Filtration

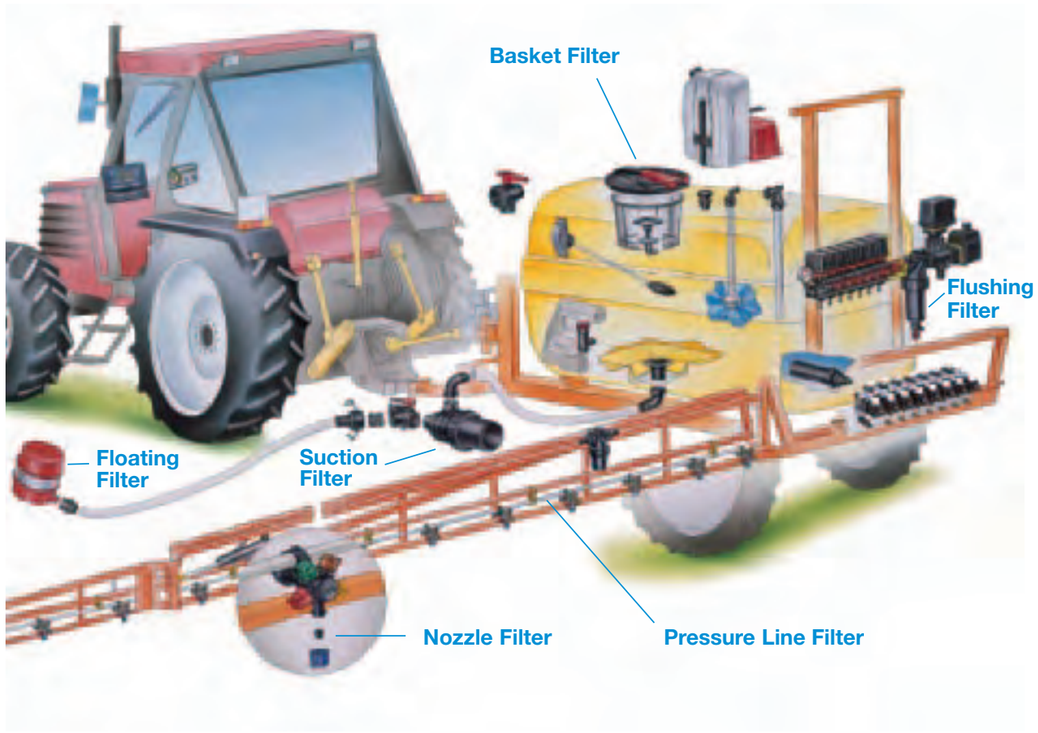
General Principles

Grit, soil or undispersed chemicals can readily block nozzles which in turn will lead to uneven chemical application and excessive wear on pumps and valves. To avoid this, filtration should be applied in stages, starting with the most coarse mesh and moving to finer sizes towards the nozzle.

STAGE 1 SOURCE TO TANK Coarse filtration is provided by foot floating filter or basket filter during tank filling. Where an induction hopper is used or water is taken from a bowser a suction hose filter can be used.

STAGE 2 TANK TO PUMP Coarse/medium filtration is provided by suction filters which protect the pump. These also provide preliminary screening before the finer pressure filters.

STAGE 3 PUMP TO NOZZLES Medium filtration is provided by large pressure line filters fitted between the pump and the pressure regulator or small line filters between each boom section. The finest filtration is provided by nozzle filters.

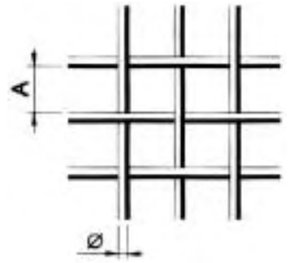


Selecting the correct mesh for your filter

Mesh size should be selected with respect to flow rate, product label recommendatiions and reference to Hypro nozzle charts.

Select a screen area which is as large as possible and has adequate clearing around the element in the filter housing

NB: Always check the chemical label - excessive filtration can remove some particles from wettable powders.



Maintenance and Care

Regular cleaning of filters is essential. Simply soak in water and clean with a soft brush - replace any that are blocked or damaged immediately.

Material	Number of wires per inch (25.4mm)	Mesh opening (Microns) (A)	Wire diameter (Microns) (Ø)	Ratio of mesh opening to mesh total surface %
Polypropylene	16	980	490	44.4
Stainless Steel	16	1320	220	73.3
Polypropylene	32	500	320	37.1
Stainless Steel	32	594	200	55.3
Stainless Steel	50	365	140	50.8
Stainless Steel	80	229	80	55.7
Stainless Steel	100	173	80	46.4
Poliammide	120	134	70	43
Stainless Steel	120	144	70	45.4
Poliammide	150	96	65	35
Stainless Steel	150	114	70	42.4
Poliammide	200	80	50	37
Stainless Steel	200	76	50	36.2

SUCTION FILTER ELEMENT	LARGE PRESSURE FILTER ELEMENT	SMALL PRESSURE LINE FILTER ELEMENT	NOZZLE FILTER FOR STANDARD PRESSURE FLAT FAN TIPS	APPLICATION RATE
50# BLUE	80# RED	100# GREEN	100# GREEN	80 litres per hectare (7 gals/acre) and below
50# BLUE	80# RED	80# RED	100# GREEN	80 - 170 litres per hectare (7 - 15 gals/acre)
30# WHITE	50# BLUE	50# BLUE	50# BLUE	170 - 280 litres per hectare (15 - 25 gals/acre)
30# WHITE	30# WHITE	30# WHITE	30# WHITE	280 - 450 litres per hectare (25 - 40 gals/acre)
30# WHITE	30# WHITE	30# WHITE	30# WHITE	Over 450 litres per hectare (40 gals/acre)

Fitting Guidelines

- When mounting filters, always select a position which allows quick, easy access whilst minimising the risk of damage.
- Ensure that the inlet and outlet port sizes of the filter are the same as the internal diameter of your hose. NB Check that hosetails do not restrict flow.
- Check that your filter has adequate flow capacity i.e. Large pressure line filters and Suction filters must be able to cope with the full flow of the pump. Small Pressure Line filters must be able to supply the largest nozzles fitted to each boom section.

www.hypropumps.com

Filtration - Stage 1

STAGE 1 - Source to Tank

The coarse, durable mesh in suction and foot filters make these products ideal for preventing very large particles being drawn from liquid source into tank

Suction Floating Filters

- Continued flotation
- Suction point just beneath water surface
- Two different coupling diameters for suction hose

Part No.	Dimensions (mm)		
	Ø	D	L
08307040	40	180	200
08307050	50	100	200

Foot Filters

- Chamferred corners prevent tank walls from being damaged.

Part No.	Dimensions (mm)		
	Ø	D	L
08302019	19	60	47
08302115	15	100	54
08302120	20	100	54
08302122	22	100	54
08302125	25	100	54
08302225	25	125	76
08302230	30	125	76
08302330	30	150	96
08302335	35	150	96
08302340	40	150	96
08302350	50	150	96
08302305	G1¼M (BSP)	150	96

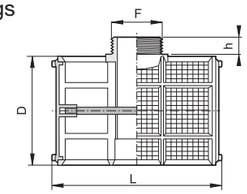
Foot Filter - Slimline Version

- Complete with non-return valve
- Mesh filter

Part No.	Dimensions
08ART17A	1" BSP (F)
08ART17B	1¼" BSP (F)
08ART17C	1½" BSP (F)
08ART17D	2" BSP (F)

Foot Filter

- 16 mesh filter
- Complete with inspection chambers
- Can be connected to foot valves and hose fittings



Part No.	Dimensions			
	F	H	D	L
0800A613	1¼	16	88	120
0800A615	2	20	110	200

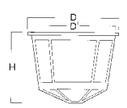
Filtration - Stages 1 and 2

Part No.	Description
0831A367	1¼" Foot Filter
0831A368	1½" Foot Filter
0825A369	2" Foot Filter

Foot Filters c/w Non-Return Valves and Hosetails

Basket Filters

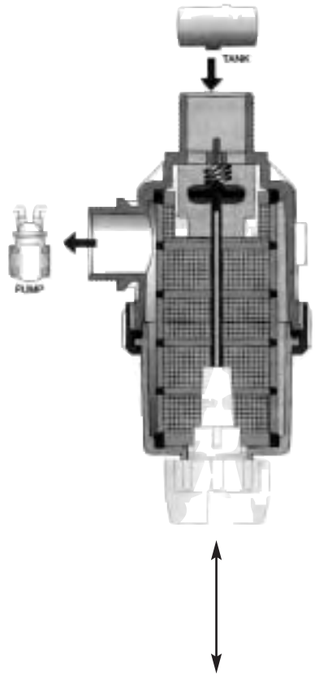
The coarse mesh (18 mesh), prevents very large particles from passing into the liquid storage tank. See page 23 for installation instructions of a new tank lid complete with basket filter.



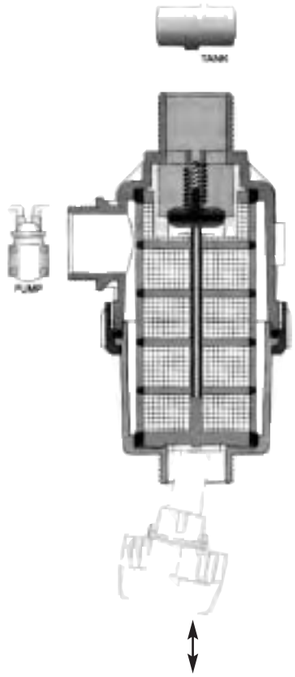
Part No.	D	D^1	H
53300110	204	185	115
5300A641	204	185	240
5300A646	302	289	254
5300A649	400	390	160

Suction Filters

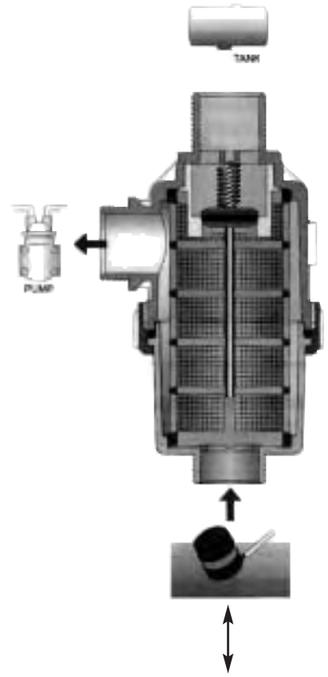
- Moulded in polypropylene for strength and durability.
- Available with connections available from 1 to 3", and 30 or 50 mesh screens held in a colour coded cages.
- Optional shut-off facility available on 1½ and 2" versions - provides failsafe shut-off for safe filter cleaning and can be used for an additional inlet during suction filling.



● Valve open
● Normal operation



● Valve closed
● Filter cleaning

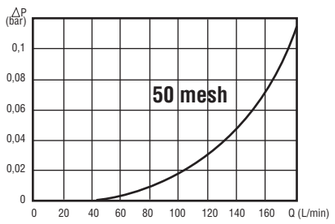


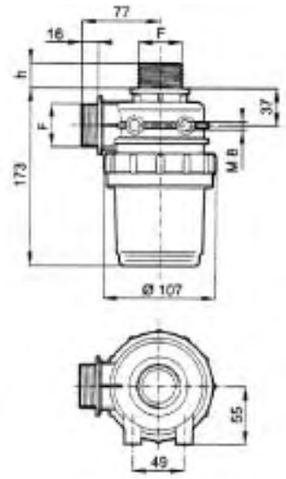
● Valve closed
● Additional inlet for tank filling

1¼" Suction Filters

- Filtering capacity 60-100 l/min
- Polypropylene body EPDM gasket, Brass fixings

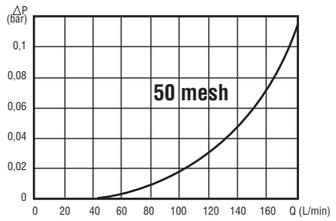
Part Number	F (BSP)	Screen Type	H (mm)	Effective Area cm2	sq.in.
48A671BK	G 1¼"	32 mesh	23	108	16.7
48A671BL	G 1¼"	50 mesh	23	99	15.3

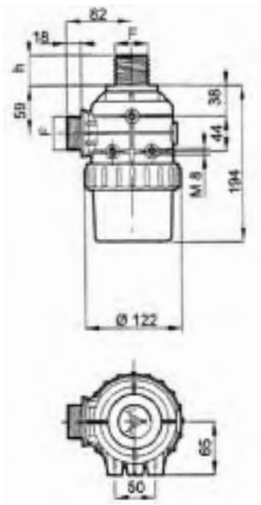




1½" Suction Filters

- Filling capacity 100 - 160 l/min
- Polypropylene body
- EPDM gaskets, brass fixings



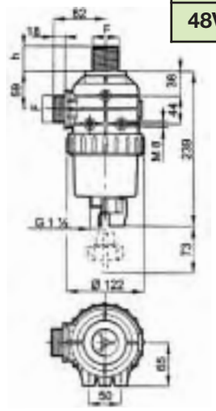


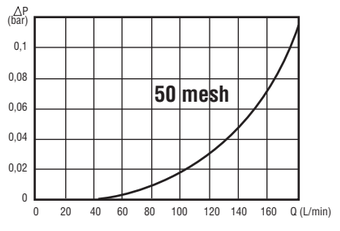
Part Number	F (BSP)	Screen Type	H (mm)	Effective Area cm2	sq.in.	Max Flow
48A672BK	G 1½"	32 mesh	39	133	20.7	160
48A672BL	G 1½"	50 mesh	39	123	15.0	160

1½" Suction Filters complete with Shut-Off Valve

- Filling capacity 100 - 160 l/min
- Polypropylene body
- EPDM gaskets, brass fixings

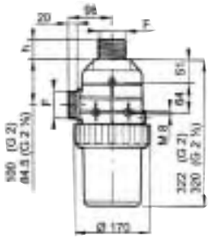
Part Number	F (BSP)	Screen Type	H (mm)	Effective Area cm2	sq.in.	Max Flow
48V14562	G 1½"	32 mesh	39	133	20.7	160
48V14563	G 1½"	50 mesh	39	123	19.0	160
48V14565	G 1½"	50 mesh	20	134	20.8	160



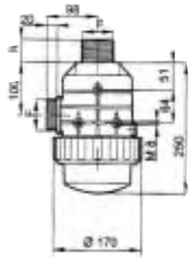


2" Suction Filters - Short and Long Bowl

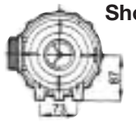
- Filtering capacity 200-260 L/min
- Polypropylene boxy
- EPDM gaskets, brass fittings

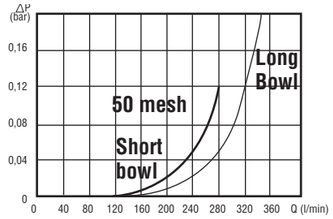


Long bowl version



Short bowl version





Part Number	F (BSP)	Screen Type	H (mm)	Effective Area cm2	sq.in.
Short Bowl					
48A673BK	G 2	32 mesh	20	242	37.5
48A673BL	G 2	50 mesh	20	222	34.5
Long Bowl					
48317172	G 2	32 mesh	42	289	44.8
48317173	G 2	50 mesh	42	265	41.1

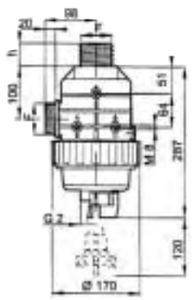
Filtration - Stage 2

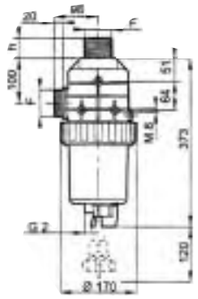
2” Suction Filters complete with Shut-Off

- Filtering capacity 200-260 L/min
- Polypropylene body
- EPDM gaskets, brass fittings

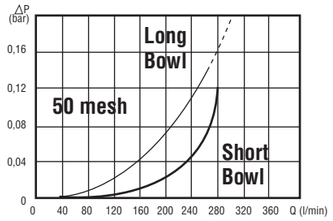
Part Number	F (BSP)	Screen Type	H (mm)	Effective Area cm2	sq.in.
Long Bowl					
48V16572	G 2	Inox 32 mesh	42	242	37.5
48V16573	G 2	Inox 50 mesh	42	222	34.5
Short Bowl					
48V17572	G 2	Inox 32 mesh	42	289	44.8
48V17573	G 2	Inox 50 mesh	42	265	41.1

Short bowl version



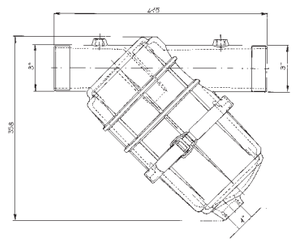


Long bowl version



3” Suction Filters

- Up to 800 L/min
- Ideal for storage tanks, irrigation systems or liquid fertiliser.



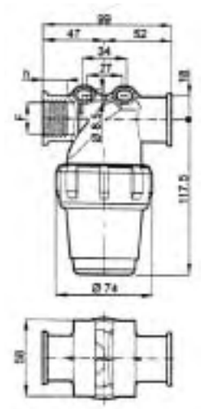
Part Number	F (BSP)	Mesh
20A62830	3	30
20A62850	3	50

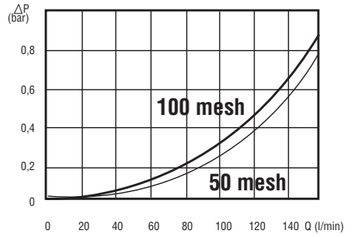
Filtration - Stage 3

STAGE 3 - Pump to Nozzle: Line Filters

½” and ¾” Line Filters

- Max working pressure 14 bar
- Filtering capacity 80 - 100 L/min
- Polypropylene body and EPDM gaskets

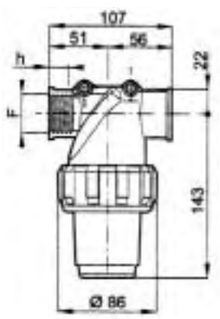


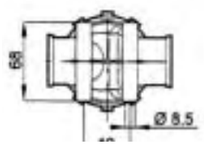


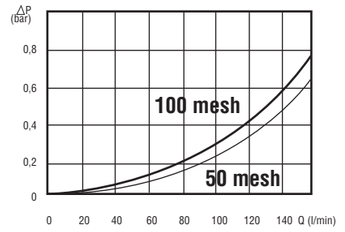
Part Number	F (BSP)	Screen Type	H (mm)	Effective Area cm2	sq.in.
20N62230	G ½”	32 mesh	21	30	4.7
20N62250	G ½”	50 mesh	21	28	4.3
20N62280	G ½”	80 mesh	21	25	3.9
20N62220	G ½”	250 mesh	21	20	3.1
20N62330	G ¾”	32 mesh	23	30	4.7
20N62350	G ¾”	50 mesh	23	28	4.3
20N62380	G ¾”	80 mesh	23	25	3.9
20N62320	G ¾”	250 mesh	23	20	3.1

1” Line Filters

- Max aworking pressure, 14 bar
- Filtering capacity of 150-160 l/min
- Polypropylene boxy, EPDM gaskets, fixing points both sides





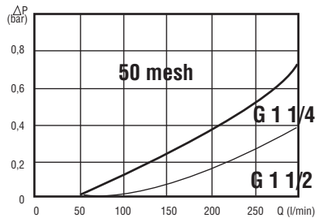


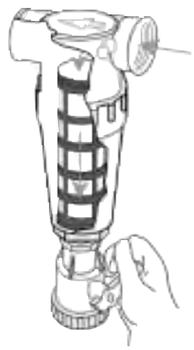
Part Number	F (BSP)	Screen Type	H (mm)	Effective Area cm2	sq.in.
20N62430	G 1	32 mesh	23	41	6.4
20N62250	G 1	50 mesh	23	38	5.9
20N62480	G 1	80 mesh	23	34	5.3

Filtration - Stage 3

1¼" and 1½" Line Filters

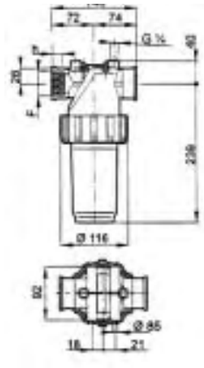
- Maximum working pressure 15 bar
- Filtering capacity of 200-280 L/min
- Fixing points on both sides, polypropylene body EPDM gaskets
- Standard and flushing versions available





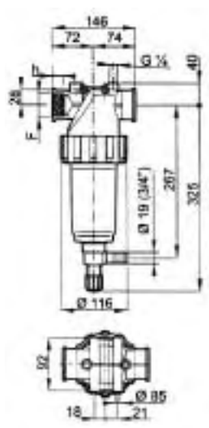
Flushing version available

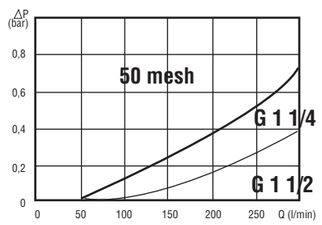
Part Number Flushing	Part Number Standard	F (BSP)	Screen Type	H (mm)	Effective Area cm2	sq.in.
20NF62530	**20N62530**	1¼"	32 mesh	21	115	17.9
20NF62550	**20N62550**	1¼"	50 mesh	21	106	16.4
20NF62580	**20N62580**	1¼"	80 mesh	21	97	15.0
20NF62520	**20N62520**	1¼"	250 mesh	21	77	11.9
20NF62630	**20N62630**	1½"	32 mesh	21	115	17.9
20NF62650	**20N62650**	1½"	50 mesh	21	106	16.4
20NF62680	**20N62680**	1½"	80 mesh	21	97	15.0
20NF62620	**20N62620**	1½"	250 mesh	21	77	11.9



1¼" and 1½" Self Cleaning Line Filters

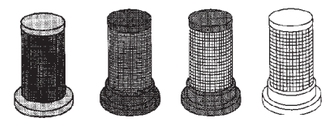
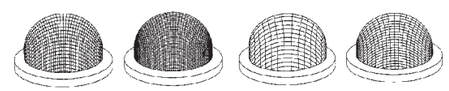
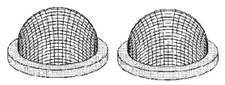
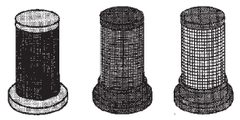
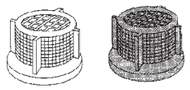
- Max working pressure, 15 bar
- Filtering capacity 200-280 L/min
- Fixed points at both sides, polypropylene body, EPDM gaskets





Part Number	F (BSP)	Screen Type	H (mm)	Effective Area cm2	sq.in.
203282152	1¼"	32 mesh	21	115	17.9
203282153	1¼"	50 mesh	21	106	16.4
2032821535	1¼"	80 mesh	21	97	15.0
2032821525	1¼"	200 mesh	21	77	11.9
203282162	1½"	32 mesh	21	115	17.9
203282163	1½"	50 mesh	21	106	16.4
2032821635	1½"	80 mesh	21	97	15.0
2032821625	1½"	200 mesh	21	77	11.9

Filtration Nozzle Filters

Ball Check Filter in Kematal with s/steel screen. Provides limited anti-drip facility for non-DCV nozzles. Now fitted with nitrile balls	
Ball Check (anti-drip)	**Part No.**
30 mesh (coarse), white	**32100530**
50 mesh (medium), blue	**32100550**
100 mesh (fine), green	**32100510**
200 mesh (v. fine), yellow	**32100520**
Cup Filter with copper flange and s/steel screen	
Cup-Type (Copper Flange)	**Part No.**
30 mesh (coarse)	**32100630**
50 mesh (medium)	**32100650**
100 mesh (fine)	**32100610**
200 mesh (v. fine)	**32100620**
Cup Filter with nylon flange and s/steel screen	
Cup-Type (Nylon Flange)	**Part No.**
30 mesh (medium) screen	**3230A245**
50 mesh (medium) screen	**3250A245**
Standard Nozzle Filter in Kematal with s/steel screen	
Standard	**Part No.**
50 mesh (medium), blue	**32100050**
100 mesh (fine), green	**32100010**
200 mesh (v. fine), yellow	**32100025**
Cup Filter in moulded Polypropylene	
Cup-Type (Polypropylene)	**Part No.**
30 mesh (coarse), white	**3210063P**
50 mesh (coarse), blue	**3210065P**

EeziFit Series 2 and Select-a-space nozzle bodies/DCV modules will only accept cup-type nozzle filters.

Hypro Nozzle filters are colour-coded for easy identification and fit all leading makes of nozzle holders.

Nozzle filters are generally used when pressure line Filters are not fitted although they are sometimes used as an additional precaution when making low volume applications.

The Ball-Check Filter provides an anti-drip facility in the absence of diaphragm check valves.