



ORBOTTM

Changing the future
with orbital technology!



HOS

HRUBY ORBITAL SYSTEMS

The One Machine for Every Floor!



Sustainability:

For most applications, only water is being used. The environmental impact of chemicals is greatly reduced.

Water Consumption:

The ORBOT consumes on average 10 times less water compared to conventional cleaning methods.

Air Quality:

The low consumption of cleaning agents leads to the improvement of indoor air quality.

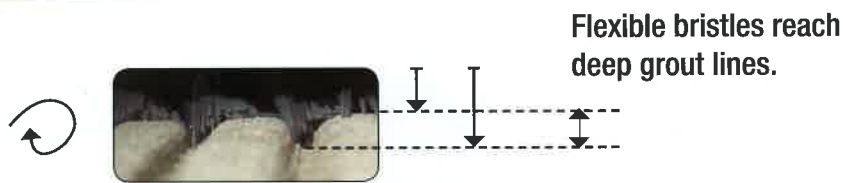
Prevention:

Due to the low water consumption, drying times are greatly reduced which prevents mold formation.



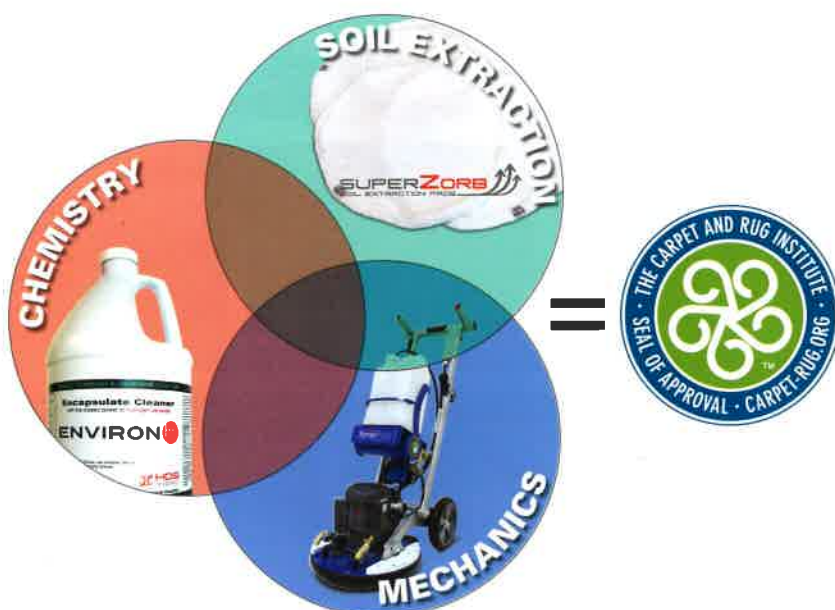
ORBOT Brush

- Scrubs and cleans tile & grout, concrete, epoxy, rubber, porous and other rough-textured floor surfaces
- Thin nylon bristles reach into small pores and crevices
- Flexible bristles reach into low-lying grout lines
- Long and angled outside bristles allow cleaning along edges and obstacles
- Unique patent-pending brush design was developed to complement orbital mechanics.
- Complete 3/8" micro orbits without collapsing under the machine, achieving 360° contact with deep pores, gaps and every edge of grout lines



Certified Deep Cleaning of Carpet

Our carpet cleaning system is certified by the Carpet & Rug Institute (CRI) as a method for deep cleaning carpets. The Orbot is the first and only "woven pad" machine to receive this certification from the CRI!



Parts of the System

Orbital Technology: Each contact point makes orbital movements of a 3/8" diameter at 1725 rpm. Carpet fibers are surrounded and agitated from all angles and lifted.

Environ HP: The eco-friendly "Encapsulation" water-based cleaning solution contains a specific polymer. Dirt particles in carpets are entrapped and can be removed very easily.

SuperZorb Pads: These highly absorbent cotton-polyester blend pads were specifically designed for orbital technology. They thoroughly remove moisture, soil, and lift carpet pile allowing faster dry times.

Environ HP - A Unique Chemistry

What Makes Environ HP Special?

- The encapsulator Environ HP is an environmentally friendly water-based cleaning solution with a low proportion of hydrogen peroxide and a high content of specialized polymer
- A mixture of organic compounds in combination with the increased friction generated by orbital technology helps to dissolve grease and remove stubborn stains
- A low percentage of hydrogen peroxide helps to eliminate bacteria, mold, and organic contamination
- Dirt particles are liberated from carpet fibers and removed using the highly absorbent SuperZorb pads
- Remaining dirt particles are encapsulated by the high polymer content and will not re-adhere to the carpet fibers
- Any remaining encapsulated dirt can be easily vacuumed up
- Reduce recurring stains
- No dwell times, can be used instantly
- No residue! Any residues are encapsulated by the polymer and can be easily removed
- The polymer develops a protective film around the carpet fibers, which significantly reduces resoiling
- Longer lasting carpets smell, look and feel cleaner!
- Economical – Super concentrated (1–3 oz. per gallon)



Cleaning of Microporous, Textured Rubber and Water-sensitive Flooring

Porcelain Stoneware & Safety Tiles

AkwaStrip pads combined with orbital technology the ORBOT creates a hydraulic suction and a fine scrubbing, making a quick and effective cleaning of microporous floors possible.



Textured Rubber Flooring

Textured rubber flooring can be thoroughly cleaned with our unique brush design. The studs are encircled from all sides due to the ORBOT's oscillating movement.



Water-sensitive Floors

Solution flow is easily controlled and shut off. Moisture sensitive floors such as wood, laminate and cork can be easily cleaned without damage. Floors can be scrubbed with AgiClean pads and dried with SuperZorb pads.



Chemical-Free Stone Care

- HOS StoneFlash pads were specifically designed for orbital machines and can grind, hone and high-gloss polish any natural stone with only minimal use of water and effort
- Due to orbital technology, stone floors are worked more intensively and quickly – that's why grits can be skipped with our system and the floors can be fully restored in a shorter amount of time than traditional techniques.
- Deep scratches and impurities are easily removed.
- Stone pores are mechanically closed tightly creating a highly glossy, reflective and beautifully detailed natural floor.
- No orange peel effect!
- Even weight distribution across the entire pad eliminates wavy floors.
- Can be used on any natural stone: marble, limestone, travertine, terrazzo and more



Step 1: Removes significant surface damage

Step 2: Removes scratches and dirt

Step 3: Removes light scratches

Step 4: Prepares polishing

Step 5: For polishing and daily maintenance

Step 6: For high-gloss polishing, creates an additional gloss

Lippage plate: For leveling of stone slabs



Grinding with Step 1



Polishing with Step 5

Chemical-Free Refinishing

- The ORBOT removes old coatings with our AkwaStrip pads or sanding screens in no time! No chemicals needed!
- Since no chemicals are used, it is possible to remove and renew only the upper contaminated layers, thus saving a lot of time, labor and expense
- With every pass, an average of 1-2 coatings are removed
- Complete pad contact on the floor increases productivity and ease of use.
- Costly and environmentally damaging chemicals are not needed!
- The HOS SuperZorb pads can be used for regular care and maintenance
- Due to the orbital drive technology and ergonomic design, the ORBOT can be used by anyone – without causing fatigue or back pain!
- No slippery chemicals are needed, reducing slip and fall liability



What is orbital technology?



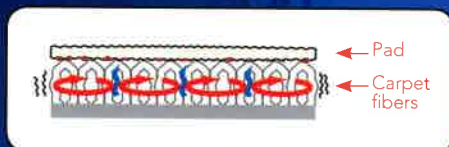
Orbital technology is the secret behind the unique cleaning effect of the ORBOT.

It is an excentric driver system that creates thousands of small circular movements with a diameter of 3/8" at 1725 rpm. At the same time, these "orbits" rotate together around the center of the driver plate at 80 rpm. These two movements are being combined into one system.

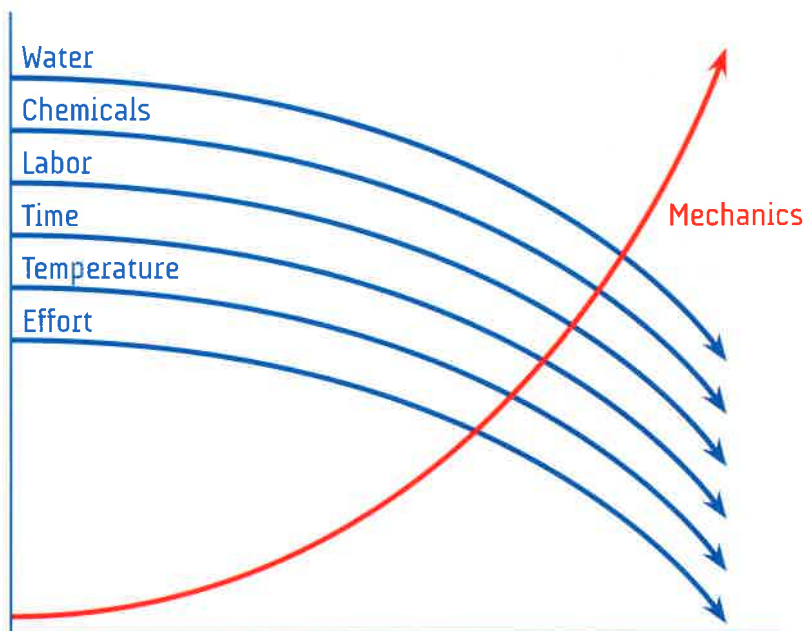
This innovative, patented design is called *orbital technology*.

28 Times per second!

The Orbot generates thousands of orbits that clean around each fiber 28 times per second.



The Mechanics Make the Difference



By increasing the mechanical cleaning power with the ORBOT, other factors of floor cleaning like water, time, chemicals, physical effort and temperature are reduced or even eliminated.

This high-performance system enables the diverse applicability of the ORBOT on all different floor types and significantly makes it stand out from its competition.

ORBOT Mechanics vs. Conventional Cleaning Machines



Rotary Disc

- Has only one outside rotation – uneven treatment of the floor from only one direction
- Many spots can't be reached by pads and brushes
- Excessive weight may be too aggressive for some floor types

Cylindrical Brush

- Brush cleans unevenly and only from two directions
- Brush is too aggressive for some floor types

Spray Extraction

- No mechanical agitation, therefore increased water, chemicals and heat need to be used
- Leads to problems like long drying times, mold growth and recurring stains

Orbital

- Outside rotation of 80 rpm
- Inside rotation of 1725 rpm – every floor contact point rotates on a 3/8" diameter path
- Dual driver motion – the floor is cleaned from all directions

Advantage of the ORBOT Base

Conventional Single-Disc Machine

Uneven floor contact of the driver plate decreases productivity and leads to many problems.



Machine running to the left

Area in contact $\approx 30\%$



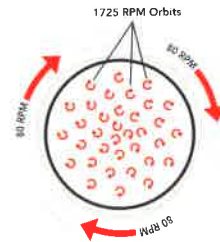
Machine running to the right

Area NOT in contact



ORBOT

The floating machine base allows the driver plate to always sit flat on the floor, surfaces can be cleaned evenly and controlled. Productivity increases and many problems are solved.



ORBOT Driver running in ANY direction

ORBOT driver sits flat

Area in contact = 100%



ORBOT Features

Ergonomic hand grips to rest hands,
prevent fatigue and increase productivity

Spray switch - manual control
of water amount

On/off switch – does not
need to be held

Removeable 3-gallon bottles -
cleaning solutions can be
switched quickly, saves time

Adjustable frame – for
individual working heights

Motor – 1400W, 120-240V/50-60Hz,
6-11A, 1725 rpm

Adjustable spray jets –
improve productivity and
even solution coverage

10-inch wheels – chemical
resistant and non-marking

Handle – to lift and
lower base

Free floating base

Bumper – protects walls and obstacles

fold-down handle, compact
height for transportation and
storage

foot to rest base when
switching pads and storing



Application Chart

Floor Type Accessories	Carpet	Stone	Tile & Grout	Wood	Laminate	Porcelain, Tiles, & Safety Flooring	Textured Rubber	Concrete	PVC/VCT & Linoleum	Other Hard Floors
SuperZorb Pads (80-120 Washings)	Up to 7000sq ft/hr Commercial 100-800 sq ft	Mopping 500-800 sq ft	Mopping 500-800 sq ft	500-800 sq ft	500-800 sq ft	Mopping 500-800 sq ft	Mopping 500-800 sq ft	-	Mopping 500-800 sq ft	-
AgiClean Pads	1500-3000 sq ft	-	Tiles: 3000-6000 sq ft	Scrubbing: 3000-6000 sq ft	-	-	-	-	Soft Cleaning/ Polishing 3000-6000 sq ft	-
Environ Cleaning Solution	= 20K-50K sq ft/gallon	-	-	-	-	-	-	-	-	-
AkwaStrip Pads	-	-	-	1000-2500 sq ft	-	1000-2500 sq ft	-	-	Refinishing: 2500-8200 sq ft	-
StoneFlash Pads	-	120 sq ft/hr Restoration 5000 sq ft	-	-	-	-	-	-	-	-
Brush (500-1000 Working Hours)	-	X	X	-	-	X	X	X	-	X
Weight Kit	-	X	X	X	X	X	X	X	X	X

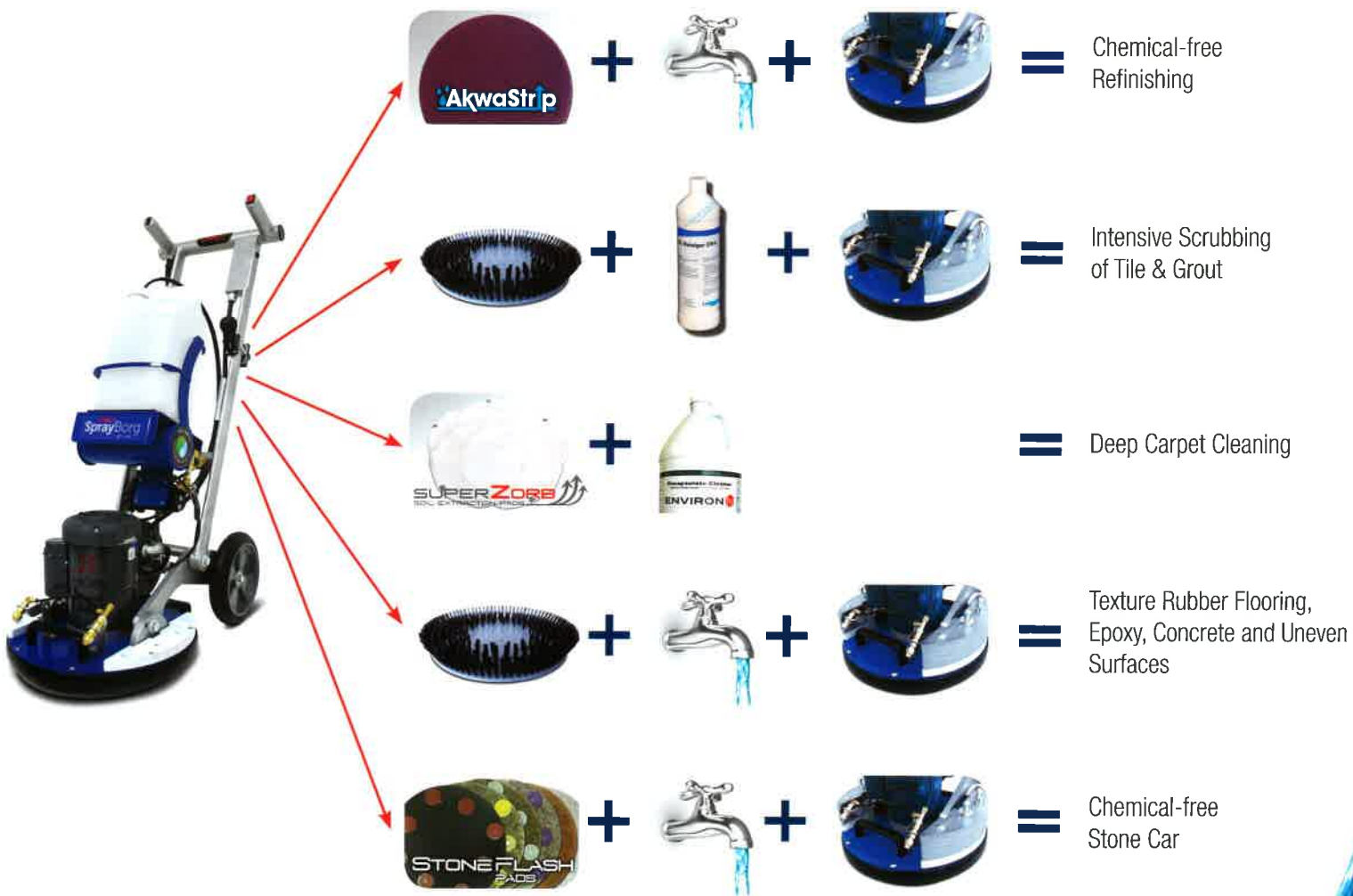
The average values can vary depending on floor type & condition, grade of soil, needed care, and operator experience.

Quick-Change Cartridge System

The Orbot utilizes a unique quick change solution cartridge system. Three cartridges are supplied with the machine and are designed to quickly slide into the holder. Each 3-gallon cartridge can clean approximately 1,000 sq.ft on carpet and 4,000 sq.ft on hard floors. Built in anti-vibration technology eliminates noise and vibration transferring to the user. Proper use of the Quick Change System can reduce refill times by 15 minutes per hour.



Not just a floor cleaning machine...ORBOT does it all!





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CAPITAL POWER CLEAN LTD

6 Liggat Syke Place
East Mains Industrial Estate
Broxburn, West Lothian, EH52 5NA
Tel: 01506 854585
Fax: 01506 859692
Web: www.capitalpowerclean.co.uk
Email: sales@capitalpowerclean.co.uk