

DSH

High Efficiency Droplet Separator

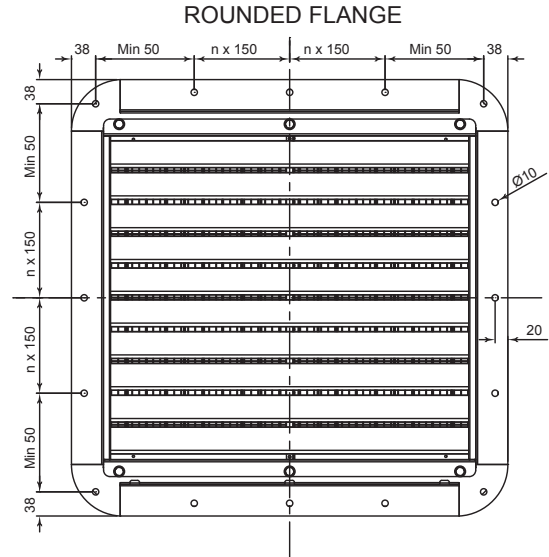
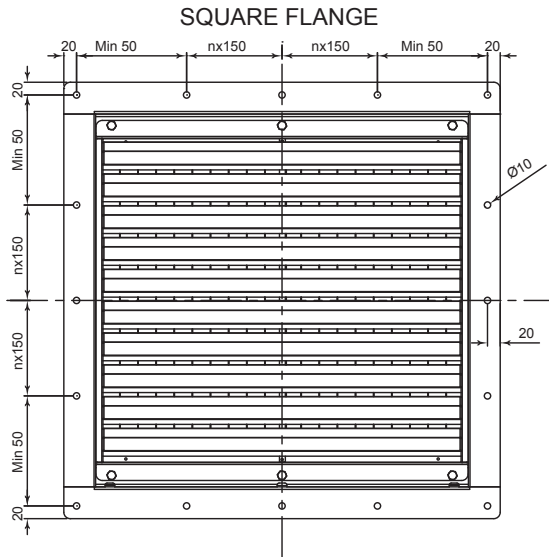


Halton's DSH high efficiency droplet separators are designed for demanding applications such as marine, oil & gas, chemical, nuclear and paper industries, where reliability, easy installation and special design play an important role. Separator vanes are designed to restrict the passage of moisture, salt spray and rainwater e.g. into HVAC systems or engine room intakes. They are used in a wide range of applications, where there are differences in wind speed and direction, levels of local turbulence, rate and droplet size, distribution of rainfall and surface water flow from the surrounding structure. Unique form of separator vanes enables high efficiency separation.

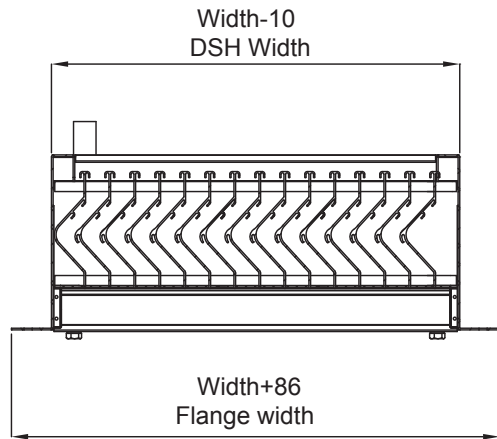
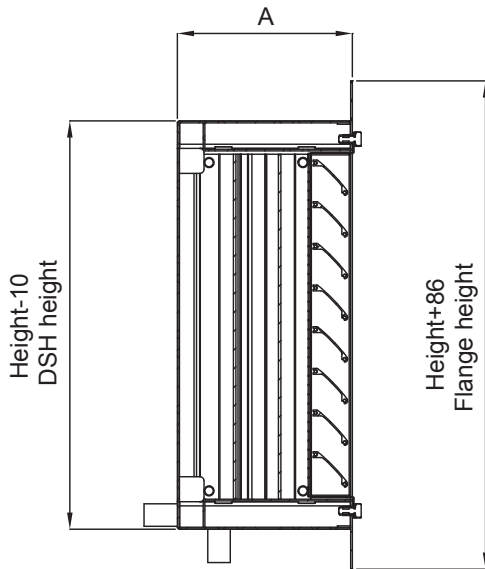
- High droplet and moisture separation efficiency
 - Class A results (EN 13030:2001)
 - Minimum pressure drop
- Performance tested according to EN 13030 test for louvres subjected to simulated rain, at the independent laboratory
- Tailored sizes and designs according to customer's needs. Unlimited sizes with modular construction
- For wall and duct installations
- A possibility to connect with Halton Marine fire dampers resulting in saving of the space
- Easy installation and commissioning. No special maintenance required
- Competitive delivery times

PART	MATERIAL	FINISHING
Water separator	Aluminium	Painted, RAL9010 as standard
Water separator	Stainless steel AISI 316	Painted as an option
Mask Louvre	Aluminium	Painted, RAL9010 as standard
Mask Louvre	Stainless steel AISI 316	Painted as an option
Frame	Aluminium	Painted, RAL9010 as standard
Frame	Stainless steel AISI 316	Painted as an option
Net	AISI 316	-
Filter	TYPE = G4 or F7, other types available on request	-

GENERAL DSH+ML DRAWINGS



Please note that round flanges are available as an option.



DIMENSIONS TABLE

TYPE	A	
	Wall installation	Duct installation
DSH	160	170
DSH+ML	210	-
DSH+G4	225	235
DSH+G4+ML	275	-
DSH+F7	535	545
DSH+ML+F7	585	-

DSH = droplet separator

DSH+ML = droplet separator + mask louvre

DSH+G4 = droplet separator + G4 panel filter

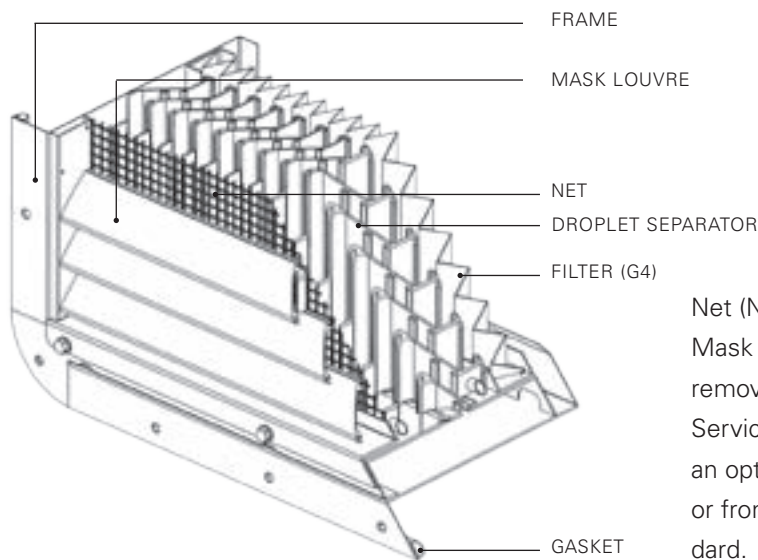
DSH+G4+ML = droplet separator + G4 panel filter + mask louvre

DSH+F7 = droplet separator + F7 bag filter with depth of 300 mm

DSH+ML+F7 = droplet separator, mask louvre, F7 bag filter with depth of 300 mm

Net available as an option.

GENERAL CONSTRUCTION



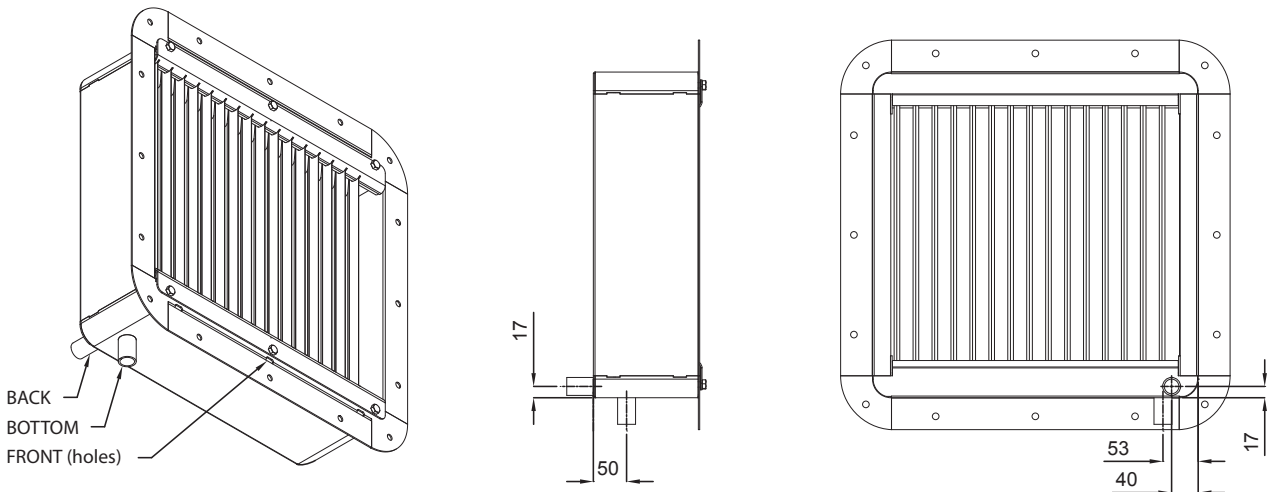
- Modular construction available for large sizes
- Single-stage model includes: droplet separator and frame. Net and mask louvre available as an option.
- Two-stage model includes: droplet separator, frame and filter. Net and mask louvre available as an option.

Net (N) prevents objects entering to the HVAC system. Mask Louvre (ML) provides aesthetic outlook. Filter (F) removes small particles.

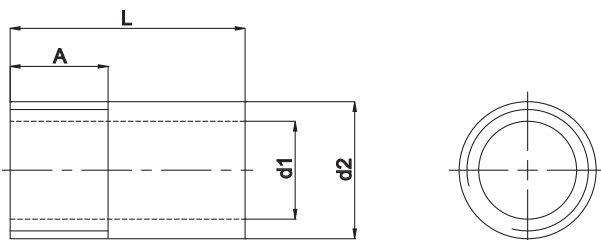
Service hatch for filter or a fire damper are available as an option. Drainage position options: back or bottom or front. Drainage fittings: weld-on nipple 3/4" as standard.

DRAIN PIPE

A threaded drain pipe nipple is welded to the bottom or back of the droplet separator. Wall mounted droplet separators can also have small holes in the front face for draining the water to outside.



Drain locations

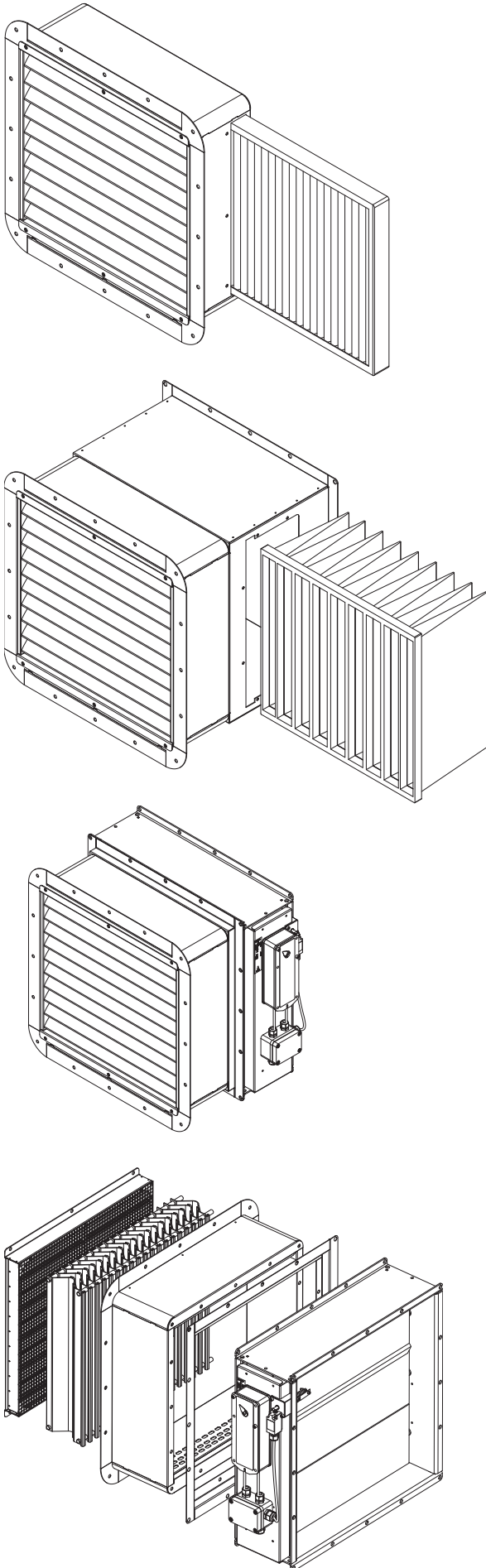


Drain pipe sizes

Weld-on nipple	A Inch	L mm	A mm	d1 mm	d2 mm
Aluminium	1/2	50	20	15	22
	3/4	50	20	20	28
	1	60	25	25	35
Stainless steel AISI 316	1/2	35	15	16	21
	3/4	40	15	22	27
	1	60	25	25	34

Standard size is 3/4". 1/2" and 1" are available as an option

OPTIONAL FEATURES



Access hatch

Enables easy access to the filter from the side of the unit. (G4 filter in the picture).

G4 Filter

Panel filters are manufactured of progressive thermally smoothed synthetic polyester having high dust holding capacity and constancy for humidity. The filters are used in general ventilation system for air purification. Halton Clean Air filters are certified with ISO9001 and ISO14001 quality and environmental standards.

F7 and F8 Bag filters

The materials of the synthetic fine filters are high-quality and durable, progressive mounted synthetic fibres. The filters can be used in example for air purification of intake air. Halton Clean Air filters are certified with ISO9001 and ISO14001 quality and environmental standards. The fine filters are also certified by Eurovent (EN779) standard.

Installation in conjunction with fire damper

Halton droplet separator can be connected to a Halton Marine fire damper with or without a connection piece. In both cases the construction is modified to fit the fire damper. Connecting DSH together with a fire damper must be mentioned when ordering products.

Fire dampers are used in ventilation ducts to prevent the fire progression within a ventilation ductwork. Halton Marine manufacturers A0(A60)-class and H0(H120) fire dampers that are certified according to leading classification societies worldwide. FDB2, FDL and FEX fire dampers are ATEX approved. In addition FDB2 is shock-tested. Special flanges and drilling patterns are available for all models on request. The structural flexibility and high-quality combined with a wide range of accessories (including explosion-proof) and special steels, enable Halton Marine to offer tailored solutions for its customers.

Combining Halton Marine droplet separator to fire damper offers customers a compact solution for air intake that also saves space. The products are recommended to be connected together at Halton Marine factory.

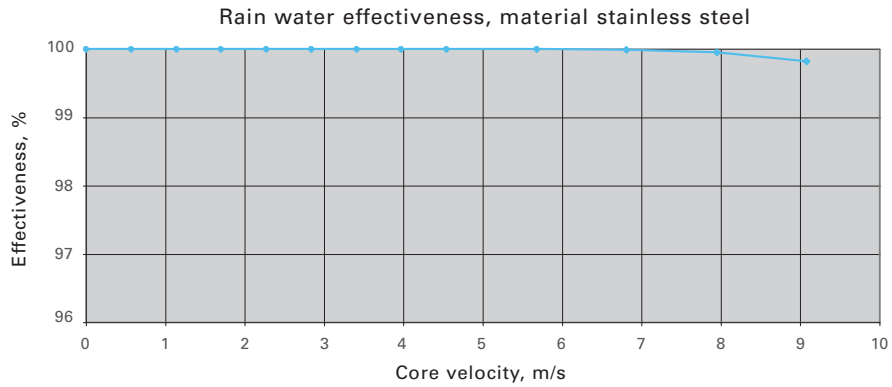
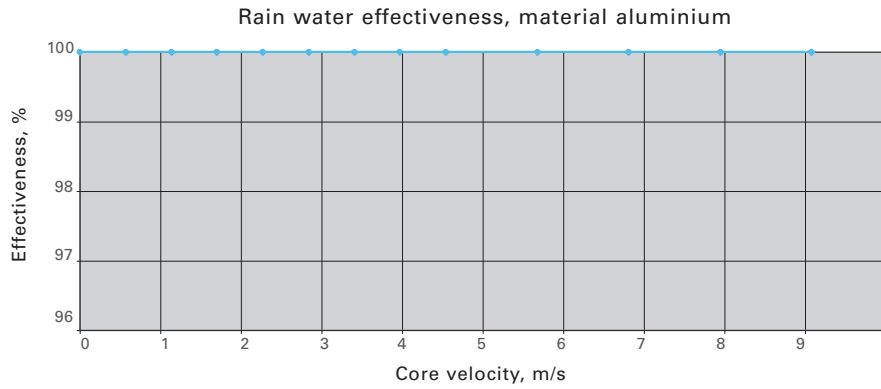
PERFORMANCE DATA

Effectiveness for removal of simulated rain

EN 13030:2001

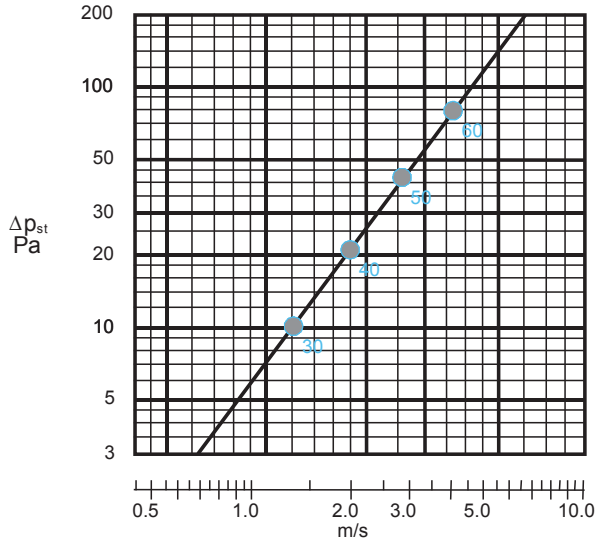
Rainfall rate: 75 (l/h)/m², (75 mm/h)

Vertical installation

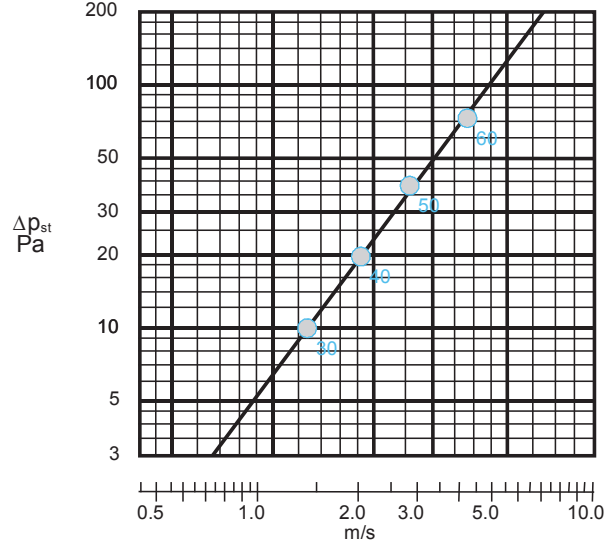


Pressure drop and sound data

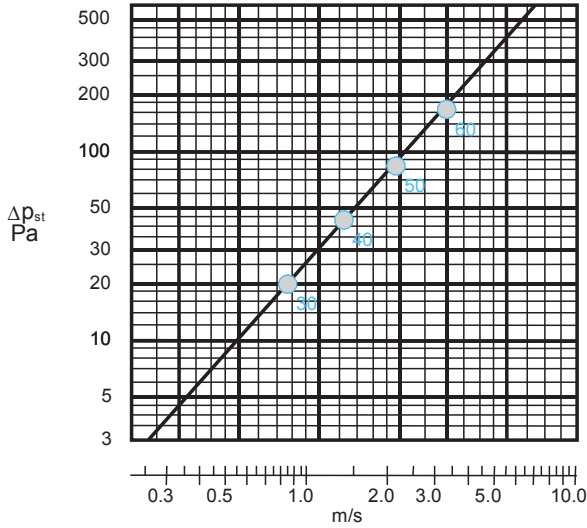
DSH aluminium



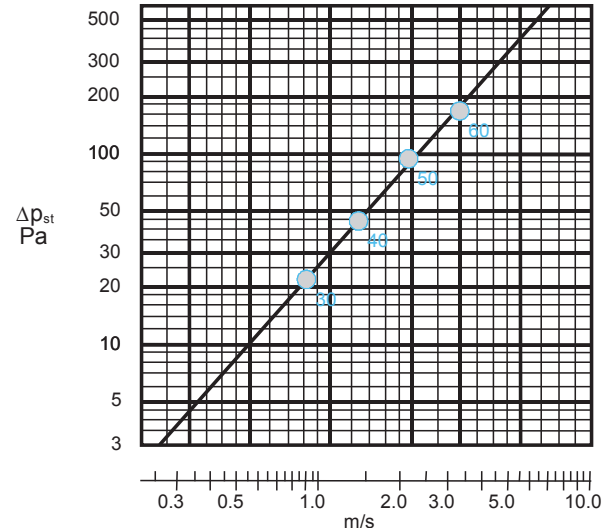
DSH stainless steel



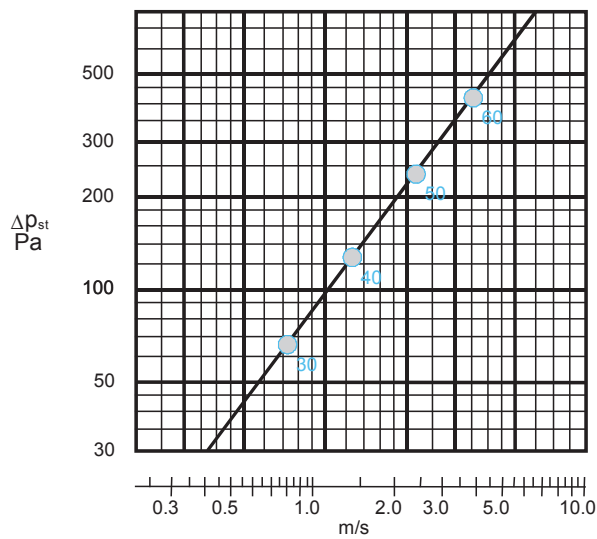
DSH aluminium with G4 filter



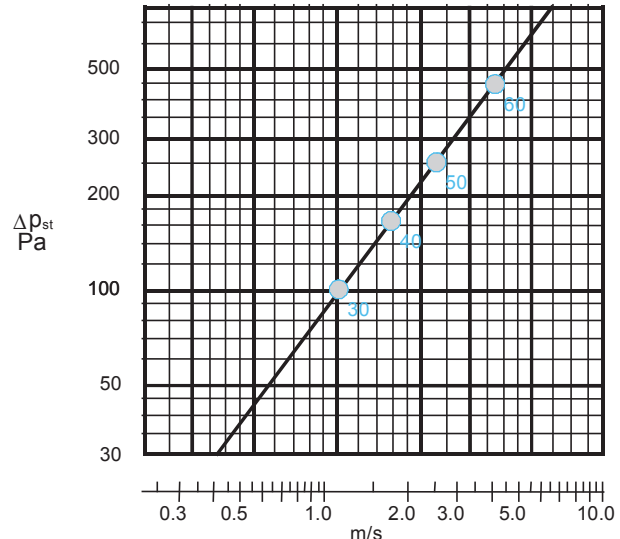
DSH stainless steel with G4 filter



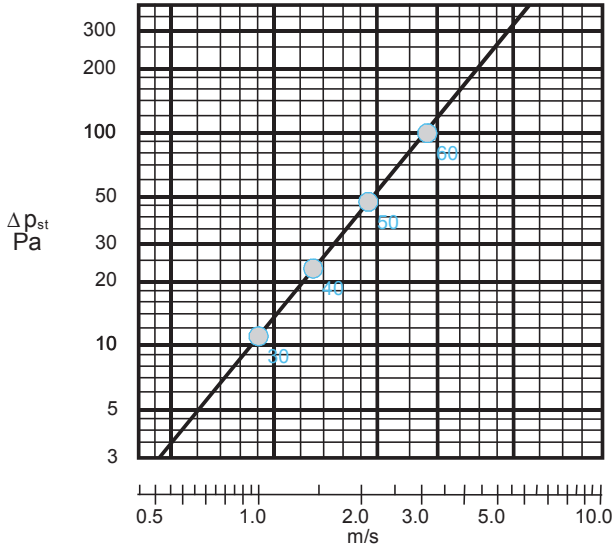
DSH aluminium with F7 filter



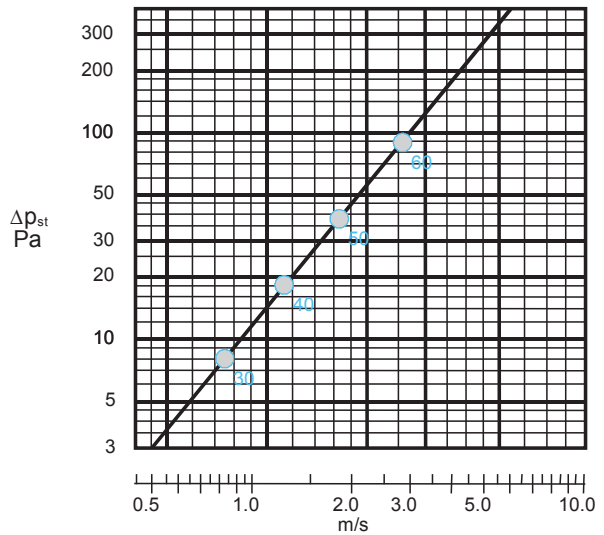
DSH stainless steel with F7 filter



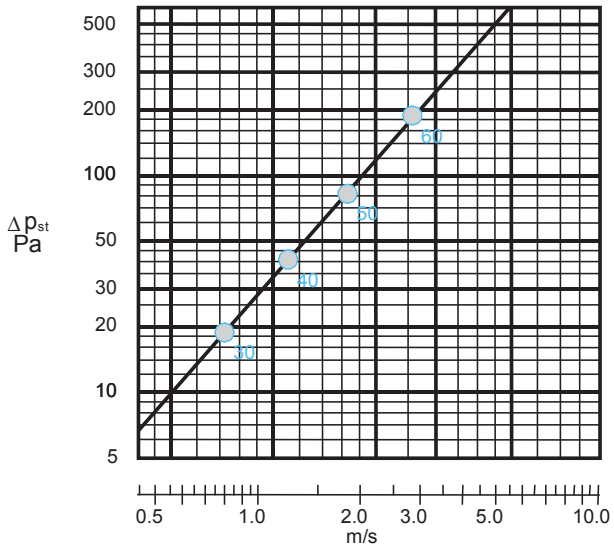
DSH aluminium with mask louvre



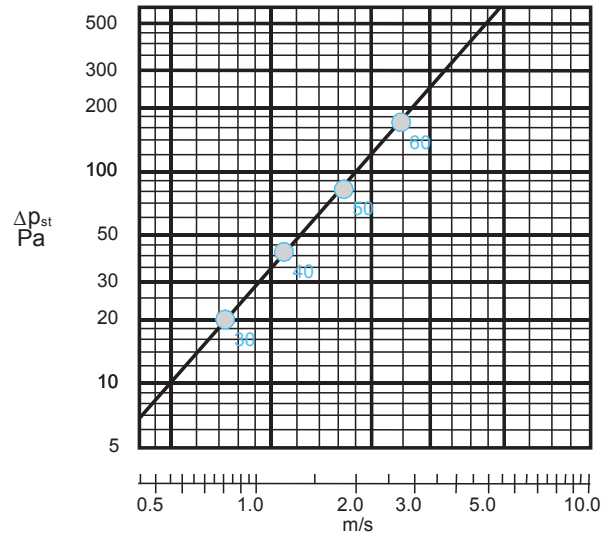
DSH stainless steel with mask louvre



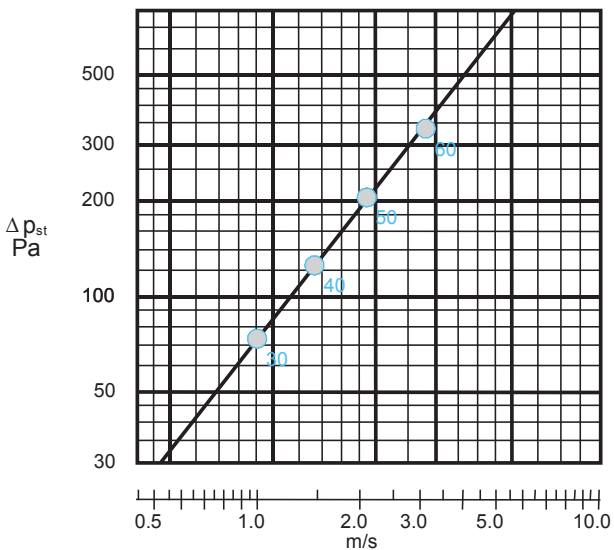
DSH aluminium with mask louvre and G4 filter



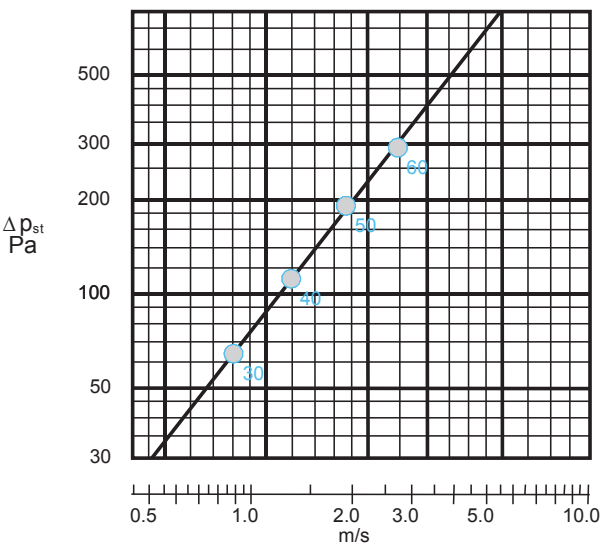
DSH stainless steel with mask louvre and G4 filter



DSH aluminium with mask louvre and F7 filter



DSH stainless steel with mask louvre and F7 filter



Measured size 1000 x 1000 mm.

WEIGHTS OF DSH including frame, aluminium (KG)

H/Height	B / Width (mm)														
mm	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
150	1,3	1,6	2,4	3,1	3,8	4,6	5,3	5,9	6,7	7,4	8,1	8,9	9,6	10,2	11,0
200	1,7	2,1	3,1	3,9	4,8	5,8	6,7	7,6	8,6	9,4	10,3	11,3	12,2	13,0	14,0
300	2,4	2,9	4,4	5,6	6,8	8,3	9,5	10,8	12,2	13,5	14,7	16,2	17,4	18,6	20,1
400	3,1	3,7	5,7	7,3	8,9	10,8	12,4	14,0	15,9	17,5	19,1	21,0	22,6	24,2	26,1
500	3,9	4,6	7,0	8,9	10,9	13,3	15,2	17,2	19,6	21,5	23,5	25,9	27,8	29,8	32,2
600	4,6	5,4	8,3	10,6	12,9	15,8	18,1	20,4	23,3	25,6	27,9	30,8	33,0	35,3	38,2
700	5,3	6,3	9,6	12,3	14,9	18,3	20,9	23,6	27,0	29,6	32,2	35,6	38,3	40,9	44,3
800	6,0	7,1	10,9	13,9	16,9	20,8	23,8	26,8	30,6	33,6	36,6	40,5	43,5	46,5	50,3
900	6,7	7,9	12,3	15,6	19,0	23,3	26,6	30,0	34,3	37,7	41,0	45,4	48,7	52,1	56,4
1000	7,5	8,8	13,6	17,3	21,0	25,8	29,5	33,2	38,0	41,7	45,4	50,2	53,9	57,6	62,4
1100	8,2	9,6	14,9	19,0	23,0	28,3	32,4	36,4	41,7	45,7	49,8	55,1	59,1	63,2	68,5
1200	8,9	10,5	16,2	20,6	25,0	30,8	35,2	39,6	45,4	49,8	54,2	59,9	64,4	68,8	74,5

The weights on the table are indicative and do not include the filter.

WEIGHTS OF DSH+ML including frame, aluminium (KG)

H/Height	B / Width (mm)														
mm	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
150	1,9	2,3	3,3	4,2	5,1	6,1	7,0	7,9	8,9	9,8	10,8	11,7	12,7	13,6	14,6
200	2,3	2,8	4,1	5,2	6,3	7,6	8,7	9,9	11,1	12,2	13,4	14,6	15,8	16,9	18,2
300	3,2	3,8	5,6	7,2	8,8	10,6	12,1	13,7	15,5	17,1	18,6	20,4	22,0	23,6	25,4
400	4,0	4,8	7,2	9,2	11,2	13,5	15,5	17,5	19,9	21,9	23,9	26,2	28,2	30,2	32,6
500	4,9	5,9	8,8	11,2	13,6	16,5	19,0	21,4	24,3	26,7	29,1	32,1	34,5	36,9	39,8
600	5,7	6,9	10,3	13,2	16,0	19,5	22,4	25,2	28,7	31,5	34,4	37,9	40,7	43,6	47,0
700	6,6	7,9	11,9	15,2	18,5	22,5	25,8	29,1	33,1	36,4	39,6	43,7	46,9	50,2	54,2
800	7,5	8,9	13,5	17,2	20,9	25,5	29,2	32,9	37,5	41,2	44,9	49,5	53,2	56,9	61,5
900	8,3	9,9	15,0	19,2	23,3	28,4	32,6	36,7	41,9	46,0	50,2	55,3	59,4	63,6	68,7
1000	9,2	10,9	16,6	21,2	25,8	31,4	36,0	40,6	46,2	50,8	55,4	61,1	65,6	70,2	75,9
1100	10,1	12,0	18,2	23,2	28,2	34,4	39,4	44,4	50,6	55,6	60,7	66,9	71,9	76,9	83,1
1200	10,9	13,0	19,7	25,2	30,6	37,4	42,8	48,3	55,0	60,5	65,9	72,7	78,1	83,6	90,3

The weights on the table are indicative and do not include the filter.

WEIGHTS OF DSH including frame, stainless steel AISI316 (KG)

H/Height	B / Width (mm)														
mm	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
150	3,3	4,2	5,8	7,4	9,0	10,7	12,3	14,0	15,5	17,2	18,8	20,5	22,1	23,7	25,3
200	4,0	4,9	6,7	8,6	10,4	12,3	14,1	16,0	17,8	19,7	21,5	23,4	25,2	27,1	28,9
300	5,2	6,4	8,5	10,9	13,1	15,5	17,7	20,1	22,2	24,6	26,8	29,2	31,3	33,8	35,9
400	6,4	7,9	10,4	13,3	15,8	18,7	21,2	24,1	26,7	29,6	32,1	35,0	37,5	40,4	43,0
500	7,6	9,3	12,2	15,6	18,5	21,9	24,8	28,2	31,1	34,5	37,4	40,8	43,7	47,1	50,0
600	8,8	10,8	14,1	18,0	21,2	25,1	28,4	32,3	35,6	39,5	42,7	46,6	49,9	53,8	57,1
700	10,1	12,3	15,9	20,3	23,9	28,3	32,0	36,4	40,0	44,4	48,1	52,5	56,1	60,5	64,1
800	11,3	13,7	17,7	22,6	26,6	31,5	35,6	40,5	44,5	49,4	53,4	58,3	62,3	67,2	71,2
900	12,5	15,2	19,6	25,0	29,4	34,8	39,1	44,5	48,9	54,3	58,7	64,1	68,5	73,9	78,3
1000	13,7	16,7	21,4	27,3	32,1	38,0	42,7	48,6	53,4	59,3	64,0	69,9	74,7	80,6	85,3
1100	14,9	18,1	23,3	29,7	34,8	41,2	46,3	52,7	57,8	64,2	69,3	75,7	80,9	87,2	92,4
1200	16,2	19,6	25,1	32,0	37,5	44,4	49,9	56,8	62,3	69,2	74,7	81,5	87,0	93,9	99,4

The weights on the table are indicative and do not include the filter.

WEIGHTS OF DSH+ML including frame, stainless steel AISI316 (KG)

H/Height	B / Width (mm)														
mm	150	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
150	5,1	6,3	8,6	11,0	13,3	15,7	18,0	20,4	22,7	25,1	27,4	29,8	32,1	34,5	36,8
200	5,9	7,2	9,8	12,5	15,0	17,7	20,2	22,9	25,5	28,2	30,7	33,4	36,0	38,6	41,2
300	7,5	9,1	12,1	15,4	18,4	21,7	24,7	28,0	31,0	34,3	37,3	40,6	43,6	46,9	49,9
400	9,1	11,0	14,5	18,4	21,9	25,7	29,2	33,1	36,6	40,5	43,9	47,8	51,3	55,2	58,7
500	10,7	12,9	16,9	21,3	25,3	29,8	33,7	38,2	42,1	46,6	50,6	55,0	59,0	63,4	67,4
600	12,3	14,8	19,2	24,3	28,7	33,8	38,2	43,3	47,7	52,7	57,2	62,2	66,7	71,7	76,1
700	13,9	16,7	21,6	27,3	32,1	37,8	42,7	48,3	53,2	58,9	63,8	69,4	74,3	80,0	84,9
800	15,5	18,6	24,0	30,2	35,6	41,8	47,2	53,4	58,8	65,0	70,4	76,6	82,0	88,3	93,6
900	17,1	20,5	26,3	33,2	39,0	45,8	51,7	58,5	64,3	71,2	77,0	83,9	89,7	96,5	102,3
1000	18,7	22,4	28,7	36,1	42,4	49,9	56,2	63,6	69,9	77,3	83,6	91,1	97,4	104,8	111,1
1100	20,3	24,3	31,1	39,1	45,9	53,9	60,7	68,7	75,4	83,5	90,2	98,3	105,0	113,1	119,8
1200	21,9	26,2	33,4	42,1	49,3	57,9	65,1	73,8	81,0	89,6	96,9	105,5	112,7	121,3	128,6

The weights on the table are indicative and do not include the filter.