ODIS

IRRIGATION EQUIPMENT LTD.

SCREEN WATER FILTERS

SERIES 1000

APPLICATIONS

- Mainly used as Control Filter in agriculture
- Adapted for filtering small quantities of impurities
- For domestic use, construction sites and industry

CERTIFIED QMS SI ISO 9001: 2000

THE STANDARDS INSTITUTION OF ISRAEL

ODIS Filtration is The Heart of Every Irrigation System

DESCRIPTION

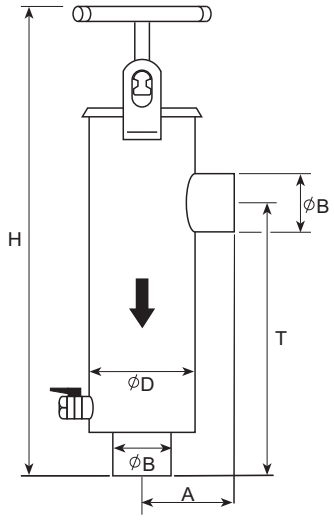
A water screen filter with two stainless steel screens for added safety.
The filter has a horizontal inlet and a vertical outlet.
Available in the following sizes: 1½", 2" short, 2" long, 3".
Each filter is equipped with a drain valve located at the bottom of the filter, and with two Pressure Testing Ports, in order to check head loss between inlet and outlet of the filter without interfering with the water flow.
Filters contain two filter screens or one (see Technical Data).
Available with three end connections: Thread (M), Flange (F), Victaulic (V).
The filter has a 120 micron protective coating of extra-durable polyester, applied electrostatically and oven-cured on a zinc-phosphate layer for maximal anti-corrosion protection.

Dimensions & Weight Metric Units

Model	B		D	A	H	T	Weight
	mm	inch	inch	mm	mm	mm	kg
1115M	40	1½"	4"	97	420	233	6
1220M	50	2"	6"	134	480	170	13
1320M	50	2"	6"	135	730	265	16
1430M	80	3"	6"	139	745	278	17

Dimensions & Weight U.S. Units

Model	B	D	A	H	T	Weight
	inch	inch	inch	inch	inch	lbs
1115M	1½"	4"	3.82	16.5	9.2	13
1220M	2"	6"	5.3	18.9	6.7	29
1320M	2"	6"	5.3	28.8	10.5	35
1430M	3"	6"	5.3	29.3	10.95	37



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Recommended Flow Rates

Metric Units

Model	Inlet / Outlet Diameter		Recommended Flow Rate
	inch	mm	m^3/h
1115	1 1/2"	40	up to 15
1220	2"	50	up to 23
1320	2"	50	up to 30
1430	3"	80	up to 38

U.S. Units

Model	Inlet / Outlet Diameter	Recommended Flow Rate
	inch	U.S. gpm
1115	1 1/2"	up to 65
1220	2"	up to 100
1320	2"	up to 130
1430	3"	up to 170

Technical Data

- Filter screen: stainless-steel.
- Single filter screen: Model 1115 (1 1/2").
- Double filter screen: Models 1220 (2"), 1320 (2"), 1430 (3").
- Max. recommended working pressure: 8 bar (120 psi).
- Max. pressure: 10 bar (150 psi).
- Horizontal inlet/vertical outlet.

Protective Coating

120 micron extra-durable polyester, applied electrostatically and oven-cured on a zinc-phosphate layer for maximal anti-corrosion protection.

Pressure Relief Valve

A pressure relief valve must be inserted before the filtering installation if pressure is not controlled effectively.

End Connections

Thread (M)
Flange (F)
Victaulic (V)

- Each filter is designed and manufactured in order to achieve the highest standard of quality and finish.

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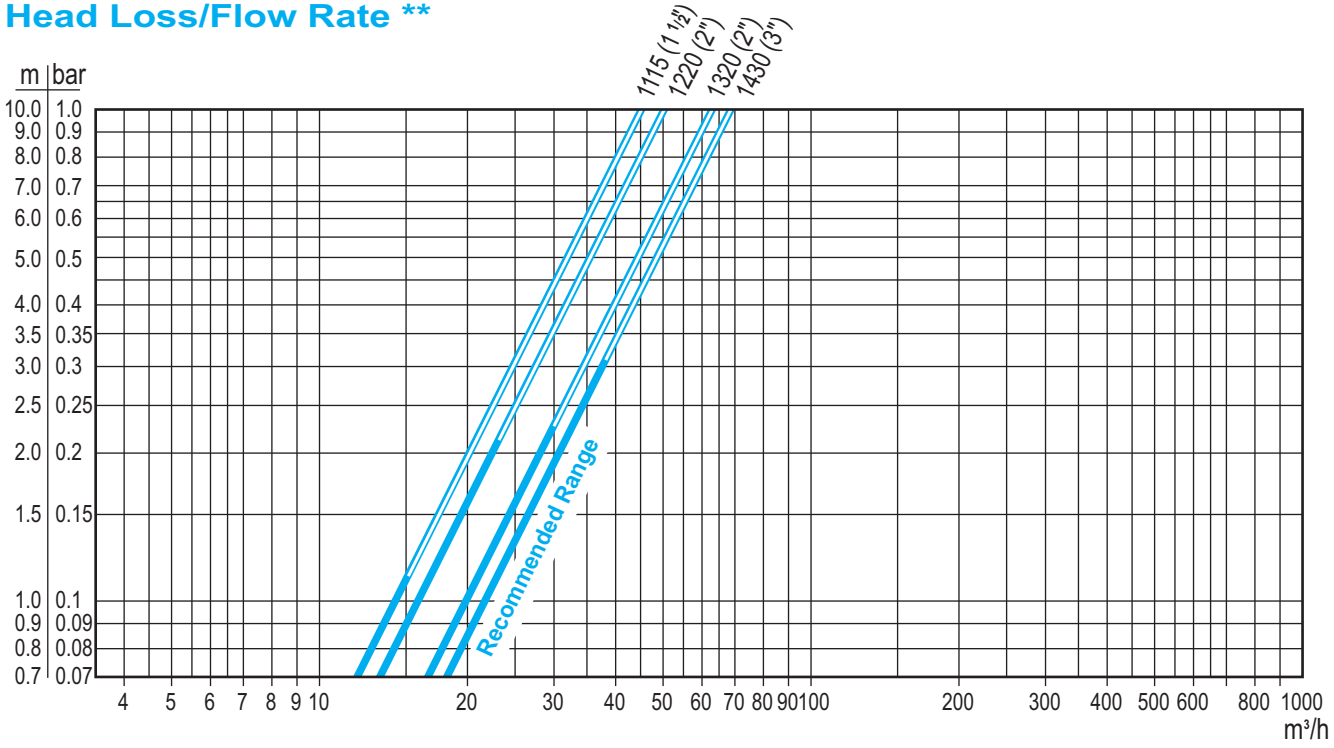
HEAD LOSS/FLOW RATE

Metric Units

Head Loss **

Model	Flow Rate Q (m³/h)										
	10	15	20	25	30	35	40	45	50	60	70
	Head Loss dP (bar)										
1115 (1½")	0.05	0.11	0.20	0.31	0.44	0.60	0.79	1.00	1.23		
1220 (2")	0.04	0.09	0.16	0.25	0.36	0.49	0.64	0.81	1.00	1.44	
1320 (2")		0.06	0.10	0.16	0.23	0.32	0.42	0.53	0.65	0.94	1.27
1430 (3")		0.05	0.09	0.14	0.20	0.27	0.36	0.45	0.56	0.80	1.09

Head Loss/Flow Rate **



** For a clean filter and 120 mesh screen.

■ 1 bar=100 kPa=1.02 kg/cm^2=10.2 m (W.C)=14.5 psi

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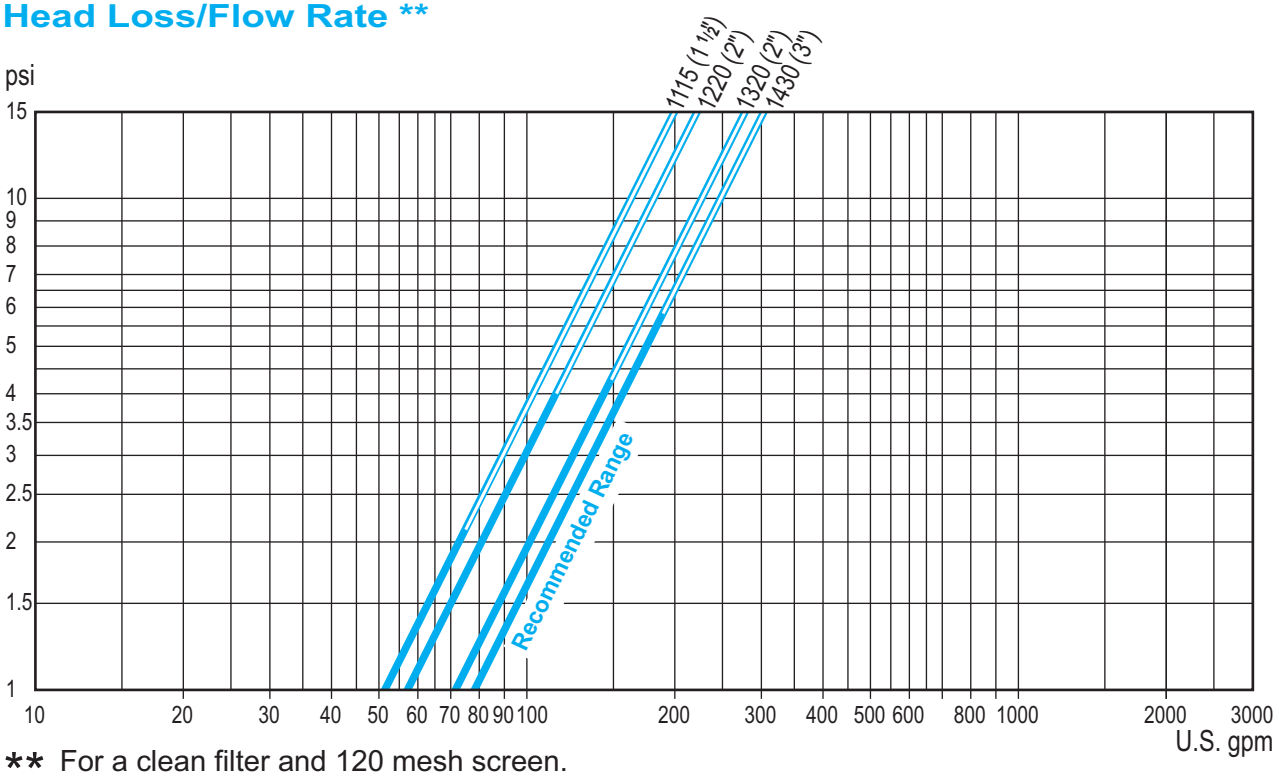
HEAD LOSS/FLOW RATE

U.S. Units

Head Loss **

Model	Flow Rate Q (U.S. gpm)											
	50	75	100	125	150	175	200	225	250	275	300	325
	Head Loss dP (psi)											
1115 (1½")	0.9	2.1	3.7	5.8	8.3	11.3	14.8	18.7				
1220 (2")	0.7	1.7	3.0	4.7	6.7	9.2	12.0	15.1	18.7			
1320 (2")	0.5	1.1	1.9	3.0	4.4	6.0	7.8	9.9	12.2	14.7	17.5	
1430 (3")		0.9	1.7	2.6	3.7	5.1	6.7	8.4	10.4	12.6	15.0	17.6

Head Loss/Flow Rate **



** For a clean filter and 120 mesh screen.

■ 1 psi=0.069 bar=6.9 kPa=0.07 kg/cm^2=0.7 m (W.C)

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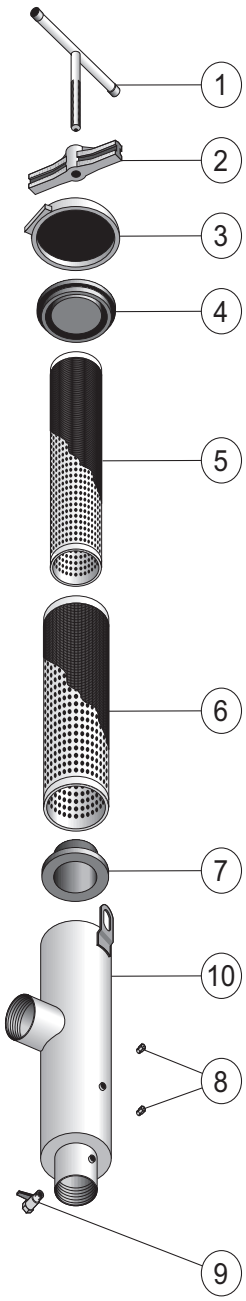
ILLUSTRATED PARTS BREAKDOWN

Catalog Numbers

Part No.	Description	Model			
		1115 (1 1/2")	1220 (2")	1320 (2")	1430 (3")
1	Handle	E 000 101	E 000 100	E 000 100	E 000 100
2	Tightening Bracket	E 000 214	E 000 216	E 000 216	E 000 216
3	Cover	E 000 240	E 000 260	E 000 260	E 000 260
4	Neoprene Cover Gasket	E 001 340	E 001 360	E 001 360	E 001 361
5	Inner * Filter Screen	-	E 000 401	E 000 402	E 000 404
6	Outer * Filter Screen	E 000 401	E 000 411	E 000 412	E 000 412
7	Neoprene Inner Gasket	E 001 345	E 001 365	E 001 365	E 001 366
8	Pressure Testing Port	E 000 800	E 000 800	E 000 800	E 000 800
9	Drain Valve	PM1050120	PM1075020	PM1075020	PM1075020
10	Filter Body	A1115	A1220	A1320	A1430



*** When ordering, please specify screen mesh.**

- Model 1115 contains one filter screen only.
- Aimed at continued improvement, ODIS reserves the right to change specifications without prior notice.

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GENERAL INSTRUCTIONS

Operation

- Normal working conditions are obtained when headloss is less than 0.25 bar (4 psi) with clean filter screen.
- If headloss exceeds 0.25 bar (4 psi) - filter is either partially clogged or operating under an excessive flow rate.
- Maximal operational pressure should not exceed 8 bar (120 psi).
- Filter is designed to withstand a maximum pressure of 10 bar (150 psi).
- Verify headloss by inserting pressure gauge with needle into pressure testing ports, (8) assembled at inlet and outlet of filter.
- If head-loss is 0.7 bar (10 psi), open the drain valve (9) for 10 seconds. Check the head-loss again. If it remains 0.5 bar (7 psi), the screens should be removed for cleaning.

Installation

- Install filter vertically.
- Water inlet and outlet are clearly marked by arrow.
- Drain valve (9) should be at the bottom of the filter.
- If more than one filter is installed, leave sufficient space between units to facilitate maintenance.
- All filters are supplied with instructions for correct assembly, installation, operation and maintenance.
- Specially designed ODIS manifolds (series 9000), are available for mounting multiple filter arrays (see chapter 1).
- A pressure relief valve must be inserted before the filtering installation if pressure is not controlled effectively.

Manual Flushing

- Manual flushing is performed by simply opening drain valve (9) located at filter bottom.
- Check time required to reach a headloss of 0.4 bar (6 psi).
- Open drain valve (9) and flush filter for 10-30 seconds.
- Check pressure reading again: headloss should be 0.25 bar (4psi) or less.

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Periodic Cleaning

- Recommended cleaning of filter and checking of screens: every two weeks or when headloss reaches 1.0 bar (15 psi), and on completion of irrigation.
- Close valve at the inlet of the filter.
- Open drain valve (9), to release pressure within filter and drain.
- Open handle (1), release tightening bracket (2) and remove filter's cover (3), wait until water stops running from drain valve (9).
- Gently remove filter screens (5,6).
- Rinse filter screens (5,6) thoroughly with clean water, using a brush to remove particles from screen (do not use a wire brush).
- Keep water level below collar of gasket to prevent contaminated water from entering the network.
  After cleaning, assemble filter as follows:
- Verify that filter screens are intact and undamaged.
- Verify that inner gasket (7) is in position with the cutout next to the drain valve (9).
- Replace filter screens (5,6) carefully into the filter housing.
- Ensure tops of both filter screens are leveled with top of filter housing.
  Place cover (3) on filter housing, so that cover gasket (4) fits over filter screens and centers them.
- Mount tightening bracket (2) and handle (1), fasten and secure it properly.

WARNING:

- **Do not tighten or open cover during operation or under pressure.**

NOTE:
In the event that a bristle brush does not remove particles from screen, immerse filter screens in acid/alkaline solution.
Keep it there for some time then rinse thoroughly.

Maintenance

- Each filter is supplied with maintenance instructions, as well as assembly, installation and operation instructions.
- Apply a layer of grease to thread of handle (1) once a year.
- Any damage to the protective coating of filter must be repaired without delay. Prior to the application of the protective paint, thoroughly clean the damaged spot with wire brush.

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Stainless Steel Filter Screen

Filtering Grades

Mesh Grade	mm	micron	Effective Filtering Area (%)
40	0.435	435	47
60	0.225	225	31
80	0.178	178	31
100	0.139	139	30
120	0.122	122	33
140*	0.112	112	37
160*	0.094	94	35
200*	0.072	72	32

NOTES:
- Filters models 1220, 1320, 1430 are supplied with one or two screens.
- Filter model 1115 is supplied with one screen only.

* Mesh grades 140, 160, 200 on special request.

How To Order Odis Filters

1. Type of filter required.
2. Catalog Number of filter.
3. Preferred mesh grade.
4. No. of screens for models 1220 (2"), 1320 (2"), 1430 (3").
5. End connections: Thread (M)
   Flange (F)
   Victaulic (V)
6. Min. /max. pressure.
7. Maximal Flow rate.
8. Additional accessories: Nipples/Valves/Pilots/Relays/Manifolds/Pressure Gauges.
9. Filter arrays: see chapter 1.
10. Other than standard material, required for filter body and cover.
11. Special Coating Requirements.

Filter Catalog Numbers

Model	Thread (M)	Flange (F)	Victaulic (V)
1115 (1 1/2")	1115 M - Female		1115 V
1220 (2")	1220 M - Female		1220 V
1320 (2")	1320 M - Female		1320 V
1430 (3")	1430 M - Female	1430 F	1430 V

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PACKING / SHIPPING DATA

Metric Units

Model	Inlet / Outlet (inch)	Weight (kg)	Filter per carton	Length (m)	Width (m)	Height (m)	Gross Volume (m^3)
1115	1½"	6.0	1	0.42	0.16	0.17	0.011
1220	2"	13.0	1	0.48	0.24	0.24	0.028
1320	2"	16.0	1	0.75	0.25	0.25	0.047
1430	3"	17.0	1	0.75	0.25	0.25	0.047

U.S. Units

Model	Inlet / Outlet (inch)	Weight (lbs)	Filter per carton	Length (inch)	Width (inch)	Height (inch)	Gross Volume (cu.ft)
1115	1½"	13	1	17	6	7	0.39
1220	2"	29	1	19	10	10	1.00
1320	2"	35	1	30	10	10	1.66
1430	3"	37	1	30	10	10	1.66

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