2 mm	45 mm
DN50/2"	60.3 mm	60.9 mm	59.7 mm	15.5 mm	7.3 mm	57.2 mm	56.8 mm	2 mm	45 mm
DN65/1"	73 mm	73.8 mm	72.3 mm	15.5 mm	7.3 mm	69.1 mm	68.6 mm	2 mm	48 mm
DN65/2"	76.1 mm	77 mm	75.4 mm	15.5 mm	7.3 mm	72.3 mm	71.8 mm	2 mm	48 mm
DN80	88.9 mm	89.8 mm	88.1 mm	15.5 mm	7.6 mm	84.9 mm	84.5 mm	2.3 mm	50 mm
DN100/1"	108 mm	109 mm	107.2 mm	16 mm	7.6 mm	103.7 mm	103.2 mm	2.3 mm	55 mm
DN100/2"	114.3 mm	115.4 mm	113.5 mm	16 mm	7.6 mm	110.1 mm	109.6 mm	2.3 mm	55 mm



**Edmund Tan**  
Business Development Manager  
MSc in Construction Project Management

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