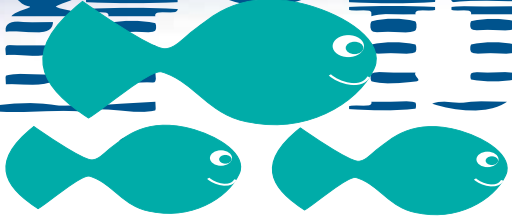


ENVIRO

Solutions



Carpet Cleaning

ENVIRO

Solutions



PROVEN ...

- ... Solutions
- ... Competitive in Performance & Price
- ... More Environmentally Sound
- ... Safer for People



OUTLINE

- 1. Overview of Enviro Solution**
- 2. Carpet Life Cycle Costing**
- 3. Carpet Warranties**
- 4. Manufacturers**
- 5. Carpet Fiber Composition**
- 6. Common Soil Types**
- 7. The Soiling Process**
- 8. Key Elements Affecting The Life Cycle Of Carpet**
- 9. Review of Wall Charts**
- 10. Summary**
- 11. Q's & A's**



1. OVERVIEW OF ENVIRO- SOLUTIONS

- **Review of Brochure**
- **Proven**
 - Solutions
 - Competitive in Performance & Price
 - More Environmentally Sound
 - Safer For People



MIKE SAWCHUK PROFILE:

- Industry Experience
- IICRC Certified
- Institute of Inspection, Cleaning and Restoration Certificate
 - ✓ Commercial Carpet Maintenance
 - ✓ Carpet Cleaning
 - ✓ Upholstery & Fabric Cleaning



2. CARPET LIFE CYCLE COSTING

$$\frac{\text{Carpet} + \text{Installation} + \text{Downtime during installation} + \text{Maintenance}}{\text{Number of Years Useful Life}} = \text{Cost per Year}$$

Appearance: Level of acceptance is a factor in determining the years of useful life of the carpet.

Proper maintenance: Extends the performance life of the carpet in any installation. It can also improve indoor air quality as the carpet serves as a filter to help capture air-borne particles until they are removed by routine carpet cleaning.



3. CARPET WARRANTIES

- Generally speaking, warranties cover up to 10 years, usually with a large number of conditions
- In the case of Dupont, it covers only Antron® nylon fiber installed after June 15/98
- All warranties vary but some of the key elements often include:
 - Certain types of stains not covered
 - Certain chemicals void warranty - Main concerns are high pH chemicals that attack stain resisters
 - Sometimes want own people to maintain carpet - More expensive, not practical
 - Don't cover normal wear (they tend to be the people deciding what is normal)
 - Don't cover inconvenience, downtime

However, sustaining a routine carpet maintenance program as indicated by the carpet manufacturer will maintain the warranty e.g. BASF



4. MANUFACTURES

SOME KEY MANUFACTURERS ARE THE FOLLOWING:

- Dupont
- Mohawk – BASF
- Shaw
- Milliken



5. CARPET FIBER COMPOSITION

COMMERCIAL CARPET FIBERS ARE PRIMARILY COMPOSED OF FIVE DIFFERENT TYPES OF FIBERS, MOST OF WHICH ARE SYNTHETIC. THE MAIN TYPES AND PERCENTAGES ARE:

Nylon	60%
Olefin (polypropylene)	30%
Polyester	8%
Wool	1%
Acrylic	1%



WOOL: Wool carpet, being **highly absorbent**, will retain more moisture than a synthetic fiber carpet and overwetting of wool carpeting can result in an unusually long drying time, odor problems, shrinkage (sometimes resulting in the carpet pulling away from the baseboards,) and browning (or tipping) which is the unstable dye in the backing migrating to the carpet tips. Jute was commonly used as a backing material for carpeting in the past.

NYLON: Nylon carpeting is **more absorbent and less chemical-resistant** than olefin (polypropylene) and is said to have a memory which resists crushing and distortion. The higher absorbency of nylon results in the carpet fiber accepting liquid and foreign matters easier, which can lead to difficult-to-remove spotting and staining problems

OLEFIN: Olefin, or polypropylene, has a lower melting point than nylon and **does not possess the memory that nylon does**. As a result, when crushed by foot traffic it does not spring back to its original position as well as nylon. Olefin will repel spots and stains far more readily. However, **olefin will attract petroleum stains**. A lower melting point, such as is found in olefin, can result in the burning or melting of the carpet fibers from various situations such as an excessively aggressive shampoo brush or bonnet cleaning pad, or insufficient lubrication of these cleaning devices during cleaning. This situation may result in large donut-shaped burn marks on the olefin carpet surface. It is not common to see burns on olefin carpeting caused by bicycle tires, wheel chair tires, etc.



IDENTIFYING CARPET FIBERS:

To determine if the carpet fibers are made from natural or synthetic fibers, apply a flame to a tuft of removed carpet fiber and blow out the flame before it consumes the entire tuft. If the residual crumbles into an ash, it is a natural fiber and likely wool. If it dries to a hard black bead, it is synthetic.

To determine whether the carpeting is nylon or olefin, place a tuft of carpet fiber on the surface of a glass or water and plunge the fiber downward. If the fiber sinks it is nylon and if it floats it is olefin.

Knowing ahead of time what the composition of the carpet fiber is will help to determine the precautions necessary to follow while applying various cleaning, spotting and stain removal procedures. Identifying the cause of a stain or spot is only half the battle. You may also have to identify what the carpet is made of to determine which cleaning method is safest to use. If a remnant is available, a burn or chemical test may identify the type of carpet you are attempting to clean or spot.



FIBER PRECAUTIONS:

FIBER	COMPOSITONS	PRECAUTIONS
Cotton	Cellulosic or vegetable fiber	Avoid high alkaline or strong solution spotters
Wool	Protein fiber	Avoid high alkaline or oxidizing spotters
Rayon	Man-made or semi-synthetic	To prevent browning, avoid aggressive agitation, high alkalinity and aqueous solutions causing prolonged drying
Acetate	Man-made or semi-synthetic	Never use acetone; avoid aggressive agitation
Nylon	Synthetic	Avoid chlorine bleach; most other spotting chemicals can be used successfully
Olefin	Synthetic-polypropylene	Offers good chemical and stain resistance, except oil
Polyester	Synthetic	Avoid prolonged exposure to petroleum-based spotters to prevent yellowing
Acrylic	Synthetic	Avoid prolonged exposure to petroleum-based spotters to prevent yellowing



FIBER IDENTIFICATION CHART:

FIBER TYPE	FLAME (COLOR/ ACTION/SMOKE)	ODOR	ASH(SHAPE/ COLOR/HARDNESS)	IDENTIFICATION BY CHEMICAL TESTING
Wool	Orange/sputters out/ no smoke	Burning hair	Irregular/black/crumbles to coarse powder	Chlorine bleach or sodium hydroxide (lye) will dissolve. Strong acids will not dissolve.
Rayon	Orange/ burning flame	Burning paper	No ash/no bead	Acetone and strong alkalines will not dissolve. Sulfuric acid will dissolve rayon and cotton
Cotton/Jute /Sisal	Orange/burns evenly/ continues to smolder/ no smoke	Burning paper	Irregular, glowing ember/ gray-black/crumbles to fine powder	Strong acids will dissolve. Strong when wet. Usually safer with alkalines (mild)
Acrylic	White-Orange/sputters black smoke/burns fast	Acid or burned meat	Irregular/black/hard crust can be crushed	Dissolves in 'warm' dimethylformamide
Nylon	Blue base/orange tip/ burns evenly no smoke/white puff	Celery or sealing wax	Round bead/gray-brown to black/hard	Dissolves in formic acid. Sinks in water
Polypropylene/Olefin	Blue base/orange tip/ burns evenly but rapidly/no smoke	Asphalt or paraffin	Round bead/ light tan to brown/ hard	Dissolves in dehydronaphthalene. Has a specific gravity less than 1. Floats in water
Polyester	Orange/sputters/ sooty black smoke	Sweet/fruity	Round/shiny black/hard	Dissolves in hot meta-cresol or boiling dimethylformamide



6. COMMON SOIL TYPES

THE MOST COMMON SOIL TYPES ON CONTAMINANTS ENCOUNTERED ARE:

- | | |
|--|--------|
| • Sand, silica, silicates, clay, quarts, volcanic ash
(all gritty contaminants) | 30-40% |
| • Petroleum oils, tar, etc. | 10-12% |
| • Gums, resins, etc. | 6-10% |
| • Cellulose, natural fibers (linting and fibers from clothing) | 3-8% |
| • Human and animal contaminants (hair follicles, skin, dust mites, fleas, etc.) | 10-12% |
| • Organic soil and dust particles (found in rain) | 2-5% |
| • Carbon and automotive exhaust | 0-3% |
| • Miscellaneous unknowns | 1-10% |



7. THE SOILING PROCESS

SOIL GETS INTO CARPET IN THREE BASIC WAYS:

Track-in Soil

Tracked-in soil normally represents 80% or more of the soil deposited on carpets at entry points (that is why an effective matting system should be used.) Typically, soiling results from shoe soles that track dirt in from the street, parking garages, etc. and deposit it on a clean carpet until the carpet becomes as soiled as the shoe sole. Once this happens, the carpet and shoe sole transfer dirt back and forth, resulting in the dirt being carried to areas of the carpet that are not as soiled as the shoe sole. This is how soiled traffic areas develop and dirt is spread throughout a building

Tracked-in soil particles are usually small in size, oily and contain a high level (30 to 40%) of particulates such as silica. If dirt is not removed as it is deposited, it builds up in the carpet and causes scratches and abrasion damage. The tiny particulates are the most destructive. They may be in the shape of pointed arrows with flat, razor-sharp edges. Foot traffic drives the particulates against the carpet fibers, gouging or spearing into them. This accumulated dirt flattens the fibers and tufts, resulting in a crushed and matted carpet.



Airborne Soil

Airborne soil is made up of very small dust particles, volatilized oils, industrial wastes, auto emissions, tobacco smoke, and other air pollutants such as pollens, human skin flakes and hair. Much of this type of dirt is oily or soot in nature.

Once the oily soil content of carpets becomes large enough, soil complexes composed of combinations of oil and dry soil begin to form a sticky film that holds other dirt. These complexes adhere to the carpet fibers, binding them together preventing the efficient removal of soil by normal vacuuming, and causing the carpet to appear dingy looking.

Spills

Spills usually create the most noticeable contrast in carpets. They consist of localized high concentration of soiling matter.

When spills first occur, they are in a wet, mobile state. As time passes, spills can penetrate carpet fibers. If allowed to dry, penetrate, or be walked into the carpet, spots can become difficult stains which are sometimes impossible to remove.



8. KEY ELEMENTS AFFECTING THE LIFE CYCLE OF CARPET

CARPET SELECTION

Selecting the best carpet for the installation involves:

- Choosing carpet that is aesthetically pleasing and appropriate for the end use
- Choosing the carpet that is engineered to withstand the maintenance it will require
- Choosing the carpet that is best suited for the types of soil to be encountered

Select color and pattern with ability to hide soils and stains that are likely to be encountered

Anticipated traffic flow is also a determining factor in carpet selection



CARPET MAINTENANCE PROGRAM ELEMENTS

Prevention:

- Eighty (80) % of soil brought into any building can be trapped within the first 12-15 feet after stepping onto a carpeted surface (Carpet & Rug Institute)
- Entryway mats can be outdoors and indoors
- These soil control mats at all entry points can reduce the amount of maintenance needed for the entire facility
- They can also increase safety by preventing accidents on hard surface entryways



VACUUMING:

- Vacuuming is the most important and cost efficient element of an efficient maintenance program
- Even with an efficient entry mat program, loose sand, soil, salt, etc. is brought into the building and deposited on mats
- Today's carpet fibers do an excellent job of concealing soil to your consumers
- If allowed to remain in the pile it can permanently damage the carpet
- Vacuuming can reduce more than 80% of the soil on a daily basis
- Routine carpet vacuuming with the program equipment not only prevents particles from being redistributed in the air but also has a positive impact on indoor air quality and consequently is healthier



KEY ELEMENTS OF GOOD VACUUMING PROGRAM

Proper Equipment

An upright heavy-duty commercial vacuum cleaner with dual motor and beater bar provides the best soil removal. One motor powers the brush, while the other provides strong suction to pull the loose soil particles into the sealed bag. Use in straight lines going against the lay of the carpet.

This can be supplemented with a canister or backpack vacuum suitable for low traffic areas, hard to get to places.

Vacuuming Frequency

In high traffic volume stores or areas, vacuuming should be done daily. This includes all entryway mats which under certain weather conditions may require more frequent vacuuming.



SPOT REMOVAL:

- The single most difficult challenge in carpet maintenance is remaining stains, which are usually the result of spills
- Key to successful spot removal is timely attention. Do not allow a spill to become a stain
- If addressed immediately, most spills can be completely picked up without leaving a mark with very little to no chemical
- However, this requires alert staff that addresses the problem right away
- Many spills are not noticed or acted upon during normal business hours
- They should be addressed on a nightly basis and never left more than a day. In some warranties, stains left for 3 days invalidates the warranty protection for that particular problem



The keys to effectively removing spots are:

- Correctly identify the spot type
- Select the right spot remover
- Follow the procedures

Recognize that severe spots will often require action over time



CARPET CLEANING

Chemical Selection:

Most carpets are stain resistant. It is very important to use chemicals that

- Have a pH between 5-10
- Have been tested to determine they do not destroy the stain resisting properties
- Do not have optical brighteners

Use chemicals that have low VOC levels to protect indoor air quality. Follow the manufacturer's use recommendations



Pre-determine:

1. Soil levels by type and area
2. Traffic conditions by area
3. Access time available
4. Level of clean desired
5. Availability of cleaning personnel and equipment
6. Manufacturer of carpet and their recommendations
7. Type of installation
8. Age and condition of carpet
9. Etc.

Pre-communicate to customer:

1. Potential problem areas
2. Concerns
3. Give options if necessary
4. Etc.

Select and implement the cleaning chemicals and procedures to match above

Applying a protective coating



BRIEF DEFINATIONS OF CLEANING SYSTEMS

Absorbent Powder/Dry Extraction Cleaning

This is a cylindrical brush cleaner with two counter-rotating brushes. This method uses a dry granular absorbent media impregnated with solvent & detergent. Evenly disperse this medium over the soiled carpet and hand or machine brush to allow absorption of soil. Allow to dry for short period of time and dry vacuum. E.g. Host or Capture

Bonnet/Spin (Absorbent) Pad

This method is accomplished by pre-spraying a detergent/solvent over the carpet. Follow this process by using white polyester floor pad or bonnet attached to a floor machine and buff.

Rotary Shampoo

A rotary brush cleaner using wet shampoo. A complete line of accessories including vacuum and drying equipment may also be employed.



Dry Foam Shampoo

This system has a cylindrical brush which scrubs and picks up the foam generated by the machine in one pass. This machine utilizes a foam producing generator that aerates the shampoo making it lighter and less moist. E.g. Von Schroeder

Rotary Extraction (Shampoo Extraction)

Similar to rotary shampoo, except an attached wet vacuum extracts the suds and suspended soil as they are generated, eliminating the need for separate extraction and speeding drying. E.g. Chemstractor

Steam Cleaning/Hot Water Extraction

This steam extraction system is based on injection of a jet of hot water containing detergents at a prescribed rate and immediate subsequent extraction of the soil and moisture by a vacuum system. There are low and high volume (liquid) systems using portable and truck-mounted equipment.

Dual

A combination of Steam Cleaning with one of the interim cleaning methods. Rotary Extraction, Steam and Dual are considered restorative cleaning methods while the other are considered interim cleaning methods.



INTERIM CLEANING

Absorbent Powder/Dry Extraction Cleaning

THEORY: Absorbent Powder/Dry Extraction cleaning utilizes an absorbent medium (sponge-like) usually impregnated with water and small amounts of detergent and solvent. The idea is to use the 'sponges' absorbent powder to carry and control the liquids necessary to loosen the soil. They absorb and control the soil once loosened, holding it for extraction by vacuuming. With this control technique, much less total liquid is required to clean. A double-brush machine designed for this purpose is necessary for deep cleaning action... light or aggressive...as carpet and soil conditions require. This action also is designed to revive pile before or during cleaning.

ADVANTAGES: Control of the liquid cleaning agents and soil enable cleaning without streaking or wick-back. Carpet can be back in service immediately. Low pH and absence of detergent brightening make it possible to feather and blend soiled areas into surrounding clean carpet providing substantial labor savings. Although referred to as dry extraction cleaning, or dry cleaning, it does contain a considerable amount of moisture.

DISADVANTAGES: Needs to be vacuumed very thoroughly, immediately. Residue of absorbent sponges can be seen at base of pile. Yarn distortion may occur if improper brushes are used. Plain 'powder' varieties of the dry extraction process may be limited in ability to clean heavily soiled carpet. Labor intensive – 500 sq. ft. per hour.



BONNET/SPIN (ABSORBENT) PAD CLEANING

THEORY: Bonnet cleaning is commonly referred to as a dry carpet cleaning system. Although not completely dry, bonnet cleaning is considered a low moisture carpet cleaning system. Bonnet cleaning is accomplished by spraying a detergent/solvent solution over the face of the carpet pile. This can be done with hand pump style sprayer, CO2 pressure tanks, or specialized spray systems attached to the floor machine. Following spraying, the carpet is buffed with pads attached to a floor machine. The carpet soil is absorbed into or absorbed onto the pads. Cotton bonnet pads are turned over, changed or rinsed when they quit absorbing onto the pads. Cotton bonnet pads are turned over, changed or rinsed when they quit absorbing soil, 250 to 300 sq. feet per side, 2000 sq feet per hour, and thoroughly laundered prior to the next job.

ADVANTAGES: The bonnet/spin pad system is a relatively fast system enabling the operator to cover large areas quickly. It is also relatively fast drying. Some cleaning solutions contain soil retardant or fluorocarbons to increase vacuuming efficiently. Minimal operator skill required. An excellent system for maintenance programs when used in conjunction with more thorough methods periodically. Leaves little residue.

DISADVANTAGES: Bonnet/spin pad cleaning is not noted for heavy soil removal. No rinsing action. Does not provide deep cleaning action. Used absorbent pad require laundering between jobs. Bonnets are very aggressive on the fibers, causing piling or untwisting of poor heat set carpets.



ROTARY SHAMPOO

THEORY: Rotary shampoo is one of the oldest methods cleaning carpet on location. In recent years, it has received undue criticism from promoters of steam extraction cleaning. Rotary shampooing when used properly is in fact, a very effective system for carpet cleaning. Rotary shampooing utilizes a rotary floor machine equipped with solution tanks and shower feed brushes. After thorough pre-vacuuming, the carpet is scrubbed while a shampoo solution is fed through the shower feed brushes. Early shampoo formulations were responsible for leaving sticky residues causing accelerated re-soiling, however, the synthetic detergent formulations available today have minimized this problem. Modern shampoo formulations dry to crystalline residues that can be easily vacuumed out of the carpet.

Following shampooing, wet vacuuming with a wet dry vacuum equipment is optional. This step in the shampooing process is commonly overlooked. The best results are achieved when the carpet is rinse extracted after shampooing, however, the possibility of overwetting is increased. Following drying, thorough dry vacuuming is important to remove loose soil and crystallized detergent residues. Grooming or pile setting is also very important as the carpet pile is distorted from the scrubbing action and if allowed to dry, will have an uneven appearance.

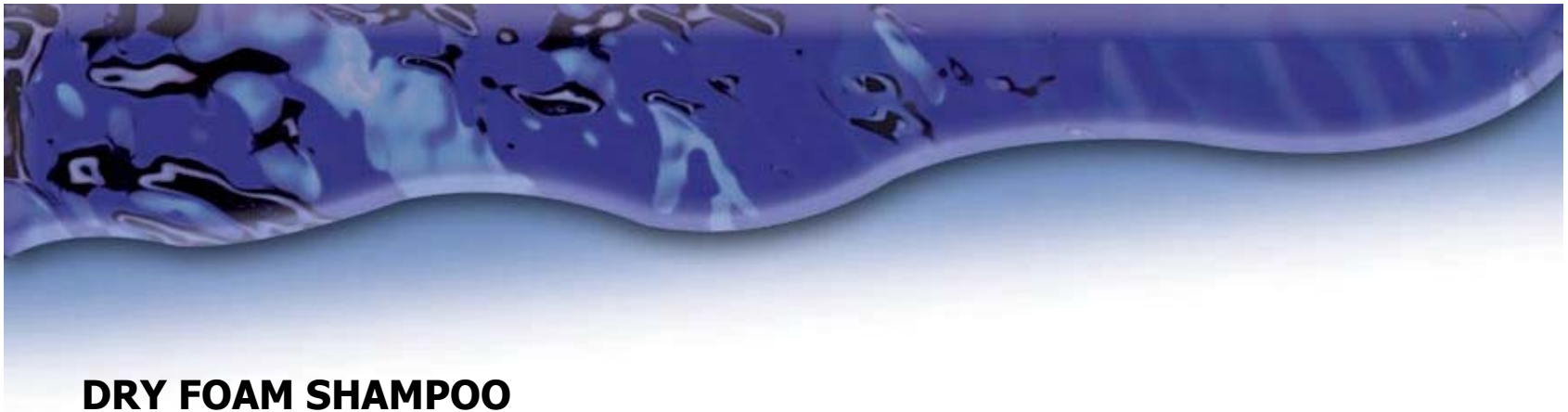


ADVANTAGES: Very economical to use. Low equipment and chemical cost. Moderately high production rates can be achieved. Excellent agitation and relatively deep cleaning that produces good overall cleaning results. Excellent distribution and agitation.

DISADVANTAGES: Longer dry times. Low equipment and chemical costs. Overwetting and pile distortion can occur with a careless operator. Improperly scrubbing or incorrect brushes are a principal cause of pile distortion. High level of operator skill required for best results. Residues can increase re-soiling if improper chemicals are used.

NOTE: Before Shampooing

1. All Carpets must be pre-vacuumed and pre-spotted. Otherwise, loose soil is turned into mud and spots may be spread or smeared.
2. New shampoo brushes must be broken in to avoid damaging the carpet. Run them with water on concrete for 30 minutes to an hour to soften and even. Once broken in, do not leave the machine sitting on the brush. Remove it or keep it tilted so it does not become flattened.



DRY FOAM SHAMPOO

THEORY: Dry foam carpet cleaning is a version of the shampoo method. The term 'dry' is a relative term used to describe the low amount of liquid used (10% liquid, 90% air.) Dry foam carpet cleaning utilizes special equipment equipped with a foam generator that whips the shampoo liquid into a foam before it is applied to the carpet. Most dry foam equipment utilizes cylindrical or reel type brush systems for agitation. Some dry foam equipment is also equipped with a vacuum recovery system to extract soiled foam solution.

ADVANTAGES: Dry foam systems utilize low amounts of moisture that results in fast drying times. Minimal operator skill level is required. Dry foam is a good method for surface appearance management in commercial maintenance programs. Dry foam cleaning is capable of covering large areas in short periods of time. Due to low moisture levels, problems associated with overwetting are minimal.

DISADVANTAGES: Moderate levels of soil removal. Some equipment have little or no extraction capability and can allow excessive soil and residue build up. Periodic hot water extraction is recommended as well as thorough dry vacuuming after drying when dry foam cleaning is used on a regular basis.



RESTORATIVE CLEANING

Rotary Extraction (Shampoo Extraction)

THEORY: Rotary extraction is a newer innovation which was devised to expand and improve upon the fundamentals of Rotary Shampooing. The rotary shampoo method, as previously discussed, has many benefits to the professional carpet cleaner. But the rotary extraction takes it a step further. The rotary extraction method takes advantage of the benefits of rotary shampooing while compensating for most of its shortcomings.

The idea behind the development of the rotary extraction shampoo machine, such as the Chemstructor, is that a carpet shampoo when used under ideal conditions, is only capable of holding soil in suspension for a limited time (3 to 5 seconds). An attempt to wet vacuum the previously shampooed area, either as an additional step or using a second technician, has only minimal effectiveness. Rotary extraction, with its simultaneous foam generation and vacuum extraction, will remove the soil while it is still in suspension.



ADVANTAGES: Labor consolidation by combining two steps into a one technician and one step operation. Superior soil removal by operating within the limited time frame of soil suspension. Lessons potential for overwetting by providing immediate wet-vacuum. Faster drying time than any restorative cleaning system (1 to 1.5 hours on man-made fibers.) Excellent for commercial carpets.

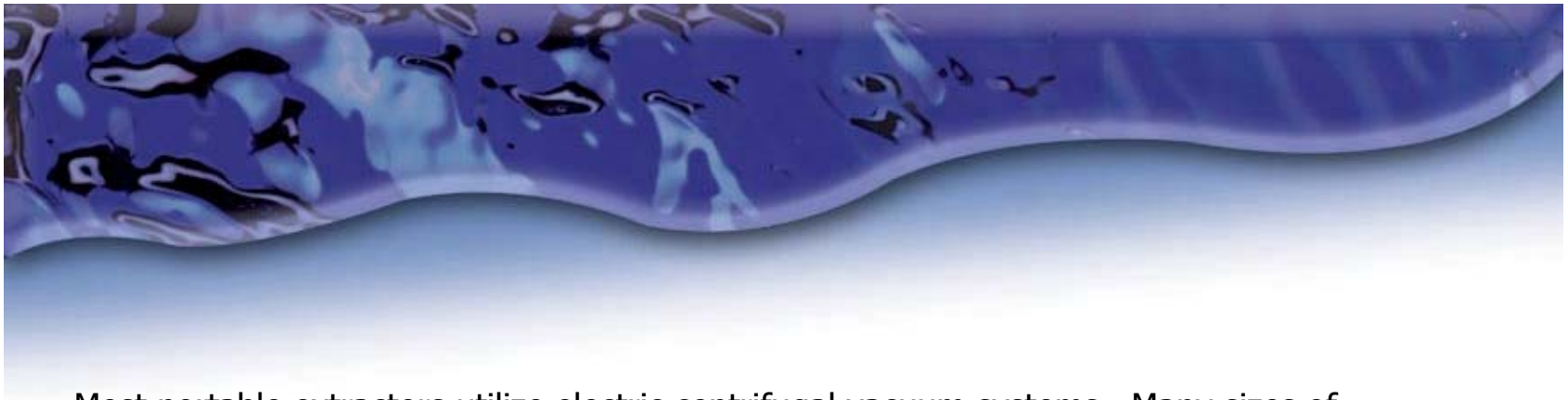
DISADVANTAGES: This system is bound by the limitations of rotary shampooing as a whole. Operator skill and chemicals will determine the effectiveness of this method. Certain carpet constructions and fibers (eg Saxony, Berber and fine silk area rugs) should be evaluated for the appropriateness of rotary equipment due to its increased agitation.



STEAM (HOT WATER) CLEANING

THEORY: The term “steam cleaning” is derived from the original concept of the equipment first utilized in the steam extraction process. Solution pressures were created by large steam generators that relied upon steam pressure to deliver cleaning solution to the cleaning tool. A crude vacuum system was used for recovering the cleaning solution. This system was quickly recognized for its superior cleaning results obtained by the flushing or rinsing ability. Equipment manufacturers soon made drastic improvements utilizing high pressure pumps to deliver cleaning solutions to the cleaning tools and more efficient vacuum systems.


The vacuum efficiency of steam extraction units is a combination of both airflow and lift. Airflow is measured in CFM (cubic feet per minute), indication how much air volume is moved per minute. Lift mercury (Hg) lift. Water lift indicated the amount of vacuum to raise a 1 inch diameter column of water 1 inch, while mercury lift refers to the same for a column of mercury; 1 inch of mercury lift = 13.6 inches of water lift.



Most portable extractors utilize electric centrifugal vacuum systems. Many sizes of electric vacuum systems are available and are rated by airflow and lift potential. Many manufacturers install tandem vacuum systems in a series (first unit exhausting into the intake of the second) for increased lift. Other manufacturers prefer a parallel arrangement (for increased airflow). Portable vacuum lift rarely exceeds 10 inches Hg or 136 inches H₂O. Truck mounted units normally use positive displacement vacuum blowers available in various sizes. Their lift is usually set at 14 inches Hg or 204 inches H₂O and their air flow can be great enough to use two wands simultaneously.

Portable units normally produce solution pressures of 50 to 350 psi. Truck mounted units utilize high pressure pumps capable of producing solution pressures up to 1000 psi. However, normal working pressures of 350 psi to 500 psi are common.

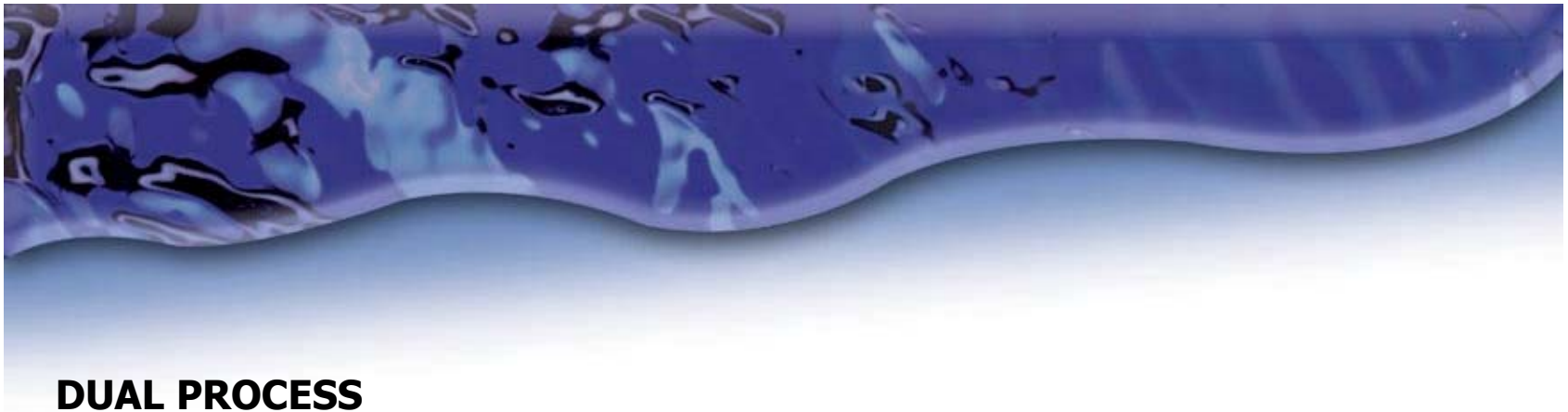
Better designs have made steam extraction more effective, compact, lighter weight and more reliable. We now see a wide variety of portable and truck mounted equipment available today.



The process of steam cleaning includes the injection of a hot heat is very important in cleaning solution under pressure into the carpet fibers followed by immediate extraction. The design of equipment, both truck mounted and portable will vary, however, the principle remains the same. The practice of pre-conditioning with traffic lane and general area cleaners is a very important step in the steam cleaning process. Pre-conditioning, including applying some mechanical action (e.g. using spin and/or shampoo), should be utilized in all instances of heavy soil accumulations. Pre-conditioning enables stronger detergents and solvents more time to effectively from the carpet fiber. Tests show that the pre-spray, agitate and rinse extract system will out-perform the one-step system.

ADVANTAGES: Steam cleaning is recognized by most professional carpet manufacturers and fiber producers as today's preferred method for the most efficient soil removal. Present state of the art equipment enables high rates of production and less residue, provided proper chemicals are used. Relatively low chemical costs.

DISADVANTAGES: Requires high level of operator skill. Longer drying times. Problems associated with overwetting if equipment is not not in proper operating condition or operator employs poor technique. High equipment and maintenance cost. Must reduce temperature on true plush or non-colorfast carpets.

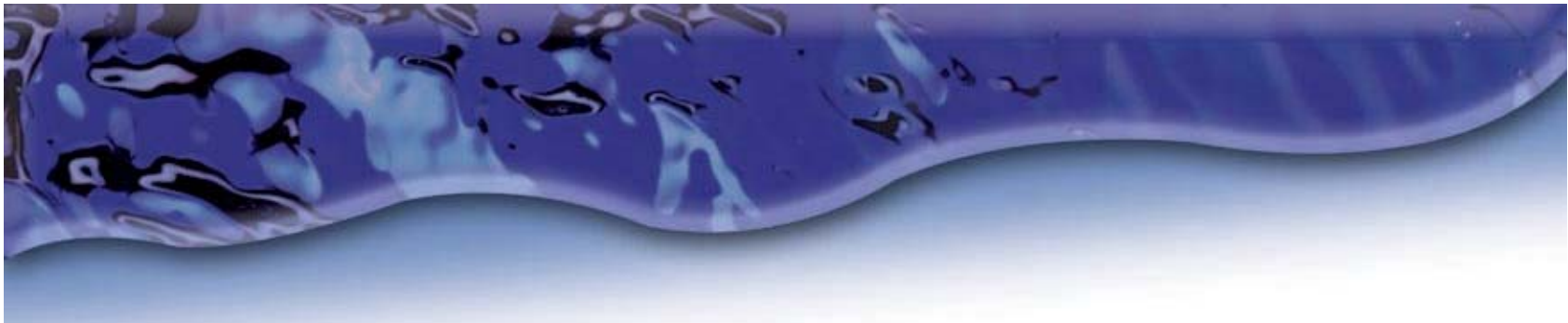


DUAL PROCESS

THEORY: Dual process carpet cleaning is a commonly used term that describes the practice of shampooing or one of the other interim cleaning methods with steam extraction cleaning.

ADVANTAGES: Increased efficiency of both methods especially when limited powered portable extraction units are used. Pre-conditioning in this manner gives chemicals more dwell time and the increased agitation improves cleaning results.

DISADVANTAGES: More equipment is needed. Set up and production time is increased. Problems associated with overwetting can occur if operator is not extremely careful and does not maintain equipment properly. Distortion from scrubbing action, especially on cut pile carpets. Higher equipment and chemical costs.



AVERAGE CLEANING SYSTEM PRODUCTION – COMMERCIAL:

METHOD		REGULAR	STAIRS
Preventative	Spotting	10,000	1,000
	Vacuuming	5,000	300
Pre-requisite for Interim or Corrective Cleaning	Pile Lifting	3,000	(vac) 300
Interim Cleaning	Dry Powder	500	50
	Spin Pad	2,000	50
	Dry Foam	500	50
	Rotary Shampoo	500	50
Corrective Cleaning	Rotary Shampoo Extraction	500	50
	Hot Water Extraction	500	50
Protective Spray Topical Treatments	Fluorochemical	3,000	1,000
	Anti-stat	3,000	1,000
	Anti-Microbial/Deodorant	3,000	1,000
	Acid Dye Resistors	2,000	1,000
<p>-----</p> <p>These figures (square feet per man per hour) will vary depending on the crews, equipment and chemicals used and should save only as a guideline.</p>			



MAINTENANCE PROGRAM

A) Training

Proper training

- Procedures
- Schedules
- Equipment
- Chemicals

B) Plan

Need plan by area



FREQUENCY PROGRAM OF CARPET CLEANING:

Traffic	Vacuum	Pile Lifting	Professional Spotting	Interim Cleaning	Protective Spray	Corrective Cleaning
Light	Daily	Quarterly	As required	3-6 mths	12-18 mths	As required 18-24 mths
Medium	Daily	Each 2 mths	As required	2-3 mths	12 mths	As required 12-24 mths
Heavy	Daily	Monthly	As required	Monthly	6-12 mths	As required 12-24 mths



9. REVIEW OF WALL CHARTS

- **Review/Discuss**
- **Example** – see next page



"SAMPLE" IMPORTANT REMINDERS



Always use proper protection, including glove and eye protection.

Make sure to label all secondary bottles with the correct label.



Never mix chemicals together.



Always use wet floor signs and washroom closed signs.



Keep machines and tools clean and neat.



Report leaking or broken fixtures to your supervisor.

Check your work. Take pride in a job well done.



10. SUMMARY

Helpful Hints:

- Vacuum daily with a quality vac complete with beater bar
- Spot immediately or at least daily
- Develop and follow frequency plans
- Ensure adequate entrance matting

Pre-Determine:

- Types of soil and spots
- Type of carpet fibers- synthetic mostly used commercial carpets
 - olefin floats in water
 - nylon sinks in water

Match up:

- Cleaning chemicals to type of soils and spots
- Procedures to type of carpet fibers and frequency required



Key Points To Remember:

- Ensure proper procedures are in place
- Use appropriate equipment
- Employ the correct chemicals and apply the accurate dilutions
- Use a quality carpet cleaner for pre-spraying and extraction
- Use specialty cleaners to spot (e.g. coffee, gum, rust, etc.)
- Do not over wet
- Do not over dilute
- Dry carpet as soon as possible; circulate air with fans, wet vac, etc.

Spotting Removal Tools:

- Remove excess
- vacuum solids
 - Blot liquids
 - Scoop up semi solids



Spotting Removal Tools:

- Identify precisely the source of the spot
- Apply minimum spotter required (by dripping on) to the spot and 2 to 3 inches around the spot. Be careful not to over wet
- Tamp only as brush action may distort fibers
- Blot clean using white cotton towels
- Observe for transfer of contaminant to towel. Continue applying tamping and blotting while observing as long as transfer carries on
- Rinse using clear water and blotting the excess
- Too much chemical or water will cause spots to reappear
- Severe spots may take repeated action in order to achieve results



Important Carpet Cleaning Pointers:

	NYLON	OLIFIN
INTERIM CLEANING	Pre-spray	Same
	5-10 min. dwell time	
	Bonnet	
DEEP CLEANING	Pre-spray	Same
	5-10 min. dwell time	
	Extract with clear water or with a light dilution	
VERY DEEP CLEAN	Pre-spray	Pre-spray
	5-10 min. dwell time	5-10 min. dwell time
	Extract	Bonnet/Clean carpet
	Bonnet with dry pad	Extract
	Accelerate drying	Accelerate drying



11. Q's & A's



Thank You For Your Time And
Consideration!

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- ... Solutions
- ... Competitive in Performance & Price
- ... More Environmentally Sound
- ... Safer for People