

**The Energy Solutions of
Withair Packaged Rooftop Unit Catalogue 2017**



Take Control of Your Energy Future !

Withair offers a wide range of clean energy products and solutions to meet the needs of your projects.



Ongoing innovation with cutting-edge products



Over 20 years of experience



Production 100% Made in China



Guaranteed support and spare parts



Support in design



Documentation for incentives



Two-year guarantee



Free training course

About Withair

Withair® is one leading manufacturer in sustainable energy solutions supplying HVACR products & services for cooling, heating, hot water, ventilation, industrial refrigeration and heat recovery that reflect today's demand for sustainable construction, comfortable indoor climate and industrial cooling process application. and specialize in heating & cooling system, air quality system and new energy development and utilization,now it has three factories,manufacturing different kinds of products, and committed to providing the first-class products & system solutions for customers.

At Withair®, our aim is to support the growth, profit, and sustainability goals of our clients by delivering innovative solutions with n x value.we gain a deep understanding of our client's needs and business objectives first and foremost by gaining and leveraging our technical knowledge, innovative thinking, and vast equipment resources. from heating & cooling solutions and air quality management,to energy performance and efficiency determination,Withair® delivers the results.

Withair® operates in a strongly impacting sector in the energy field, and its primary objectives include committing resources to continuous technological research and improvement of production processes, with the aim of streamlining products and raise users' awareness on the actual soundness of ensuing energy savings.

Withair® products & solutions combine utmost efficiency with minimum energy consumption and strict respect of the environment, the idea proved to be a winning one in just a few years, Withair® became the leader in the sector !



Low energy consumption systems

Use of clean energy

Use of environmentally-friendly cooling gases

ZERO direct CO2 emissions in the environment

Packaged Rooftop Unit System - Comfort, Efficient and Quiet

Withair® Packaged Rooftop Units Comfortable, efficient and quiet — that’s what you want in any heating and cooling system. But the secret to affordable, year-round comfort is a unit designed for your climate and your specific needs. With a Withair® Packaged Rooftop Unit, that’s what you get — a quality system that delivers the performance your application demands day after day. It’s efficient, dependable performance that’s also exceptionally quiet, so it’s a perfect solution for schools and other noise-conscious spaces.

When you choose a Withair® packaged system, each self-contained unit is installed outdoors, saving you a substantial amount of indoor space. And no matter where you are, there’s a Withair® Series Packaged Unit designed to deliver exceptional comfort in your unique climate. This innovative lineup includes gas and electric heat models and heat pumps, each with advanced motor technology and optional two-stage heating and cooling for quiet, efficient performance year after year.

Packaged Rooftop Unit



Packaged Rooftop Unit

— Product Description —

Withair® packaged rooftop units were designed to be easy to install, maintain, and operate, with customer-requested features including a gage port, centralized control center, plug-and-play accessory board, "no-strip screw" collars, and handled access panels. Units are field-convertible to horizontal airflow without special adapter curbs or kits, making it easy for the installer to adjust to unexpected jobsite complications. Units are pre-wired and pre-charged with environmentally (R-410A) refrigerant and are factory tested. Withair® packaged rooftop unit applicability is wide and used in shopping malls, hotels, factories, villas, commercial housing, office buildings, shops, hospitals and other places.

— The Key Advantages Include —

- All model sizes share a common, compact cabinet in a single footprint for on-site flexibility.
- Installation time and costs are reduced by easy power and control wiring. All units are factory-wired, charged and tested prior to shipment.
- Gas and electric utility knockouts are provided on unit side and bottom for easy connections.
- Compressor is internally protected against high pressure and temperature.
- Units are engineered and built to be among the quietest models.
- Full-perimeter base rails are easily removable, yet provide a solid unit foundation.
- Durable finish, made of powder-painted, galvanized steel to meet 500-hour salt-spray test demands.
- Condensate drain is heavy-duty. 3/4" NPT connection is rigidly mounted for a proper fit and a tight seal.
- Condensate pan is non-corrosive, long-lasting and watertight.
- Convertible airflow design means no panel cutting is required, and no accessory panel is necessary.
- Heat exchangers are corrosion-resistant, with aluminized steel tubular construction for durability and long service life.
- Post-purge induced draft combustion exhausts combustion products from the heat exchanger to prolong heat exchanger life.
- Hot surface to pilot ignition provides faster, more reliable heat delivery.
- Secured service access ports are protected, externally mounted and reusable on both high and low lines.
- Complete line of field-installed accessories, including propane and high altitude conversion kits, economizers, single- and dual-enthalpy sensors and more.
- Evaporator coils are constructed with grooved copper tubes and enhanced for construction to improve heat transfer.
- Condenser coils are constructed of MicroChannel aluminum tubing and aluminum fins for durability and long-lasting efficient operation.
- Cooling operating range up to 52°C and down to -1°C.
- Control terminal board facilitating simple safety circuit troubleshooting and simplified control box arrangement.
- Access panels with easy grip handles and tool-less filter access door
- Belt drive evaporator-fan motor and pulley combinations available on all three phase models to meet any application
- Field convertible from vertical to horizontal airflow for slab mounting.
- Dependable time/temperature defrost board and logic.
- Loss of charge, freeze protection, and high-pressure switches
- Totally enclosed condenser motors with permanently lubricated bearings.
- Permanently lubricated evaporator-fan motor.

— Technical Data —

Heating and Cooling Model

Model W05R1-			10R	17R	20R	35R	56R	70R	105R	142R	177R	220R	265R	352R
Cooling capacity	kW		10.5	17.5	21.2	35.2	56.3	70.4	105.6	142.1	176.8	219.6	265.0	352.0
	EER		3.00	3.18	2.99	3.14	3.18	3.05	3.05	3.08	3.02	3.04	2.99	3.20
	BTU		35,826	59,710	72,334	120,102	192,096	240,205	360,307	484,845	603,242	749,275	904,180	1,201,024
	USRT		3.0	5.0	6.0	10.0	16.0	20.0	30.0	40.4	50.3	62.4	75.3	100.1
Heating capacity	kW		11.2	18.1	22.8	36.5	60.4	76.6	112.3	155.5	185.6	227.0	277.0	369.0
	COP		3.20	3.29	3.21	3.26	3.41	3.32	3.25	3.37	3.17	3.14	3.13	3.35
	BTU		38,214	61,757	77,794	124,538	206,085	261,359	383,168	530,566	633,267	774,524	945,124	1,259,028
	USRT		3.2	5.1	6.5	10.4	17.2	21.8	31.9	44.2	52.8	64.5	78.8	104.9
Compressor	Input power	kW	3.5	5.5	7.1	11.2	17.7	23.1	34.6	46.1	58.5	72.3	88.6	110
	Type		Hermetic high efficiency scroll compressor											
Refrigerant			R410A & R407C											
Power supply	V/P/Hz		380~420/3/50											
Air flow volume	m3/h		2550	3600	5400	6500	11000	13700	19900	28900	32600	37800	43600	52900
Capacity control	%		100. 0			100. 50. 0			100.50.25.0					
Filter			Dismountable and compliant with the ASHRAE52-76 standards, dust intercept rate >95%											
Heat exchanger type			High efficiency finned copper pipe heat exchanger											
Noise	dB(A)		52	54	55	58	61	63	65	72	73	73	75	75
Product size	Length	mm	1200	1200	1200	2100	2250	2800	2800	4050	4380	12000	12000	12000
	Width	mm	950	1200	1200	1500	1980	2150	2150	2400	2520	2600	2600	2600
	Height	mm	780	820	1050	1250	1500	1750	1750	1950	2100	2700	2700	2700
Weight	Net	kg	160	190	220	390	850	1180	1650	2350	2780	4900	5600	5900
	Gross	kg	180	210	245	420	890	1350	1860	2540	2990	5350	5960	6450

Notes:

- 1.Cooling condition: indoor air inlet dry bulb temperature 27°C, wet bulb temperature 19°C, outdoor air inlet dry bulb temperature 35°C.
- 2.Heating condition: indoor air inlet dry bulb temperature 20°C, outdoor air inlet dry bulb temperature 7°C, wet bulb temperature 6°C.
- 3.Gas heating and Electronic heating are for your option.
- 4.Constant temperature and humidity type, heat recovery and cooling only model are for your option
- 5.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

Rooftop Unit with Fresh Air

Model W05R1-			10RF	17RF	20RF	35RF	56RF	70RF	105RF	142RF	177RF
Cooling capacity		kW	54.5	64.3	81.0	95.0	110.0	130.0	158.0	185.0	250.0
		BTU	185,954	219,392	276,372	324,140	375,320	443,560	539,096	631,220	853,000
		USRT	15.5	18.3	23.0	27.0	31.3	37.0	44.9	52.6	71.1
Heating capacity		kW	31.5	37.9	48.1	56.2	65.1	77.3	94.8	113.0	150.0
		BTU	107,478	129,315	164,117	191,754	222,121	263,748	323,458	385,556	511,800
		USRT	9.0	10.8	13.7	16.0	18.5	22.0	27.0	32.1	42.6
Compressor	Input power	kW	18	21.7	27	32.5	36.5	44.5	53.3	58.5	81.5
	Type		Hermetic high efficiency scroll compressor								
Refrigerant			R410A & R407C								
Power supply		V/P/Hz	380~420/3/50								
Fan motor	Type of drive		Direct			Belt					
	ESP	Pa	250		270	290		310		380	400
	Fresh air	m ³ /h	2550	3600	5400	6500	11000	13700	19900	28900	32600
Capacity control		%	Continuous								
Temperature control			Microcomputer thermostat								
Heat exchanger type			High efficiency finned copper pipe heat exchanger								
Noise		dB(A)	52	54	55	58	61	63	65	72	73
Product size	Length	mm	2250		2800		4020	4380	3950		
	Width	mm	1950		2150		2400	2500	3350		
	Height	mm	1500		1750		1920	2080	2600		
Weight	Net	kg	810	850	1150	1280	1360	1650	1750	2400	3100
	Gross	kg	920	980	1290	1420	1540	1810	1990	2720	3450

Notes:

- 1.Cooling condition: outdoor air temperature 33°C DB, 28°C WDB(60%RH).
- 2.Heating condition: outdoor air temperature 0°C DB, -2.9°C WDB(50%RH).
- 3.All models, sizes, dimensions, and specifications are subject to change without prior notice, please refer to nameplates for the most accurate specifications.

Withair, your perfect partner for successful projects.



01/2017 - The technical data in this document are not binding.

Withair reserves the right to introduce at any time whatever modifications deemed necessary for improving the product.



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