

# SAND MEDIA

## DUAL FILTERS



### Advantages

- ✓ Sand filtration unit **compact and autonomous**
- ✓ **Easy to transport**
- ✓ **Completely automatable**
- ✓ **High filtering surface area**
- ✓ **Robust** and durable construction.

### Principle of operation

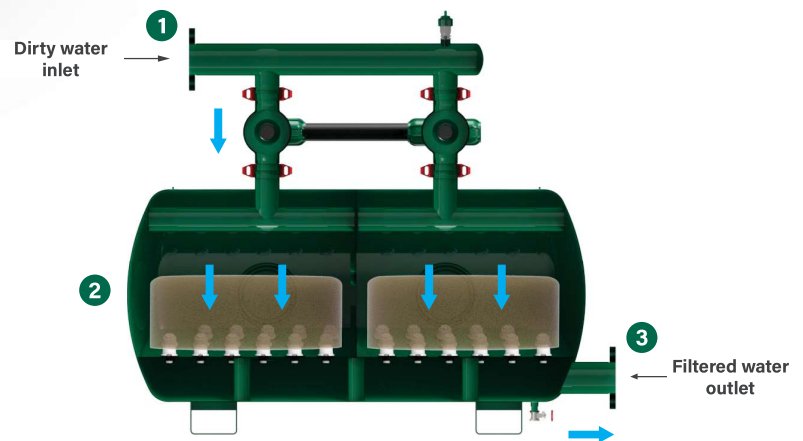
#### Filtration stage

1. Dirty water enters through the inlet manifold
2. As it passes through the sand bed, the impurities are trapped
3. The filtered water exits through the outlet manifold

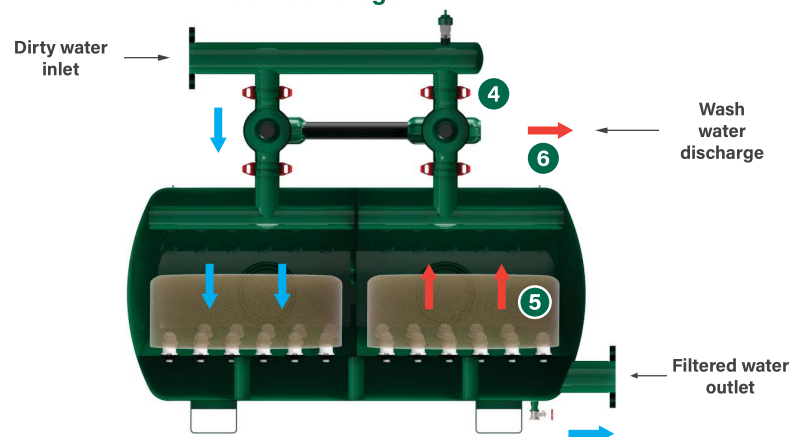
#### Backwash stage

4. One of the 3-way valves switches to the wash stage, (on command by the Control Unit)
5. The water flows in the opposite direction, in the relative chamber, removing the collected impurities (backwashing).
6. The impurities are discharged with the wash water through the discharge manifold.

### Filtration stage



### Backwash stage



# SAND MEDIA

## DUAL FILTERS

### PRODUCT RANGE: Dual chamber and Four chamber



#### ER - Dual chamber - plate drainage

- Drainage consisting of a PLATE and "mushroom" diffusers
- Models from 2" to DN125
- "Standard" lateral water outlet
- Robustness and transportability



#### EM - Dual Chamber Maxi Flow

- Drainage consisting of "maxi flow" diffusers
- Models from 2" to DN125
- Central water outlet - allows for more compact installations
- Lightweight design - increased filter bed height



#### EQ3V Four chamber

- Drainage consisting of a PLATE and "mushroom" diffusers
- Special DN150 model
- Handles high flow rates (up to 160 m<sup>3</sup>/h) in a single compact body
- Robustness and transportability

**ER**

**SAND MEDIA**  
DUAL FILTERS

**Description**

Dual chamber sand media filter with "plate" and "mushroom" diffuser drainage. It combines the functions of 2-element battery in a compact and transportable body. Ideal for treating difficult waters (high turbidity, presence of algae and other organic residues) in medium-sized systems.



**Flow rate**  
10 - 100 m<sup>3</sup>/h



**Filtering Surface**  
3490 - 15000 cm<sup>2</sup>



**Diameters**  
1"1/2 - 5" (DN125)



**Advantages**

- ✓ **"Plate" drainage system** with very high efficiency in both the filtration and wash stages
- ✓ **Sturdy construction** with high gauge metal.
- ✓ **High surface area filtration** in a compact and transportable body
- ✓ **Large inspection and load hatches**, for easier maintenance and use

**Construction materials**

<b>FILTER BODY</b>	Structural steel
<b>MANIFOLDS</b>	Structural steel
<b>COATING</b>	Polyester powder coating (min. thickness 160 micron)
<b>DIFFUSERS</b>	Polypropylene
<b>FILTERING ELEMENT</b>	Sand (recommended grain size: 0.8 - 1.2 mm)
<b>GASKETS</b>	EPDM
<b>ACCESSORIES</b>	Polypropylene

**Conditions of use**

<b>PH RANGE</b>	4<pH<11
<b>MAX TEMPERATURE</b>	60 °C / 140 °F
<b>MAX PRESSURE</b>	8 bar at 20°C
<b>MIN PRESSURE</b>	2.5 bar (backwash stage)

**ER**


**SAND MEDIA**  
DUAL FILTERS

Selecting the correct model

General Specifications	BODY DIAMETER	400 mm	500 mm	600 mm	750 mm	850 mm
	CONNECTIONS	1"1/2	2"	3"	4"	5"
	CONNECTION TYPE	Threaded Female		Threaded Female - Flanged		Flanged
	QUANTITY OF SAND	60 kg	120 kg	200 kg	450 kg	600 kg
	FILTERING SURFACE	3490 cm <sup>2</sup>	4910 cm <sup>2</sup>	6630 cm <sup>2</sup>	11040 cm <sup>2</sup>	15050 cm <sup>2</sup>
	MAXIMUM FLOW RATE	11 m <sup>3</sup> /h	30 m <sup>3</sup> /h	60 m <sup>3</sup> /h	80 m <sup>3</sup> /h	110 m <sup>3</sup> /h
	FILTERING CAPACITY	VERY HIGH				
Backwash Data	MINIMUM FLOW RATE	7 m <sup>3</sup> /h	10 m <sup>3</sup> /h	14 m <sup>3</sup> /h	22 m <sup>3</sup> /h	30 m <sup>3</sup> /h
	MINIMUM PRESSURE	2.5 bar				
	MIN TIME BACKWASH	60 - 120 sec.				
	BACKWASH CRITERIA	ΔP max 0.5 bar - washing cycles according to water quality				
Applications	AGRICULTURE	Primary filtration of "Difficult" water - medium-large systems				
	LANDSCAPE					


Compatible automation kits  
(to be ordered separately)

**KTB**




Ref.	Description
IFKTBS02IM	2 outlets - 12VDC latch

**KFA**




Ref.	Description
IFKFAU02IO	2 outlets - 24VAC

**KPB**






Ref.	Description
IFKPB02IM	2 outlets - 12VDC latch

**KFB**



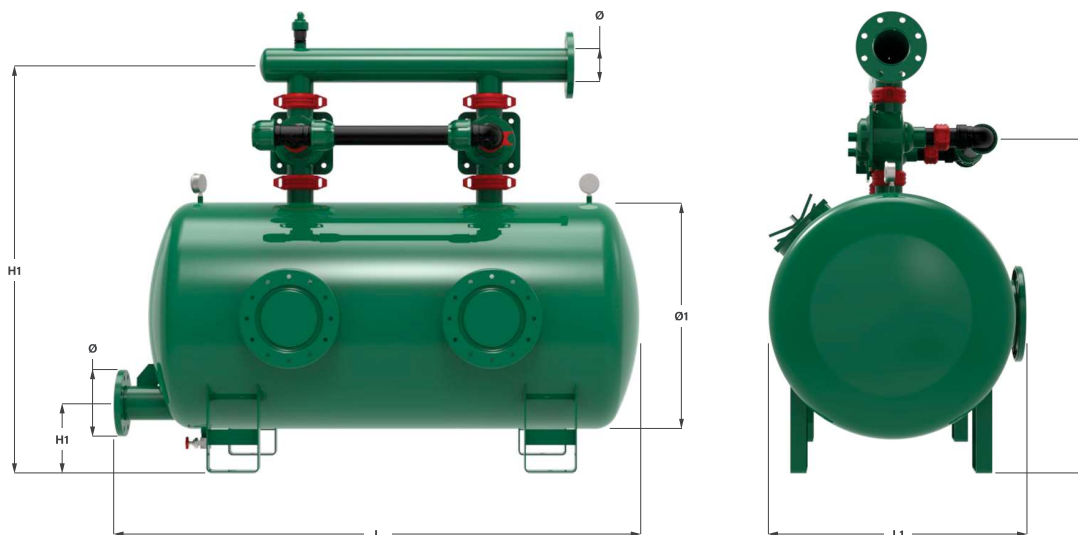
Ref.	Description
IFKFB02IO	2 outlets - 12VDC latch

DUAL CHAMBER FILTER: CONTROL VALVE OPTIONS

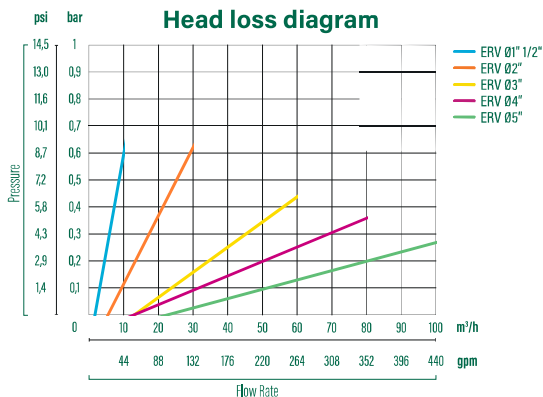
FILTER BODY AND MANIFOLD	BALL VALVE KIT (MANUAL)	3-WAY VALVE KIT (AUTOMATABLE)
 IFERV15H		
OFER3V20H	OFKMRV0GI	IFKMV02G
OFER3V30H		
OFER3V30F		
OFER3V40H	OFKMRV0LM	IFKMV02I
OFER3V40F		
OFER3V50F		

**ER**

**SAND MEDIA  
DUAL FILTERS**



Ø body (mm)	Connections		Code	Number of Nozzles	Filtration Surface (cm <sup>2</sup> )	Flow rate (m <sup>3</sup> /h)	L (mm)	H (mm)	H1 (mm)	H2 (mm)	Weight (kg)
400	1 1/2"	threaded female	IFERV15H	16	3490	5÷11	900	470	190	910	68
500	2"	threaded female	IFER3V20H	38	4910	10÷30	1160	570	190	1020	100
600	3"	threaded female	IFER3V30H	46	6630	30÷60	1350	670	245	1220	150
600		flanged	IFER3V30F			30÷60	1330				140
750	4"	threaded female	IFER3V40H	68	11040	40÷80	1730	820	245	1430	260
750		flanged	IFER3V40F				1700				270
850	5"	flanged	IFER3V50F	86	15050	70÷110	2050	920	280	1550	350



**Recommended flow rate (m<sup>3</sup>/h) according to water quality**

Model	Model	Flow rate Maximum	Medium Quality	Poor Quality	Very poor Quality
ER	2"	30	25	20	15
	3"	60	40	25	20
	4"	80	60	45	35
	DN125	110	90	70	45



**EM**

**SAND MEDIA**  
DUAL FILTERS

**Description**

Dual chamber sand media filter with manifold and "maxi-flow" diffuser drainage. It combines the functions of a 2-element battery in a compact and transportable body. The unique central outlet design is ideal for compact installations and mounting on a trolley.



**Flow rate**  
10 - 100 m<sup>3</sup>/h



**Filtering Surface**  
4900 - 15000 cm<sup>2</sup>



**Diameters**  
2" - 5" (DN125)

**Advantages**

- ✓ "Maxi-Flow" drainage system
- ✓ Greater volume of sand compared to other models on the market
- ✓ High surface area filtration in a compact and transportable body
- ✓ Large, easy to open, oval inspection and load hatches



**Construction materials**

FILTER BODY	Structural steel
MANIFOLDS	Structural steel
COATING	Polyester powder coating (min. thickness 160 micron)
DIFFUSERS	Polypropylene
FILTERING ELEMENT	Sand (recommended grain size: 0.8 - 1.2 mm)
GASKETS	EPDM
ACCESSORIES	Polypropylene



**Conditions of use**

PH RANGE	4<pH<11
MAX TEMPERATURE	60 °C / 140 °F
MAX PRESSURE	8 bar at 20°C
MIN PRESSURE	2.5 bar (backwash stage)

**EM**


**SAND MEDIA**  
DUAL FILTERS

Selecting the correct model

General Specifications	BODY DIAMETER	500 mm	600 mm	750 mm	850 mm
	CONNECTIONS	2"	3"	4"	5"
	CONNECTION TYPE	Threaded Female		Flanged	
	QUANTITY OF SAND	150 kg	250 kg	500 kg	700 kg
	FILTERING SURFACE	4910 cm <sup>2</sup>	6630 cm <sup>2</sup>	11040 cm <sup>2</sup>	15050 cm <sup>2</sup>
	MAXIMUM FLOW RATE	30 m <sup>3</sup> /h	60 m <sup>3</sup> /h	80 m <sup>3</sup> /h	110 m <sup>3</sup> /h
	FILTERING CAPACITY	VERY HIGH			
Backwash Data	MINIMUM FLOW RATE	10 m <sup>3</sup> /h	14 m <sup>3</sup> /h	22 m <sup>3</sup> /h	30 m <sup>3</sup> /h
	MINIMUM PRESSURE	2.5 bar			
	MIN TIME BACKWASH	60 - 120 sec.			
	BACKWASH CRITERIA	ΔP max 0.5 bar - washing cycles according to water quality			
Applications	 AGRICULTURE	Primary filtration of "Difficult" water			
	 LANDSCAPE				


Compatible automation kits  
(to be ordered separately)

**KTB**




Ref.	Description
IFKTBS02IM	2 outlets - 12VDC latch

**KFA**




Ref.	Description
IFKFAU02IO	2 outlets - 24VAC

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Ref.	Description
IFKPBS02IM	2 outlets - 12VDC latch

**KFB**



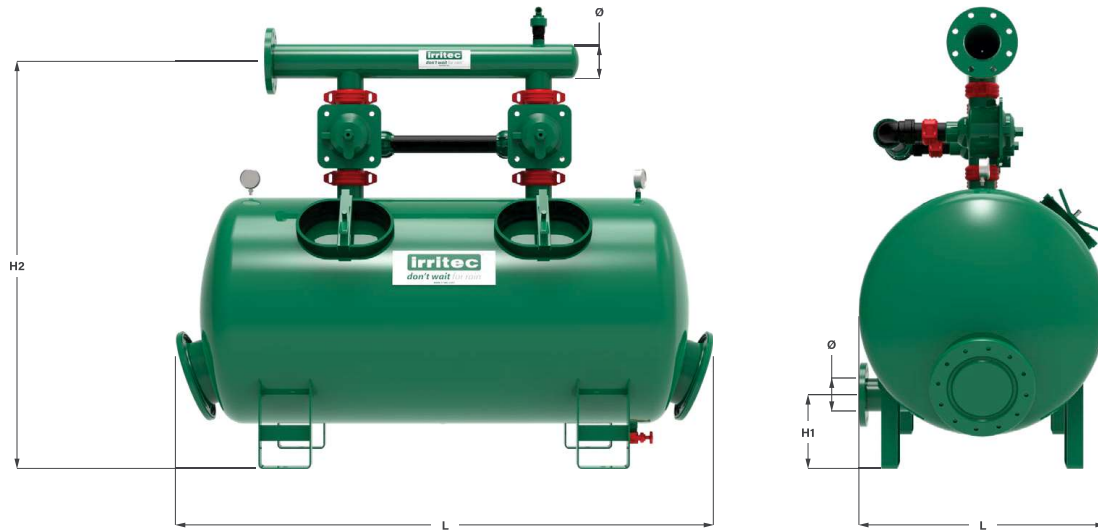
Ref.	Description
IFKFB02IO	2 outlets - 12VDC latch

DUAL CHAMBER FILTER: CONTROL VALVE OPTIONS

FILTER BODY AND MANIFOLD	BALL VALVE KIT (MANUAL)	3-WAY VALVE KIT (AUTOMATABLE)
		
IFERV15H	-	-
OFEM3V20H	OFKMRV0GI	IFKMV02G
OFEM3V30H		
OFEM3V40F	OFKMRV0LM	IFKMV02I
OFEM3V50F		

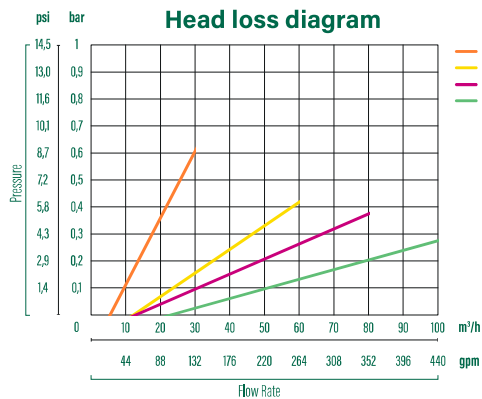
**EM**

**SAND MEDIA**  
DUAL FILTERS



Ø body (mm)	Connections		Code	Number Nozzles	Nozzle Length (mm)	Flow rate (m³/h)	L (mm)	L1 (mm)	H1 (mm)	H2 (mm)	Weight (kg)
500	2"	threaded female	OFEM3V20H	6	383	10÷30	1250	550	190	1020	100
600	3"	threaded female	OFEM3V30H	12	420	30÷60	1450	650	245	1220	150
750	4"	flanged	OFEM3V40F	14	602	40÷80	1850	800	245	1430	270
850	5"	flanged	OFEM3V50F	18	712	70÷110	2150	900	280	1550	350

Diffuser nozzle



Recommended flow rate (m³/h) according to water quality

Model	Model	Flow rate Maximum	Medium Quality	Poor Quality	Very poor Quality
EM	2"	30	25	20	15
	3"	60	40	25	20
	4"	80	60	45	35
	5"	110	90	70	45



**EQ3V**

**SAND MEDIA**  
 DUAL FILTERS

**Description**

Four chamber sand media filter with plate and "mushroom" diffuser drainage. It combines the functions of a 4-element sand media filter battery in a compact and transportable body. Complete with 3-way valves and ready to be automated.



**Flow rate**  
 80 - 160 m<sup>3</sup>/h



**Filtration Surface**  
 22700 cm<sup>2</sup>



**Diameters**  
 6" (DN150)



**Advantages**

- ✓ Unique **four chamber** DN150 model
- ✓ Handles high capacities while maintaining a **compact and transportable structure**.
- ✓ Large, easy to open, **oval inspection and load hatches**

**Construction materials**

<b>FILTER BODY</b>	Structural steel
<b>MANIFOLDS</b>	Structural steel
<b>COATING</b>	Polyester powder coating (min. thickness 160 micron)
<b>DIFFUSERS</b>	Polypropylene
<b>FILTERING ELEMENT</b>	Sand (recommended grain size: 0.8 - 1.2 mm)
<b>GASKETS</b>	EPDM
<b>ACCESSORIES</b>	Polypropylene



**Conditions of use**

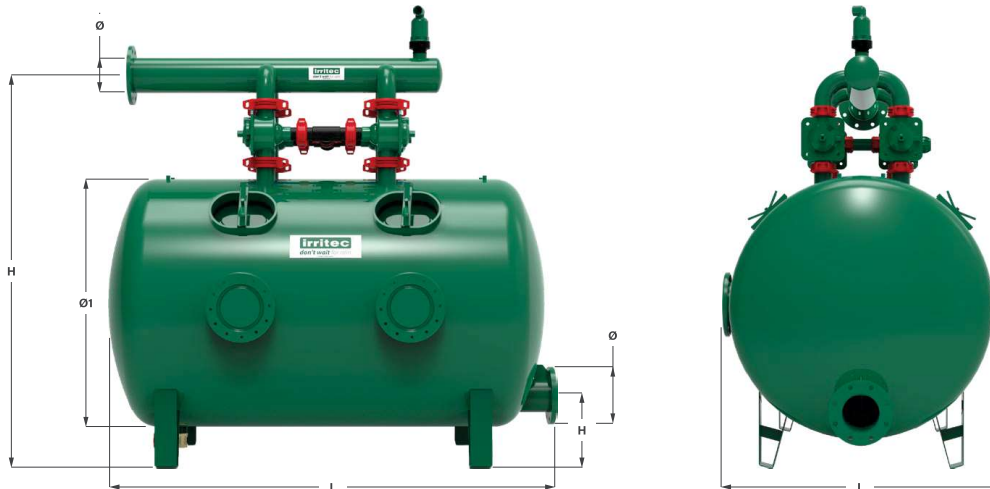
<b>PH RANGE</b>	4<pH<11
<b>MAX TEMPERATURE</b>	60 °C / 140 °F
<b>MAX PRESSURE</b>	6 bar at 20°C
<b>MIN PRESSURE</b>	2.5 bar (backwash stage)

**EQ3V**

**SAND MEDIA**  
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Selecting the correct model

General Specifications	BODY DIAMETER	1200 mm
	CONNECTIONS	6"
	CONNECTION TYPE	Flanged
	QUANTITY OF SAND	1600 kg
	FILTERING SURFACE	22700 cm <sup>2</sup>
	MAXIMUM FLOW RATE	160 m <sup>3</sup> /h
FILTERING CAPACITY	VERY HIGH	
Backwash Data	MINIMUM FLOW RATE	35 m <sup>3</sup> /h
	MINIMUM PRESSURE	2.5 bar
	MIN TIME BACKWASH	60 - 120 sec.
	BACKWASH CRITERIA	ΔP max 0.5 bar - washing cycles according to water quality
Applications	 AGRICULTURE	Primary filtration of "difficult" water - medium-large systems
	 LANDSCAPE	



Ø body (mm)	Connections		Code	Number of Nozzles	Flow rate (m <sup>3</sup> /h)	L (mm)	L1 (mm)	H1 (mm)	H2 (mm)	Weight (kg)
1200	6"	flanged	IFEQ3V60F	192	80-160	2200	1350	300	1850	860

