

Total Solution Carpet Care Guide

Courtesy of Windsor Industries



- *Maintaining high quality appearance*
- *Extending commercial carpet life*
- *Improving indoor air quality*



Total Solution Carpet Care from a unique combination of resources

This guide is part of the Windsor Total Solution Carpet Care Program, a program made possible by a unique combination of expertise. When Windsor, Century 400, and ProChem combined resources to create Castle Rock Industries, the technical and service strengths of each participating company expanded. As you read this guide, you'll be tapping knowledge from all three companies as well as leading carpet and fiber manufacturers, and recognized industry organizations. Here is the latest information on care methods, equipment, chemicals, and tools that can optimize commercial carpet appearance and life, while reducing cleaning time and labor expenses.

Proactive cleaning for the health of the carpet and end user

Without frequent mopping, a hard floor quickly shows scratches from dirt and soil build-up. The problem is similar with commercial carpet, even though the damage may not be as quickly obvious. Without regular removal, dirt and soil accumulate to grind and permanently damage fibers, so carpets "ugly out" before their time. For the long life and health of your carpet, proactive cleaning is essential.

Proactive cleaning is preventative maintenance before the carpet looks dirty, instead of *reactive cleaning* after the carpet is visibly soiled. It is the premise of this guide that *proactive daily, scheduled, and interim maintenance* can reduce or eliminate the cost and time of *reactive restoration* required for extreme cases of badly soiled or damaged carpet. Restoration involves water extraction with aggressive agitation followed by thorough rinsing and pile grooming.

Proactive cleaning also provides the best possible carpet appearance day after day and contributes to good indoor air quality for end users.

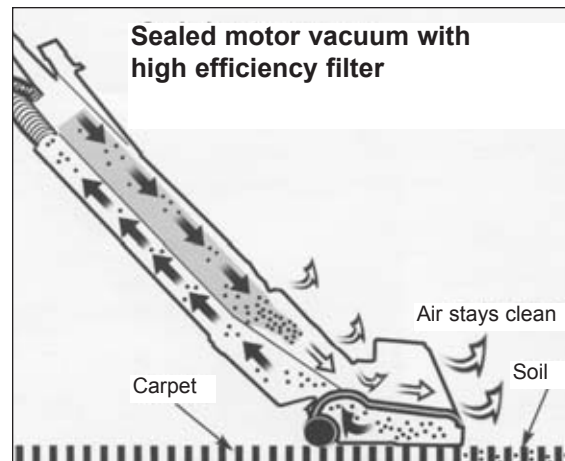
Carpet acts as a filter that traps and keeps dust and dirt out of the air. This is a significant end-user health benefit since most people spend up to 90% of their time inside. When removing contaminants from carpet, it's important to prevent recirculation into the environment and protect the surrounding air quality. Recirculating dust and dirt can also redeposit on the carpet and undo your work.



Without proactive cleaning, dirt and soil will grind and permanently damage fibers - shortening carpet life.

Methods and tools to promote maximum indoor air quality

- Sealed motor vacuum with high efficiency filter
- Hot water extraction



Proactive cleaning - a function of frequency and traffic

This guide is organized by cleaning frequency: **Daily**, **Scheduled**, and **Interim**. Depending on frequency and traffic, there are different techniques and tools for best results in your particular facility.

Daily

Daily cleaning is necessary for heavy, medium, and light traffic areas, and includes the following:

- Daily vacuuming of walk-off mats.
- Daily vacuuming of track-off, funnel, and main traffic lanes. In some instances, frequency may be greater.
- Immediate spot removal with extraction, powder, or blotting to guard against permanent staining.

Scheduled

Scheduled periodic overall cleaning with water extraction is required to keep carpets in all areas looking their best. Water extraction cleans to the base of the fiber. Every third extraction is followed with a clear water rinse for best long term results.

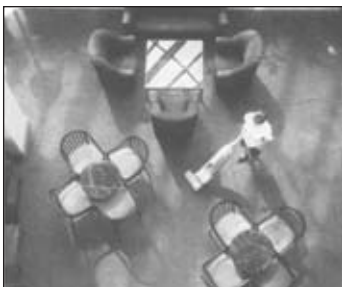
Interim

This is fast, light surface cleaning for heavy and medium traffic areas. Low moisture methods such as bonnet buffing or absorbent dry powder cleaning can be used, but water extraction is recommended. Extraction of large or medium size areas can be easier by cleaning a small portion each day. This also applies to scheduled maintenance.

Daily

Vacuuming removes 90% of dry soils that scratch and cut carpet fibers

Vacuuming is a powerful method for preserving carpet life and appearance. The first step in vacuuming is selecting the equipment best suited to your requirements and preferences.



Daily Cleaning walk-off mats as front line carpet protection

The first step toward a clean carpet is preventing dirt from getting to the carpet. Since 80% of all carpet soil is brought from outside on the bottom of shoes, Windsor strongly recommends walk-off mats at all entry ways and transition areas where soiling is likely. Mats trap or localize dirt, and the longer the mat, the more dirt trapped. Daily vacuuming and frequent cleaning of mats will optimize mat efficiency and provide front line protection to keep carpets cleaner longer.

VACUUM CLEANER SELECTION CRITERIA

Features	Considerations
Sealed Motor	Pulls soil through the machine without exposing the motor to the soil. Motor runs longer and quieter.
Adjustable beater brush	Raises carpet pile, exposing and loosening dirt for better cleaning. Height adjusts so that the brush lightly flicks the carpet fibers rather than burying into the fibers. The brush at proper height last longer and the motor works more easily, extending its life.
Sealed toothed or cog belt	Lasts longer than any other belt. The best vacuums rarely or never need belt replacement.
Enclosed sealed bag	Vacuum cleaners with external bags generally filter down to about 10 microns. Most vacuums with enclosed bags filter efficiently down to 3 microns, containing all but the smallest particles.
High efficiency filtration	The best vacuums offer standard or optional high efficiency filters down to 0.3 microns. This helps prevent mildew spores, bacteria, dust mites, smoke and other odor-producing contaminants from escaping into the air.
Detail wand	Adds versatility for cleaning above floor areas.

Daily

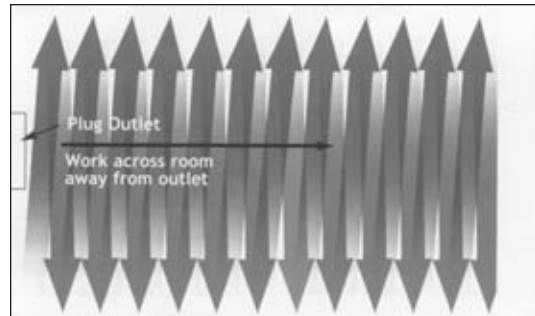
Two-motor vs. single-motor vacuums

In a two-motor vacuum, there is a separate motor for vacuuming and beater brush drive. Each motor is sized and configured to optimize the specific function. Operation is generally quieter and dirt pick-up more effective than single-motor vacuums. Weight of the two-motor unit, however, is typically greater. The handle weight is especially heavier because the vacuum motor is usually located in the upright portion of the machine.



Upright vs. backpack vacuums

Since Windsor makes back pack and upright vacuums, the answers to the following questions are totally objective:



Do backpack vacuums pick-up dirt as effectively as uprights?

The Carpet and Rug Institute has approved Windsor and other brands of back pack vacuums as effective tools at removing and containing dirt. But beware - back pack vacuums are effective only in the following circumstances:

1. You use a proper carpet floor tool that lifts the carpet pile. Tools that glide too easily over the carpet do not lift the pile and remove as much dirt.
2. You methodically go up and down the carpet in an overlapping motion, hitting the entire carpet as shown in the diagram. Operators of back pack vacuums tend to spot clean, and often miss large areas of the carpet, particularly in open areas.

Are backpack vacuums faster than upright vacuums?

Despite many claims about the coverage of back pack vacuums, common sense and a quick experiment will give you the answer. Take a 14" upright vacuum and a back pack vacuum with a 14" carpet tool. Begin methodically vacuuming in an open area from one end to the other in properly overlapping passes. The upright vacuum with wheels and a beater brush quickly outpaces the back pack vacuum, which must pass over the floor more slowly to pick up the same amount of dirt. The back pack is only more efficient for spot cleaning when it can skip areas of unapparent soil and go to the spots where soil is apparent.

Vacuuming efficiently and effectively

Techniques for reducing vacuum time

- Use wider area vacuums for open areas. While uprights are up to 18" wide or more, wide area vacuums are available in widths up to 28" or more. But beware - a wide area vacuum can save more time but is less effective at picking up dirt as it becomes wider. With the larger vacuum opening the unit must move more air to lift the dirt. 28" is about as wide as you want to go in a well-designed wide area vacuum.
- Use back pack vacuums for congested areas or above-the-floor cleaning. Windsor, IICRC, and many carpet manufacturers recommend back pack vacuums for these situations. Units are lightweight with a variety of tools to vacuum congested areas, such as school classrooms, offices, and cubicles where uprights are less efficient or impractical. With dusting, upholstery, and crevice tools, back pack vacuums also make above-the-floor cleaning easier.

Daily

Spot Removal - 8 rules for best results

Spot removal can be one of the most confusing and frustrating aspects of carpet care. Improperly treated or ignored spots can destroy expensive carpet. That's why Windsor sponsors Spot Removal training seminars through authorized Windsor Distributors. The following eight rules can also help simplify the challenge.

Eight rules of spot removal

- 1 The faster you get to a spot the better for removal. At the minimum, spot removal must be a daily routine.
- 2 Know the fiber make-up of your carpet. Most commercial carpets use either nylon or olefin (polypropylene) fibers, or a blend of both. IICRC certified professional carpet cleaners have simple tests that can determine fiber type for you. Nylon carpets will usually contain stain blocking chemicals, which if properly maintained, can facilitate removal of serious stains.
- 3 Know and recognize the common spots in your facility. Keep a spotting kit on hand with a general purpose spotter and specialty spotters for spots specific to your area of responsibility. Offices, for example, often have coffee or copier toner

spots. Hospitals commonly have blood or betadine spots. You can expect coffee, tea, and red food dye spots in retail or hospitality facilities. Nursing homes commonly have urine stains. Gum stains are common in public facilities.

- 4 Many spots are concentrated areas of general soil tracked into an area. A general purpose water-based spotter will remove these.
- 5 Greasy spots and tar are best removed by an oil or solvent-based spotter.
- 6 Protein or fatty soils such as vomit, feces, or blood can be effectively removed with an enzyme-based spotter.
- 7 When applying a spotter, never rub the spotted area. Always carefully blot the spot with a cloth. To help prevent recoiling, use a spotting water extractor such as the Windsor Presto to thoroughly clean the spotted area after blotting.
- 8 As an alternative to a spotting extractor, use a dry absorbent powder cleaner such as Windsor Dri-matic™ Powder Clean Kit to thoroughly clean spotted areas without wetting the carpet.

*Your local rental dealer is
your carpet-care expert.
Check with your rental dealer
to make sure you're using the
right tools for the job.*



Presto™ Spotting Extractor



Red Carpet™ Professional
Spotting Kit



Red Carpet™
Specialty Office
Facility Spotting Kit



Red Carpet™
Specialty
Hospitality/Retail
Facility Spotting Kit



Red Carpet™
Specialty Health
Care Facility
Spotting Kit



Red Carpet™
Pro Spotter



Dri-Matic™
Powder Clean Kit

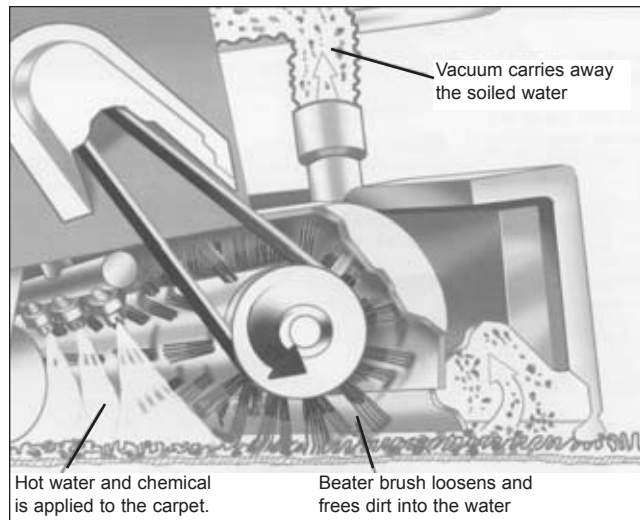
Scheduled

Hot Water Extraction - most thorough way to preserve carpet life and appearance

There are many advantages and disadvantages with the various cleaning methods in this guide. But for the most effective way to safely and thoroughly clean carpets, major carpet manufacturers and fiber producers recommend hot water extraction for both scheduled and interim cleaning.

Water extraction cleans to the base of the carpet fibers, leaving less residue than any other cleaning method, plus removing residue left by other methods. This keeps carpets cleaner longer because residue attracts dirt and can act as food for microorganisms. The less residue the better.

For productivity, hot water extraction simultaneously washes, rinses, and vacuums. A combination of hot water, chemical action, and agitation cleans and rinses the carpet, while a vacuum carries away the soiled water.



Selecting self-contained, truck-mounted, or portable equipment

The variety of equipment ranges from truck-mounted high powered machines to portable machines that use a hose and wand. The most popular type in commercial facilities is the self-contained extractor that can use a hose and wand, but is usually operated using the self-contained spray jets, agitating brush, and vacuum shoe shown here.

Self-contained machines use hot tap water. The temperature is cooler than truck-mounts or portables which also apply the water at higher pressure. Brush agitation in the self-contained unit makes up for the cooler water and lower pressure so that cleaning commercial carpet is very effective. In addition, productivity is greater than a truck-mount or portable. Truck-mounts or portables can typically clean 1000-2000 sq. ft. per hour. A mid-sized self-contained extractor can clean between 2000 and 4000 sq. ft. per hour. A large walk-behind wide-area extractor can clean up to 10,000 sq. ft. per hour.

Scheduled

WINDSOR EXTRACTION RATES

MODEL	VOYAGER 2/E	COMMODORE 20	CLIPPER 12	ADMIRAL 8	CADET 7	EXPERT
Cleaning Rate/hour	8,000 ft.	5,000 ft.	3,200 ft.	2,500 ft.	2,100 ft.	1,200 ft.

Effective hot water extraction methods

Pre-spray and neutralizing rinse is the most effective method because it allows more time for the chemical action. It also permits the harsh alkalinity of the cleaning chemical to be neutralized in the rinse, leaving the carpet looking brighter and more lustrous.

Step 1: Pump spray a diluted solution of pre-spray chemical onto the area of carpet to be cleaned about 10-15 minutes before extracting that area.

Step 2: In the solution tank of the extractor, dilute the hot water with a proper amount of neutralizing rinse. Extract the pre-sprayed carpet with this solution.

In-the-machine extraction cleaner is a little quicker and requires just one simple step: dilute the hot water in the solution tank with the proper amount of carpet extraction cleaner. Extract the carpet using this solution. With either method, you can **cut dry time in half by directing an air blower on the wet carpet.**

When to use defoamers

Well-formulated extraction cleaners and pre-sprays are usually non-foaming, so a defoamer is often not necessary. If a carpet, however, is alternately shampooed or bonnet buffed, a residue of high foaming chemical may be present and can cause excessive foaming during extraction.

If foaming occurs, put a small amount of defoamer into the recovery tank of the extractor. Spraying defoamer onto the inner wall of the recovery tank can give faster contact with foam as it enters the tank.

Warning: Never put defoamer into the solution tank. This can clog the spray jets. Also, defoamer residue on the carpet will attract recoiling.

Maintenance Tip: Rinse plain water through the solution system when cleaning up after extracting to keep pump and spray jets in top condition. Also, check the spray jets for clogs before operating the extractor. Carpet streaking is a sure sign of clogged spray jets.

Carpet Protectors -proven to slow down resoiling

Most carpet manufacturers incorporate special chemicals absorbed into the fibers that repel soils and materials that cause stains. This protection can be very effective, but wears away with each cleaning. Also, if a carpet is cleaned with chemicals that are above 10 pH, the protector will be stripped immediately from the carpet. All Windsor chemicals have an in-use pH below 10.

Over time, as the manufacturer's protector loses effect, you can bring back that soil repelling protection by spraying a good protector onto the carpet after extracting. But beware - most carpet protectors have similar chemistry and are very expensive, and some suppliers will water down to ineffective dilutions in order to sell at a competitive price. You truly will get what you pay for.

Interim

Absorbent/Dry Powder Cleaning - low moisture dry-as-you-go method

This method of carpet cleaning has the advantage of leaving the carpet dry as you clean. It is recommended by such carpet manufacturers as Interface and Milliken as excellent for their carpets. Some facilities, which don't have much down-time to allow wet extraction to dry, use absorbent powder cleaning as their preferred method.

With absorbent or dry powder cleaning, sponge-like particles containing a cleaning solvent are spread on the carpet and then agitated with a special scrubbing machine into the carpet. The cleaning solvent loosens the soil with agitation, and the sponge-like powder absorbs the soil. Within a half-hour, the cleaning solvent evaporates, leaving the dry soiled powder to be picked up with an upright vacuum.

This method is reasonably effective but slow compared to other methods. Chemical cost is also higher.



Interim

Bonnet Buffing - fast freshen-up of carpet appearance

Bonnet buffing or spin bonneting quickly improves the appearance of commercial loop pile carpet with less than an hour dry time without blowers. Many experts in the industry say that not much dirt is removed and only the surface of the carpet is cleaned. Soil is merely spread around evenly to make the carpet look cleaner.

Bonnet buffing is not recommended for cut pile carpet, since it can damage the yarn shape. Some carpet manufacturers recommend against this method on any of their carpets. Nevertheless, bonnet buffing has long been used by facilities as an interim method to keep up carpet appearance between more thorough cleanings. Windsor recommends checking your carpet warranty and manufacturer's recommendations prior to bonnet buffing.

Typical bonnet buffing method

Step 1: Pre-spray with a pump sprayer an area of carpet using a diluted solution of bonnet buff cleaner.

Step 2: Start with a bucket and wringer with clean warm water. Wet a bonnet and wring it out thoroughly. Place the damp bonnet under a 17" or 20" floor machine and buff the area that has been pre-sprayed. Flip the bonnet once the surface is soiled. After both sides of the bonnet have been soiled, soak and rinse the bonnet in the bucket. Use a second clean damp bonnet while the first is soaking, and alternate back and forth changing the rinse water as needed.

Use the right tools for the job



Interim

Wet and Dry Foam Shampooing

Long before anyone developed hot water extraction, carpet shampooing was the primary method of cleaning installed carpet. Today, it is not widely used for carpet, but some professionals prefer it as an interim method between more thorough cleanings.

With **foam shampooing**, a foam shampoo solution is applied to the carpet, then lathered as in washing your hair. The soil gets locked into the foam, which can be vacuumed away or allowed to dissipate and dry, leaving a powdery residue with the soil encapsulated. This dry residue may then be removed using an upright vacuum.

Wet foam shampooing involves using a rotary floor machine with a solution tank to dispense shampoo solution into the carpet. A soft nylon shampoo brush is used to lather the carpet as solution is dispensed.

Dry foam shampooing utilizes a special machine that generates a light, low moisture foam. The machine then scrubs the foam into the carpet using a cylindrical brush. Some professionals use a combination of shampooing followed by hot water extraction to clean highly soiled carpet.

Use the right tools for the job



Your Map to Total Solution Carpet Care

There are many ways to clean commercial carpeting. To determine the best for your requirements, you should map out the types of traffic in your facility's carpeted areas. Using a copy of your building's floor plan, categorize and label traffic areas as heavy, medium, or light.

Heavy -1,000 traffics* per day

Heavy areas include:

- Track-off areas such as entrances and doorways.
- Pivot areas where people turn corners.
- Funnel areas where foot traffic converges from several areas. These include interior doorways, hallways, elevators, and stairs; concentrated traffic areas; and areas near coffee machines, vending machines, and copiers.

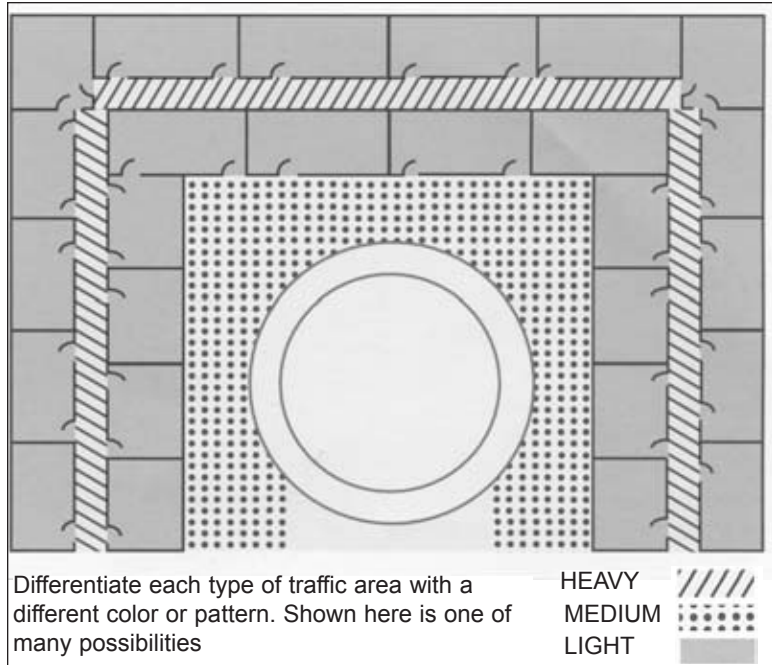
Medium - 500 to 1,000 traffics per day

These include main corridors, lobbies, and other main areas where major traffic flows broadly and repetitively.

Light - less than 500 traffics per day

These include meeting rooms, offices, and areas with less traffic.

** The term "traffics" means each time one person walks in the area. The same person walking in the same area 20 times a day equals 20 traffics.*



Monday	Tuesday	Wednesday	Thursday	Friday
1 SpotClean Vacuum	2 SpotClean Vacuum	3 SpotClean Vacuum	4 SpotClean Vacuum	5 SpotClean Vacuum Interim
8 SpotClean Vacuum	9 SpotClean Vacuum	10 SpotClean Vacuum	11 SpotClean Vacuum	12 SpotClean Vacuum Interim
15 SpotClean Vacuum	16 SpotClean Vacuum	17 SpotClean Vacuum	18 SpotClean Vacuum	19 SpotClean Vacuum Interim
22 SpotClean Vacuum	23 SpotClean Vacuum	24 SpotClean Vacuum	25 SpotClean Vacuum	26 SpotClean Vacuum Interim
29 SpotClean Vacuum	30 SpotClean Vacuum	31 SpotClean Vacuum		

This example shows a suggested month's cleaning schedule for heavy, medium and light traffic areas in an industrial building with oily outdoor equipment.

Recommended cleaning frequencies

Maintenance	Methods	HEAVY Traffic	MEDIUM	LIGHT
DAILY	Walk-off mats	Change daily	2-3 x/week	Weekly
	Spot removal	Daily	Daily	Daily
	Vacuuming	At least daily	3-4 x/week	1-2 x/week
INTERIM	For funnel, track-off & main corridors	Daily-weekly	1 x/month - 2 x/month	2-4 x/year
SCHEDULED	Overall extraction	6-12+* x/year	4-8 x/year	1-4 x/year

**Some facilities will require scheduled extraction as often as weekly.*

Increase cleaning frequency in areas where dirt, grease and soot accelerate soiling.