

ODIS

IRRIGATION EQUIPMENT LTD.

AUTOMATIC CIRCULATING FILTERS

SERIES

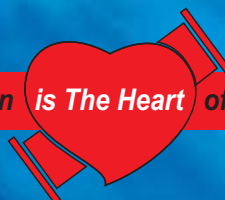
3000

APPLICATIONS

- Self Cleaning Filter for filtering sand and organic matter
- Used as secondary filters after gravel/sand filters for improved filtration
- Can replace hydrocyclones for water containing small quantities of sand



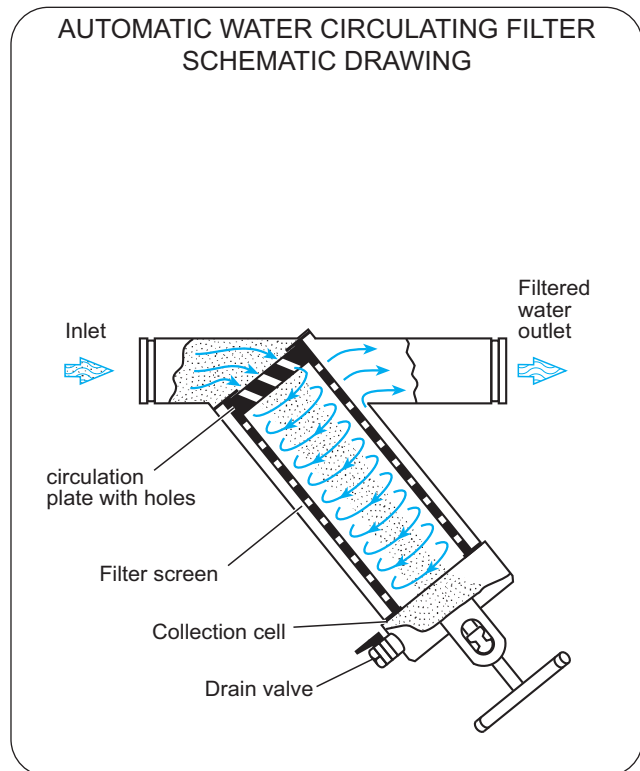
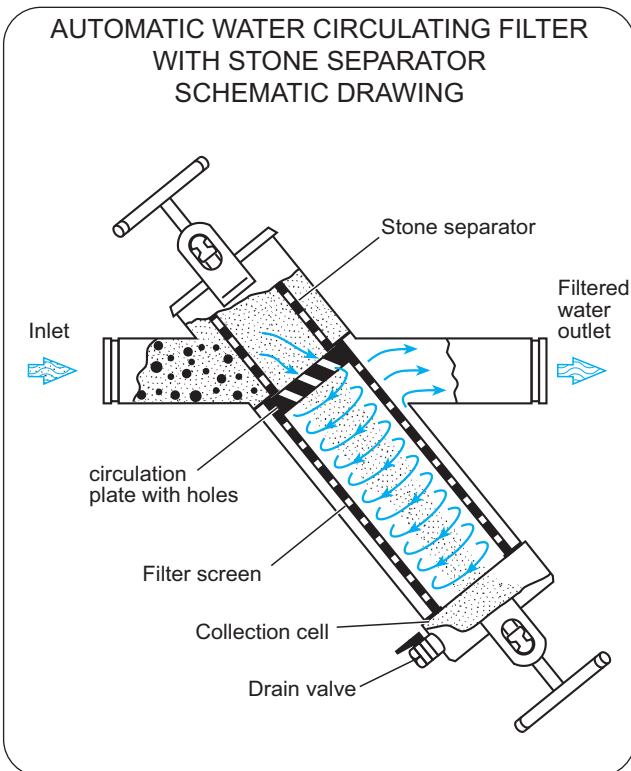
ODIS Filtration *is The Heart* of Every Irrigation System



DESCRIPTION

An automatic water screen filter that uses a method of filtering water by circulation. It maintains a flow of filtered water without increased loss of pressure. The filter is designed to automatically remove residue from the screen during the entire filtration process. This is accomplished by a specially designed circulation plate with holes (installed at the top of the screen) which passes incoming water through directional holes into the filter in a descending circular pattern. This continuous downward spiral flushes the screen and forces the debris to the collection cell, which can be drained during the filtering process either automatically, manually, or continuously by a bleeder.

The filter provides effective filtration and trouble-free operation because the filter may be adjusted according to the system's actual flow-rate. Depending on the flow-rate, an appropriate number of directional holes must be blocked with rubber stoppers.



Available in the following inlet sizes: 1½", 2", 3", 4", 6".

Sizes: 1½", 2", 3", are offered in two options:

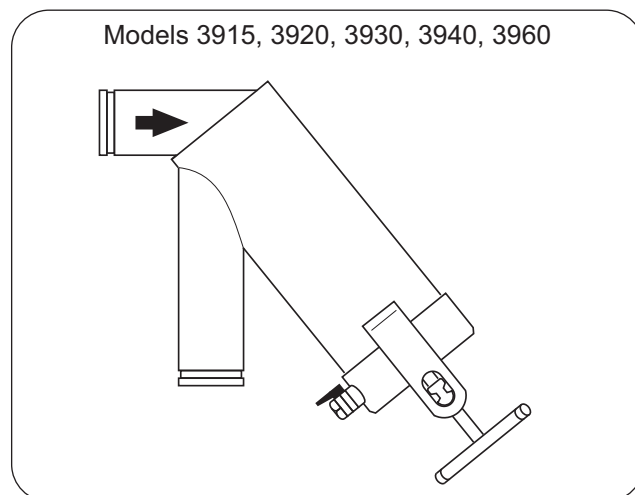
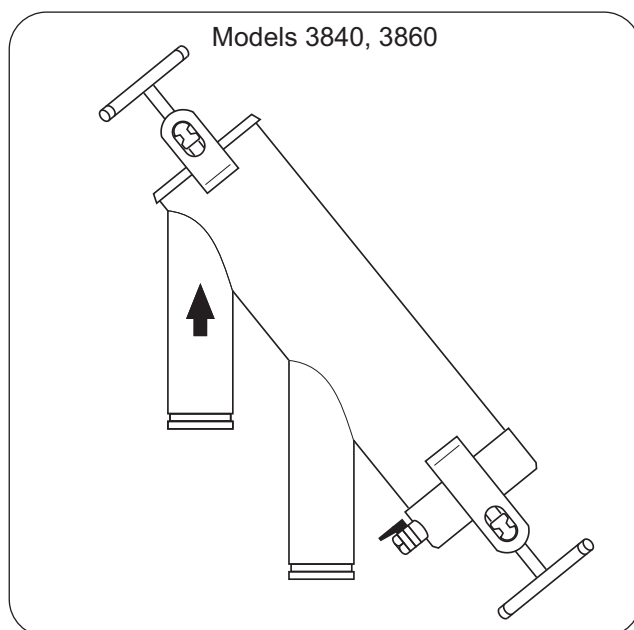
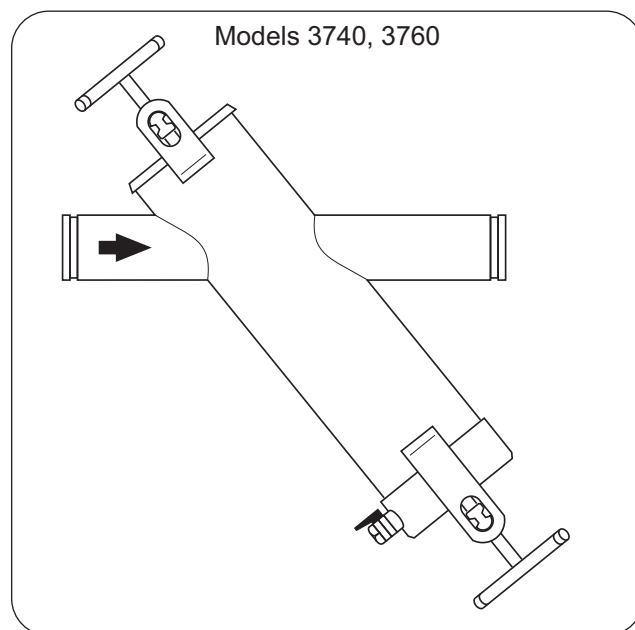
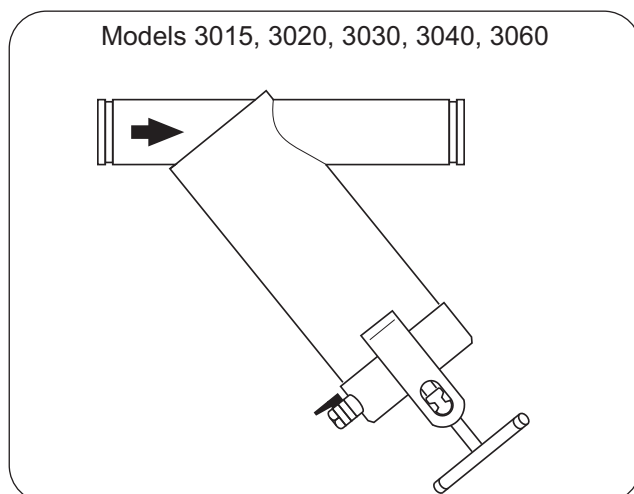
- A. Horizontal inlet and outlet, Models: 3015 (1½"), 3020 (2"), 3030 (3").
- B. Horizontal inlet, vertical outlet Models: 3915 (1½"), 3920 (2"), 3930 (3").

Sizes: 4", 6", are offered in four options:

- A. Horizontal inlet and outlet, Models: 3040 (4"), 3060 (6").
- B. Horizontal inlet and outlet with stone separator, Models: 3740 (4"), 3760 (6").
- C. Horizontal inlet, vertical outlet, Models: 3940 (4"), 3960 (6").
- D. Parallel vertical inlet/outlet with stone separator, Models: 3840 (4"), 3860 (6").

Available with three end connections: Thread (M), Flange (F), Victaulic (V).

The filter has a 100 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

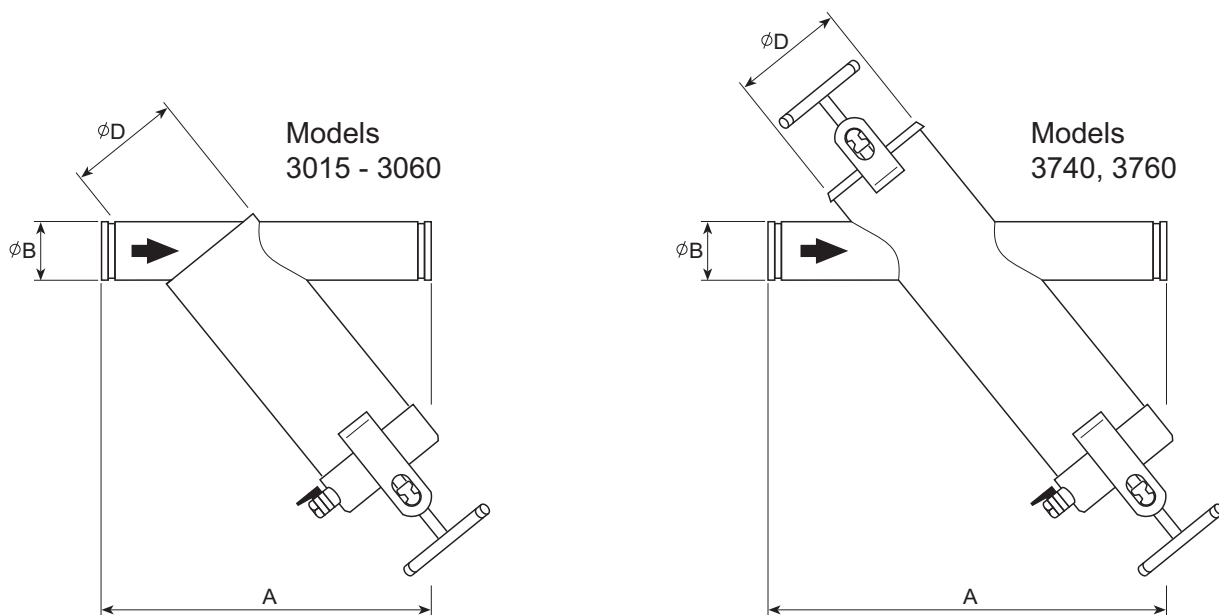
Model	B		D	A	Weight
	mm	inch	inch	mm	kg
3015	40	1½"	6"	370	15
3020	50	2"	6"	400	17
3030	80	3"	6"	460	22
3040	100	4"	8"	565	42
3060	150	6"	12"	920	96
3740 *	100	4"	8"	820	58
3760 *	150	6"	12"	1310	138

* With stone

U.S. Units

Model	B	D	A	Weight
	inch	inch	inch	lbs
3015	1½"	6"	14.5	33
3020	2"	6"	15.7	37
3030	3"	6"	18	49
3040	4"	8"	22.3	93
3060	6"	12"	36.3	212
3740 *	4"	8"	32.3	128
3760 *	6"	12"	51.5	304

* With stone



Metric Units

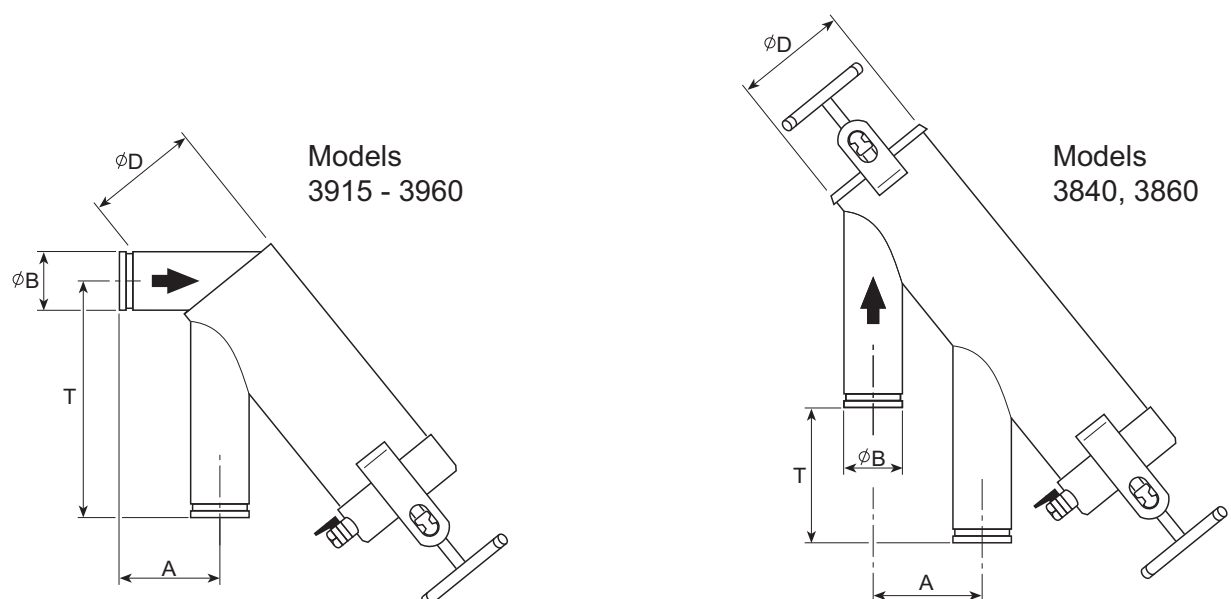
Model	B		D	A	T	Weight
	mm	inch	inch	mm	mm	kg
3915	40	1½"	6"	135	250	15
3920	50	2"	6"	120	280	17
3930	80	3"	6"	110	330	22
3940	100	4"	8"	140	410	42
3960	150	6"	12"	250	660	96
3840 **	100	4"	8"	265	275	58
3860 **	150	6"	12"	400	430	138

** Parallel vertical inlet / outlet with stone separator

U.S. Units

Model	B	D	A	T	Weight
	inch	inch	inch	inch	lbs
3915	1½"	6"	5.3	9.5	33
3920	2"	6"	4.7	11	37
3930	3"	6"	4.3	13	49
3940	4"	8"	5.5	16	93
3960	6"	12"	9.7	26	212
3840 **	4"	8"	10.5	10.7	128
3860 **	6"	12"	15.7	17	304

** Parallel vertical inlet / outlet with stone



Recommended Flow Rates

Metric Units

Models	Inlet / Outlet Diameters		Recommended Flow Rate
	inch	mm	m ³ /h
3015, 3915	1½"	40	3 - 11
3020, 3920	2"	50	11 - 31
3030, 3930	3"	80	12 - 40
3040, 3940	4"	100	20 - 66
3740, 3840	4"	100	20 - 66
3060, 3960	6"	150	44 - 155
3760, 3860	6"	150	44 - 155

U.S. Units

Models	Inlet / Outlet Diameters		Recommended Flow Rate
	inch		U.S. gpm
3015, 3915	1½"		15 - 49
3020, 3920	2"		49 - 136
3030, 3930	3"		53 - 146
3040, 3940	4"		88 - 290
3740, 3840	4"		88 - 290
3060, 3960	6"		195 - 680
3760, 3860	6"		195 - 680

NOTES:

- The filter size must suit the actual flow rate.
- Operation above the recommended range will increase head loss on the filter, and might induce increased erosion.
- Operation below the recommended range will reduce the circulation velocity and affect the filtration quality.

Technical Data

- Recommended head loss for effective filtration: 0.3 - 0.5 bar (4.5 - 7.5 psi).
- Max. recommended working pressure: 8 bar (120 psi).
- Max. pressure: 10 bar (150 psi).
- Filter screen: single reinforced stainless steel screen.
- Circulation plate: plate with 6 directional holes for adjusting the filter to the precise flow rate of the system with rubber stoppers.
- Horizontal inlet/outlet, Models: 3015 (1½"), 3020 (2"), 3030 (3"), 3040 (4"), 3060 (6").
- Horizontal inlet and vertical outlet, Models: 3915 (1½"), 3920 (2"), 3930 (3"), 3940 (4"), 3960 (6").
- Horizontal inlet/outlet with stone separator, Models: 3740 (4"), 3760 (6").
- Parallel vertical inlet/outlet with stone separator, Models: 3840(4"), 3860(6").

Protective Coating

100 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

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

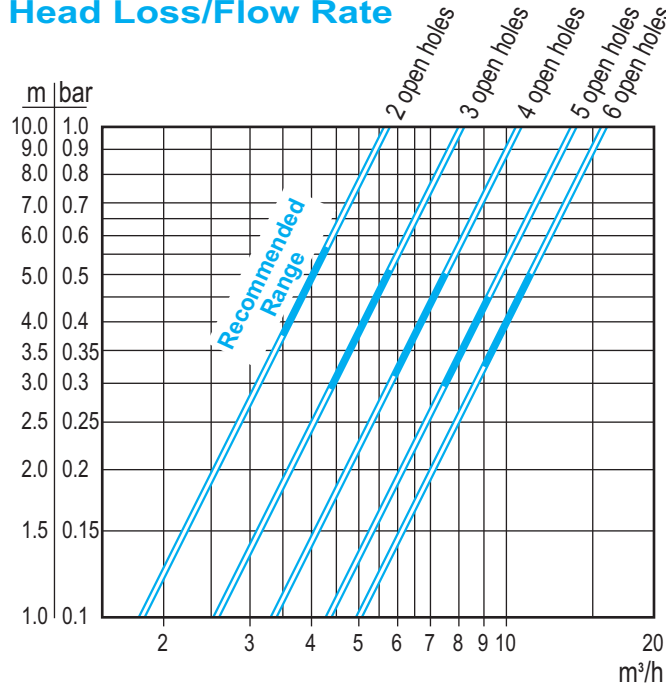
- Each filter is designed and manufactured in order to achieve the highest standard of quality and finish.

HEAD LOSS / FLOW RATE

MODELS 3015 (1½"), 3915 (1½")

Metric Units

Head Loss/Flow Rate



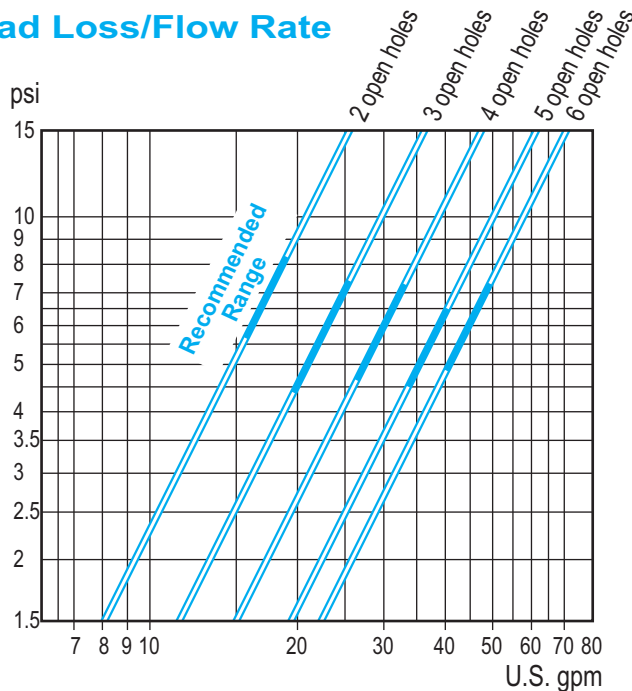
Head Loss

Number of Open Holes	Head Loss dP (bar)			
	0.3	0.4	0.5	0.6
	Flow Rate Q (m³/h)			
2	3.1	3.6	4.0	4.4
3	4.4	5.1	5.7	6.3
4	5.8	6.7	7.5	8.2
5	7.5	8.7	9.7	10.6
6	8.7	10.0	11.2	12.2
Recommended Range				

■ 1 bar=100 kPa=1.02 kg/cm²=10.2 m (W.C)=14.5 psi

U.S. Units

Head Loss/Flow Rate



Head Loss

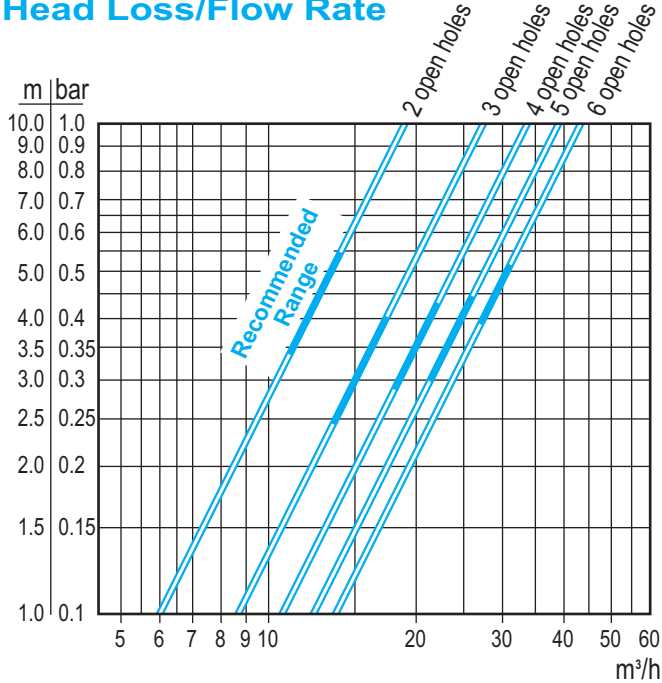
Number of Open Holes	Head Loss dP (psi)			
	4.5	6	7.5	9
	Flow Rate Q (U.S. gpm)			
2	14.0	16.1	18.1	19.8
3	19.9	22.9	25.7	28.1
4	26.0	30.0	33.6	36.8
5	33.6	38.8	43.4	47.5
6	38.8	44.8	50.0	54.8
Recommended Range				

■ 1 psi=0.069 bar=6.9 kPa=0.07 kg/cm²=0.7 m (W.C)

**HEAD LOSS/ FLOW RATE
MODELS 3020 (2"), 3920 (2")**

Metric Units

Head Loss/Flow Rate



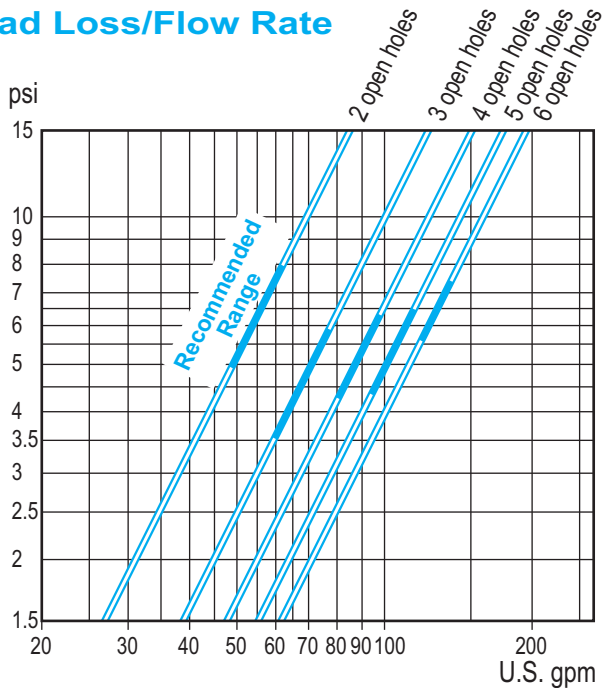
Head Loss

Number of Open Holes	Head Loss dP (bar)			
	0.3	0.4	0.5	0.6
	Flow Rate Q (m³/h)			
2	10.4	12.0	13.4	14.7
3	15.1	17.4	19.4	21.3
4	18.5	21.3	23.8	26.1
5	21.4	24.7	27.6	30.2
6	23.8	27.4	30.7	33.6
Recommended Range				

■ 1 bar=100 kPa=1.02 kg/cm²=10.2 m (W.C)=14.5 psi

U.S. Units

Head Loss/Flow Rate



Head Loss

Number of Open Holes	Head Loss dP (psi)			
	4.5	6	7.5	9
	Flow Rate Q (U.S. gpm)			
2	46.6	53.8	60.2	65.9
3	67.5	77.9	87.1	95.4
4	82.7	95.5	106.7	116.9
5	95.7	110.5	123.5	135.3
6	106.5	122.9	137.4	150.6
Recommended Range				

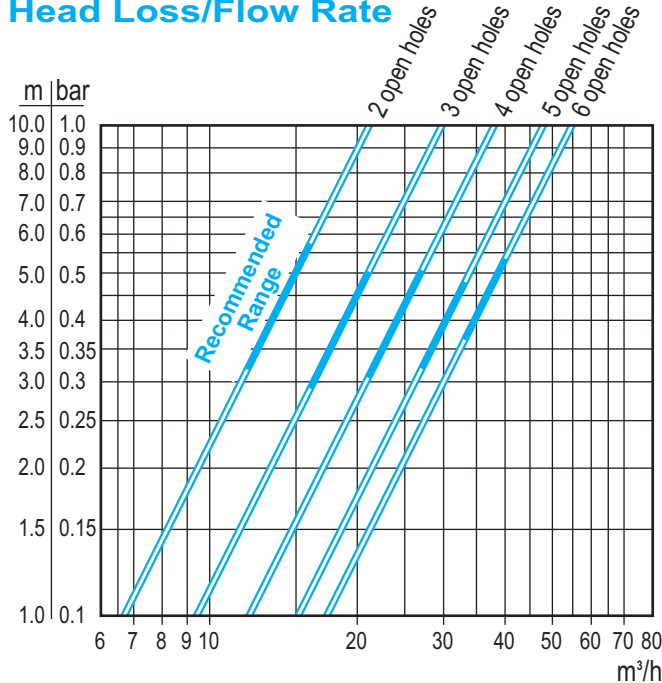
■ 1 psi=0.069 bar=6.9 kPa=0.07 kg/cm²=0.7 m (W.C)

HEAD LOSS/ FLOW RATE

MODELS 3030 (3"), 3930 (3")

Metric Units

Head Loss/Flow Rate



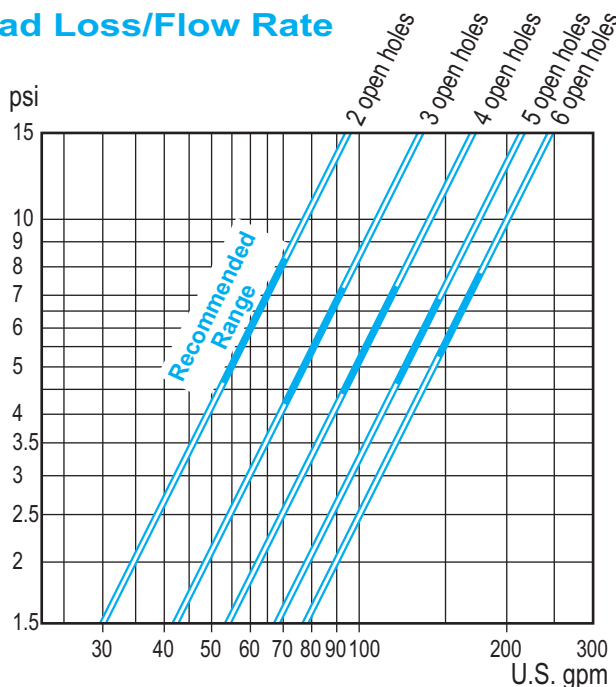
Head Loss

Number of Open Holes	Head Loss dP (bar)			
	0.3	0.4	0.5	0.6
	Flow Rate Q (m³/h)			
2	11.6	13.4	15.0	16.4
3	16.3	18.8	21.1	23.1
4	20.9	24.1	26.9	29.5
5	26.3	30.4	33.9	37.2
6	30.0	34.7	38.7	42.4
Recommended Range				

■ 1 bar=100 kPa=1.02 kg/cm²=10.2 m (W.C)=14.5 psi

U.S. Units

Head Loss/Flow Rate



Head Loss

Number of Open Holes	Head Loss dP (psi)			
	4.5	6	7.5	9
	Flow Rate Q (U.S. gpm)			
2	52.0	60.0	67.1	73.5
3	73.1	84.4	94.4	103.4
4	93.5	107.9	120.7	132.2
5	117.7	136.0	152.0	166.5
6	134.4	155.2	173.5	190.1
Recommended Range				

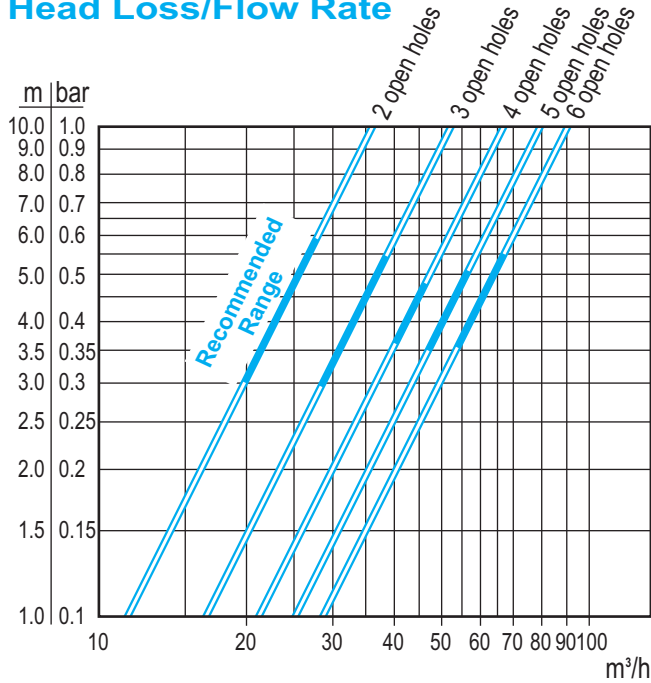
■ 1 psi=0.069 bar=6.9 kPa=0.07 kg/cm²=0.7 m (W.C)

HEAD LOSS/ FLOW RATE

MODELS 3040 (4"), 3740 (4"), 3840 (4"), 3940 (4")

Metric Units

Head Loss/Flow Rate



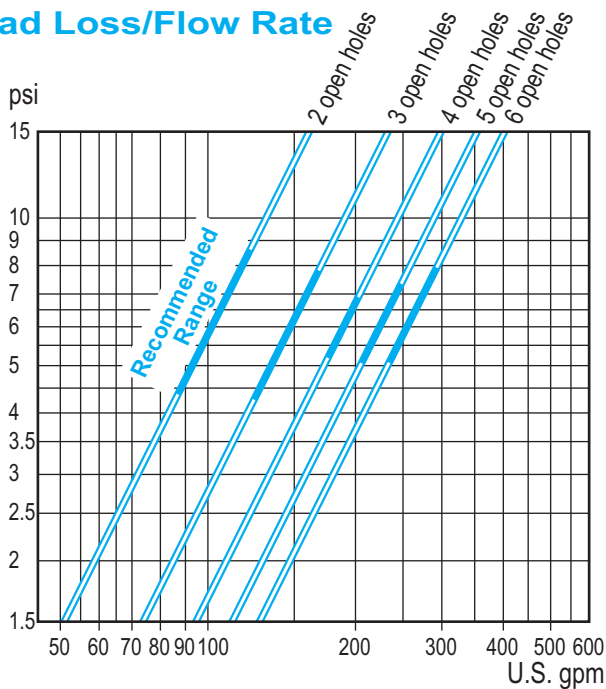
■ 1 bar=100 kPa=1.02 kg/cm²=10.2 m (W.C)=14.5 psi

Head Loss

Number of Open Holes	Head Loss dP (bar)			
	0.3	0.4	0.5	0.6
	Flow Rate Q (m ³ /h)			
2	19.7	22.8	25.5	27.9
3	28.5	32.9	36.8	40.3
4	36.5	42.1	47.1	51.6
5	43.3	50.0	55.9	61.2
6	49.3	56.9	63.6	69.7
Recommended Range				

U.S. Units

Head Loss/Flow Rate



■ 1 psi=0.069 bar=6.9 kPa=0.07 kg/cm²=0.7 m (W.C)

Head Loss

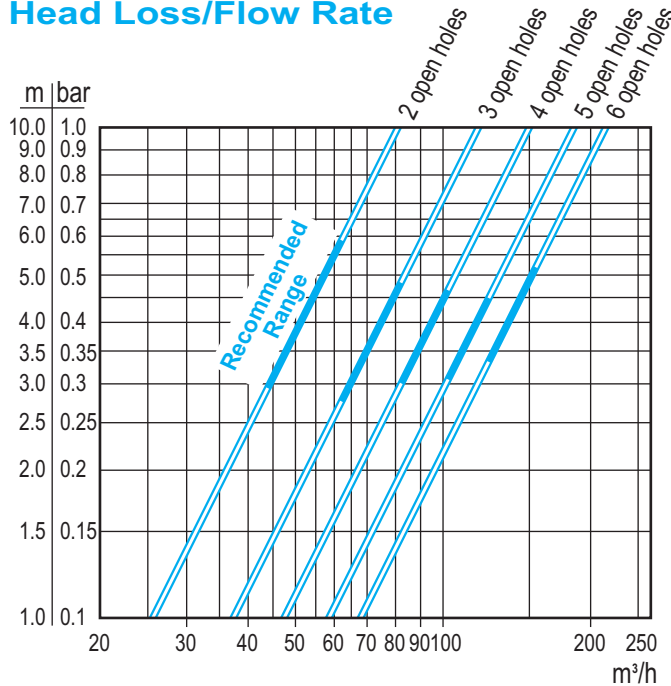
Number of Open Holes	Head Loss dP (psi)			
	4.5	6	7.5	9
	Flow Rate Q (U.S. gpm)			
2	88.3	102.0	114.0	124.9
3	127.6	147.3	164.7	180.4
4	163.3	188.5	210.8	230.9
5	193.8	223.8	250.2	274.1
6	220.8	254.9	285.0	312.2
Recommended Range				

HEAD LOSS/ FLOW RATE

MODELS 3060 (6"), 3760 (6"), 3860 (6"), 3960 (6")

Metric Units

Head Loss/Flow Rate



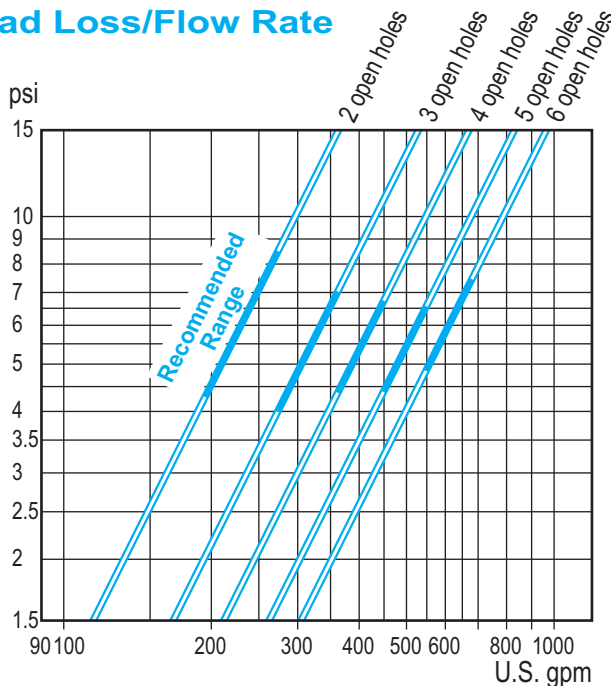
■ 1 bar=100 kPa=1.02 kg/cm²=10.2 m (W.C)=14.5 psi

Head Loss

Number of Open Holes	Head Loss dP (bar)			
	0.3	0.4	0.5	0.6
	Flow Rate Q (m³/h)			
2	44.4	51.2	57.3	62.7
3	64.6	74.6	83.4	91.4
4	82.2	94.9	106.1	116.2
5	101.3	117.0	130.8	143.3
6	117.8	136.0	152.0	166.5
Recommended Range				

U.S. Units

Head Loss/Flow Rate

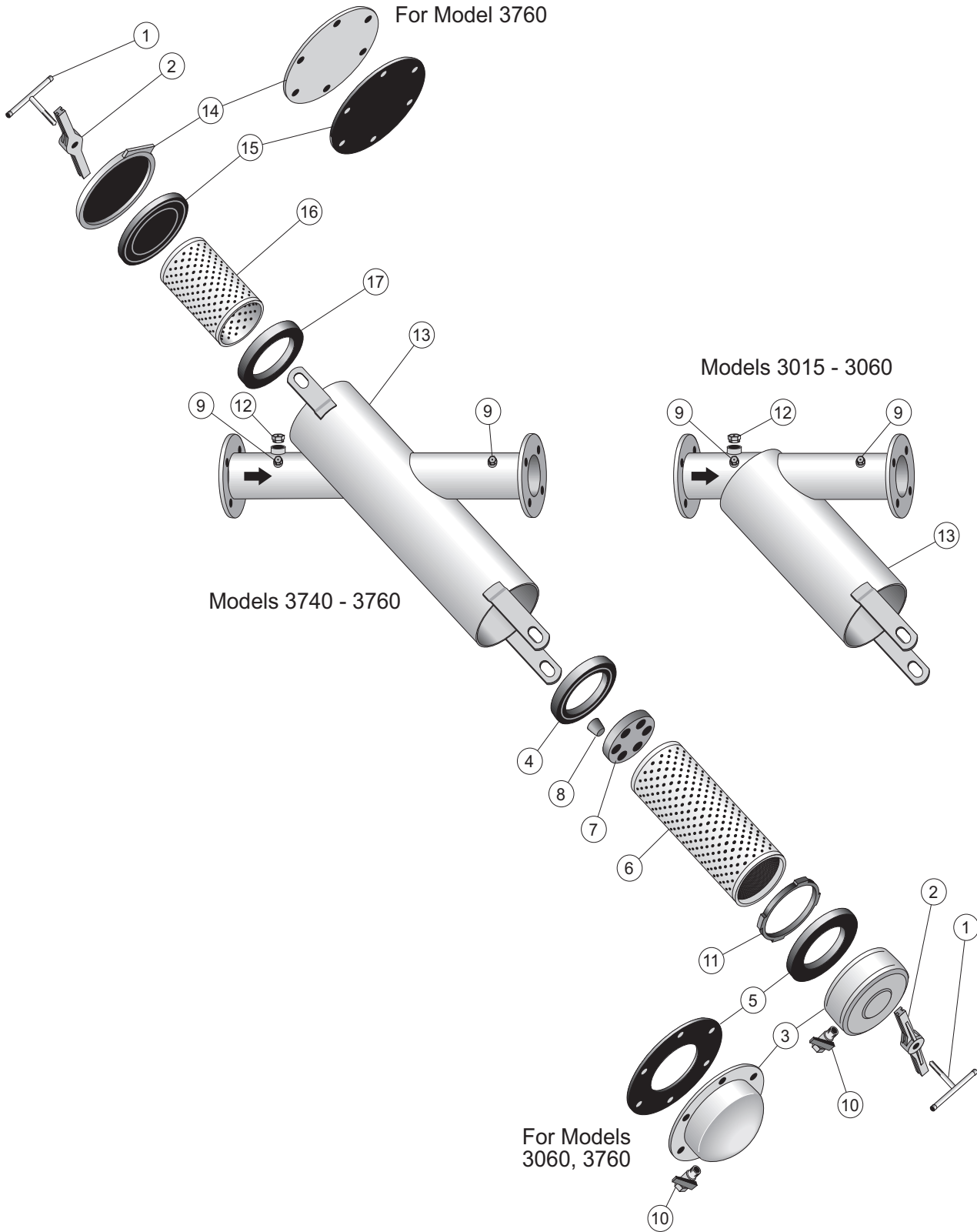


■ 1 psi=0.069 bar=6.9 kPa=0.07 kg/cm²=0.7 m (W.C)

Head Loss

Number of Open Holes	Head Loss dP (psi)			
	4.5	6	7.5	9
	Flow Rate Q (U.S. gpm)			
2	198.7	229.4	256.5	281.0
3	289.5	334.2	373.7	409.4
4	368.0	424.9	475.0	520.4
5	453.8	524.0	585.9	641.8
6	527.4	609.0	680.9	745.9
Recommended Range				

ILLUSTRATED PARTS BREAKDOWN



Catalog Numbers

Part No.	Description	Model						
		3015 (1½")	3020 (2")	3030 (3")	3040 (4")	3060 (6")	**** 3740 (4")	**** 3760 (6")
1	Handle	E 000 100	E 000 100	E 000 100	E 000 100	-	E 000 100	-
2	Tightening Bracket	E 000 216	E 000 216	E 000 216	E 000 218	-	E 000 218	-
3	Collection Cell Cover	E 300 260	E 300 260	E 300 260	E 300 280	E 360 290**	E 300 280	E 360 290**
4	Neoprene Inner Gasket	E 007 365	E 003 365	E 003 365	E 003 385	E 003 396	E 003 385	E 003 396
5	Collection Cell Cover Gasket	E 003 360	E 003 360	E 003 360	E 003 380	E 003 390	E 003 380	E 003 390
6	Filter Screen *	E 000 420	E 000 421	E 000 422	E 000 423	E 000 424	E 000 423	E 000 424
7	Circulation Plate	E 300 500	E 300 501	E 300 501	E 300 504	E 300 506	E 300 504	E 300 506
8	Rubber Stoppers	E 300 700	E 310 700	E 310 700	E 340 700	E 360 700	E 340 700	E 360 700
9	Pressure Testing Port	E 000 800	E 000 800	E 000 800	E 000 800	E 000 800	E 000 800	E 000 800
10	Drain Valve	PM1075110	PM1075110	PM1075110	PM1075110	PM1150010	PM1075110	PM1150010
11	Centering Piece	-	-	-	-	E 007 390	-	E 007 390
12	Male Plug ***	-	-	H 070 307	H 070 307	H 070 320	H 070 307	H 070 320
13	Filter Body	A 3015	A 3020	A 3030	A 3040	A 3060	A 3740	A 3760
14	Cover	-	-	-	-	-	E 000 280	E 360 291**
15	Neoprene Cover Gasket	-	-	-	-	-	E 007 380	E 000 980
16	Stone Separator	-	-	-	-	-	E 000 428	E 000 429
17	Stone Separator Inner Gasket	-	-	-	-	-	E 007 385	E 003 396

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

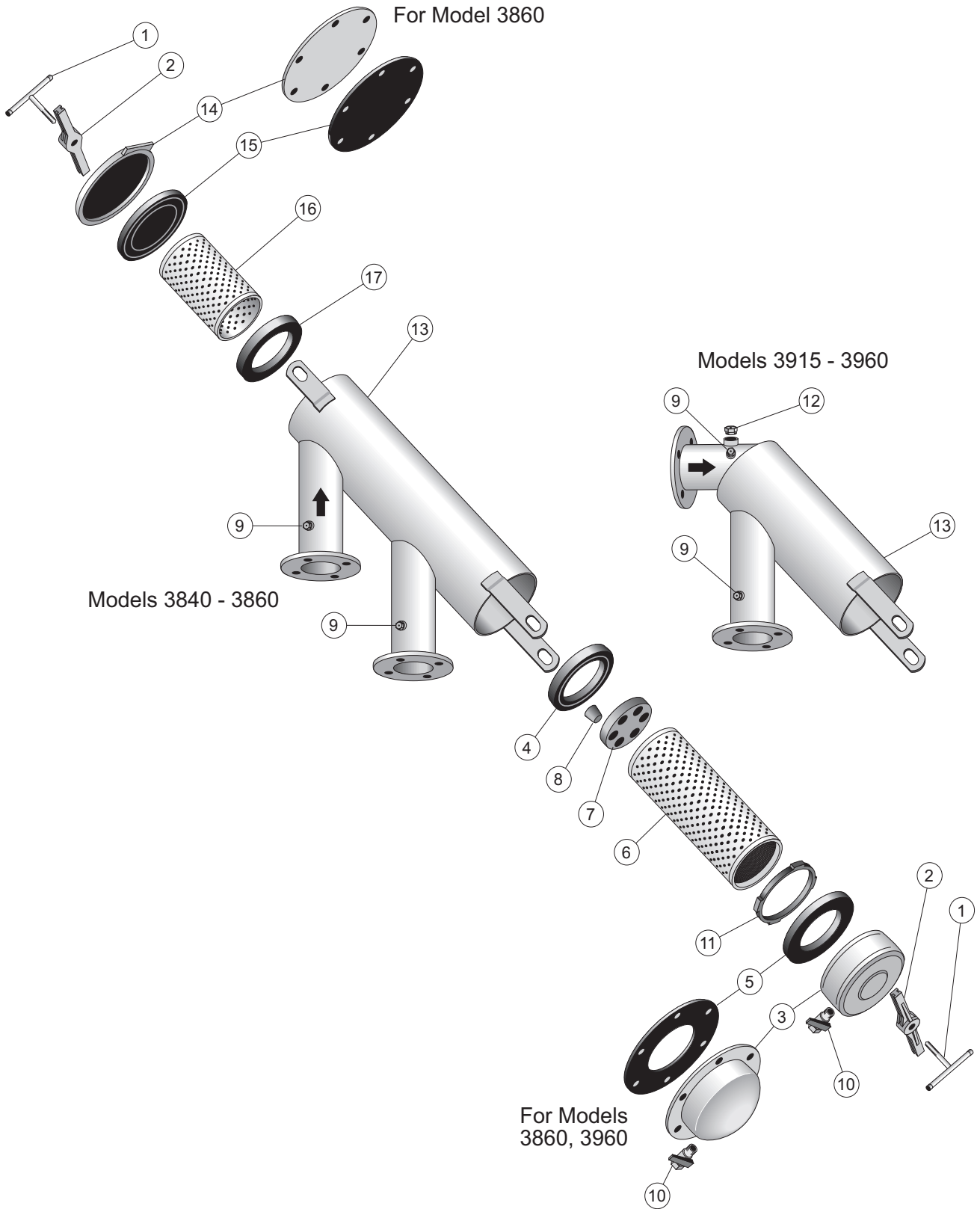
** Models 3060, 3760 are supplied with bolted covers.

*** For installing an integrated air relief - vacuum breaker valve.

**** With stone separator.

■ Aimed at continued improvement, ODIS reserves the right to change specifications without prior notice.

ILLUSTRATED PARTS BREAKDOWN



Catalog Numbers

Part No.	Description	Model						
		3915 (1½")	3920 (2")	3930 (3")	3940 (4")	3960 (6")	**** (4")	**** (6")
1	Handle	E 000 100	E 000 100	E 000 100	E 000 100	-	E 000 100	-
2	Tightening Bracket	E 000 216	E 000 216	E 000 216	E 000 218	-	E 000 218	-
3	Collection Cell Cover	E 300 260	E 300 260	E 300 260	E 300 280	E 360 290**	E 300 280	E 360 290**
4	Neoprene Inner Gasket	E 007 365	E 003 365	E 003 365	E 003 385	E 003 396	E 003 385	E 003 396
5	Collection Cell Cover Gasket	E 003 360	E 003 360	E 003 360	E 003 380	E 003 390	E 003 380	E 003 390
6	Filter Screen *	E 000 420	E 000 421	E 000 422	E 000 423	E 000 424	E 000 423	E 000 424
7	Circulation Plate	E 300 500	E 300 501	E 300 501	E 300 504	E 300 506	E 300 504	E 300 506
8	Rubber Stoppers	E 300 700	E 310 700	E 310 700	E 340 700	E 360 700	E 340 700	E 360 700
9	Pressure Testing Port	E 000 800	E 000 800	E 000 800	E 000 800	E 000 800	E 000 800	E 000 800
10	Drain Valve	PM1075110	PM1075110	PM1075110	PM1075110	PM1150010	PM1075110	PM1150010
11	Centering Piece	-	-	-	-	E 007 390	-	E 007 390
12	Male Plug ***	-	-	H 070 307	H 070 307	H 070 320	-	-
13	Filter Body	A 3015	A 3020	A 3030	A 3040	A 3060	A 3740	-
14	Cover	-	-	-	-	-	E 000 280	E 360 291**
15	Neoprene Cover Gasket	-	-	-	-	-	E 007 380	E 003 391
16	Stone Separator	-	-	-	-	-	E 000 428	E 000 429
17	Stone Separator Inner Gasket	-	-	-	-	-	E 007 385	E 003 396

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

** Models 3860, 3960 are supplied with bolted covers.

*** For installing an integrated air relief - vacuum breaker valve.

**** With stone separator.

■ Aimed at continued improvement, ODIS reserves the right to change specifications without prior notice.

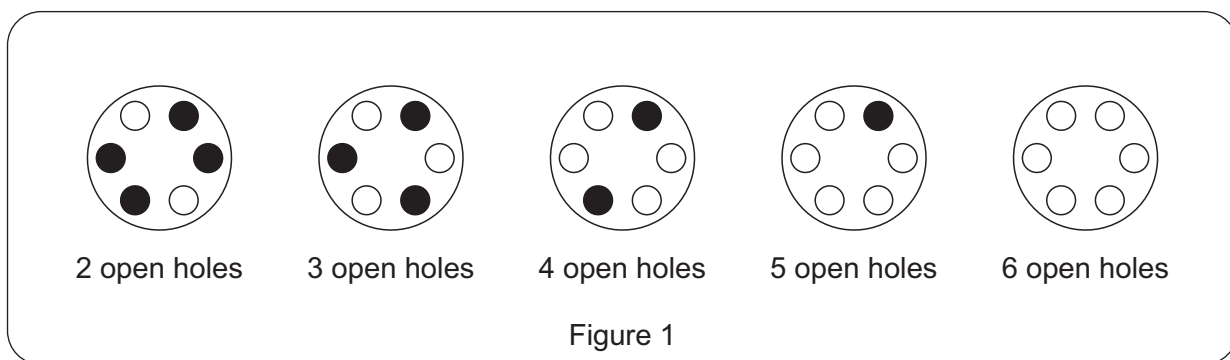
GENERAL INSTRUCTIONS

For best results, the filter must be correctly installed and properly operated as specified.

Operation

- Correct working conditions are achieved when head loss on filter is 0.3 - 0.5 bar (4.5 - 7.5 psi).
- The filter self-cleans during circulation of water.

For best results, adjust the actual flow rate through the filter, by blocking an appropriate number of holes in the circulation plate. This is achieved simply with rubber stoppers. Locate the stoppers as shown in figure 1.



- Verify headloss by inserting pressure gauge with needle into pressure testing ports,(9) assembled at inlet and outlet of filter.
- The water circulation in the filter will be reduced, if the number of open-holes is inappropriate, this impairs the filter performance.
- Working outside the recommended range will affect the filter performance.
- Maximal operational pressure should not exceed 8 bar (120 psi).
- Filter is designed to withstand a maximum pressure of 10 bar (150 psi).
- During operation, the sediments are flushed into the collection cell, while the screen is kept clean. As a result the head loss on the screen is constant.

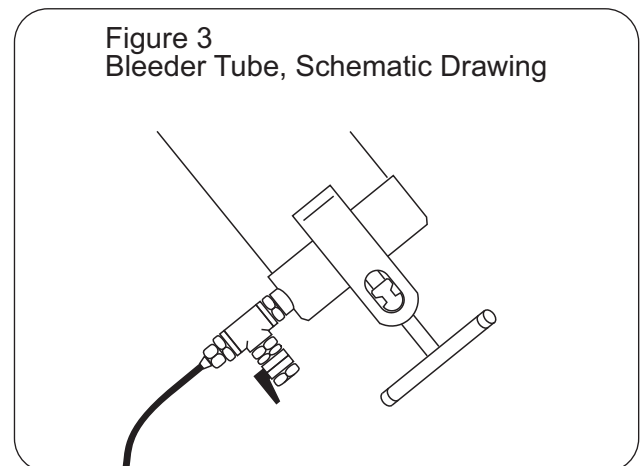
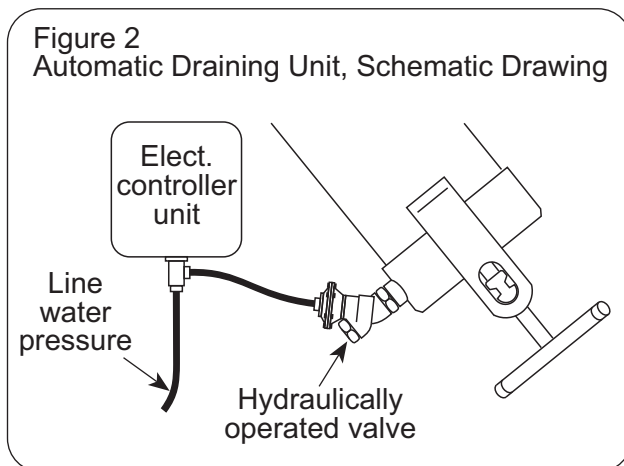
Collection Cell

The collection cell should be drained at regular intervals, determined according to working conditions and the quality of the water.

Collection cell draining can be performed in three ways:

- Manually: by opening the drain valve (10).
- Automatically: by a controller on a time basis. In this case the drain valve should be hydraulically or electrically operated.
- Continuously: by a bleeder tube (usually a 5-10 m of 8 mm polytube). The tube should be straight and not coiled.

If the dirt accumulated, shorten the bleeder tube.

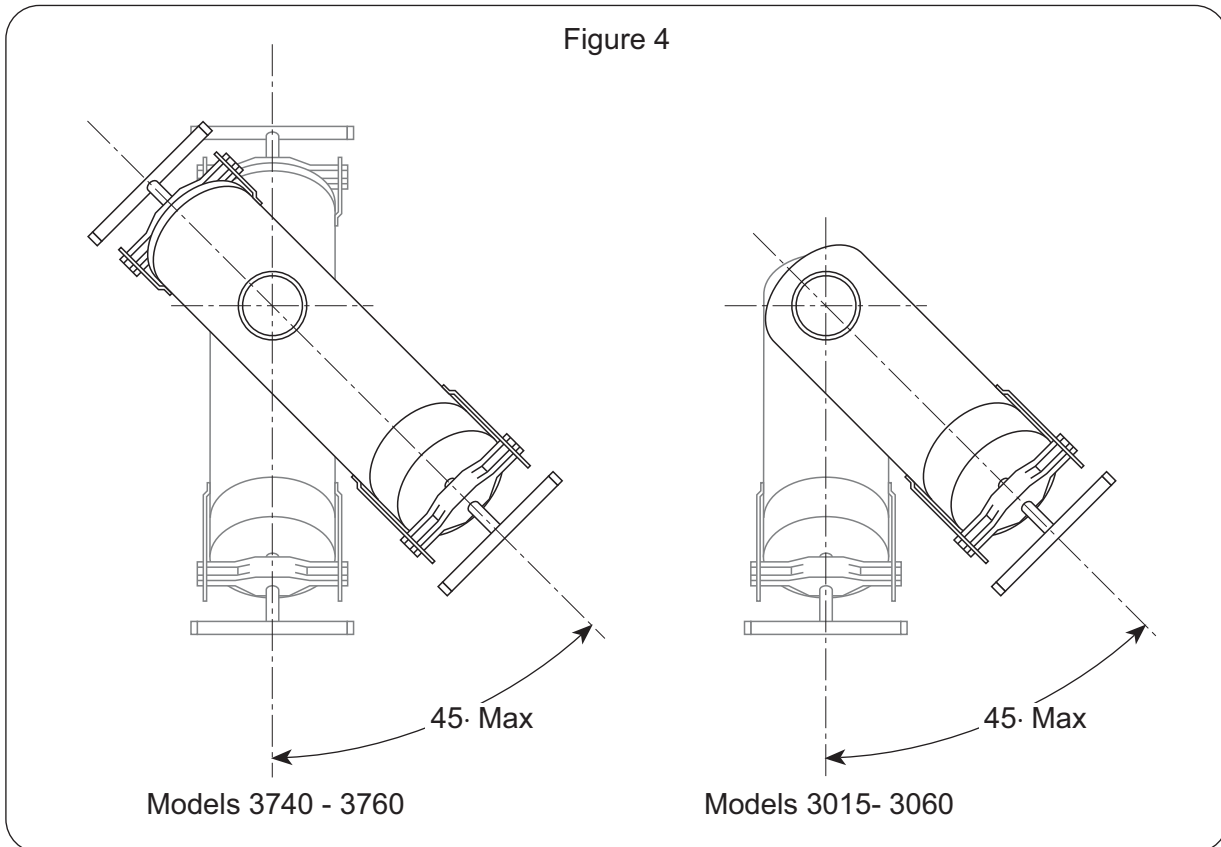


NOTES:

- If the filter becomes clogged too often, check the bleeding and/or plug an additional hole in the circulation plate.
- A large capacity collection cell can be attached to the drain valve.
- Automatic draining is optional even for a single filter.
- Irrigation is not affected by the draining process.
- **Do not back-flush - it will tear the screen.**

Installation

- Install the filter vertically downwards or at an angle of 45 degrees maximum (Figure 2).
- Special attention should be given to the correct direction of water flow (inlet. outlet) according to arrow.



- Check that the actual flow rate through the filter is within the recommended rate. Inadequate flowrate will result in reduced performance.
- Install an integrated air relief - vacuum breaker valve for filter inlet sizes 3" and larger.
- If a back flow might occur (i.e. when the pump has stopped or the field elevation is higher than the filter), install a quick-acting (mechanical) non-return valve..
- 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.
- If pressure is not controlled effectively, a pressure relief valve must be inserted before the filtering installation.

Periodic Cleaning

Clean the filter screen (6) every three months, or when the filter is clogged (sediments were not drained properly).

- Close valve at the inlet of filter.
- Open drain valve (10) to release pressure within filter and drain.

Stone Separators - Models 3740, 3840 (4"), 3760, 3860 (6").

- In models 3740, 3840 (4") - release top handle, tightening bracket and remove cover (14).
- In models 3760, 3860 (6") - release and remove bolts of top cover (14) and take it off.
- Take out stone separator (16) and remove all stones.
- Verify that inner gasket (17) is intact and install it back.
- Slide in stone separator into top filter housing and locate in inner gasket.
- Replace cover (14) and locate the stone separator in cover gasket (15).
- Mount tightening bracket (2) and tighten handle (1) properly (models 3740, 3840).
- Replace cover (14) and tighten bolts evenly (models 3760,3860).

Screen Filters

- Release bottom handle (1) and tightening bracket (2) and carefully remove the collection cell (3).
 - In models 3760, 3860 (6") release bolts and carefully remove the collection cell (3).
 - Gently remove filter screen (6).
 - Take out inner gasket (4).
 - Rinse filter screen thoroughly with clean water, using a brush to remove particles from screen (**do not use a wire brush**).
- Verify that filter screen is intact .
After cleaning assemble as follows:
- Place circulation plate (7) in its groove within the filter screen(6).
 - Block the appropriate number of holes in the circulation plate (7).
 - Place the inner gasket (4) on the filter screen (6).
 - Place the bottom gasket (5) on the collection cell (3).
 - Place the filter screen (with all components) on the collection cell.
 - Carefully replace assembly into bottom of filter housing.
 - Ensure drain valve (10) is installed properly at the lowest point (facing downwards).
 - Mount tightening bracket (2) and tighten handle (1) properly.
 - Replace bolts and tighten evenly (models 3060, 3760, 3860, 3960).

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 screen 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) or bolt threads - Models 3060, 3760, 3860, 3960 (6").
- 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.

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

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

NOTES:

- Filters are supplied with one reinforced stainless steel screen specially designed for circulation filters.
- Recommended screens 40 - 120 mesh.

How To Order Odis Circulating Filters

1. Type of filter required.
2. Catalog Number of filter.
3. Preferred mesh grade.
4. End connections: Thread (M)
Flange (F)
Victaulic (V)
5. Min./ max. pressure.
6. Maximal/Minimal Flow rate.
7. Additional accessories: Nipples/Valves/Non Return Valves/Gauges/Bleeder/Sediment Tank.
8. Filter arrays: see chapter 1.(*)
9. Other than standard material, required for filter body and cover.
10. Special Coating Requirements.

* An array of circulating filters is preferable in case the flow-rate is not constant.

PACKING / SHIPPING DATA
Metric Units

Model	Inlet / Outlet (inch)	Gross Weight (kg)	Filter per carton	Length (m)	Width (m)	Height (m)	Gross Volume (m ³)
3015	1½"	15	1	0.65	0.35	0.23	0.05
3020	2"	17	1	0.65	0.35	0.23	0.05
3030	3"	22	1	0.66	0.54	0.22	0.08
3040	4"	42	1	0.87	0.57	0.29	0.14
3060	6"	96	Not shipped in a carton				0.55
3740 *	4"	58	Not shipped in a carton				0.30
3760 *	6"	138	Not shipped in a carton				0.80
3915 **	1½"	15	1	0.65	0.35	0.23	0.05
3920 **	2"	17	1	0.65	0.35	0.23	0.05
3930 **	3"	22	1	0.66	0.54	0.22	0.08
3940 **	4"	42	1	0.87	0.57	0.29	0.14
3960 **	6"	96	Not shipped in a carton				0.55
3840 ***	4"	58	Not shipped in a carton				0.30
3860 ***	6"	138	Not shipped in a carton				0.80

U.S. Units

Model	Inlet / Outlet (inch)	Gross Weight (lbs)	Filter per carton	Length (inch)	Width (inch)	Height (inch)	Gross Volume (cu. ft)
3015	1½"	33	1	25.5	13.7	9	1.8
3020	2"	37	1	25.5	13.7	9	1.8
3030	3"	49	1	26	21.3	8.7	2.8
3040	4"	93	1	34.3	22.5	11.5	5.1
3060	6"	212	Not shipped in a carton				19.4
3740 *	4"	128	Not shipped in a carton				10.6
3760 *	6"	304	Not shipped in a carton				28.2
3915 **	1½"	33	1	25.5	13.7	9	1.8
3920 **	2"	37	1	25.5	13.7	9	1.8
3930 **	3"	49	1	26	21.3	8.7	2.8
3940 **	4"	93	1	34.3	22.5	11.5	5.1
3960 **	6"	212	Not shipped in a carton				19.4
3840 ***	4"	128	Not shipped in a carton				10.6
3860 ***	6"	304	Not shipped in a carton				28.2

* With stone separator

** Inlet Outlet at 90°

*** Parallel Vertical Inlet/Outlet plus stone separator