

Water source heat pumps

Water cooled



Refrigerant R407C



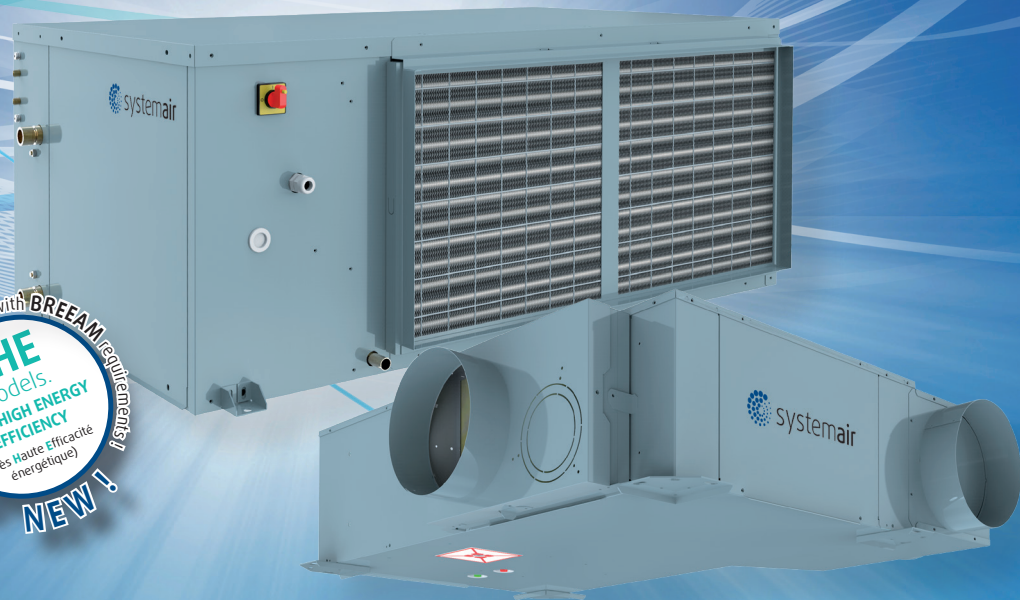
SYSEFTYS - SYSHRW

Water Source Heat Pumps Range

from 2.1 to 30.0 kW



from 2.7 to 38.1 kW



SYSEFTYS - SYSHRW

Water Source Heat Pumps

The SYSEFTYS - SYSHRW water source heat pumps range was born from our considerable product experience and our awareness of the market, all combined with a technology based on the energy efficiency of machines, in order to provide a market offer for units with the highest performance in terms of COP and EER.

This range has been designed for installation in specifically designed false ceilings or in technical rooms.



SYSEFTYS

2000-3000



SYSHRW

19-120

SYSEFTYS

- **3 sizes** : 2000, 2500 and 3000 (EC motor as standard)
- **4 versions** : Cooling and Heating (RC), cooling only (ST), Cooling and Heating or electrical heating (SH), Cooling and electrical heating (RH)
- **Cooling capacity from 2.1 to 3.0 kW**
- **Heating capacity from 2.7 to 3.6 kW**

SYSHRW

- **10 sizes** : from 19 to 120
- **4 versions** : Cooling and Heating (RC), cooling only (ST), Cooling and Heating or electrical heating (SH), Cooling and electrical heating (RH)
- **2 models** : Standard or **THE** (Very High Efficiency)
- **Cooling capacity from 5.3 to 30.0 kW**
- **Heating capacity from 5.8 to 38.1 kW**
- **EC versions on request**

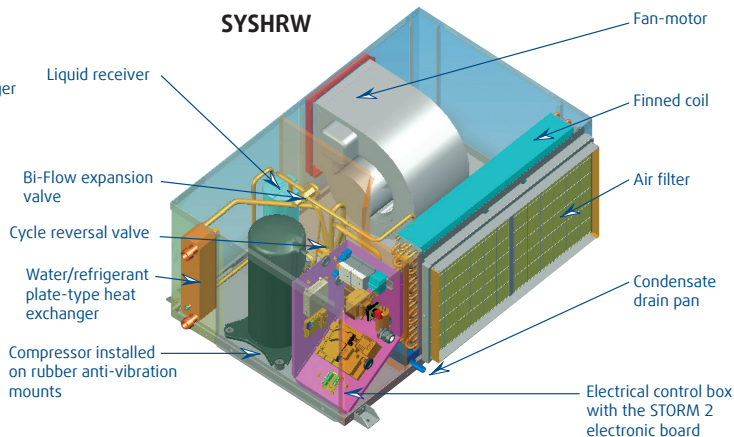
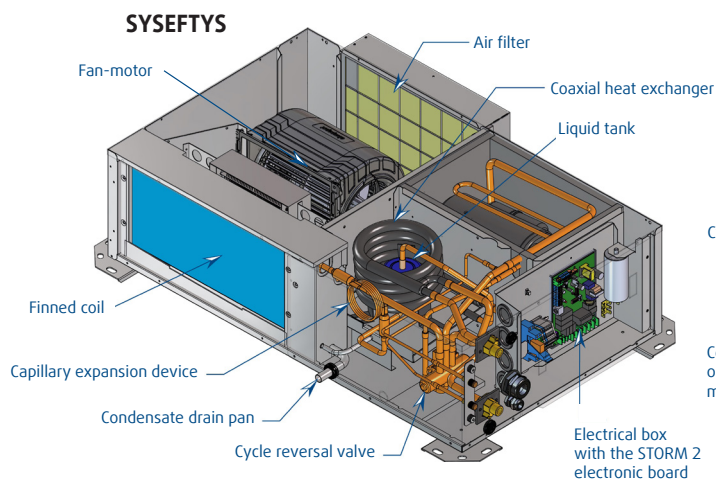


All of our SYSEFTYS and SYSHRW water source heat pumps equipped with EC fans have this label «Green ventilation». It features all Systemair products with a high energy saving potential. Products labelled with «Green ventilation» combine energy economy with energy efficiency.

Advantages

- High EER/COP
- With the new **THE** models, each size of the SYSHRW range is now in line with BREEAM requirements :
 - SFP < 750 W/m³/s (SFP 2 cat. according to EN13779)
 - COP > 4,2
 - EER > 4,0
- Refrigerant charge < 5kg.
- **Low sound levels** as standard.
- Easy access to the compressor, fan and electronic control box, through **wide removable panels**.
- **L*, U* or in-line air blowing**.
- Condensate drain pan **with anti-corrosion treatment**.
- **Heat exchanger with brazed stainless steel plates (SYSHRW) / coaxial (SYSEFTYS)** for an increased efficiency.
- **Differential pressure switch for antifreeze protection** as standard.
- **Bi-Flow thermostatic expansion valve** for a wide operating range.
- Stand-alone regulation by a **STORM 2 electronic board which can be configured to 4 operating modes using the RCL user remote control**, which comprises a digital display and essential control keys.
- **The µBMS mini-supervision station**, available as an optional extra, enables **32 units in 15 zones** to be monitored and managed with **global or individual area programming**.

* depending on the sizes



Quick selection guide

SYSEFTYS		Cooling and Heating capacities (kW)		EER*	COP*	Nominal air flow (m³/h)	Dimensions LxWxH (mm)
	2000	2.1	2.7	3.88	4.12	451	900 x 530 x 240
	2500	2.4	3.0	4.13	4.17	503	
	3000	3.0	3.6	3.85	4.30	605	
SYSHRW		Cooling and Heating capacities (kW)		EER*	COP*	Nominal air flow (m³/h)	Dimensions LxWxH (mm)
	19	5.3	5.8	4.00	4.20	1250	900 x 600 x 439
	27	7.4	8.3	3.93	3.97	1185	1050 x 660 x 460
	NEW 27 THE	7.5	9.3	4.18 ↑	4.30 ↑	1180	
	30	8.7	9.8	3.85	3.78	1490	
	NEW 30 THE	8.9	10.0	4.45 ↑	4.80 ↑	1500	
	36	10.1	11.0	3.86	3.63	1580	1250 x 705 x 513
	NEW 36 THE	11.1	12.2	4.44 ↑	4.38 ↑	1580	
	42	11.4	14.4	3.81	4.35	2040	1250 x 705 x 513
	NEW 42 THE	12.5	14.5	4.43 ↑	5.02 ↑	2040	
	48	13.0	14.9	4.20	4.50	2750	1250 x 705 x 583
	NEW 60 THE	14.3	16.1	3.52	3.81	2840	
	60	14.3	16.1	3.52	3.81	2840	1250 x 705 x 513
	NEW 72 THE	16.7	18.9	4.96 ↑	4.49 ↑	2840	
	72	17.2	21.5	3.48	3.59	3570	1680 x 955 x 770
NEW 72 THE	20.6	22.6	4.62 ↑	4.21 ↑	3800		
96	21.7	26.6	3.94	3.75	4700		
NEW 96 THE	24.5	28.5	4.75 ↑	4.51 ↑	4700	1680 x 955 x 770	
120	30.0	38.1	4.18	4.28	5600		

* COP and EER Compressor

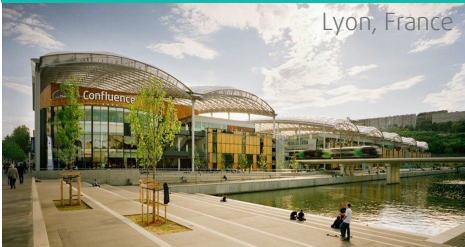
Perfect for offices, hotels, industries and shopping centers



For a **complete solution**, think also about our **Rooftop units**

Confluence Shopping center

Lyon, France



• 50 water source heat pumps SYSHRW

McArthurGlen Provence Outlet

Miramas, France



• 160 water source heat pumps SYSHRW



HAN

SysAer

SYSEFTYS - Technical features

SYSEFTYS		2000	2500	3000
Total cooling capacities ⁽¹⁾	W	2057	2405	2983
Sensible cooling capacities ⁽¹⁾	W	1686	1983	2346
Heating capacities ⁽²⁾	W	2706	2997	3558
COP compressor ⁽²⁾		4.12	4.17	4.30
EER compressor ⁽¹⁾		3.88	4.13	3.85
COP Total		3.84	3.82	3.85
EER Total		3.65	3.71	3.39
Ventilation				
Nominal air flow	m ³ /h	451	503	605
Power input - ventilation	W	65	66	105
Air filter - Number / Efficiency			1 / G2	
Hydraulic circuit				
Number of heat exchanger			1	
Maximum water pressure	bar		31	
Nominal water flow	l/h	419	456	623
Water pressure drop at nominal water flow	kPa	11	13	23
Water pressure drop at nominal water flow with valve	kPa	27	30	44
Hydraulic connections - Inlet/Outlet	inches		Male ISO G 1/2" INT	
Condensate outlet - External Ø	mm		16	
Refrigerant circuit				
Number of circuit			1	
Compressor type			Rotary	
Electrical data				
Electrical power supply	V / Ph / Hz		230V / 1~ / 50Hz	
Electric heater power input ⁽³⁾		1200	1600	2000
Compressor nominal current ⁽⁴⁾	A	2.8	3.0	4.0
Compressor starting current ⁽⁵⁾	A	16	16	18.9
Acoustical data (LS/MS/HS)				
Sound Power - Return + Radiated	dB(A)	55/57/59	56/58/60	56/58/62
Sound Power - Discharge	dB(A)	53/55/56	54/56/58	58/61/65
Sound Pressure*	dB(A)	34/36/38	35/37/40	37/40/44
NR*		30/32/34	31/34/36	34/37/42
Weight				
Weight - Operating	kg	48	48	48

(1) Nominal cooling capacities based on entering air temperature of 27 °C dry bulb, 19 °C wet bulb with entering water temperature of 30 °C.

(2) Nominal heating capacities based on entering air temperature of 20 °C dry bulb, 15 °C wet bulb with entering water temperature of 20 °C.

(3) Electric heating coil is available for SH & RH versions.

(4) Nominal currents are given at +/- 5%.

(5) Starting currents are given at +/- 10%.

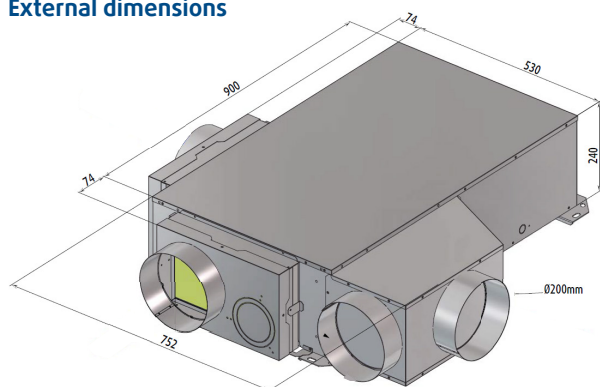
* Informative data, considering an hypothetical sound attenuation of the room and installation of 21 dB.

SYSEFTYS - Units Designation and Dimensions

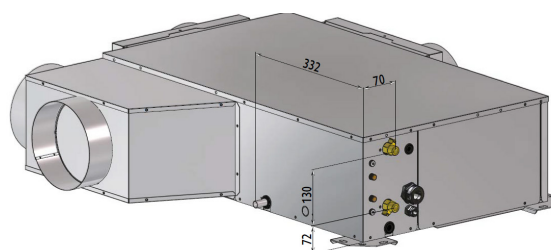
FT30 . RC . STD AV . 230V/1~/50Hz . R407C . SYSTEMAIR . EC . \$. STORM2 . RCL . \$F . \$. + . CR . IND
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭

	Description	
①	Size	FT20 : SYSEFTYS size 2000 FT25 : SYSEFTYS size 2500 FT30 : SYSEFTYS size 3000
②	Version	ST : Cooling only RH : Cooling and electrical heating RC : Cooling and Heating SH : Cooling and Heating or electrical heating
③	Configuration	STD AV : Standard Aeraulic, frontal hydraulic connections STD LT : Standard Aeraulic, lateral hydraulic connections MI AV : Mirror Aeraulic, frontal hydraulic connections MI LT : Mirror Aeraulic, lateral hydraulic connections
④	Electrical Power Supply	230V/1~/50Hz
⑤	Refrigerant	R407C
⑥	Brand	SYSTEMAIR : Systemair
⑦	Fan type	EC : EC low energy consumption fan motor STD AV and STD LT configurations EC-VI : EC low energy consumption fan motor MI AV and MI LT configurations
⑧	Filter	\$: Without air filter G2M1 : G2M1 filter
⑨	Control	STORM2 : STORM2 STORM2+MODBUS : STORM2+MODBUS LON : LON AUTRE : Other
⑩	Remote control	\$: Without module µBMS : Supervision module RCL : Local control module IR : Infrared module
⑪	Air return	\$F : Frontal without plenum RFØ200 : Frontal with plenum + Ø200 nozzle RFØ200 ANØ100 : Frontal with plenum + Ø200 Ø100 nozzles RFØ200 ANØ125 : Frontal with plenum + Ø200 Ø125 nozzles \$L : Side without plenum RLØ200 : Side with plenum + Ø200 nozzle RLØ200 ANØ100 : Side with plenum + Ø200 Ø100 nozzles RLØ200 ANØ125 : Side with plenum + Ø200 Ø125 nozzles
⑫	Air blowing	\$: Without plenum SFØ200 : With frontal plenum + Ø200 nozzle SLØ200 : With lateral plenum + Ø200 nozzle
⑬	Option	CR : Quick connection RD : Sum alarm DIS : Circuit breaker SOND : Room sensor
⑭	Packing	IND : Individual INDP : Individual with plenum GR : Bundled GRP : Bundled with plenum

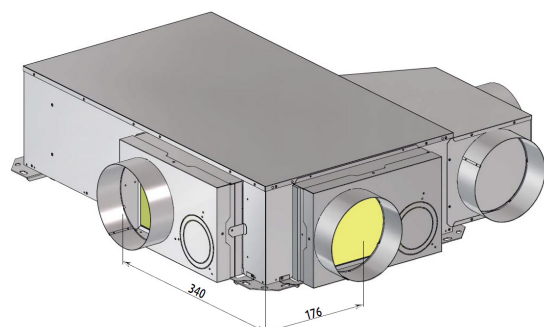
External dimensions



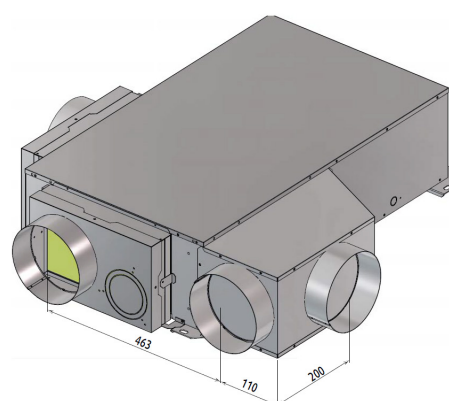
Hydraulic connections

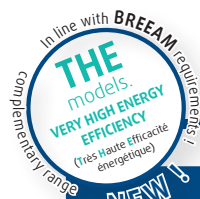


Air duct connection - Return side



Air duct connection - Discharge side



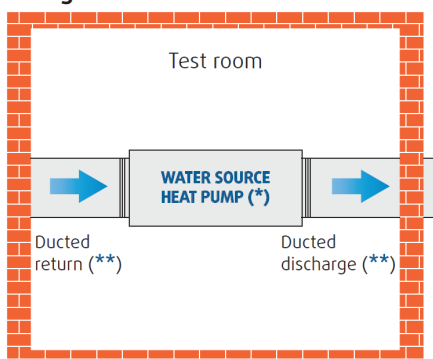


SYSHRW - Technical features

		19	27	27 THE	30	30 THE	36	36 THE	42	42 THE	48	60	60 THE	72	72 THE	96	96 THE	120	
Ventilation																			
Nominal air flow	m ³ /h	1250	1185	1180	1490	1500	1580	1580	2040	2040	2750	2840	2840	3570	3800	4700	4700	5600	
Power input - ventilation	W	230	230	230	400	400	418	418	601	601	733	911	911	1350	820	796	796	1360	
Air filters - Number / Efficiency		2 / G2																	
Hydraulic circuit																			
Number of plate heat exchanger		1																	
Maximum water pressure	bar	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	
Nominal water flow	l/h	921	1540	1620	1764	1800	2030	2306	2592	2600	2822	3348	3550	3924	4300	4860	4960	6408	
WPD at nominal water flow	kPa	13	17	13	23	20	25	21	33	28	34	40	35	61	50	55	55	80,5	
WPD at nominal water flow with valve	kPa	16	23	16	33	28	39	30	55	42	60	77	63	112	87	133	130	250	
Hydraulic connections - Inlet / Outlet	inches	ISO G 3/4" INT											ISO G 1"1/4	ISO G 3/4" INT	ISO G 1"1/4				
Condensate outlet - External Ø	mm	19														22			
Refrigerant circuit																			
Number of circuit		1																	
Compressor type		Rotary									Scroll								
Electrical data																			
Electrical power supply		230V / 1- / 50Hz ±10%					400V / 3- / 50Hz +Neutre												
Electric heater power input ⁽³⁾		2250	3750	3750	3750	3750	4500	4500	5500	5500	6500	7500	7500	9000	9000	13000	13000	16000	
Compressor nominal current ⁽⁴⁾	A	6,6	3,7	3,7	4,5	4,5	5,4	5,4	5,7	5,7	7,0	7,5	7,5	15	15	15,9	15,9	19,6	
Compressor starting current ⁽⁵⁾	A	33,0	32,0	32,0	40,0	40,0	46,0	46,0	51,5	51,5	54,0	65,5	65,5	101	101	111	111	118	
Acoustical data (Configuration A)																			
Lw radiated casing only (LS)	dB(A)	51	54	54	53	53	53	53	54	54	55	55	55	57	55	70	70	72	
Lw radiated casing only (MS)	dB(A)	54	56	56	54	54	56	56	56	56	59	59	59	60	59	69	69	69	
Lw radiated casing only (HS)	dB(A)	58	57	57	57	57	58	58	58	58	63	63	63	63	62	68	68	70	
Weight																			
Weight of the unit (approx.)	kg	85	100	112	115	115	120	133	133	135	140	144	149	150	253	255	259	280	

- (1) Nominal cooling capacities based on : entering air temperature of 27 °C dry bulb, 19 °C wet bulb with entering water temperature of 30°C.
- (2) Nominal heating capacities based on : entering air temperature of 20 °C dry bulb, 15 °C wet bulb with entering water temperature of 20°C.
- (3) Electric heating coil is an optional feature available for SH & RH versions.
- (4) Nominal currents are given at +/- 5%.
- (5) Starting currents are given at +/- 10%.

Configuration A



- (*) Unit suspended at 1 metre from ground.
- (**) 1.5 metre long acoustic duct.

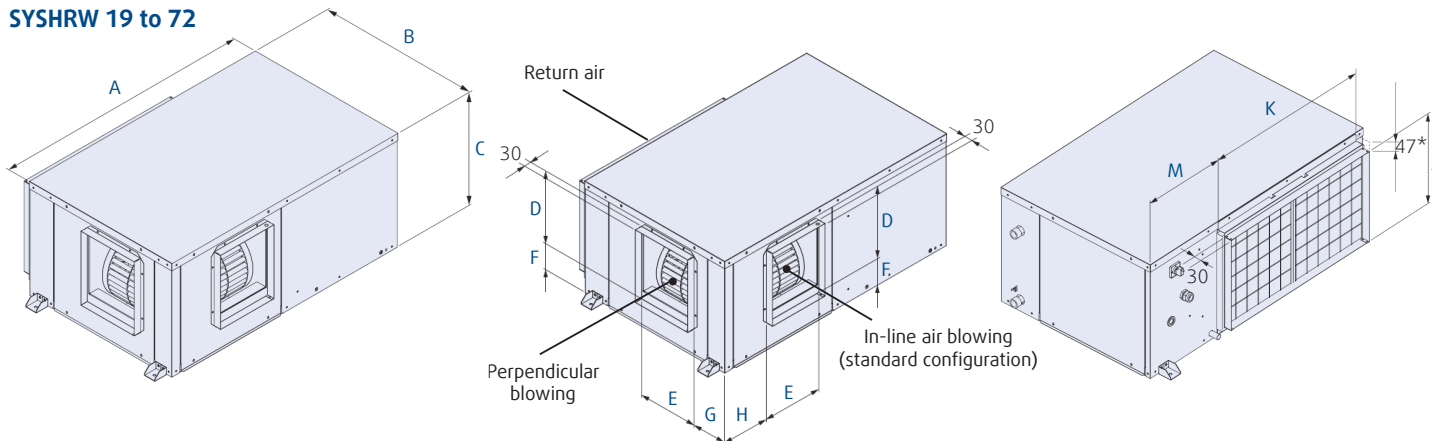
SYSHRW - Units Designation and Dimensions

SYSHRW 27 . THE . ST . 400V/3N~/50Hz . R407C . SYSTEMAIR . SL . \$. SECT

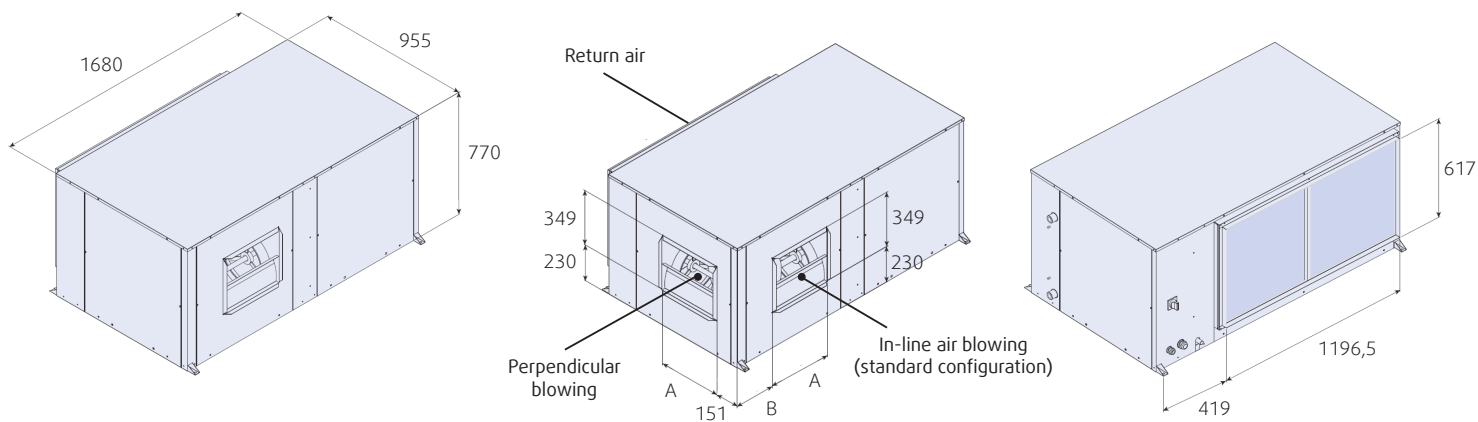
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

	Description	
① Size	SYSHRW 19 : size 19 SYSHRW 27 : size 27 SYSHRW 30 : size 30 SYSHRW 36 : size 36 SYSHRW 42 : size 42	SYSHRW 48 : size 48 SYSHRW 60 : size 60 SYSHRW 72 : size 72 SYSHRW 96 : size 96 SYSHRW 120 : size 120
② Model	<vide> : Standard THE : Very High Efficiency	
③ Version	ST : Cooling only RH : Cooling and electrical heating	RC : Cooling and Heating SH : Cooling and Heating or electrical heating
④ Electrical Power Supply	230V/1~/50Hz 400V/3N~/50Hz	
⑤ Refrigerant	R407C	
⑥ Brand	SYSTEMAIR : Systemair	
⑦ Air blowing	SL : Standard (In-line) SE : Perpendicular (sizes 19 to 60)	SE : Perpendicular (sizes 72 to 120)
⑧ Filter	\$: Without filter G3M1 : G3M1 filter	G2M1 : G2M1 filter
⑨ Option	ALAR : Sum alarm SOND : Room sensor MODBUS : Modbus VAN MOT : Motorised valve	SECT : Cut off switch µBMS : Supervision module RCL : Local control module

SYSHRW 19 to 72



SYSHRW 72 THE - 96- 96 THE - 120



SYSHRW 19 to 72	A	B	C	D	E	F	G	H	J	K	M
19	900	600	439	249	249	102	117	160	345	582	280
27 - 27 THE - 30 - 30 THE - 36	1050	660	460	299	249	109	144	196	365	682	331
36 THE - 42 - 42 THE	1250	705	513	299	249	124	165	259	419	882	331
60 THE	1250	705	583	299	349	166	110	215	514	882	331
48 - 60 - 72	1250	705	513	299	349	166	110	215	419	882	331

SYSHRW 72 THE to 120	A	B
72 THE	317	345
96 THE	317	345
96 - 120	403	259

* 21 mm for the 60 THE version

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