

# MITSUBISHI ELECTRIC HYDRONICS & IT COOLING SYSTEMS S.p.A.

COMFORT

ROOFTOP UNITS

# WRX

**AIR COOLED ROOFTOP UNITS,  
FROM 50 TO 240 kW,  
FROM 10000 TO 45000 m<sup>3</sup>/h**



# WRX

## ENGINEERED FOR MAXIMUM EFFICIENCY AND VERSATILITY



**REVERSIBLE AND COOLING ONLY AIR COOLED  
ROOFTOP UNIT. COOLING POWER FROM 50 TO 240 KW.**

WRX is an autonomous and reversible rooftop unit dedicated to the air handling and air renewal in large volume areas. All models come with a double cooling circuit, scroll compressors, R410A refrigerant, and EC plug fans.

The high flexibility in choosing the airflow direction, as well as the possibility to customize the units with four types of heat recovery and different air handling sections, make WRX an extremely versatile unit, which can easily fit in every type of application.

### IDEAL APPLICATIONS:

- ▶ Supermarkets
- ▶ Sport Arenas
- ▶ Shopping malls
- ▶ Cinemas and theatres

### VERSIONS:

**WRX:** Reversible heat pump

**WRX-T:** Cooling only

### FUNCTIONS:

**AR** Air Recirculation (Baseline)

**MF** Air mixing and free cooling

**AX** Air mixing and axial fan extraction

**HR-F** Heat recovery with thermodynamic effect

**HR-B** Heat recovery with Refrigerant Booster

**HR-P** Heat recovery with cross-flow heat exchanger (High and low flow)





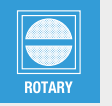
**HR-E** Heat recovery with rotary enthalpy wheel

### MAXIMUM ENERGY EFFICIENCY IN ALL APPLICATIONS

Available in seven different configurations and four different heat recovery technologies, WRX has been engineered for maximum efficiency in any situation.

As standard, WRX features plug fans with built-in EC motor, electronic thermostatic valves and the latest generation axial fans.

All units are designed to meet the seasonal efficiency standards (SEER & SCOP) established by the EU 2016/2281 regulation - First Tier (2018), some of them are already compliant with the Second Tier (2021).

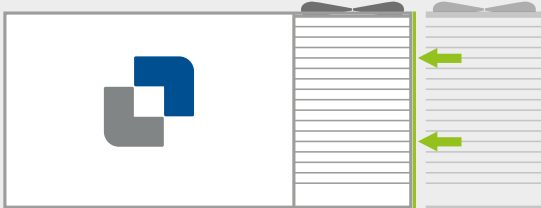
						
Cooling capacity increase	% (1)		<b>+3%</b>	<b>+12%</b>	<b>+10%</b>	<b>+45%</b>
Thermal capacity increase	% (2)		<b>+7%</b>	<b>+11%</b>	<b>+22%</b>	<b>+39%</b>

1 ▶ Percentage values refer to WRX/MF version (no heat recovery). Standard conditions for cooling: Outdoor 35°C 50% R.H. / Indoor 27°C 47% R.H. / Mix 50% - Nominal air flow.  
2 ▶ Percentage values refer to WRX/MF version (no heat recovery). Standard conditions for heating: Outdoor 7°C 87% R.H. / Indoor 20°C 50% R.H. / Mix 50% - Nominal air flow.

**High flexibility in the airflow direction, top efficiency and total reliability combined with a rational and compact design.**

**This is the result of the new WRX versatile range featuring seven operational types and four different heat recovery technologies.**

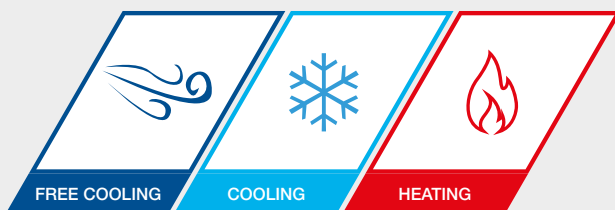
#### ▶ HIGHLY UNIT VERSATILITY



WRX is a modular and configurable solution that has been wisely engineered to fit precise size requirements.

WRX is available in both heat pump and cooling only versions, while the base module features seven different functions. Additionally, a wide range of accessories dedicated to the air handling range allow the unit to operate optimally in any condition.

#### ▶ TOTAL SYSTEM RELIABILITY



WRX manages additional resources for heating and air handling in a completely independent way.

Thanks to its free cooling mode, the unit utilizes the favorable external conditions to condition the environment without switching on the compressors.

Units are always supplied with two independent cooling circuits.

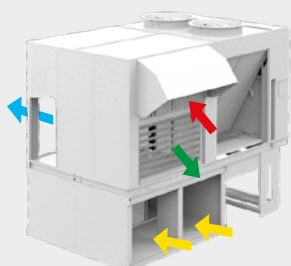
#### ▶ SPACE OPTIMIZATION



WRX features a unique design to fit large applications as well as small / medium volume areas.

An accurate distribution of the various components (fans, coils, compressors) ensures a small footprint compared to a traditional unit developed lengthwise.

#### ▶ DESIGN FLEXIBILITY



WRX ensures a free selection in the direction of both the supply and return airflows. A super flexible layout that simplifies installation and facilitates the replacement of pre-existing HVAC systems.

# TECHNOLOGICAL CHOICES

**Rational unit design, together with cutting-edge technological choices: these are the distinguishing traits of WRX.**

## AIR3000TE CONTROL

The core of the WRX management is the evolved AIR3000TE control, specifically designed for Climaveneta rooftop units.



Besides the cooling circuit management there is the air handling control, and both of these functions allow the WRX unit to work in a completely autonomous way.

## OUTDOOR FANS

New-generation axial fans with 3-D aerodynamic blades.

Each fan is equipped with a diffuser to recover the kinetic energy into static/pressure energy.

It has been designed to ensure a reduction in the number of rotational speeds which minimizes the absorbed power supply and noise level.

## ELECTRONIC THERMOSTATIC VALVE

The electronic expansion valve, which comes as standard in all versions, provides great benefits with variable loads and varying external weather conditions.



Its introduction is in line with the accurate design of the cooling circuit and its efficient operation in multiple operating conditions.

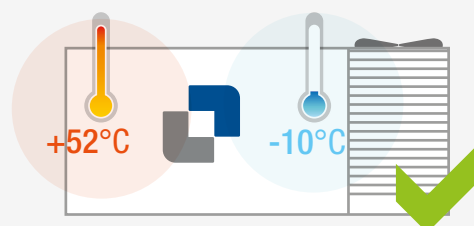
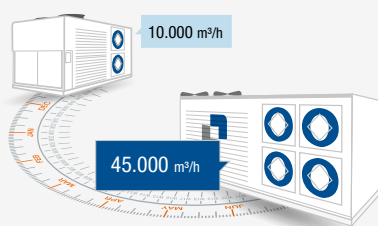


## OPERATING RANGE AND LIMITS

The WRX range consists of 13 sizes, from 50 to 240 kW of cooling capacity and airflow from 10000 to 45000 m<sup>3</sup>/h.

Thanks to the wide and generous dimensions of the treatment

coils, together with the smart design of the cooling circuit, WRX units also boast an extended outdoor temperature operating range: from -10°C when the unit is working in heat pump operation, to +52°C in cooling mode.



Because the excellence of a product, according to Climaveneta brand philosophy, starts with the best quality of each single technical component, in both the design and installation phases.

## CASING

The units have been designed with a self-supporting structure made from suitably thick hot galvanized steel sections.

The external panelling is painted with polyester powder coat whereas the air treatment section is insulated using specific high performing adhesives.

As an option, the air handling section can be made of aluminium load-bearing frame and sandwich panels.



## EC PLUG FANS



The WRX units are equipped with radial plug fans with an EC incorporated motor.

The fan speed can be regulated by keeping both the airflow or the external static pressure constant or by selecting the variable airflow through the Vair function.



## ACCESSORIES

A wide range of accessories completes the air treatment and allows the unit to optimally manage its operation.



Control function for the air handling section



Air quality control with CO<sub>2</sub> probes



High efficiency filters (up to ePM01 70% - F7) in addition to the standard class isocoarse 50% (G4) filters



BMS connection



Heating and pre-heating coils, electrical heater, hot gas coil



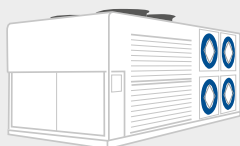
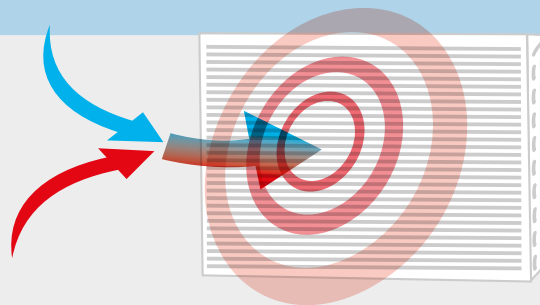
Axial EC fan, to enhance unit efficiency

# WRX HEAT RECOVERY TECHNOLOGIES

## HR-F THERMODYNAMIC HEAT RECOVERY

Thermodynamic heat transfer is achieved by deviating the exhaust air through the outdoor section of the refrigerant circuit.

This increases efficiency by allowing the unit to work at a more advantageous condensing temperature than allowed by the outside conditions.



Smart and functional design



Advantageous average temperature on the outdoor coil

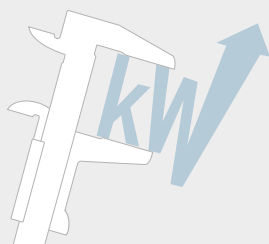
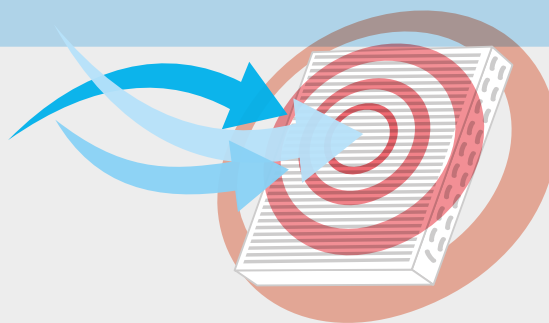
kW/h 

No additional pressure drops

## HR-B REFRIGERANT BOOSTER

The WRX HR-B units are fitted with the exclusive Refrigerant Booster heat recovery system, which promptly and fully recovers heat from the exhaust air.

This recovered energy is transferred to the refrigerant circuit, which increases the capacity of the air handling coil while reducing the power absorbed by the compressor. The recovery system, made of a finned coil installed at the air exhaust damper, takes advantage of the favourable conditions of the exhaust air, both during summer and winter operation.



Quantifiable benefits



Compact footprint of the recovery system



Ideal for Mediterranean climate

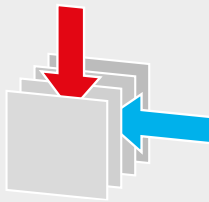
Four heat recovery technologies designed to precisely and reliably transfer the energy contained in the exhaust air to the refrigerant circuit, thus increasing the unit's overall efficiency.

## HR-P CROSS-FLOW HEAT RECOVERY

The WRX HR-P units feature the cross-flow heat recovery, which transfers the thermal energy contained in the exhaust air to the fresh airflow.

The plate heat recovery system extends the operating limits of the unit, allowing it to work with higher flow rates of external air.

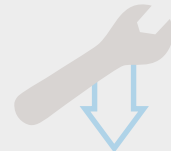
The units are equipped with by-pass dampers for free-cooling operation, to reduce system pressure drops.



Complete airflow separation



High operating reliability and safety

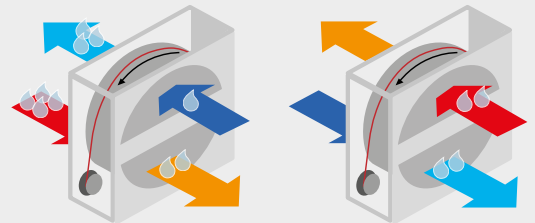


Quick and easy cleaning and maintenance

## HR-E RECOVERY OF ENTHALPY ROTARY HEAT

The most efficient heat recovery technology in terms of efficiency is the rotary enthalpic recovery, which provides performance values from 60% to 90% higher than traditional solutions.

The key component is the enthalpic wheel which is made with alternately flat and wavy sheets treated by hygroscopic coating. Due to the large exchange surface compared to its volume, it ensures the recovery of latent and sensible heat, with a significant increase in the unit overall capacity.



Summer Mode

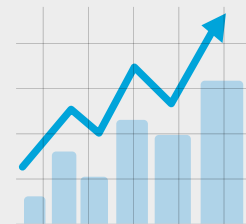
Winter Mode



Latent heat recovery



Cooling capacity recovered



Quick return on the investment

# WRX FUNCTIONS

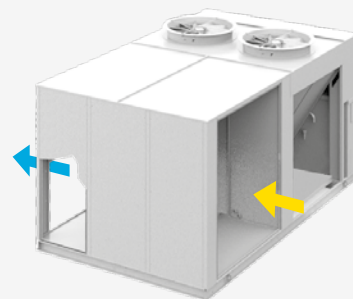
WRX is available in 7 configurations to easily fit modern HVAC design



## AR Function

Unit function for the total recovery. Ideal in those applications where the air renewal and the exhaust air extraction are not managed by the rooftop unit.

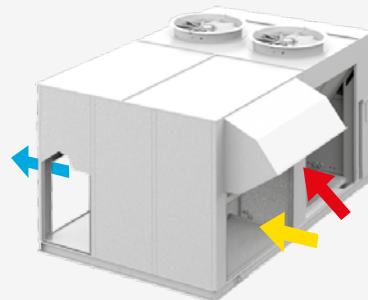
This unit perfectly substitutes old products in pre-existing HVAC plants which already have a system dedicated to air renewal.



## MF Function

The MF function allows the recirculated ambient air to be mixed with some fresh outside air. Free cooling operation is managed by the controller, which automatically opens the dampers according to the indoor and outdoor temperatures, and the set point.

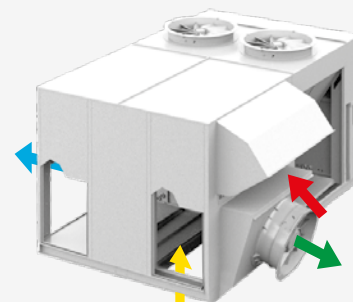
This function is ideal in refurbished buildings with low air tightening, to be coupled with already existing air extraction systems which need to be used to balance pressure inside the building.



## AX Function

As the MF function, the AX function allows the unit to mix the recirculated ambient air with some fresh outdoor air. The unit is equipped with one or more axial fans in order to ensure exhaust air rejection.

Thanks to these fans, AX is ideal in all commercial applications, such as gas stations where a compact and autonomous solution is required. Expulsion fans module is delivered in a separate package to simplify transport.





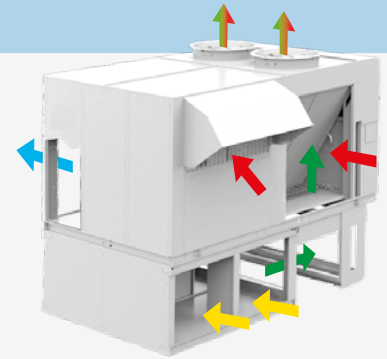


### HR-F Function

Unit with three dampers for unit operation in different modes: 100% recirculated air, air mixing, free cooling, air extraction/expulsion.

Exhaust air is forced through the expulsion damper to the external coils, in order to enhance overall unit performance:

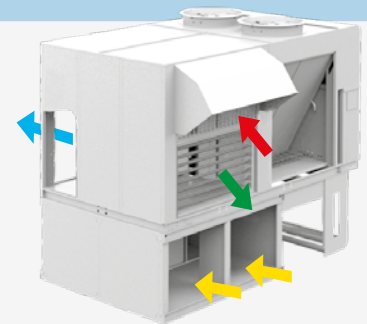
this thermodynamic effect is totally free, without the need of further heat exchangers. Return fans module is delivered in a separate package to simplify transport.



### HR-B Function

Unit with three motorized dampers and Refrigerant Booster heat recovery. The unit ensures the treatment, renovation, and air extraction in a completely autonomous way. At the same time, the HR-B function rejects excess air and ensures free cooling mode.

Thanks to the Refrigerant Booster recovery, the WRX HR-B unit promptly and fully recovers the thermal heat of the exhaust air, transferring this energy to the cooling circuit which increases its capacity. Return fans module is delivered in a separate package to simplify transport.

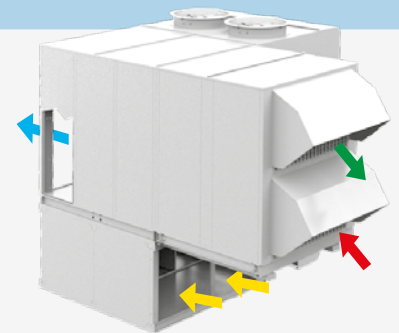


### HR-P Low Flow and High Flow Function

The HR-P function is the ideal solution for an extreme climate with very hot, or alternatively, very cold conditions. Thanks to the cross-flow heat recovery the unit transfers the thermal energy contained in the exhaust air to the fresh air. The unit is equipped with three motorized dampers for the unit operation in total recirculated mode, free cooling, air extraction, and air expulsion.

During free cooling operation, exhaust air by-passes the plate heat exchanger and it is transferred towards the external coils, thus ensuring the thermodynamic heat recovery. There are two PHE available: low flow, whenever a little fresh air is required, while high flow is recommended when a lot of fresh air is required.

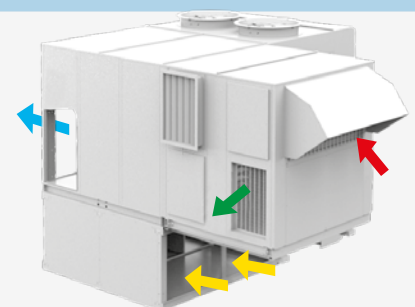
Return fans and heat recovery modules are delivered in separate packages to simplify transport.



### HR-E Function

The HR-E function employs the enthalpy heat recovery to exchange latent and sensible heat between the fresh outside air and exhaust air. The unit is equipped with three modulating dampers for the operation at 100% recirculation, air mixing, free cooling, and air extraction/expulsion.

In free cooling mode, the exhaust air by-passes the recovery system thus reducing pressure losses. Return fans and heat recovery modules are delivered in separate packages to simplify transport.



WRX

**0162 - 0804**Air source reversible and cooling only  
rooftop unit  
(from 50 to 240 kW)

## WRX/AR-MF

Model		0162	0182	0202	0262	0302	0352	0402	0444	0484	0524	0604	0704	0804
Power supply	V/ph/Hz	400/3/50												
<b>COOLING ONLY WRX/WRX-T (GROSS VALUE)</b>														
Total cooling capacity	(1) kW	50,8	58,3	69,0	82,6	97,2	110	121	142	154	170	189	219	240
Total sensible capacity	(1) kW	43,0	48,4	56,7	67,8	79,5	89,2	97,8	116	127	139	152	176	194
Compressors power input	(1) kW	12,3	14,0	16,2	21,5	25,4	29,5	32,9	35,6	36,2	39,9	50,7	58,9	67,2
EER (total)	(1)(12) kW/kW	3,1	3,2	3,2	3,0	3,1	3,0	3,0	3,2	3,2	3,2	3,0	3,0	2,9
<b>COOLING ONLY WRX/WRX-T (EN14511 VALUE)</b>														
Cooling capacity	(1)(3) kW	51,4	58,9	69,7	83,6	98,3	111	123	144	156	173	192	222	240
EER	(1)(3) kW/kW	3,32	3,35	3,34	3,18	3,24	3,18	3,16	3,31	3,34	3,36	3,06	3,12	3,27
Cooling energy class		A	A	A	A	A	-	-	-	-	-	-	-	-
<b>HEATING ONLY WRX (GROSS VALUE)</b>														
Total heating capacity	(2) kW	48,9	55,9	66,4	81,0	95,2	109	123	138	148	168	192	217	239
Compressors power input	(2) kW	9,69	11,1	12,7	16,4	20,3	23,2	26,6	27,6	29,2	33,5	41,7	46,4	52,6
COP (total)	(2)(12) kW/kW	3,6	3,6	3,6	3,7	3,6	3,7	3,6	3,7	3,6	3,7	3,5	3,6	3,5
<b>HEATING ONLY WRX (EN14511 VALUE)</b>														
Total heating capacity	(2)(3) kW	48,3	55,3	65,7	80,0	94,1	108	121	136	146	165	189	214	239
COP	(2)(3) kW/kW	3,76	3,78	3,80	3,76	3,72	3,78	3,70	3,83	3,67	3,67	3,51	3,64	4,05
Heating energy class		A	A	A	A	A	-	-	-	-	-	-	-	-
<b>SEASONAL EFFICIENCY IN COOLING WRX/WRX-T (Reg. EU 2016/2281)</b>														
<b>Ambient refrigeration</b>														
Prated,c	(7) kW	51,4	58,9	69,7	83,6	98,3	111	123	144	156	173	192	222	243
SEER	(7)(8)	3,37	3,37	3,46	3,35	3,46	3,44	3,37	3,55	3,85	3,80	3,77	3,55	3,69
Performance ηs	(7)(9) %	131,8	131,8	135,4	131,0	135,4	134,6	131,8	139,0	151,0	149,0	147,8	139,0	144,6
<b>SEASONAL EFFICIENCY IN HEATING WRX (Reg. EU 2016/2281)</b>														
<b>Ambient heating</b>														
PDesign	(7) kW	40,3	46,2	54,8	67,0	78,7	90,2	101	106	114	129	148	192	183
SCOP	(7)(8)	2,98	2,96	2,99	3,01	2,99	3,06	2,99	3,21	3,20	3,27	3,14	3,30	3,21
Performance ηs	(7)(10) %	116,2	115,4	116,6	117,4	116,6	119,4	116,6	125,4	125,0	127,8	122,6	129,0	125,4
<b>SUPPLY FANS</b>														
Air flow rate	m³/h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal ESP	(4) Pa	200	200	200	250	250	250	300	300	350	350	350	350	350
Total power input	(12) kW	1,93	2,49	2,61	2,85	3,11	3,63	4,05	4,76	5,24	5,88	6,60	7,46	8,86
<b>REFRIGERANT CIRCUIT</b>														
No. Compressors / No. Circuits	N°	2/2	2/2	2/2	2/2	2/2	2/2	2/2	4/2	4/2	4/2	4/2	4/2	4/2
Refrigerant charge	(6)(11) kg	14,0	19,0	20,0	20,0	27,0	30,0	33,0	40,0	43,0	54,0	53,6	56,0	59,0
<b>NOISE LEVEL</b>														
Unit sound power level	(5) dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
Sound Power on outlet side	(5) dB(A)	80	83	81	82	82	82	84	85	87	88	88	88	0
<b>SIZE</b>														
Length A	(6) mm	3630	3630	3630	4080	4080	4080	4080	5560	5560	5560	5560	6460	6460
Width B	(6) mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height H	(6) mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150
Operating weight	(13) kg	1270	1330	1350	1550	1650	1750	1850	2150	2340	2430	2430	3020	3170
<b>FUNCTION MF</b>														
Length	mm	3630	3630	3630	4080	4080	4080	4080	5560	5560	5560	5560	6460	6460
Width with rainproof hood	mm	2850	2850	2850	2850	2850	2850	2850	2850	2850	2850	2850	2850	2850
Height	mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150
Operating weight	(13) kg	1350	1410	1430	1720	1780	1920	1980	2320	2520	2610	2610	3240	3390

**Notes:**

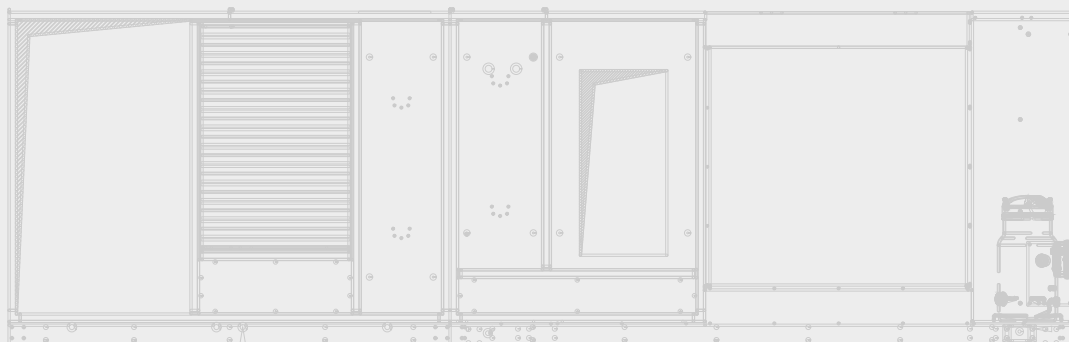
- ▶ Cooling: Outdoor 35°C 50% R.H. / Indoor 27°C 47% R.H. / Mix 0%.
- ▶ Heating: Outdoor 7°C 87% R.H. / Indoor 20°C 50% R.H. / Mix 0%.
- ▶ Values in compliance with EN14511
- ▶ ESP for standard configuration (optional accessories not included/calculated).
- ▶ Sound power on the basis of measurements made in compliance with ISO 9614.
- ▶ Unit in AR configuration
- ▶ Parameter calculated according to [REGULATION (EU) N. 2016/2281]
- ▶ Seasonal energy efficiency ratio
- ▶ Seasonal space cooling energy efficiency

- ▶ Seasonal energy efficiency of the heating environment in AVERAGE climatic conditions [REGULATION (EU) N. 2016/2281]

- ▶ The gas charge is obtained from a theoretical calculation and may differ from the real one present in the unit and shown on the plate.
- ▶ Available static pressure 250Pa (pressure drop resulting from any available accessories not included).
- ▶ The weight shown refers to the unit in the heat pump version, including any batteries and accessory filters. Any additional modules are not considered.

The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.

Certified data in EUROVENT





## WRX/AX

Model		0162	0182	0202	0262	0302	0352	0402	0444	0484	0524	0604	0704	0804	
<b>COOLING ONLY WRX/WRX-T (GROSS VALUE)</b>															
Total cooling capacity	(1)	kW	54	61,9	73,2	87,8	104	117	129	151	163	182	201	233	256
Total sensible capacity	(1)	kW	43,8	49,2	57,6	68,8	80,9	90,4	99,1	118	129	141	153	179	196
Total absorbed power	(1)	kW	17,2	19,4	22,8	30,3	34,6	39,5	43,4	50,8	53,5	58,4	70,2	82,0	91,9
EER (total)	(1)		3,10	3,20	3,20	2,90	3,00	3,00	3,00	3,00	3,00	3,10	2,90	2,80	2,80
<b>HEATING ONLY WRX (GROSS VALUE)</b>															
Total heating capacity	(2)	kW	49,5	56,5	67,3	81,8	96,4	111	124	140	150	170	194	220	242
Total absorbed power	(2)	kW	13,6	15,4	17,9	23,6	27,6	31	34,5	39,9	43,6	48,7	57,3	64,8	72
COP (total)	(2)		3,60	3,70	3,80	3,50	3,50	3,60	3,60	3,50	3,40	3,50	3,40	3,40	3,40
<b>SUPPLY FAN</b>															
Quantity			1	1	1	2	2	2	2	4	4	4	4	4	
Air flow rate		m <sup>3</sup> /h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	250
<b>EXHAUST FAN</b>															
Quantity			1	1	1	1	1	1	2	2	2	2	3	3	
Air flow rate		m <sup>3</sup> /h	3150	3600	4200	4800	5550	6300	6750	8100	9000	9750	10500	12300	13500
Nominal AESP	(3)	Pa	150	150	150	150	150	150	150	150	150	150	150	150	150
<b>REFRIGERANT CIRCUIT</b>															
No. compressors / No. circuits			2/2	2/2	2/2	2/2	2/2	2/2	2/2	4/2	4/2	4/2	4/2	4/2	4/2
Refrigerant charge	(7)	kg	14	19	20	20	27	30	33	40	43	54	54	56	59
<b>NOISE LEVEL</b>															
Unit sound power level - COOLING ONLY	(4)	dB(A)	79	80	86	86	86	88	88	88	88	88	88	91	92
Unit sound power level - HEATING ONLY	(4)	dB(A)	79	80	86	86	86	88	88	88	88	88	88	91	92
<b>SIZE</b>															
Length		mm	3630	3630	3630	4080	4080	4080	4080	5560	5560	5560	5560	6460	6460
Width	(6)	mm	2850	2850	2850	2920	2920	2920	2920	2920	2920	2920	2920	2920	2920
Height		mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150
Operating weight	(5)	kg	1400	1460	1480	1790	1850	1990	2050	2390	2590	2680	2680	3340	3490

**Notes:**

- Cooling: Outdoor 35°C 50% R.H. / Indoor 27°C 47% R.H. / Mix 30%.
- Heating: Outdoor 7°C 87% R.H. / Indoor 20°C 50% R.H. / Mix 30%.
- ESP for standard configuration (optional accessories not included/calculated).
- Sound power on the basis of measurements made in compliance with ISO 9614. For complete sound data consult Elca World.

5 ► The weight shown refers to the unit in the heat pump version, including any batteries and accessory filters. Any additional modules are not considered.

6 ► The dimension includes hood and expulsion fans

7 ► The refrigerant charge is the result of a theoretical calculation and could be different from the actual amount of refrigerant which is charged in the unit and on the label

The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.

## WRX/HR-F

Model		0162	0182	0202	0262	0302	0352	0402	0444	0484	0524	0604	0704	0804	
<b>COOLING ONLY WRX/WRX-T (GROSS VALUE)</b>															
Total cooling capacity	(1)	kW	54,4	62,4	73,8	88,7	105	118	131	153	165	183	204	236	259
Total sensible capacity	(1)	kW	44,0	49,4	57,8	69,2	81,4	91,1	99,9	119	129	142	154	180	198
Total absorbed power	(1)	kW	17,7	20,2	23,8	29,2	33,6	42,0	42,7	48,6	51,2	56,4	68,4	77,6	87,8
EER (total)	(1)		3,1	3,1	3,1	3	3,1	2,8	3,1	3,2	3,2	3,2	3	3	3
<b>HEATING ONLY WRX (GROSS VALUE)</b>															
Heating capacity	(2)	kW	50,6	57,9	68,7	83,8	99,2	114	129	144	154	175	200	227	251
Total absorbed power	(2)	kW	14,4	16,6	19,3	23,1	27,4	34,5	35,2	38,8	42,3	48	57,2	62,7	70,8
COP (total)	(2)		3,5	3,5	3,6	3,6	3,6	3,3	3,7	3,7	3,6	3,7	3,5	3,6	3,5
<b>SUPPLY FAN</b>															
Quantity			1	1	1	2	2	2	2	4	4	4	4	4	
Air flow rate		m <sup>3</sup> /h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	250
<b>RETURN FAN</b>															
Quantity			1	1	1	2	2	2	3	3	3	3	4	4	
Air flow rate		m <sup>3</sup> /h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	250
<b>REFRIGERANT CIRCUIT</b>															
No. compressors / No. circuits			2/2	2/2	2/2	2/2	2/2	2/2	2/2	4/2	4/2	4/2	4/2	4/2	4/2
Refrigerant charge	(7)	kg	14	19	20	20	27	30	33	40	43	54	54	56	59
<b>NOISE LEVEL</b>															
Unit sound power level - COOLING ONLY	(4)	dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
Unit sound power level - HEATING ONLY	(4)	dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
<b>SIZE</b>															
Length		mm	3630	3630	3630	4080	4080	4080	4080	5560	5560	5560	5560	6460	6460
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height with return fans module		mm	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240
Operating weight	(5)	kg	1780	1840	1860	2320	2380	2520	2580	3220	3420	3510	3510	4270	4420

**Notes:**

- Cooling: Outdoor 35°C 50% R.H. / Indoor 27°C 47% R.H. / Mix 30%.
- Heating: Outdoor 7°C 87% R.H. / Indoor 20°C 50% R.H. / Mix 30%.
- ESP for standard configuration (optional accessories not included/calculated).
- Sound power on the basis of measurements made in compliance with ISO 9614. For complete sound data consult Elca World.

5 ► The weight shown refers to the unit in the heat pump version, including any batteries and accessory filters. Any additional modules are not considered.

6 ► The dimension does not include hoods and the thickness of the pre-filter for fresh air if present.

7 ► The refrigerant charge is the result of a theoretical calculation and could be different from the actual amount of refrigerant which is charged in the unit and on the label

The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.

WRX

**0162 - 0804**Air source reversible and cooling only  
rooftop unit  
(from 50 to 240 kW)

## WRX/HR-B

Model		0162	0182	0202	0262	0302	0352	0402	0444	0484	0524	0604	0704	0804	
<b>COOLING ONLY WRX/WRX-T (GROSS VALUE)</b>															
Total cooling capacity	(1)	kW	58,6	67,2	79,5	95,4	113	127	140	164	178	197	219	253	278
Total sensible capacity	(1)	kW	46,0	51,6	60,4	72,2	84,8	94,8	104,0	124	135	148	161	187	206
Total absorbed power	(1)	kW	18,0	20,5	24,2	29,7	34,3	39,6	43,8	49,5	52,2	57,5	69,8	79,4	90,1
EER (total)	(1)		3,3	3,3	3,3	3,2	3,3	3,2	3,2	3,3	3,4	3,4	3,1	3,2	3,1
<b>HEATING ONLY WRX (GROSS VALUE)</b>															
Total heating capacity	(2)	kW	53,3	60,9	72,5	88,2	104	119	134	151	162	183	209	237	261
Total absorbed power	(2)	kW	14,7	16,9	19,7	23,5	27,9	31,8	35,8	39,5	43,1	48,8	58,1	63,7	71,8
COP (total)	(2)		3,6	3,6	3,7	3,8	3,7	3,8	3,7	3,8	3,8	3,8	3,6	3,7	3,6
<b>SUPPLY FAN</b>															
Quantity			1	1	1	2	2	2	2	4	4	4	4	4	
Air flow rate		m <sup>3</sup> /h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	250
<b>RETURN FAN</b>															
Quantity			1	1	1	2	2	2	3	3	3	3	4	4	
Air flow rate		m <sup>3</sup> /h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	
<b>REFRIGERANT CIRCUIT</b>															
No. compressors / No. circuits			2/2	2/2	2/2	2/2	2/2	2/2	2/2	4/2	4/2	4/2	4/2	4/2	
Refrigerant charge	(7)	kg	18	22	27	35	43	49	52	55	63	65	68	77	86
<b>NOISE LEVEL</b>															
Unit sound power level - COOLING ONLY	(4)	dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
Unit sound power level - HEATING ONLY	(4)		77	79	82	83	84	86	87	85	86	86	86	89	90
<b>SIZE</b>															
Length		mm	3630	3630	3630	4080	4080	4080	4080	5560	5560	5560	5560	6460	6460
Width	(6)	mm	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260	2260
Height with return fans module		mm	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240
Operating weight	(5)	kg	1380	1450	1470	1760	1830	1950	2030	2380	2580	2670	2670	3320	3470

**Notes:**

- ▶ Cooling: Outdoor 35°C 50% R.H. / Indoor 27°C 47% R.H. / Mix 30%.
- ▶ Heating: Outdoor 7°C 87% R.H. / Indoor 20°C 50% R.H. / Mix 30%.
- ▶ ESP for standard configuration (optional accessories not included/calculated).
- ▶ Sound power on the basis of measurements made in compliance with ISO 9614. For complete sound data consult Elca World.

- ▶ The weight shown refers to the unit in the heat pump version, including any batteries and accessory filters. Any additional modules are not considered.

- ▶ The dimension does not include hoods and the thickness of the pre-filter for fresh air if present.

- ▶ The refrigerant charge is the result of a theoretical calculation and could be different from the actual amount of refrigerant which is charged in the unit and on the label

The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.

## WRX/HR-P LOW FLOW

Model		0162	0182	0202	0262	0302	0352	0402	0444	0484	0524	0604	0704	0804	
<b>COOLING ONLY WRX/WRX-T (GROSS VALUE)</b>															
Total cooling capacity	(1)	kW	57,9	66,3	78,3	93,8	110	124	137	160	173	192	212	246	270
Total sensible capacity	(1)	kW	45,7	51,2	59,8	71,4	83,5	93,4	102,0	121	133	146	158	184	202
Total absorbed power	(1)	kW	18,3	21,0	25,0	30,4	35,2	41,1	45,3	54,5	59,3	65,5	79,5	87,9	101,0
EER (total)	(1)		3,2	3,2	3,1	3,1	3,1	3	3	2,9	2,9	2,9	2,7	2,8	2,7
<b>HEATING ONLY WRX (GROSS VALUE)</b>															
Total heating capacity	(2)	kW	56,3	64,2	76	92,2	108	124	138	155	167	188	213	243	267
Total absorbed power	(2)	kW	15,1	17,5	20,7	24,3	29	33,5	37,5	44,8	50,4	57	68	72,4	82,8
COP (total)	(2)		3,7	3,7	3,7	3,8	3,7	3,7	3,7	3,5	3,3	3,3	3,1	3,3	3,2
<b>SUPPLY FAN</b>															
Quantity			1	1	1	2	2	2	2	4	4	4	4	4	
Air flow rate		m <sup>3</sup> /h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	
<b>RETURN FAN</b>															
Quantity			1	1	1	2	2	2	3	3	3	3	4	4	
Air flow rate		m <sup>3</sup> /h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	
<b>REFRIGERANT CIRCUIT</b>															
No. compressors / No. Circuits			2/2	2/2	2/2	2/2	2/2	2/2	2/2	4/2	4/2	4/2	4/2	4/2	
Refrigerant charge	(7)	kg	14	19	20	20	27	30	33	40	43	54	54	56	59
<b>NOISE LEVEL</b>															
Unit sound power level - COOLING ONLY	(4)	dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
Unit sound power level - HEATING ONLY	(4)	dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
<b>SIZE</b>															
Length		mm	3630	3630	3630	4080	4080	4080	4080	5560	5560	5560	5560	6460	6460
Width with recovery module	(6)	mm	3560	3560	3560	3560	3560	3560	3560	3560	3560	3560	3560	3560	3560
Height with return fans module		mm	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240
Operating weight	(5)	kg	2190	2250	2270	2760	2820	2960	3020	3760	3960	4050	4050	4880	5030

**Notes:**

- ▶ Cooling: Outdoor 35°C 50% R.H. / Indoor 27°C 47% R.H. / Mix 30%.
- ▶ Heating: Outdoor 7°C 87% R.H. / Indoor 20°C 50% R.H. / Mix 30%.
- ▶ ESP for standard configuration (optional accessories not included/calculated).
- ▶ Sound power on the basis of measurements made in compliance with ISO 9614. For complete sound data consult Elca World.

- ▶ The weight shown refers to the unit in the heat pump version, including any batteries and accessory filters. Any additional modules are not considered.

- ▶ The dimension does not include hoods and the thickness of the pre-filter for fresh air if present.

- ▶ The refrigerant charge is the result of a theoretical calculation and could be different from the actual amount of refrigerant which is charged in the unit and on the label

The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.



WRX/HR-P HIGH FLOW

Model		0162	0182	0202	0262	0302	0352	0402	0444	0484	0524	0604	0704	0804	
<b>COOLING ONLY WRX/WRX-T (GROSS VALUE)</b>															
Total cooling capacity	(1)	kW	58,0	66,4	78,4	94	111	125	137	161	175	193	214	247	271
Total sensible capacity	(1)	kW	45,8	51,3	59,8	71,5	83,6	93,5	102,0	122	133	146	158	184	202
Total absorbed power	(1)	kW	18,0	20,6	24,3	29,8	34,4	39,9	43,9	49,6	52,5	57,8	70,2	81,8	92,4
EER (total)	(1)		3,2	3,2	3,2	3,2	3,2	3,1	3,1	3,3	3,3	3,3	3	3	2,9
<b>HEATING ONLY WRX (GROSS VALUE)</b>															
Total heating capacity	(2)	kW	56,6	64,5	76,4	92,7	109	124	139	158	170	191	217	244	268
Total absorbed power	(2)	kW	14,8	17,1	20	23,8	28,2	32,3	36,1	40	43,8	49,5	58,9	66,3	74,4
COP (total)	(2)		3,8	3,8	3,8	3,9	3,8	3,8	3,8	3,9	3,9	3,7	3,7	3,7	3,6
<b>SUPPLY FAN</b>															
Quantity			1	1	1	2	2	2	2	3	3	3	4	4	
Air flow rate		m³/h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	250
<b>RETURN FAN</b>															
Quantity			1	1	1	2	2	2	2	3	3	3	4	4	
Air flow rate		m³/h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	250
<b>REFRIGERANT CIRCUIT</b>															
No. compressors / No. circuits			2/2	2/2	2/2	2/2	2/2	2/2	2/2	4/2	4/2	4/2	4/2	4/2	4/2
Refrigerant charge	(7)	kg	14	19	20	20	27	30	33	40	43	54	54	56	59
<b>NOISE LEVEL</b>															
Unit sound power level - COOLING ONLY	(4)	dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
Unit sound power level - HEATING ONLY	(4)	dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
<b>SIZE</b>															
Length		mm	3630	3630	3630	4080	4080	4080	4080	5560	5560	5560	5560	6460	6460
Width with recovery module	(6)	mm	3960	3960	3960	3960	3960	3960	3960	3960	3960	3960	3960	3960	3960
Height with return fans module		mm	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240
Operating weight	(5)	kg	2190	2250	2270	2760	2820	2960	3020	3760	3960	4050	4050	4880	5030

Notes:

- 1 ▶ Cooling: Outdoor 35°C 50% R.H. / Indoor 27°C 47% R.H. / Mix 30%.
- 2 ▶ Heating: Outdoor 7°C 87% R.H. / Indoor 20°C 50% R.H. / Mix 30%.
- 3 ▶ ESP for standard configuration (optional accessories not included/calculated).
- 4 ▶ Sound power on the basis of measurements made in compliance with ISO 9614. For complete sound data consult Elca World.

- 5 ▶ The weight shown refers to the unit in the heat pump version, including any batteries and accessory filters. Any additional modules are not considered.
  - 6 ▶ The dimension does not include hoods and the thickness of the pre-filter for fresh air if present.
  - 7 ▶ The refrigerant charge is the result of a theoretical calculation and could be different from the actual amount of refrigerant which is charged in the unit and on the label
- The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.

WRX/HR-E

Model		0162	0182	0202	0262	0302	0352	0402	0444	0484	0524	0604	0704	0804	
<b>COOLING ONLY WRX/WRX-T (GROSS VALUE)</b>															
Total cooling capacity	(1)	kW	73,1	83,2	97,2	118	137	154	169	197	213	233	256	293	318
Total sensible capacity	(1)	kW	50,0	56,2	65,5	78,8	92,0	103,0	112,0	133	145	159	172	199	218
Total absorbed power	(1)	kW	18,2	20,9	24,8	29,9	34,7	40,2	44,2	50,1	54,1	59,7	72,2	83,0	93,6
EER (total)	(1)		4,00	4	3,9	4	4	3,8	3,8	3,9	3,9	3,9	3,5	3,5	3,4
<b>HEATING ONLY WRX (GROSS VALUE)</b>															
Total heating capacity	(2)	kW	63,8	72,7	85,7	104	122	139	154	175	189	211	238	269	295
Total absorbed power	(2)	kW	15,4	17,7	20,9	24,6	29,2	33,4	37,4	41,4	46,4	52,4	62,1	69	77,3
COP (total)	(2)		4,2	4,1	4,1	4,2	4,2	4,2	4,1	4,2	4,1	4	3,8	3,9	3,8
<b>SUPPLY FAN</b>															
Quantity			1	1	1	2	2	2	2	2	4	4	4	4	4
Air flow rate		m³/h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	250
<b>RETURN FAN</b>															
Quantity			1	1	1	2	2	2	2	3	3	3	4	4	
Air flow rate		m³/h	10500	12000	14000	16000	18500	21000	22500	27000	30000	32500	35000	41000	45000
Nominal AESP	(3)	Pa	250	250	250	250	250	250	250	250	250	250	250	250	250
<b>REFRIGERANT CIRCUIT</b>															
No. compressors / No. Circuits			2/2	2/2	2/2	2/2	2/2	2/2	2/2	4/2	4/2	4/2	4/2	4/2	4/2
Refrigerant charge	(7)	kg	14	19	20	20	27	30	33	40	43	54	54	56	59
<b>NOISE LEVEL</b>															
Unit sound power level - COOLING ONLY	(4)	dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
Unit sound power level - HEATING ONLY	(4)	dB(A)	77	79	82	83	84	86	87	85	86	86	86	89	90
<b>SIZE</b>															
Length		mm	3630	3630	3630	4080	4080	4080	4080	5560	5560	5560	5560	6460	6460
Width with recovery module	(6)	mm	3960	3960	3960	3960	3960	3960	3960	3960	3960	3960	3960	3960	3960
Height with return fans module		mm	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240	3240
Operating weight	(5)	kg	2160	2220	2240	2730	2790	2930	2990	3790	3990	4080	4080	4930	5080

Notes:

- 1 ▶ Cooling: Outdoor 35°C 50% R.H. / Indoor 27°C 47% R.H. / Mix 30%.
- 2 ▶ Heating: Outdoor 7°C 87% R.H. / Indoor 20°C 50% R.H. / Mix 30%.
- 3 ▶ ESP for standard configuration (optional accessories not included/calculated).
- 4 ▶ Sound power on the basis of measurements made in compliance with ISO 9614. For complete sound data consult Elca World.

- 5 ▶ The weight shown refers to the unit in the heat pump version, including any batteries and accessory filters. Any additional modules are not considered.
  - 6 ▶ The dimension does not include hoods and the thickness of the pre-filter for fresh air if present.
  - 7 ▶ The refrigerant charge is the result of a theoretical calculation and could be different from the actual amount of refrigerant which is charged in the unit and on the label
- The units highlighted in this publication contain HFC R410A [GWP<sub>100</sub> 2088] fluorinated greenhouse gases.

# MORE THAN 1000 PROJECTS ALL OVER THE WORLD

## ALESSANDRIA RETAIL PARK

Alessandria - Italy

**Period:** 2018

**Application:** Shopping Centre

**Plant type:** Air to Air System

**Cooling capacity:** 340 kW

**Heating capacity:** 336 kW

**Air flow:** 100000 M<sup>3</sup>/h

**Installed machines:** 1x WRX 0604, 2x WRX 0524



## ENOPLASTIC

Bodio Lomnago - Italy

**Period:** 2018

**Application:** Office Buildings

**Plant type:** Air to Air System

**Cooling capacity:** 567 kW

**Heating capacity:** 576 kW

**Air flow:** 105000 m<sup>3</sup>/h

**Installed machines:** 1x WRX/AR 0604,

2x WRX/HR-B 0604



## PARCO COROLLA SHOPPING CENTER & CINEMA

Milazzo - Italy

**Period:** 2018

**Application:** Cinema - Shopping Centre

**Plant type:** Air to Air System

**Cooling capacity:** 2002 kW

**Heating capacity:** 940 kW

**Air flow:** 119000 m<sup>3</sup>/h

**Installed machines:** x i-FX(1+i)/R-CA 4212,

1x i-FX-Q2 1002, 3x WIZARD,

4x WRX 1x WRX 0524, 1x WRX 0302,

3x WRX 0262, 1x WRX 0182, 1x WRX 0162



Climaveneta's rooftop units, with their unbeatable advantages in terms of efficiency, quality, and precision are already the preferred choice of the major brands in the most prestigious projects all over the world.

## KONZUM

Over 19 stores in Croatia

**Period:** 2009 - 2017

**Application:** Supermarket

**Plant type:** Air to Air System

**Cooling capacity:** 11310 kW

**Installed machines:** 40x rooftop units,  
several air cooled chillers



## POLITECNICO DI TORINO

Turin - Italy

**Period:** 2017 - 2018

**Application:** School / University

**Plant type:** Air to Air System

**Cooling capacity:** 3774 kW

**Air flow:** 48000 m<sup>3</sup>/h

**Installed machines:** 1x WTA-D/S 550, 4x  
WRX/S 0182, 1x FOCS2-W/CA-E 3602, 2x  
TECS2-W/LC 0912, 1x TECS2-W/HC 0712



## THÉÂTRE MUNICIPAL ZARZIS

Zarzis - Tunisia

**Period:** 2017

**Application:** Theatres

**Plant type:** Air to Air System

**Cooling capacity:** 154 kW

**Heating capacity:** 148 kW

**Air flow:** 30000 m<sup>3</sup>/h

**Installed machines:** 1x WRX 0484





for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.



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