TWINFRESH

www.ventilation-system.com

VENTS

SINGLE-ROOM ENERGY RECOVERY UNITS

TWINFRESH EXPERT RW1-30-14 V.2

TWINFRESH EXPERT IS A SERIES OF SINGLE-ROOM ENERGY RECOVERY VENTILATORS

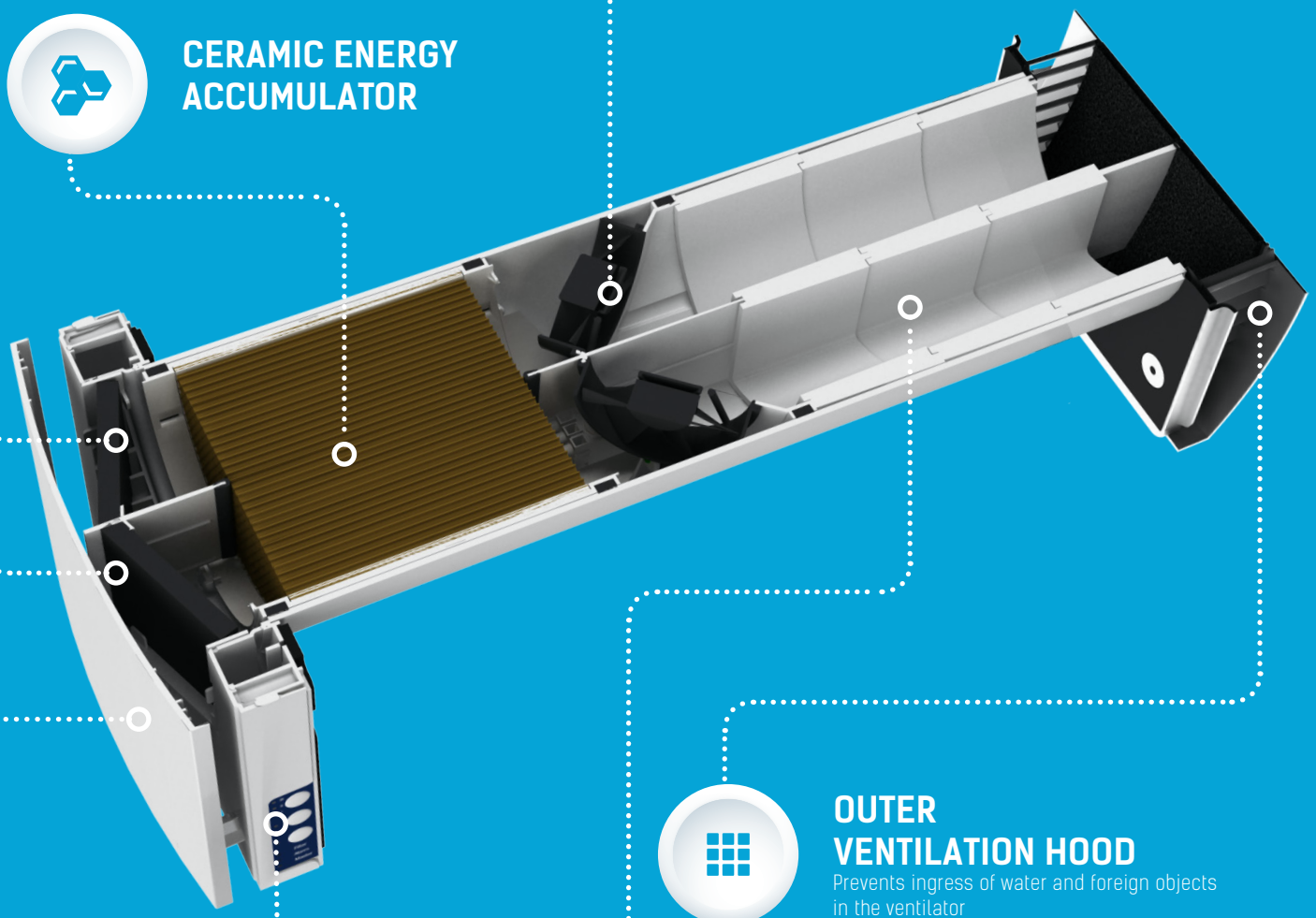
winFresh Expert is a modern and efficient solution to create a comfortable indoor climate and provide required air exchange in refurbished premises, recently settled houses or renovated flats.

- Control with Android- or iOS-based smartphone via a cloud worldwide
- Connection to smart house or Building Management System (BMS) via Wi-Fi
- Efficient supply and exhaust single-room ventilation with air flow up to 60 m^3/h
- Air cleaning with G3 filters
- Reversible EC-fan with low power consumption from 6.62 W and safe voltage 12 V
- High-tech ceramic heat exchanger with heat recovery efficiency up to 85 %
- No freezing and condensate formation during operation
- Rated for non-stop operation
- Integrated automation
- Low-noise operation from 24 dBA

DECORATIVE FRONT PANEL
Decoration purpose and shutoff of the air duct in case of the ventilator standstill.

G3 FILTERS
For supply and extract air filtration

CERAMIC ENERGY ACCUMULATOR



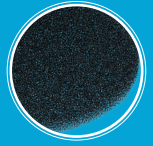
CONTROL PANEL

2 REVERSIBLE EC FANS
The reversible axial fans with a EC motor serve for air supply and exhaust. Due to the applied EC technology the fans are featured with low power consumption. The fans are supplied with save 12 V voltage. The fan motors have integrated thermal overheating protection and ball bearings for long service life.

OUTER VENTILATION HOOD
Prevents ingress of water and foreign objects in the ventilator

AIR DUCT
Plastic air duct

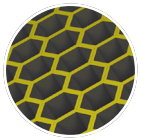
AIR FILTERS



The integrated G3 air filters provide supply and extract air filtration. The filters prevent ingress of dust and insects into the supply air and contamination of the ventilator parts.

VENTILATOR STRUCTURE

- **CERAMIC ENERGY HEAT EXCHANGER**



The high-tech ceramic energy heat exchanger ensures extract air heat recovery for warming of supply air flow. Due to the cellular structure the unique heat exchanger has a large air contact surface and high heat-conducting and heat-accumulating properties. The ceramic accumulator is treated with an antibacterial composition which prevents bacteria growth inside of the heat exchanger. The antibacterial properties last for 10 years.

ONE OF THE BEST HEAT RECOVERY RATINGS ON THE MARKET DUE TO INNOVATIVE HEXAGONAL STRUCTURE OF THE HEAT EXCHANGER CELLS.

EASY MAINTENANCE
The indoor unit is opened by a light press on the latches on both sides

The specially designed front panel provides 100 % air tightness and protection from wind.

VENTILATOR CONTROL

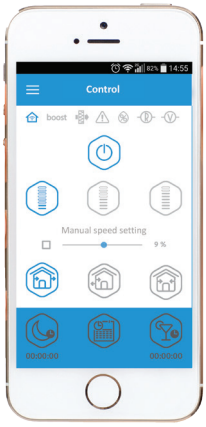
The ventilators are operated with:

Control panel | Remote control | Mobile application

DUO models in kitchen and bathroom

- The units can be connected by Wi-Fi for synchronized operation.
- House ventilation control via cloud server worldwide.
- Connection to Smart Home or BMS via Wi-Fi.

The specially designed **Vents TwinFresh V.2** app is available to download at Google Play and App Store



Google play

Download on the App Store

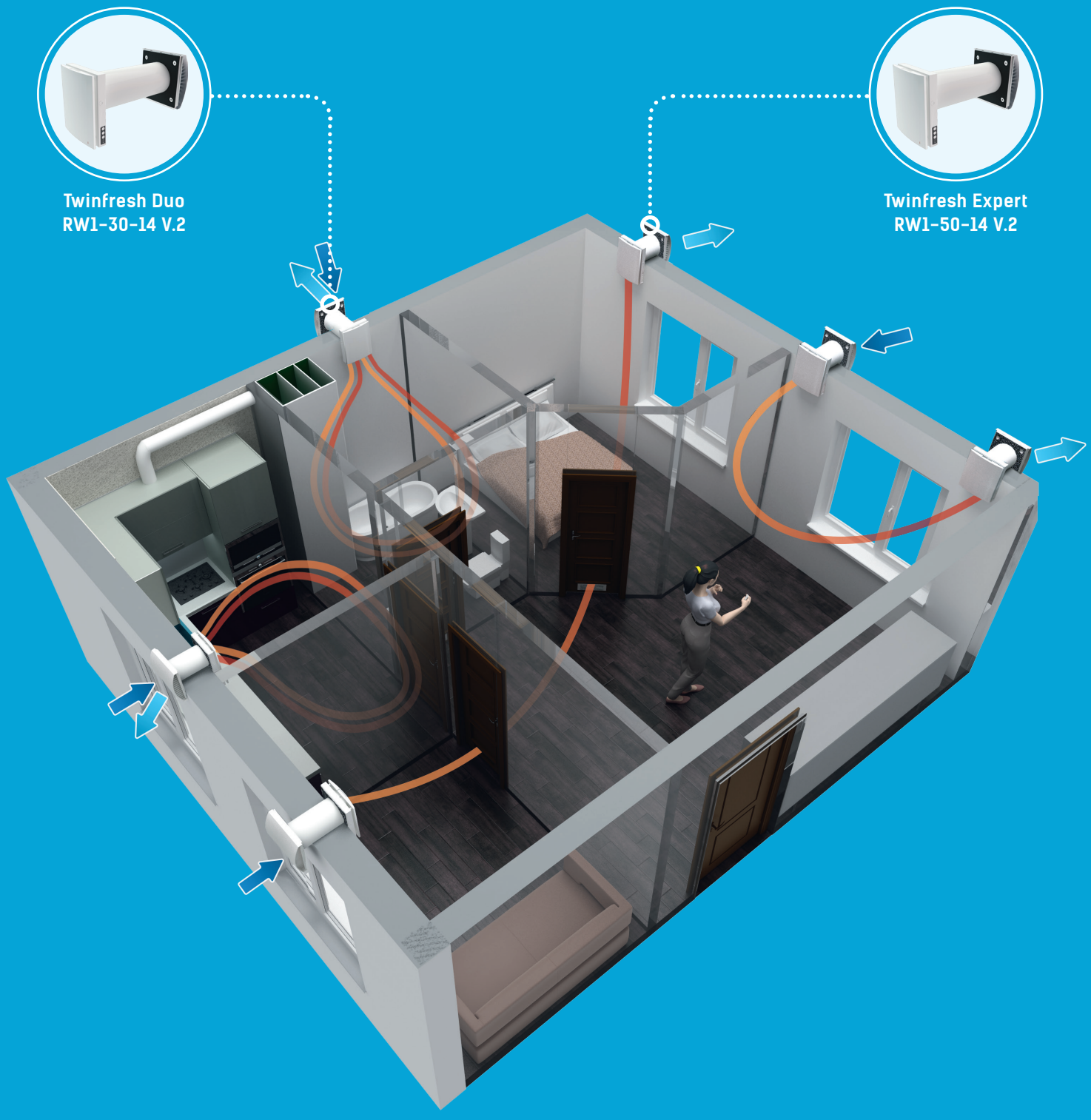
Standard models in bedroom and living room

VENTILATION ARRANGEMENT EXAMPLE

The ventilator is designed for through-the-wall installation inside a prepared hole in an outer wall of the building. To ensure balanced ventilation it is advisable to use a paired number of ventilators and connect those into a single network. Some ventilators must be set to operate in the supply mode and the other ventilators must be set to operate in the extract mode. This mounting solutions enables the most efficient balanced ventilation.

In case of brand new construction the installation has two steps:

- Preliminary mounting of the air duct, outer ventilation hood and cable during interior finishing and wall plastering.
- Complete mounting before commissioning of the house that includes installation of the indoor unit with controller, front panel and filters as well as the cartridge with heat exchanger and fans.



VENTILATOR OPERATION LOGIC

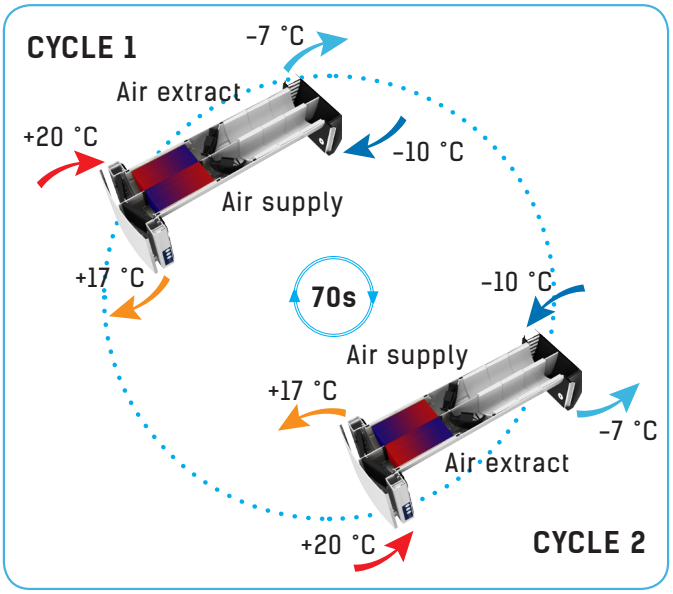
The ventilator operates in the reverse mode with energy recovery or in extract or supply mode without energy recovery.

CYCLE 1

One of the fans runs in the supply mode: the fresh intake air flows through the heat exchanger and absorbs the accumulated heat and humidity in the heat exchanger. At the same time, the other fan runs in the extract mode: the extract air flows from the room through the heat exchanger and transfers heat and partly humidity to the heat exchanger.

CYCLE 2

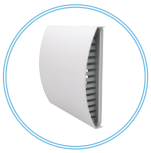
After 70 seconds operation the fans change their rotation direction to the opposite direction and the cycle starts from the beginning.



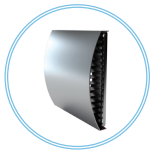
TECHNICAL DATA

Speed	1	2	3
Voltage [V 50 (60) Hz]	100-230		
Power consumption [W]	2,17	3.66	6.62
Air flow [m^3/h]	10	20	30
Air flow in humidity extraction mode [m^3/h]	60		
RPM	1600	2200	2500
Sound pressure level @ 1 m [dBA]	33	40	43
Sound pressure level @ 3 m [dBA]A	24	31	34
Outdoor sound pressure attenuation [dBA]	42		
Heat recovery efficiency [%]	max 85		
Transported air temperature [°C]	-15...+40		
Filter	G3		
Ingress protection	IP24		

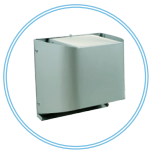
ACCESSORIES



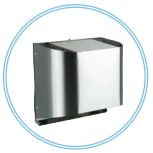
EHD-14 white 160
White plastic outer hood



EHD-14 chrome 160
Plastic hood with brushed aluminium plate



EHD grey 160
Stainless steel outer hood for thin walls



EHD chrome 160
Brushed stainless steel outer hood for thin walls

MVVM 162 05
Outer ventilation hood for mounting from inside

Duct 160-500
500 mm air duct and polystyrene foam plug

Duct 160-700
700 mm air duct and polystyrene foam plug

RP TwinFresh Expert Duo
Air flow separator

SF TwinFresh Expert Duo R-30 G3
G3 Filter (2 pcs.)

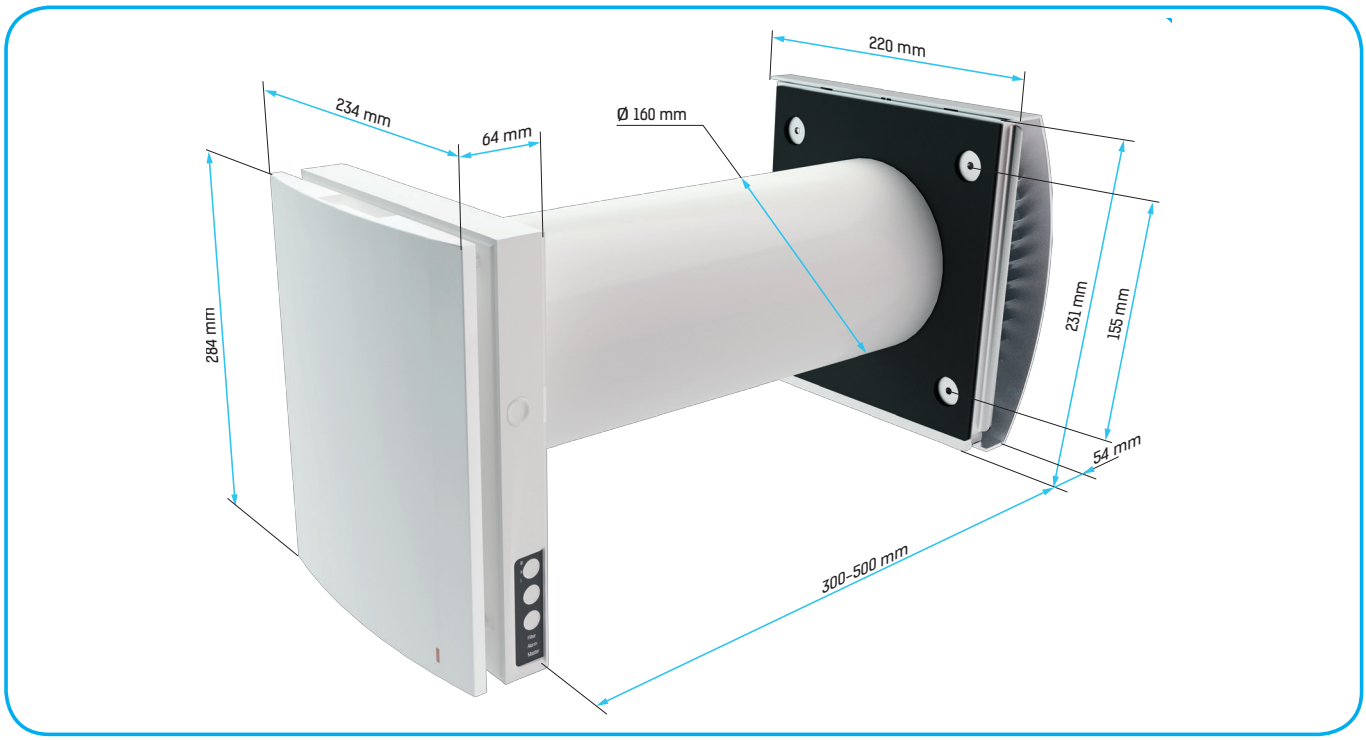
RC1 TwinFresh
Remote control

CO2-2
CO_2 sensor

CO2-1
CO_2 sensor

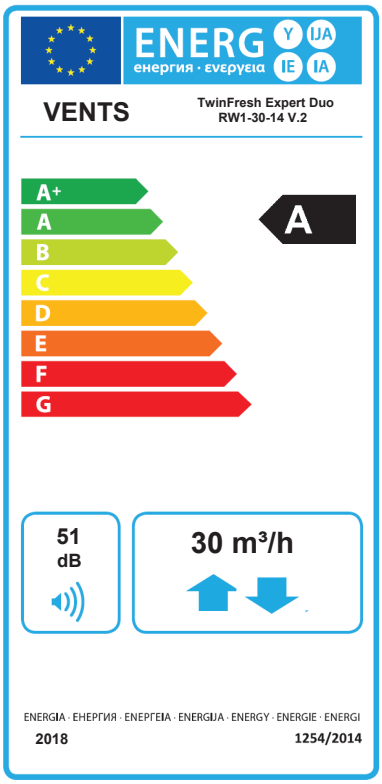
KV TwinFresh Expert RW
Wi-Fi controlled control panel

OVERALL DIMENSIONS



ECODESIGN PARAMETERS

Model	Twinfresh Duo RW1-30-14 V.2					
Specific energy consumption (SEC),kWh/(m².a)	Cold climate		Average climate		Average climate	
	-82	A+	-40	A	-17	E
Type of ventilation unit	Bidirectional					
Type of drive installed	Variable speed					
Type of heat recovery system	Regenerative					
Thermal efficiency of heat recovery, %	74					
Maximum flow rate, m³/h	30					
Electric power input, W	6.62					
Sound power level, dBA	51					
Reference flow rate, m³/s	0.006					
Reference pressure difference, Pa	0					
Specific power input (SPI), W/(m³/h)	0.183					
Control typology	Local demand control					
Maximum internal leakage rates, %	2.7					
Maximum external leakage rates, %	0					
Mixing rate of bidirectional units, %	1					
Airflow sensitivity at +20 Pa and -20 Pa	0.4					
The indoor/outdoor air tightness, m³/h	0.5					
Internet address	http://www.ventilation-system.com/					
Annual electricity consumption (AEC), kWh electricity/a	Cold climate		Average climate		Average climate	
	1.1		1.1		1.1	
Annual heating saved (AHS), kWh primary energy/a	Cold climate		Average climate		Average climate	
	84.3		43.1		19.5	



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09–2018