



United Technologies
turn to the experts 

POWER TAILORED TO YOUR BUILDING

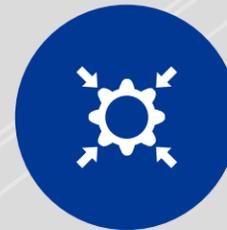
AQUAFORCE[®]

30DW Water-Cooled Screw Chiller
(cooling capacity: 270~350 RT)





30DW is the new generation of Carrier's AquaForce® water-cooled screw chiller series. It offers you tailored solution that empowers your building performance to the fullest with industry-leading efficiency, reliability, and intelligence at true operating conditions without compromising on environmental sustainability.



**TAILORED
COOLING CAPACITY**



**HIGH
EFFICIENCY**



**GUARANTEED
RELIABILITY**



**INTELLIGENT
CONTROL**



**EASY
INSTALLATION**



**SUPERIOR USER
EXPERIENCE**



AQUAFORCE®

**POWER TAILORED
TO YOUR BUILDING**

TAILORED COOLING CAPACITY

WE UNDERSTAND
ONE SIZE DOESN'T FIT FOR ALL.



30DW is designed to have a variable cooling capacity that ranges from **270 to 350** refrigeration tons (RT) with a maximum of **100⁺** efficiency options^[1] for you to choose from.

Whether you need an economic system or a powerful unit with high efficiency, the tailored cooling capacities of 30DW can seamlessly suit your unique business requirement and industry application needs.

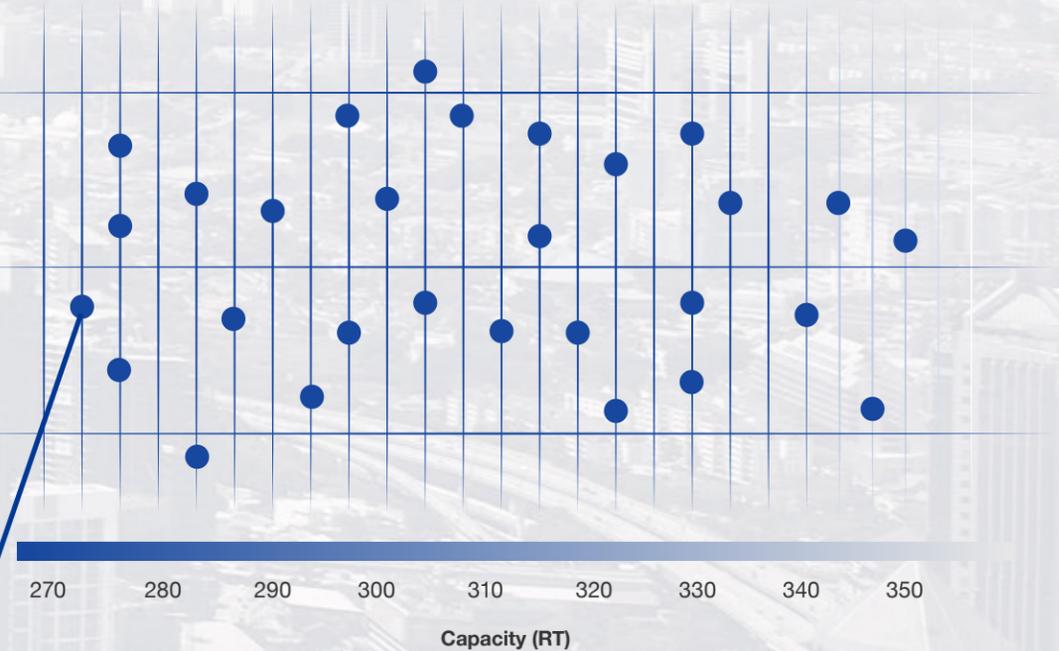
[1] Number of efficiency options varies according to specific cooling capacity.

HIGH
COP 6.0-6.4

MEDIUM
COP 5.6-6.0

STANDARD
COP 5.3-5.6

Efficiency options



UP TO **100⁺**
CONFIGURABLE OPTIONS
for
JUST 1
COOLING CAPACITY POINT

-6°C-20°C

Apart from wide range of cooling capacity, 30DW also works steadily over an extended water temperature range from **-6°C to 20°C**^[1] that can meet variable application needs and effectively reduces energy consumption and operating costs.

[1] Chiller evaporator leaving water temperature



GENERAL COMFORT COOLING

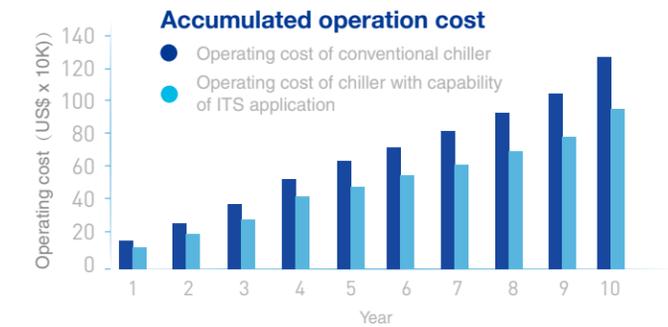


ICE THERMAL STORAGE

Case study

Building type: office building
 Construction area: 15500m²
 Cooling capacity: 600RT
 Operation hours: 10pm ~ 6am
 Ice storage capacity: 3565 RTH
 Ice storage hours: 10pm~6am
 Electricity price: 0.179\$/kW.h in peak hours
 0.045\$/kW.h in slack hours

30% Operating Cost Saved



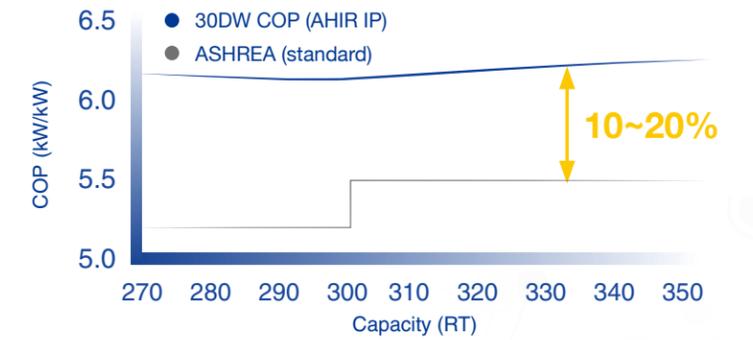
HIGH EFFICIENCY

WE KNOW THAT POWER COMES FROM HIGH EFFICIENCY.

30DW incorporates Carrier's proven technologies and patented innovations that bring you high efficiency and enhanced building performance with reduced energy consumption and operating cost.

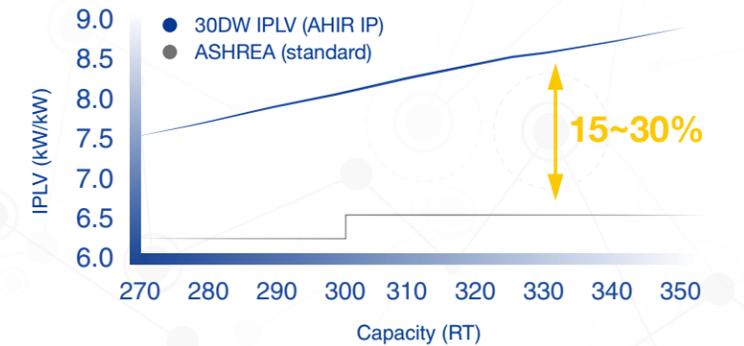
6.4
COP_R

Full load efficiency (AHRI IP)



8.7
IPLV

Part load efficiency (AHRI IP)



Compressor

- Direct-driven compressor reduces mechanical loss
- Patented streamlined twin-rotor screw compressor optimizes operation
- Optimized discharge and suction flow path
- Optimized Vi enables the chiller automatically match the building load



Heat Exchanger

- Inner-grooved & outer-finned copper tubes optimize energy and heat transfer efficiency
- Lower water pressure drop saves water pump energy consumption



Control

- **4260** steps stepper motor driven EXV allows for precise refrigerant flow modulation
- Patented heat transfer temperature difference control improves efficiency
- Advanced chiller control precisely respond to dynamic load requirement



GUARANTEED RELIABILITY

WE UNDERSTAND RELIABILITY IS CRITICAL TO EVERY BUSINESS.

The various technological advancements in 30DW minimize the potential failures and costs that are associated with conventional chiller designs.

With the powerful 30DW in place, you can count on it for a robust and stable operation with uncompromising reliability.

3000
HOURS

30DW has undergone 3000+ hours of accelerated life testing

2.5
TIMES

The wye-delta closed-circuit starter applies a reduced current that is **2.5 times** less than the rated current to minimize impacts of inrush current and starting torque.

300
SECONDS

In the event of power disruption, 30DW can automatically restart and restore cooling capacity to the optimal level within **300 seconds**.

COMPREHENSIVE PROTECTIONS

Chiller System

NO

- × Low cooling water leaving temperature
- × Low oil pressure
- × High refrigerant pressure

Electrical

NO

- × Over high/low current
- × Electrical leakage
- × Circuit breaker & emergence stop

Compressor

NO

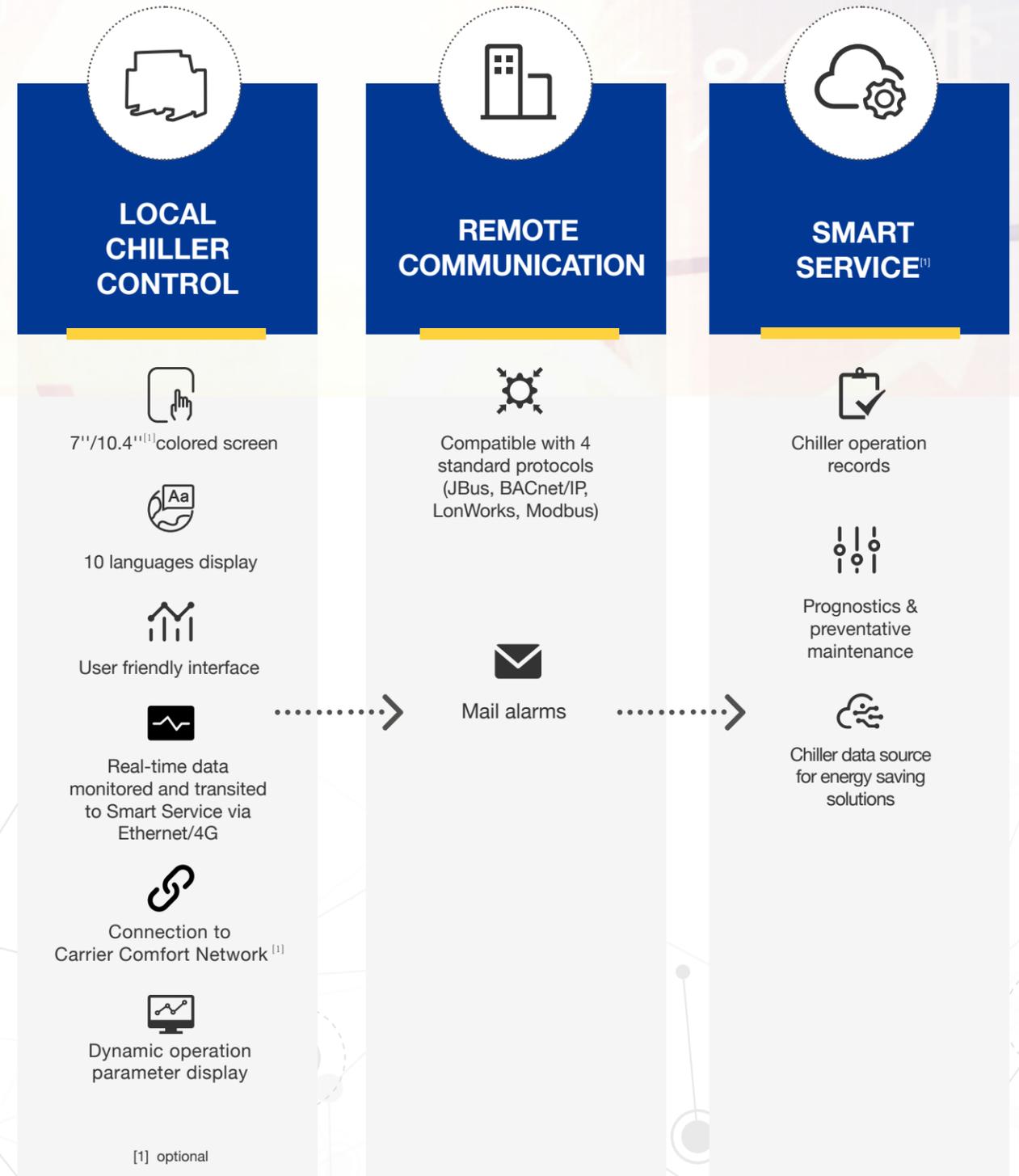
- × Low oil pressure
- × Compressor overload
- × High discharge & motor temperature

INTELLIGENT CONTROL

**WE GIVE
THE CONTROL YOU NEED TO
GET THE POWER YOU WANT.**

30DW is equipped with the Touch Pilot™ -- a powerful Carrier control system that assists to install, commission, monitor, and control chiller operation.

Combining ultimate intelligence with superb operating simplicity, the Touch Pilot™ provides useful analytics and deeper insight into chiller performance that helps to achieve operational excellence.





EASY INSTALLATION

WE VALUE
YOUR SPACE AND TIME
AS MUCH AS YOU DO.



Compact Design

-  Minimum width of nearly **1.4m** allows for easy access through standard doorway
-  Footprint as small as **5m²**, i.e. **30%** less than conventional chiller
-  Easy transportation that is ideal for retrofit projects

Easy Onsite Assembly

-  Simplified electrical and water connections minimize assembly complications and time required on jobsite
-  Fast commissioning realized by comprehensive testings prior to shipment and quick test function with step-by-step verification



±1°C

**0
ODP**

SUPERIOR USER EXPERIENCE

**WE BELIEVE
SUPERIOR USER EXPERIENCE
IS NOT A LUXURY, IT IS A NECESSITY.**



More Comfort

Variable Water Flow (VWF) Technology regulates water temperature fluctuation within **±1°C** and supports as high as **30%** flow fluctuation per minute to maximize energy saving potential.

More Green Commitment

The non-ozone depleting refrigerant HFC-134a efficiently supplies your facility with all the power you need without sacrificing a commitment to environmental sustainability.

Less Noise

30DW has a built-in sound reduction device, vibration treatment technology, and low refrigerant discharge pulsation. Its profound low operating sound level allows you to obtain the Occupational Health and Safety Advisory Services (OHSAS) 18001 certification.

-  **Sound reduction options reduces noise by 3~8dB(A)**
-  **Vibration treatment technology**

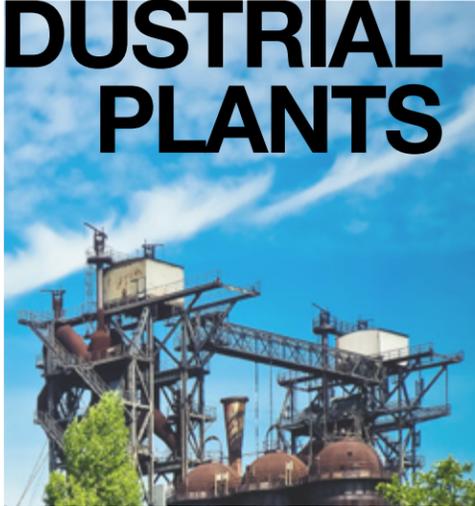
**OFFICE
BUILDING**



HOTEL



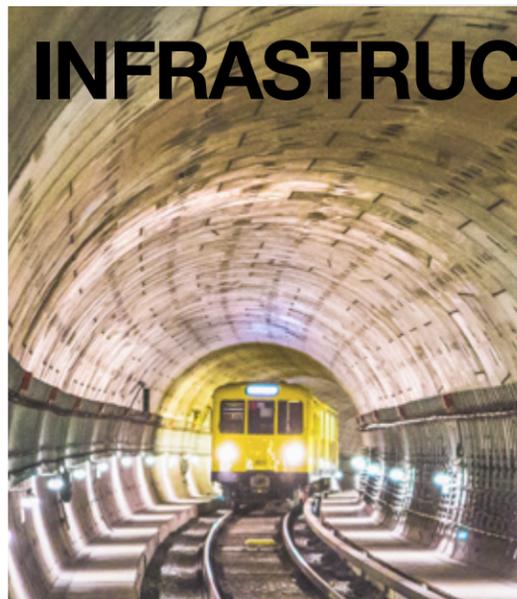
**INDUSTRIAL
PLANTS**



**HEALTH
CARE**



INFRASTRUCTURE



30DW

**POWER TAILORED
TO YOUR BUILDING**





We make the world a better place to live. We create comfortable, efficient, healthy, safe and secure environments, and ensure the global food supply is transported and preserved for safe consumption.



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