

datasheet

dolphin m-swipe



Description

m-swipe filters are mesh filters equipped with a manual brush cleaning system, allowing operators to easily clean the filter cartridge in seconds without opening the cover. These robust filters require minimal maintenance due to their stainless steel construction and nylon brushes. The cleaning process does not interrupt filtration. m-swipe filters are available in two configurations, Y and L, to accommodate various installation types. They are ideal for treating water with suspended solids, including coarse, non-colloidal particles, and can be used with water from wells, canals, rivers, and industrial processes. The extensive range of FILTERKIT options, available in PES or 2LE versions, offers a wide range of filtration levels from 3000 µm to 80 µm.

Filtration

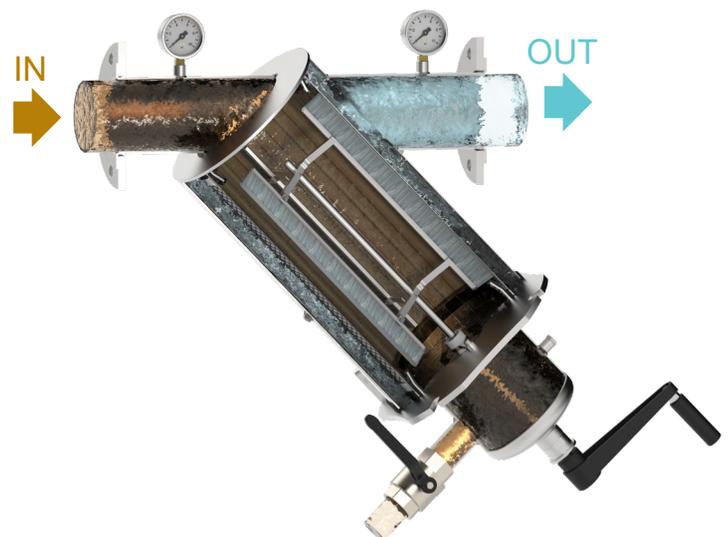
The unfiltered liquid enters the filter through the inlet connection (IN), where suspended solids are trapped inside the cartridge, and the filtered liquid exits through the outlet connection (OUT).

Cleaning

The continuous accumulation of solids trapped within the filter mesh creates a pressure difference between the inlet and outlet, which can be monitored using the two pressure gauges installed on the filter.

The filter element should be cleaned when the differential pressure between the inlet and outlet gauges reaches approximately 0.8-1 bar. To clean the filter, simply open the drain valve and rotate the handle clockwise 5-6 times, then close the drain valve.

For a more thorough cleaning (if necessary), it is recommended to close or partially close the filter's outlet valve during the draining and handle rotation process.



Technical data

Maximum flow rate	550 m ³ /h
Nominal pressure [bar]	PN 10 - PN 16 ⁽¹⁾
Maximum temperature	90°C
Construction shape	Y, L
Salinity	< 10000 ppm
pH range	3 - 9
Design standard	PED 2014/68/EU

Materials

Housing	AISI 304 - AISI 316
Gaskets	EPDM ⁽²⁾
Vent/drain valves	Nickel-plated brass - AISI 316
Pressure gauges	AISI 304 - AISI 316
Surface finishing	Micro shot peening and passivation

Cleaning cycle

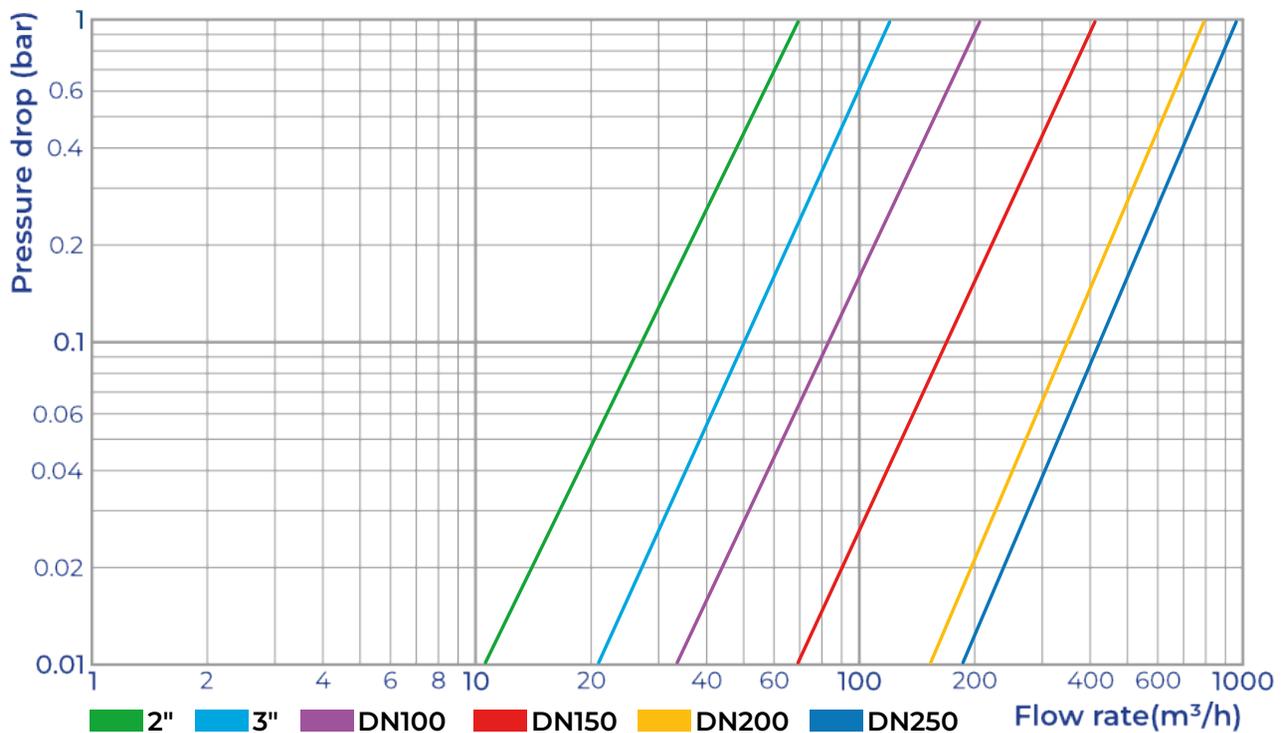
	SIZE 6	SIZE 8	SIZE 18	SIZE 30	SIZE 50
Minimum flow rate during cleaning cycle	10 m ³ /h	15 m ³ /h	15 m ³ /h	20 m ³ /h	20 m ³ /h
Minimum pressure during cleaning cycle	1.5 bar				
Water consumption for a complete cycle	55 L	84 L	84 L	110 L	110 L
Duration of cleaning cycle	20-25 sec				

Models and flow rates

Model	Construction shape	Size	In/Out	Max flow rate ⁽³⁾ [m ³ /h]	Filtering surface [cm ²]		
M-SPH 2" S6	Y, L	6	2" BSPP	30	1'500	Threaded	
M-SPH 3" S6	Y, L	6	3" BSPP	60	1'500		
M-SPH 3" S8	Y, L	8	3" BSPP	70	1'500		
M-SPH DN50 S6	Y, L	6	DN 50	30	1'500	Flanged	
M-SPH DN80 S6	Y, L	6	DN 80	60	1'500		
M-SPH DN100 S6	Y, L	6	DN 100	100	1'500		
M-SPH DN80 S8	Y, L	8	DN 80	70	2'200		
M-SPH DN100 S8	Y, L	8	DN 100	110	2'200		
M-SPH DN100 S18	Y, L	18	DN 100	120	3'300		
M-SPH DN150 S18	Y, L	18	DN 150	240	3'300		
M-SPH DN100 S30	Y, L	30	DN 100	120	5'400		
M-SPH DN150 S30	Y, L	30	DN 150	260	5'400		
M-SPH DN200 S30	L	30	DN 200	400	5'400		
M-SPH DN150 S50	Y, L	50	DN 150	260	7'400		
M-SPH DN200 S50	Y, L	50	DN 200	450	7'400		
M-SPH DN250 S50	L	50	DN 250	550	7'400		
M-SPH 2" S6 GR	Y, L	6	2"	30	1'500		Grooved connections
M-SPH 3" S6 GR	Y, L	6	3"	60	1'500		
M-SPH 4" S6 GR	Y, L	6	4"	100	1'500		
M-SPH 3" S8 GR	Y, L	8	3"	70	2'200		
M-SPH 4" S8 GR	Y, L	8	4"	110	2'200		
M-SPH 4" S18 GR	Y, L	18	4"	120	3'300		
M-SPH 6" S18 GR	Y, L	18	6"	240	3'300		
M-SPH 4" S30 GR	Y, L	30	4"	120	5'400		
M-SPH 6" S30 GR	Y, L	30	6"	260	5'400		

1. On request
 2. Certified for contact with drinking water according to the following European regulations: UBA, DVGW standard W-270, WRAS, and ACS.
 3. Flow rates calculated with a filtration degree of 120µm and clean water (NTU < 1) at a temperature of 20°C

Head loss

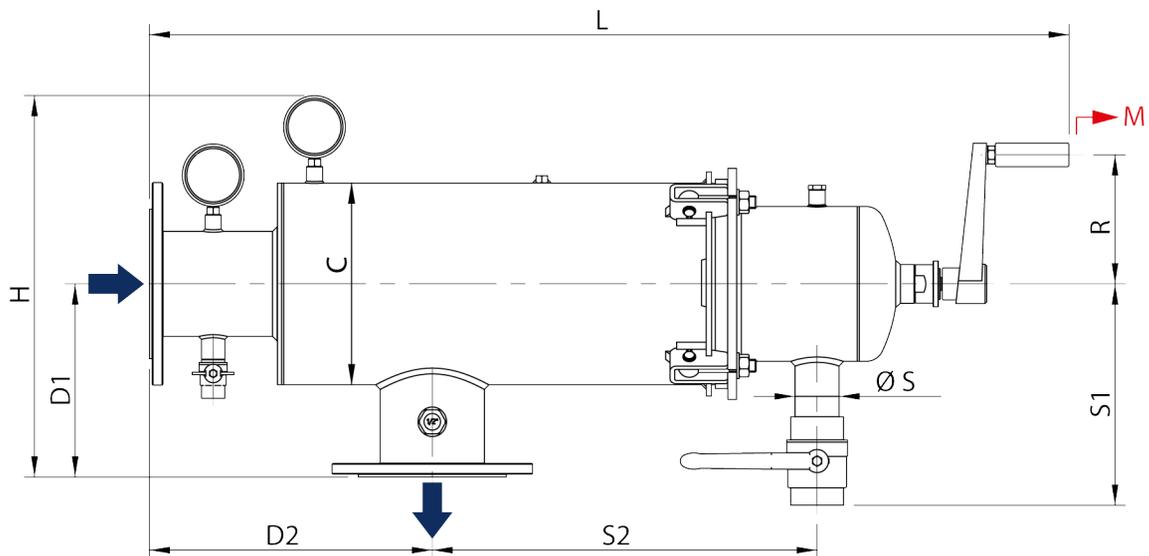


Dimensions

L Shape

Model	D1 [mm]	D2 [mm]	L [mm]	H [mm]	C [mm]	S1 [mm]	S2 [mm]	Ø S	R [mm]	M* [mm]	Weight [Kg]
M-SPH 2" L 6	190	310	856	394	219	220	268	1" BSPP	140	500	21
M-SPH 3" L 6	190	310	856	394	219	220	268	1" BSPP	140	500	22
M-SPH DN80 L 6	210	310	856	415	219	220	268	1" BSPP	140	500	27
M-SPH DN100 L 6	210	310	856	415	219	220	268	1" BSPP	140	500	28
M-SPH 3" L 8	190	310	1010	394	219	253	422	1"½ BSPP	140	700	26
M-SPH DN80 L 8	210	310	1010	415	219	252	422	1"½ BSPP	140	700	31
M-SPH DN100 L 8	210	310	1010	415	219	252	422	1"½ BSPP	140	700	32
M-SPH DN100 L 18	246	350	1066	479	273	252	423	1"½ BSPP	180	700	39
M-SPH DN150 L 18	246	350	1066	479	273	252	423	1"½ BSPP	180	700	44
M-SPH DN100 L 30	246	350	1372	479	273	252	729	1"½ BSPP	180	1000	47
M-SPH DN150 L 30	246	350	1372	479	273	252	729	1"½ BSPP	180	1000	52
M-SPH DN200 L 30	266	350	1372	499	273	252	729	1"½ BSPP	180	1000	57
M-SPH DN150 L 50	292	354	1476	549	323	295	834	2" BSPP	180	1000	80
M-SPH DN200 L 50	302	354	1476	559	323	295	834	2" BSPP	180	1000	82
M-SPH DN250 L 50	302	484	1476	559	323	295	704	2" BSPP	180	1000	87

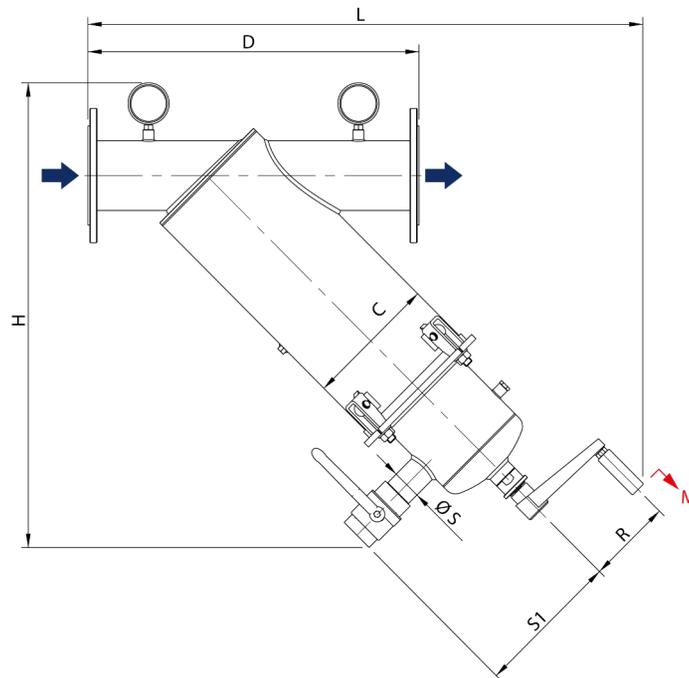
* M = minimum space required for maintenance



Y Shape

Model	D [mm]	L [mm]	H [mm]	C [mm]	S1 [mm]	Ø S	R [mm]	M* [mm]	Weight [Kg]
M-SPH 2" Y 6	412	742	588	219	198	1" BSPP	140	500	21
M-SPH 3" Y 6	464	768	602	219	198	1" BSPP	140	500	22
M-SPH DN80 Y 6	487	767	602	219	198	1" BSPP	140	500	26
M-SPH DN100 Y 6	547	809	615	219	198	1" BSPP	140	500	28
M-SPH 3" Y 8	464	877	755	219	251	1½" BSPP	140	700	26
M-SPH DN80 Y 8	487	876	755	219	251	1½" BSPP	140	700	30
M-SPH DN100 Y 8	547	918	768	219	251	1½" BSPP	140	700	32
M-SPH DN100 Y 18	585	958	769	273	251	1½" BSPP	180	700	39
M-SPH DN150 Y 18	661	981	797	273	251	1½" BSPP	180	700	44
M-SPH DN100 Y 30	585	1174	986	273	251	1½" BSPP	180	1000	47
M-SPH DN150 Y 30	661	1197	1013	273	251	1½" BSPP	180	1000	52
M-SPH DN150 Y 50	702	1273	1123	323	296	2" BSPP	180	1000	79
M-SPH DN200 Y 50	941	1519	1329	323	296	2" BSPP	180	1000	86

* M = minimum space required for maintenance

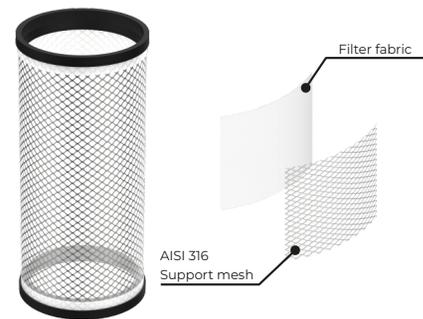


Filtering elements

PES filter kit

This filter cartridge consists of a stainless steel AISI 316 mesh cylinder supporting a layer of polyester (PES) filter fabric. This design offers a wide range of filtration grades and easy maintenance.

Available filtration degrees:
700 - 500* - 400 - 200 - 120 - 80 - 53 - 25 microns

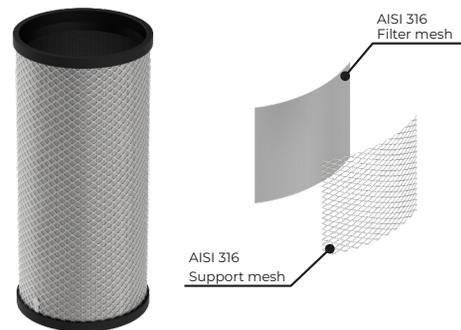


2LE filter kit

This filter cartridge is made entirely of AISI 316 stainless steel, consisting of a filter mesh welded to an outer support.

This filtering element provides greater resistance compared to polyester and is recommended for more challenging operating conditions, such as the presence of abrasive suspended solids, aggressive chemicals, or high temperatures.

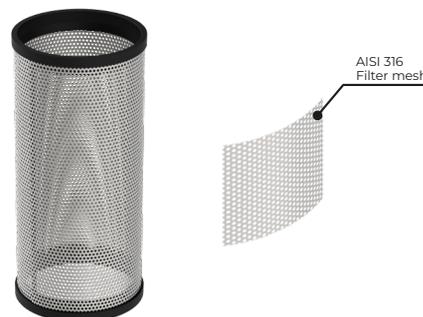
Available filtration degrees:
400* - 200* - 110 - 40 micron



1LE filter kit

Made entirely of AISI 316 perforated stainless steel, this single-layer filter element offers exceptional resistance to the most challenging operating conditions, including extremely low or high temperatures, abrasive materials, and exposure to chemicals.

Available filtration degrees:
3000 - 2000* - 1000* micron



* On request

Configurations/Availability

Filtration degree [µm]	PES Filterkit	2LE filter kit	1LE filter kit
25	✓	X	X
40	X	✓	X
53	✓	X	X
80	✓	X	X
110	X	✓	X
120	✓	X	X
200	✓	✓	X
400	✓	X	X
580	✓	X	X
810	✓	X	X
1000	X	X	✓
2000	X	X	✓
3000	X	X	✓

Accessories

Differential Pressure Kit

Enables monitoring of the pressure difference between the filter's inlet and outlet. By doing so, it allows the connection of an alarm that activates when the ΔP reaches the preset value, alerting maintenance personnel that the filter requires cleaning.

Max pressure	17 bar
ΔP range	0,3-2 bar
Max temperature	60°C

Threaded Gate Valve

Improves the cleaning efficacy in harsh operating conditions. Suitable for models with BSP threaded connections.

Material	Brass
Nominal pressure	PN10 - PN16
Max temperature	110°C

LUG Butterfly Valve

Improves the cleaning efficacy in harsh operating conditions. Suitable for models with flanged connections.

Valve body	Ductile iron
Disc	AISI 316
Liner	EPDM
Max temperature	120°C

Spare Parts

Description	Material	Compatibility
Body gasket Ø 219.1	EPDM	Size 6 - Size 8
Filter kit – gasket kit Ø145, (2pcs)	EPDM	Size 6 - Size 8
Body gasket Ø273	EPDM	Size 18 - Size 30
Filter kit – gasket kit Ø218, (2pcs)	EPDM	Size 18 - Size 30
Pressure gauge 0-10 bar G1/4" Ø63	AISI 304	All models
Pressure gauge 0-10 bar G1/4" Ø63	AISI 316	All models
Brush kit (3pcs)	Nylon	Size 6, 8, 18, 30



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