

COIL CLEANING PRO GUIDE

- Understanding the Right Tools and Process
- Benefiting the Bottom Line

GOODWAY®

INNOVATIVE MAINTENANCE SOLUTIONS

The Dirty Truth

GOODWAY PROVIDES THE FACTS TO MAKE THE RIGHT DECISION

Condenser and evaporator coils are an integral part to HVAC systems. Dirty A/C coils cause systems to run hotter, running longer and cost a LOT more to operate. They also burn through components faster. One of the quickest and safest ways to maintain your HVAC system is through a comprehensive coil cleaning program for both evaporator and condenser coils.

The fact is that an A/C system operating with dirty coils can use up to 37% more energy than it does with clean coils. Higher temperatures and operating pressures caused by dirty coils can also shorten the life of the equipment. A fouled coil cannot supply proper heat transfer resulting in higher discharge pressures and greater energy consumption.

FACT **Maximum heat transfer** is dependent on having clean coils!

In addition to energy consumption, other byproducts impact your coils. Acid formation can occur under these conditions, leading to lubricant breakdown and ultimately equipment failure. Cooling air passing through the coils contains dust, dirt, pollen, moisture and other contaminants clogging the coils promoting the growth of organisms and thereby generating odors throughout an occupied space.

FACT **System longevity** is dependent on having clean coils!

In addition, the evaporator coil and its condensate pan can become fouled with pollen, mold spores and other biocontaminants and can have an adverse effect on indoor air quality. With all the moisture around the evaporator coil, it can become a breeding ground for bacteria and mold.

FACT **Indoor air quality** is dependent on having clean coils!

Clean coils the right way. While any attempt to clean coils on a consistent basis can be applauded, there are right ways and wrong ways of cleaning. Cleaning the wrong way can actually do more harm than good.

Studies prove you can save 10–25% of the average operating cost on your AC unit.

AC coils become a breeding ground for mold and bacteria as airborne contaminants are filtered through the system, threatening indoor air quality.

Cleaning coils is a specialized and time consuming process that if not performed by professionals can result in lost time and resources.

“Dirty coils will drastically increase the costs of running your HVAC systems, plus put undue strain on system components.”

HURTING THE BOTTOM LINE

How dirty coils negatively affect cooling capacity and energy efficiency

Dirty Evaporator Coils:

UP TO
40%
REDUCED COOLING CAPACITY

UP TO
35%
DROPPED ENERGY EFFICIENCY

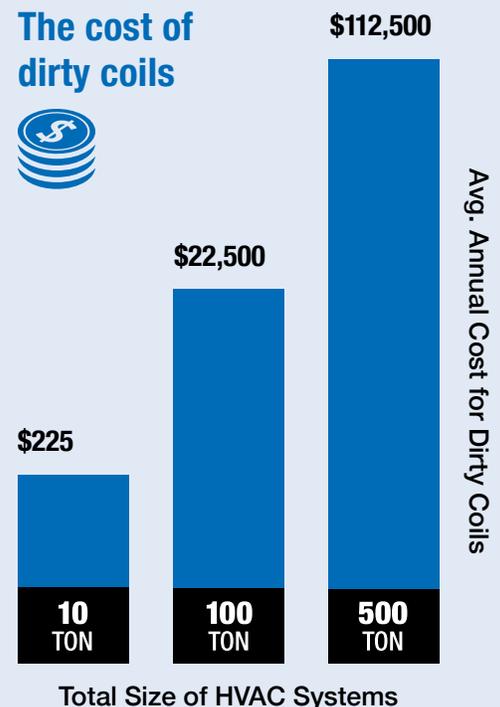
Dirty Condenser Coils:

UP TO
40%
DEGRADED COOLING CAPACITY

ABOUT
60%
REDUCED ENERGY EFFICIENCY

Source: SCE report, April, 2010

The cost of dirty coils



Use the Right Tools

GET TO KNOW GOODWAY'S BEST SELLING COIL CLEANERS

Pressure washers and pump sprayers just don't cut it anymore. Coil technology and environmental changes make simple washing of coils not sufficient to properly clean. When cleaning indoor coils, use tools designed for

minimal, yet sufficient PSI, while limiting the amount of water and chemical used so you don't overwhelm condensate lines. On outdoor coils, use a combination of lower pressure and high water volume to thoroughly clean coils.

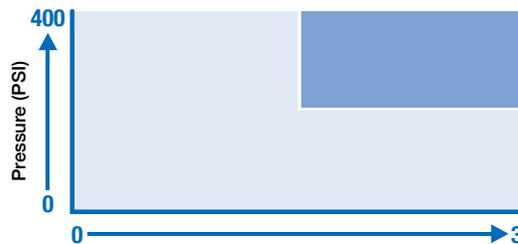


Clean thick coils inside and out

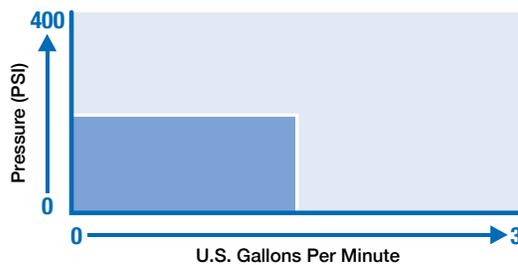


Wands available for cleaning behind coils

High Volume vs High Pressure Performance



Low Volume vs Low Pressure Performance



“Pressure washers just crush fins. And hose attachment simply don't have the power to get through dirty coils.”

- » 18 inch stainless steel wand
- » Spray gun with two nozzles (flat and pinpoint)
- » 10:1 water to chemical ratio
- » built-in siphon injector
- » 12 foot hose



CC-400HF Hi-Flo coil cleaner

CC-400HF CoilPro® Hi-Flo Coil Cleaner

Best choice for micro channel coils and thick multi-pass coils up to 8" deep.

Cleaning thick HVAC/R coils is no problem for the CC-400HF. This innovative system delivers 400 PSI cleaning power at 3.0 GPM. This delivers the perfect combination of water pressure and volume to effectively flush dirt and debris safely from thick evaporator and

condenser coils without the damage associated with pressure washing. The extremely compact design of the CC-400HF makes it ideal for cleaning rooftop units. The unit is supplied standard with a gallon of coil cleaning solution.

- » On-board 3.3 gal water tank
- » 1.75 quart chemical tank
- » 3 foot stainless steel wand
- » 10 foot self-coiling hose
- » Spray gun with two nozzles (flat and pinpoint)
- » 12V rechargeable VRLA battery

Grab and go coil cleaning



CC-JR CoilPro® Jr

The CoilPro® Jr. is a portable, extremely compact self contained unit that requires no external power or water sources. Ideal for cleaning smaller rooftop units, hard to reach air handlers and refrigeration condenser coils. Water pressure output is 125 PSI at 0.6 GPM. Chemical injection is operator adjustable from a 6:1 to a 30:1 water to chemical ratio. The unit is supplied with an adjustable carrying strap with shoulder pad and a gallon of coil cleaning solution.

- » 18 inch stainless steel wand
- » 25 foot hose
- » Spray gun with four nozzles (1 foaming, 2 flat, 1 pinpoint)
- » 12V rechargeable VRLA battery
- » 6:1 water to chemical ratio



Variable pressure and water volume

CC-140 CoilPro®

The versatile CC-140 CoilPro® can be battery operated on either its on-board 5 gallon water tank or AC power and an external water supply or any combination necessary. The CC-140 also carries five gallons of chemical in its secondary tank. Output water pressure is adjustable from 40 to 140 PSI with flow adjustable from 0.25 to 1 GPM. The unit is supplied with a gallon of concentrated coil cleaning solution.



Use the Right Cleaners

ENVIRONMENTALLY-FRIENDLY DETERGENTS THAT CLEAN DEEP

Using acid cleaners these days is just irresponsible. It isn't safe for workers, it's highly destructive to coils and other components and isn't environmentally friendly. Use a biodegradable, alkaline coil cleaner that has a foaming component. This allows the cleaner to self advance through the coils, increasing its cleaning power exponentially. When working with indoor coils consider treating them after cleaning with an EPA registered mold and mildew inhibitor. It will contain any growth and drastically improve indoor air quality (IAQ).

GOODWAY REMINDS YOU TO
Thoroughly rinse all
chemicals to prevent
coil damage.



COILSHINE®

COILSHINE® is an environmentally friendly, biodegradable, expanding foam detergent specifically formulated for use with the CoilPro®. This unique solution penetrates deep into coil beds for thorough cleaning. It is user friendly, non-acidic, and non-fuming, allowing it to be used in occupied areas and safely washed down drains.



COILSHINE BC

COILSHINE BC (Bio-Clean) is EPA registered for application to all components of HVAC systems. It is an environmentally friendly, commercial grade, ready-to-use bacteriostat, fungistat and mildewstat. It is formulated to be applied with the CoilPro® in air handlers, air ducts, drain pans and other HVAC components to help prevent the growth of odor, stain and damage causing organisms including bacteria, fungi, mold and mildew.

Use the Right Process

GOODWAY MAKES CLEANING SMARTER, NOT HARDER

Applying water and cleaner at the face of coils will do nothing but push dirt deeper into coils beds. Make sure to clean opposite the airflow whenever possible. Find the right tools and wands that allow easy access to the back of coils to properly flush dirt and debris out of the coils completely.

Patented nozzle allows for cleaning from inside of the condenser coil.



CASE STUDY

Power Engineering Magazine > ROOM FOR IMPROVEMENT

How deep cleaning an HVAC system saved \$20,000 in one month

Westchester One is a huge complex. This property houses multiple data centers and its HVAC systems are critical. But it had problems. Coils were so dirty, air was hardly penetrating them. They needed a solution and pressure washers weren't even close to cutting it. The CoilPro CC-400HF cleaned out their 8" deep coils quickly and efficiently. But the proof is in the stacks of cash this building now saves. Head Engineer Al Frabotta can attest to that.

...for Frabotta, the proof is in the energy bill. "My manager is tickled. He thought there was a mistake on the electrical bills. We save thousands of dollars a month." One month's electric bill came in \$20,000 under budget. The savings are significant, believe me, the improvements represents between a 13-15% increase in system efficiency.

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