

RADIAL

BRUSHES

'The \$450 an Hour Brush'
**Join the HI-TECH
REVOLUTION**



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JOIN THE HI-TECH REVOLUTION

The RADIAL range of Window Cleaning Brushes are the most advanced window cleaning tools ever made.

RADIAL Brushes are designed for the full spectrum of conditions that Window Cleaners face, from regular route work, to annual cleans, to 'the impossible debris' like Artillery Fungus, Paint Overspray, Bee Poo, and more.

The ROCKER brushes, which are based on technology developed for WINDOW WEAPON, are the fastest, most versatile brush, and the easiest to use on the market. Delivering up to \$450 an hour, ROCKER is the 'GameChanger' for Window Cleaners globally.

To maximize your efficiency, we engineered The RADIAL TECHNIQUE
- it's **FASTER** ... it's **BETTER** ... it's **SAFER!**



MAKING HYDROPHOBIC BECOME HYDROPHILIC!

HYDROPHOBIC GLASS: When water breaks up on the glass, leaving beads of water prone to spot.

HYDROPHILIC GLASS: When the water cascades down the glass delivering a perfect rinse.

Hydrophobic glass has always been a 'disaster' for water fed window cleaners - it is very difficult to get a perfect rinse, and very time consuming to provide the rinse to every square inch of the window.

Hydrophilic glass is 'easy glass' to rinse, however hydrophilic glass is often hydrophobic in the 2-3 inches next to the frames.

Don't worry: RADIAL BRUSHES make all Hydrophobic glass behave Hydrophilic, so it will never affect you again. The water will ALWAYS cascade down the glass off the top of your RADIAL Brush.

HOW? Water does not flow through the Bristle Blades of a RADIAL.

The top blade of a RADIAL Brush breaks the surface tension of the window glass. The bottom blade acts as a squeegee to remove dirty water from the glass.

On each down-stroke when cleaning a window, the HYDRO-BLADE delivers jet-streams to just above the top bristle blade and therefore 'inherit' the broken surface tension of the glass. The result is; the glass behaves HYDROPHILIC, regardless if the glass is normally Hydrophobic.

No matter the window type, your rinse water will ALWAYS cascade down the window. This means less water beads, and smaller water beads of water, resulting in a better spot-free result, so much faster. Your rinse is the full width of the brush on the glass, and any down-stroke is the only rinse you need to do.

By comparison, the old-fashioned 's tapped, broom-style brushes', just let the water fall through the bristles, so the glass behaves differently, and you need to take more time to achieve the same result.



SINGLE ACTION CLEANING

RADIAL is designed for what we call SINGLE ACTION CLEANING, replacing the old fashioned two-step 'agitate then rinse' techniques for broom-style brushes.

To explain, RADIAL is in continual motion on the glass both agitating and rinsing at the same time, all the time.

Using The RADIAL TECHNIQUE, you are performing both the AGITATION phase and RINSE phases in the same action. This is the great time saver - now you can clean windows as fast as 10 seconds each for regular work, and less than 60 seconds for the 'impossible' window.

For extra dirty glass, you AGITATE on the UPSTROKE, and RINSE on the DOWN-STROKE. RADIAL is ALWAYS ON THE WINDOW.

HOW TO CLEAN WINDOWS FASTER

EFFICIENCY is achieved by combining multiple processes into one process to SAVE TIME, and then, by reducing the force required to effect the total process, to SAVE EFFORT.

- If we can reduce the NUMBER OF AGITATIONS to one, or two strokes, we will save time.
- If we can increase the AGGRESSIVENESS of the agitation surface, we will save effort.
- If we can RINSE at the same time as we AGITATE, we will save time
- If we can clean the 'MIDDLE OF THE WINDOW' at the same time as the 'EDGES OF THE WINDOW', we will save time.
- If we can make HYDROPHOBIC glass, behave HYDROPHILIC, we win.

"EFFICIENCY is not only about choosing a TOOL, but more importantly, a TOOL with a TECHNIQUE."



STREAMS: WIDE ANGLE PRECISION



RADIAL jetstreams are unique because they "bend the water" to where you need it.

Across the top edge, the jetstreams are designed to 'drop away' so you do not wet above the agitation. Down the frames, the water is all the way to the frame. In the corners, the jetstreams reach in, and flush them out. In the middle of the window, the radial jetstream covers the full width of the brush on the glass.

This is the RADIAL RINSE - like the upstanding feathers of a peacocks tail, the rinse is edge-to-edge.

The RADIAL jetstream design outperforms all other brushes. RADIAL jet-streams de-activate along the top frame to avoid getting the frame wet (or above the frame) when cleaning. Simply angle the brush towards vertical to achieve a perfect relationship of agitation and rinse along the top edge.

FLOWRATES

RADIAL Brush works with a constant flowrate - and, depending on you, the worksite, and the type of frames, what flowrate is very 'different strokes for different folks'.

The ideal flowrate (1/2GPM, or 2LPM) is the same for all RADIAL BRUSHES, so you can switch with RELOAD, and not have to change the settings of your pure water delivery system. RADIAL LITE does not require as high a flowrate.

RADIAL changes it's rinse behavior when it is angled - less water out the top jets, to protect the frame from getting wet (more relevant with low profile frames).

UNIQUE BRISTLE DESIGN

Bristle Blades designed for maximum effectiveness, means less bristles do more.

RADIAL is the ultimate 'Scratch Agitation' brush - it is perfect for cleaning any debris off glass that is 'water soluble' and able to be scratched off with the tips of the nylon bristles.

All the power of a nylon bristle is the bristle tip on the glass - bristles have very little agitation when they are flat on the glass. RADIAL has a triple-trim of bristles to ensure the maximum number of bristle tips are on the glass, at the most effective angle. When the center bristles are perpendicular to the glass, they are great for scratching at debris like seagull poop, but more importantly, when touching the glass, the center bristles 'set' the outer radial bristles and the inner radial bristles so they do not collapse. After assembly, all the bristles are trimmed 'square' so there are more bristle tips sharp on the glass than any other brush.

Because the bristles of RADIAL are actually a 'blade', they have absolute coverage of the window in any stroke action, meaning less strokes are needed to effect a clean. To the surprise of many, often a window can be cleaned with a single pass of RADIAL Brush!

Most nylons get softer when warm, or wet. RADIAL Bristles are made from a specially chosen nylon that remains rigid when both warm and wet.





FIT ANY POLE BRAND

"PERFECT SWIVEL ACTION FOR ULTIMATE CONTROL"

PIVOT is a finely engineered swivel. The core is stainless steel, with a brass bush, for the smoothest, tightest swivel action.

Each Operator has different preferences for the tension of the swivel in their RADIAL Brush. That's why we engineered it to be adjustable - just use the Hex Wrench included with the RADIAL, to set and forget according to personal preference.

POLE COMPATIBILITY

RADIAL can be purchased to match the pole tip of most poles on the market - the standard version of PIVOT is compatible with REACH-IT, GARDINER, and TUCKER poles. If you have IONICS, FACELIFT, UNGER or another branded pole, PIVOT is customized to suit the pole tip style.

RADIAL works best with a 'direct transfer' of effort from the Technician to the Brush for precision and accuracy. If you have a pole that flexes, you will not achieve the same results as you will with a rigid pole. In this case, plan to upgrade your pole.



SCROLL THROUGH THE CORNERS

CORNERS have always been the most difficult part of a window to clean, and as such a high cost of the Operator's time. The problem is a combination of the bristles and the jetstream.

All water fed brushes 'push' dirt toward the corner, relying on the flow of rinse water to move it out of the corner and off the glass. Effectively rinsing corners requires an off-glass-rinse technique.

If you try and clean the corners with a square broom-bristle brush that has a rinse bar, the rinse bar wets above the bristles. With CONSTRUCTOR brush, you would poke the bristles into the corner at 30-45°, but you couldn't clear the debris easily out of the corners.

RADIAL solves all these problems.

The unique RADIAL array of bristles in the endcaps enable the Operator to 'sweep' the corners with a radial motion, with the jetstreams 'activating' as the brush turns to flush the corners out and add the debris to a torrent of water down the frame.

Now, you are cleaning corners **FASTER, BETTER, SAFER!**

DIFFERENT SCRUBS for DIFFERENT DEBRIS

A traditional window cleaner will carry a host of more aggressive materials to increase his/her speed on difficult to clean windows. Microfiber (for adding detergent), Magic Eraser (for silicons), White Non-Scratch Pad, Steel Wool, Bronze Wool, and the Blade. It makes them MORE EFFICIENT.

And so it is for the **ROCKER Brushes!**

When you need to scrub a window more than twice with a bristle brush for effective agitation, switch to **ROCKER and SCRUBS** for a more aggressive agitation, and get your agitation cycles back to once or twice again, saving your time.

RADIAL ROCKER and DEEP-FRAME ROCKER have 8 different **SCRUBS** (see **SCRUBS** later). Using a more aggressive agitation method saves time in **The RADIAL TECHNIQUE** exactly the same as it does for a traditional window cleaner.

Radial Rocker Brush

Green Rubber Scrub

FLAT-ON-GLASS TECHNOLOGY



When working up really close to a building, getting a pivot to work on a water fed brush is difficult as the outside edge of the brush wants to lift off the glass.

RADIAL PIVOT has solved this problem.

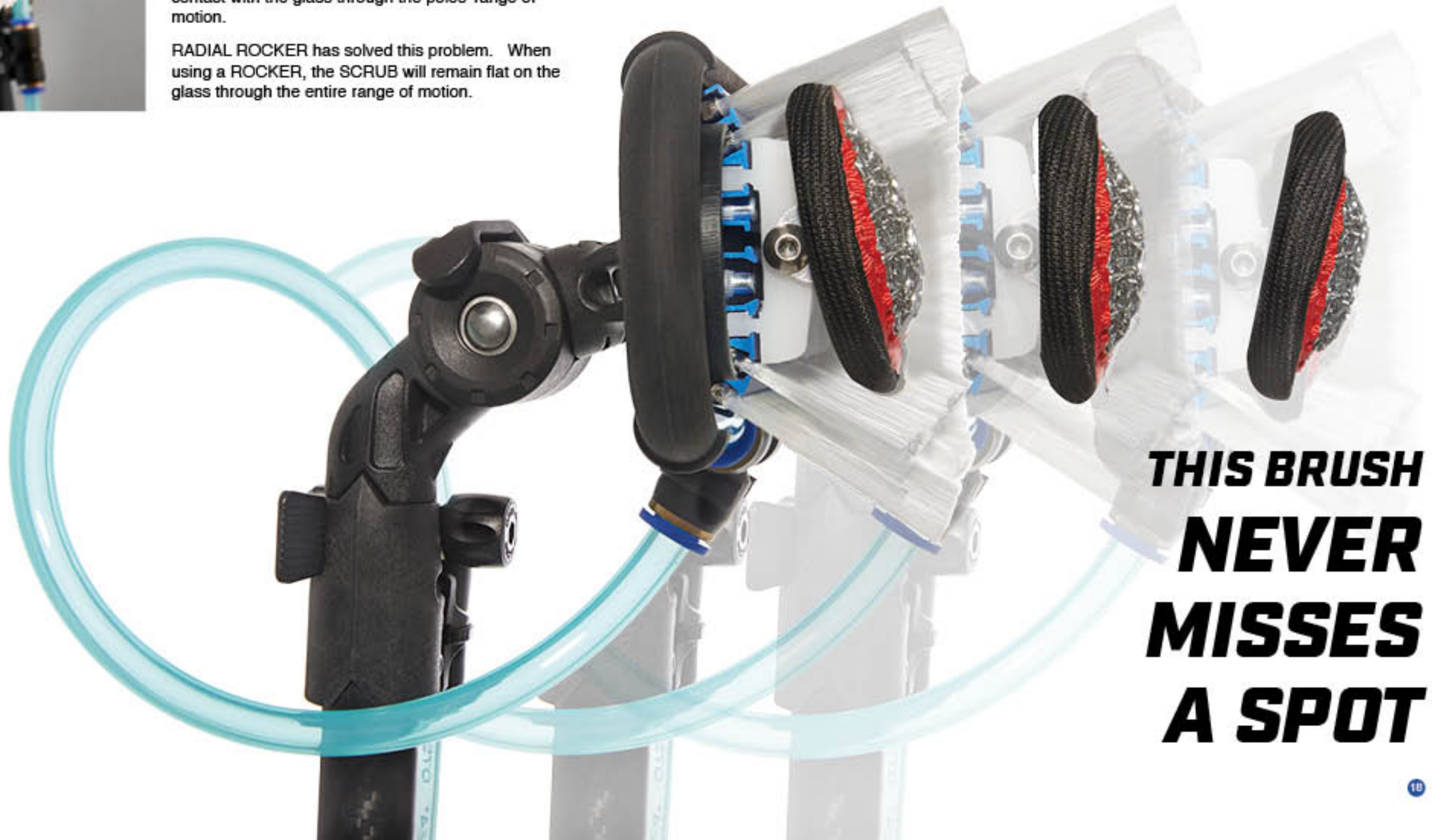
Engineered to match the full range of possibilities, PIVOT keeps your RADIAL BRUSH flat on the glass at all times. PIVOT is engineered to always be tight, and you can adjust PIVOT to how 'tight' you like!

When cleaning from the top to bottom of a window, the angle of the pole in relation to the glass surface changes, resulting in varying and less bristle or pad contact with the glass through the poles' range of motion.

RADIAL ROCKER has solved this problem. When using a ROCKER, the SCRUB will remain flat on the glass through the entire range of motion.

ALWAYS ON THE GLASS

RADIAL is designed with a 20 degree range - set the brush for the middle of the window and RADIAL will do the rest - your SCRUB will always be square on the glass for amazing fast agitation.



**THIS BRUSH
NEVER
MISSES
A SPOT**

ERGONOMIC CLEANING

When we think about Water Fed Window Cleaning, we often think about 2, 3, 4, 5 and 6 story buildings, but rarely do we think that each of these buildings has ground level glass.

When cleaning ground floor windows, we have three zones : above the chest, chest to thighs, and below the thighs. To clean these three zones ergonomically, we need 3 different techniques that apply the principles of effective agitation and effective rinse.

Using RADIAL PIVOT at a negative angle, we can clean windows below the Operator's thighs with their RADIAL BRUSH in the same 'jets on top' orientation as we use cleaning windows above the chest.

No more human contortions to get windows cleaned!



AGITATION AND RINSE EFFICIENCY

Cleaning windows is achieved with two processes:

1. **AGITATION** - getting the debris off the glass and into suspension.
2. **RINSE** - removing dirty water, leaving pure water to dry spot-free.

Broom-style brushes require you to exercise these processes equentially, and, if the glass is hydrophobic, the rinse process can be very costly in Operator time.

RADIAL has solved this with SINGLE ACTION CLEAN.

RADIAL BRUSHES are all designed for single-action clean. In other words, you can agitate and rinse in the same upwards or downwards stroke, as long as the brush is angled slightly so the water on the top bristle blade is flowing continually. Single Action is an 'ideal' and really only applies to simple light dirt removal like monthly cleans. For dirtier windows, you may need to repeat the RADIAL TECHNIQUE twice for an effective agitation and rins.

If you need to agitate any piece of glass more than twice, consider changing to RADIAL ROCKER with a more aggressive SCRUB PAD.

Using a more aggressive scrub results in LESS TIME and LESS EFFORT from the Operator.

On dirty windows, MAXIMUM RINSE is achieved on the DOWN-STROKE. Always attempt to operate the brush the full length of the window to maximize the benefits of gravity in the cascade of rinse water. Small scrubbing actions is less efficient (except when spot cleaning stubborn debris).

Do not FAN-RINSE - it is inefficient with Operator time (even though it looks and feels super cool).

Because RADIAL rinses past the outside edge of the brush, you can maximize your rinse with the full width of the brush in each stroke.

Learn to overlap your strokes with about one inch (2-3cm) so you get the maximum use of your brush width in each stroke action. Consider a 30" wide window : A 14" brush requires three passes to effect a complete clean. Changing to an 18" brush with two passes delivers a 33% increase in time efficiency.





HOW MUCH WATER WILL I USE?

We are all concerned about the use of water, and the effect of this on our environment. This is particularly relevant for window cleaners who carry a limited amount of water in truck mounted tanks, or backpacks.

We developed the high-tech RADIALrange of brushes to use a greater FLOW-RATE.

We developed The REACH-IT TECHNIQUE to use LESS TIME.

If your TIME SAVINGS are greater than your increased FLOW-RATE, you will in fact, USE LESS WATER.

With this in mind, this is the explanation summarized;

USE A HIGHER FLOW-RATE,

USE THE REACH-IT TECHNIQUE

YOU WILL USE MUCH LESS TIME,

AND YOU WILL USE LESS TOTAL VOLUME OF WATER per window.

When we face drought conditions, Water Fed Window Cleaning is often judged as 'wasting water'. Compared to traditional tools using very little water, but operating from ladders, the value of SAFETY (working from the ground, instead of from ladders) and the value of TIME, outweighs the cost of the water we use to effect the clean windows with RADIAL Brushes.

WILL THE WINDOWS BE CLEANER?

If you are a 'Perfectionist Professional Window Cleaner', you will always clean windows perfectly. Using RADIAL, you can clean windows perfectly, but you cannot clean a window better than 'perfect'. However, anecdotal evidence does suggest that windows cleaned with pure water stay clean longer on the basis that there is no film of detergent left on the glass, compared to when using a squeegee (try using a squeegee with no detergent under the blade).

RADIAL will deliver a perfect clean FASTER!

RADIAL ROCKER will clean a difficult-to-clean window FASTER!

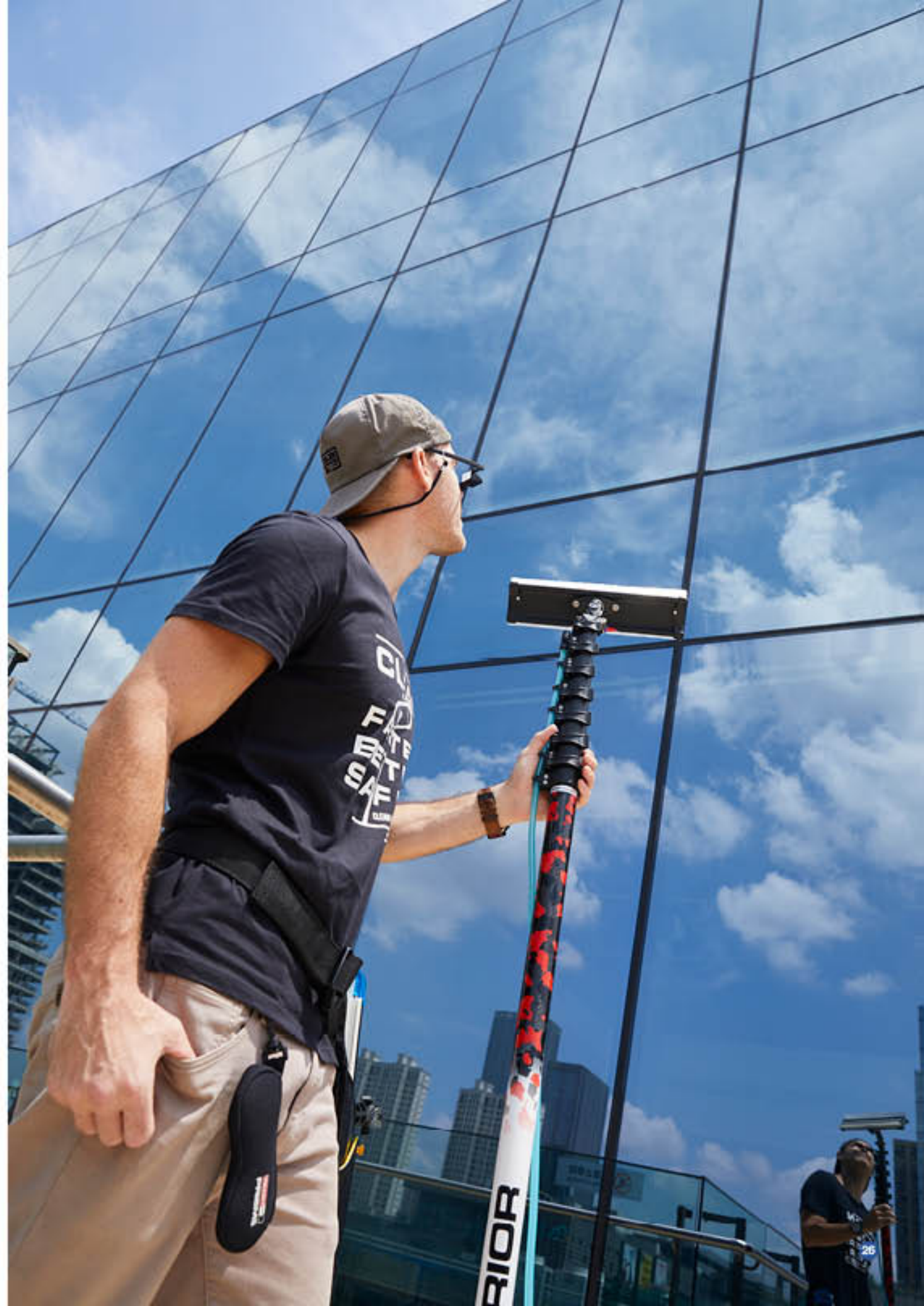
If RADIAL can double your speed on the glass, you double your hourly rate. \$50 becomes \$100, \$100 becomes \$200, and so on.

Your increased hourly rate justifies and pays for the price difference between RADIAL and other brushes. Your new RADIAL will pay for itself in days, and then, the profit is yours thereafter.

To maximize your profitability when you upgrade to RADIAL Brush, you may need need to change your TECHNIQUE, your HOSE/TUBE arrangement and possibly even PURE WATER Set-Up, over time.

Your RETURN ON INVESTMENT is your ability to

***CLEAN WINDOWS
MULTIPLES FASTER
- meaning you
MAKE MORE MONEY.***



SCRATCH, SCRAPE, OR GRAB ?

TRADITIONAL TOOLS

For a Traditional Window Cleaner, AGITATION is most time consuming when the Operator is faced with concretions, excretions or pollutions that cannot be 'lifted' off the glass by the Mop / T-bar. Alternatively, when debris is not soluble in water, removing the debris will need more aggressive agitation, with more strokes.

There are 3 ways to agitate glass - SCRATCH, SCRAPE, or GRAB.

NYLON BRISTLE brushes **SCRATCH** at the debris on a window - bristles are ideally at 30-40° to the window on the outer, and at 90° to the window in the center, for maximum agitation. If a brush is too stiff, or too soft, you will not get an effective 'scratch' from the bristle tips (it is the bristle tips that do the agitation).

BOARS HAIR bristles **GRAB** at the debris on a window. Once wet, the boars hair becomes soft and flexes on the glass. The edges of the bristles have a high friction coefficient, so they drag across the glass, grabbing the debris in this agitation action.

The ultimate agitation tools are SCRAPERS, or BLADES, that **SCRAPE** the glass. By running a blade angled at 30-40° to the glass, the blade will get 'under the debris' and lift it without scratching the glass.

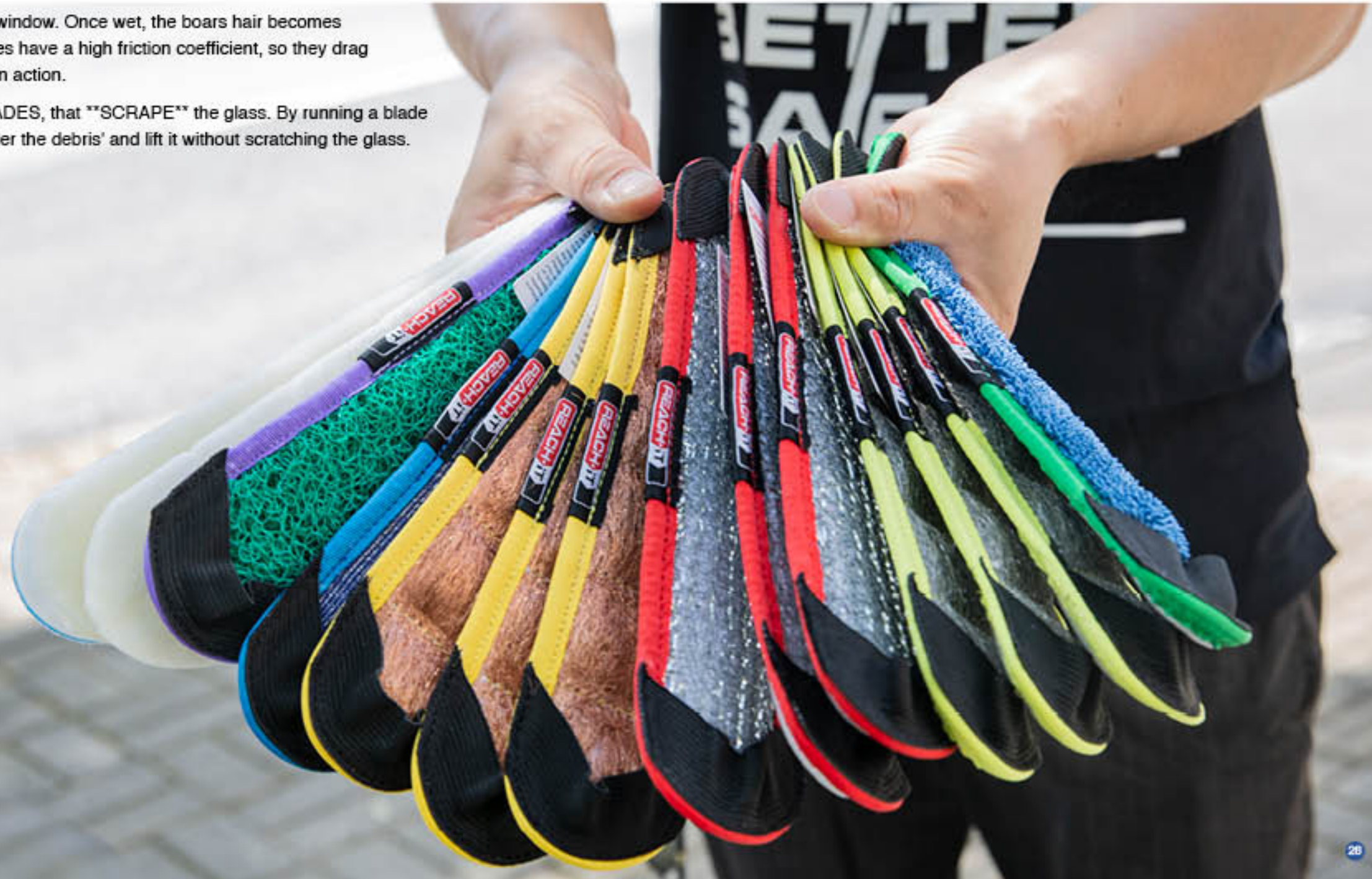
WATER FED TOOLS

For a Water Fed Window Cleaner, AGITATION is also most time consuming when an Operator is faced with concretions, excretions or pollutions that cannot be 'scratched' off the glass by nylon bristles or 'grabbed' by boars hair bristles. Alternatively, when debris is not soluble in water, removing the debris will need more aggressive agitation, with more agitation strokes.

RADIAL ROCKER has the answer.

With a range of 'SCRAPE' AGITATOR SCRUBS and 'GRAB' AGITATOR SCRUBS (see SCRUBS later), ROCKER will have you cleaning windows several HOURS per day faster than before.

Choose the right SCRUB and watch debris get cut off the glass right before your eyes. You will be AMAZED!





TWO BRUSH SIZES, and WHY ?

Just like the way we choose the right size squeegee blade to maximize efficiency, sizing your RADIAL brush on the glass has a HUGE effect on your Operator efficiency.

When you use a brush that covers the width of the window pane 100%, you can often use an up-down action, and clean the window in seconds.

When you size the brush to over 50% the width of a window, you can focus your agitation/rinse action on the LEFT FRAME, followed by the RIGHT FRAME, overlapping in the middle, and have two action cycles to a clean.

When you size the brush correctly, reducing the number of agitation paths on the glass delivers great advances in efficiency. Reducing 3 strokes to 2 strokes, delivers 33% improvement to efficiency. Reducing 4 strokes to 3 strokes, delivers 25% improvement to efficiency.

All RADIAL BRUSHES are available in two sizes - 14" and 18" (the width of the brush on the glass).



ROCKER TECHNOLOGY

While RADIAL is the ideal BRISTLE BRUSH, the RADIAL ROCKER and DEEP- FRAME ROCKER incorporate SCRUBS to maximize the SCRAPE and GRAB on RADIAL BRUSHES, far superior to Boars Hair.

BRISTLES:

The top bristle blade of all REACH-iT Brushes are there to break the surface tension of the glass, guaranteeing a water squeegee effect, ensuring all HYDROPHOBIC glass behaves like HYDROPHILIC on the down stroke. The bottom bristle blade to pull the dirty water off the glass on the down stroke.



SCRUBS:

Small SCRUBS for 12-14" brushes are around 12 inches square on the glass to maximize your pounds-per-square-inch pressure - it is the perfect match of useable surface area, and the efficiency of cleaning as much glass as possible with each stroke. Larger brushes have 30% more surface area, meaning you need to add 30% more force to get the same agitation effect on the window. With this in mind, remember a smaller ROCKER will give more pressure for more aggressive action, while a wider ROCKER will cover more area with each stroke.

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All SCRUBS can be detached and re-attached to the double-hook Velcro base plate so you can re-use them and interchange them, rather than making them one-time-use.

The 5 'SCRAPE' SCRUBS are : White Non-Scratch Pad, Steel Wool, Bronze Wool, Stainless Mesh, and Blue Metal.

The 4 'GRAB' SCRUBS are: Microfiber, Green Rubber, Magic Eraser and Silicon. Here are the product descriptions and applications to get you started:



WHICH SCRUB, WHEN?



1. WHITE NON-SCRATCH SCRUBS - WHITE NON-SCRATCH material is a proven agitation tool for traditional window cleaners, and it is an obvious evolution to include it for Water Fed. This is a medium-aggressive SCRUB to maximize your every-day efficiency, and have you cleaning windows **FASTER, BETTER, SAFER.**



2. STAINLESS STEEL WOOL and BRONZE WOOL SCRUBS - BRONZE WOOL and STAINLESS WOOL are a proven agitation tool for traditional and water fed window cleaners, and it is an obvious evolution to include it in your brush. This is an aggressive SCRAPE SCRUB - not prone to oxidize (rust), meaning it will last longer on the glass, and not lead to staining.

These scrubs are not like soft steel wool - the strands are all parallel to the glass - this is how they act like blades on the glass. These SCRUBS will maximize your agitation efficiency on very dirty glass, and have you cleaning windows **FASTER, BETTER, SAFER.**



3. STAINLESS STEEL MESH SCRUBS - STAINLESS MESH (we affectionately call it 'THE CHEESEGRATER') is designed for 'scraping' caked on dirt, artillery fungus, paint overspray, sticker removal, and other, until now, impossible concretions to remove with Water Fed. Water Fed.

This SCRUB is based on the 'Brillo' scrub used in industrial kitchens - it is a very fine and sharp blade running parallel to the window, scraping off some of the most difficult debris.



4. BLUE METAL SCRUBS - BLUE STEEL is 'sharper' than STAINLESS MESH, with a tight knit 'blade' effect, as the fine stainless steel strands are tightly woven through a blue polyester fabric. This is a very aggressive SCRUB to maximize your efficiency, and have you cleaning windows **FASTER, BETTER, SAFER.**



5. MICROFIBER SCRUBS - MICROFIBER is great at 'grabbing' dirt, however, being tight knit, it may not flush itself - meaning it can trap debris like grains of sand, and scratch glass. MICROFIBER is ideal for windows that are dirty from petrochemical pollution. Add a squirt of non-streaking detergent like GG4 to the MICROFIBER SCRUB to break down the organic pollutants, and clean the window like normal.



6. GREEN RUBBER SCRUBS - This SCRUB is unique because it is like a WHITE NON SCRATCH pad, but it is a 'Grabber', not a 'Scraper', and unlike MICROFIBER, it can selfflush in the event of a grain of sand being in its path. Most commonly preferred for BEE POO - GREEN RUBBER SCRUB removes both the bee poo, and the waxy residue underneath.



7. MICROFIBER SCRUBS - Silicones, and Sticker Residues have always been impossible for Water fed Window Cleaning. With MAGIC ERASER, even these, can be removed. Note : usually, more agitations are required when dealing with these non-watersoluble pollutants on the glass.

8. SILICON SCRUBS - This SCRUB is a unique GRAB type SCRUB with a delightful 'squeaky sound' as it passes over the glass - it even sounds like it's cleaning! Silicon may well become your the ultimate GO-TO SCRUB for everyday use.

Disclaimer: Certain treated glass surfaces (e.g. E-Glass and transparent polymer panels) will scratch with any abrasive pad. We rely on your knowledge and professionalism to test each glass surface before using WINDOW WEAPON. This SCRUB pad can be used on true glass without scratching. Be careful to not pick up debris in the pad, as debris can scratch glass.

Please note by using this SCRUB pad, you accept responsibility for your choice of SCRUB on any glass surface and you hereby indemnify the manufacturer against any claim for damage to glass surfaces.



TECHNIQUE DETERMINES EFFICIENCY

"If you use the same technique, you will have the same efficiency, regardless the tool"

Only by using a tool designed with a new and faster technique, can you advance worker efficiency.

RADIAL TECHNIQUE is the result of advanced study of TIME & MOTION related in the 'art' and the 'science' of Window Cleaning.

With the RADIAL TECHNIQUE, every Hi-Tech RADIAL BRUSH becomes 'The \$450 an Hour Brush' on premium jobs.

THE RADIAL TECHNIQUE

EFFICIENCY

EFFICIENCY: signifies a peak level of performance that uses the least amount of inputs to achieve the "highest" amount of output. "Efficiency" requires reducing the number of unnecessary resources used to produce a given output including personal time and energy. In other words, we need to clean each window **FASTER**, with **LESS EFFORT**.

Our goal is to remove more debris with less effort. To achieve this, we 'map the window' into 'ZONES' to eliminate unnecessary duplication and overlaps. The Operator cleans the entire window surface rapidly, with a smooth continuous action, never lifting the brush off the glass.



The basis of **RADIAL TECHNIQUE** is to focus attention on 4 zones of the window (see Figure 1 'THE FOCUS ZONES'):

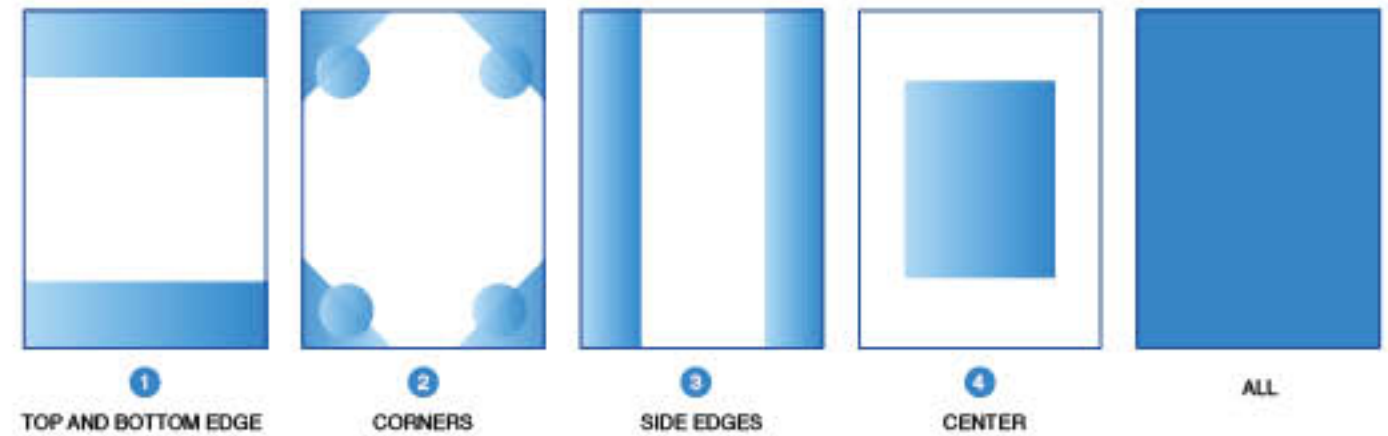
1. **TOP and BOTTOM EDGES**
2. **CORNERS**
3. **SIDE EDGES**
4. **CENTER**

RADIAL TECHNIQUE is only possible with **RADIAL Brush** which are **DESIGNED TOGETHER** to maximize your efficiency in each zone.

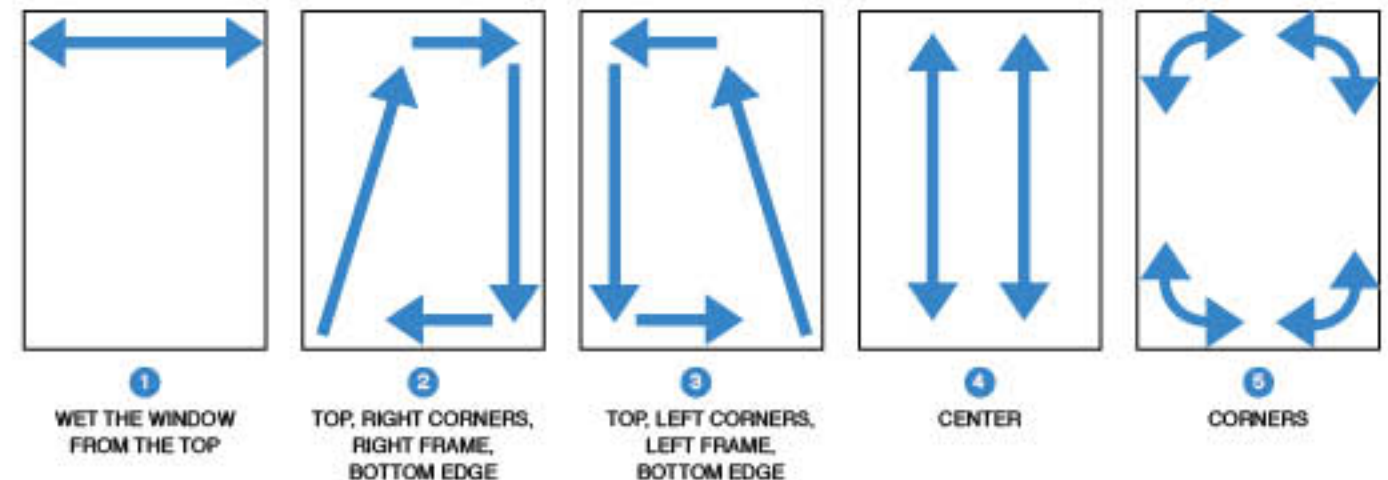
The second part of **RADIAL TECHNIQUE** involves determining the '**SHORTEST DISTANCE**' for the **RADIAL Brush** to travel in order to achieve the goal of a clean window. By reducing the total distance travelled, we reduce Operator Time, and achieve a greater **EFFICIENCY**.

Greater Efficiency = HIGHER HOURLY RATE

THE FOCUS ZONES:



THE MOVEMENT



THE RADIAL TECHNIQUE

The most effective passes could be defined as follows (see Figure 2 'THE MOVEMENT').

Your first intention is to create a 'NO GO ZONE' along the top edge with the brush at an angle (1, 2, 3) (not wetting above the agitation), so the future up/down strokes (4) do not go as high as the top frame, ensuring the jets do not wet above the agitation:

1. PASS ACROSS THE TOP OF THE WINDOW TO WET THE WINDOW FIRST, with the brush angled at 30-45-90 degrees (see videos) to avoid wetting above where you are agitating. (Figure 1)

2. Bottom (off-center left) to top center, angling the brush through the movement so it is at 30-45 degrees by the time it hits the top frame. (Figure 2)

3. Top-center to right corner, roll through the corner as many times as needed to dig out debris, follow right frame down to bottom right corner with brush angled slightly down towards the frame to the bottom corner, pull across the bottom of the frame with brush at 30-45 degrees for the width of the brush in the down-stroke. (Figure 3-1, 3-2, 3-3, 3-4)



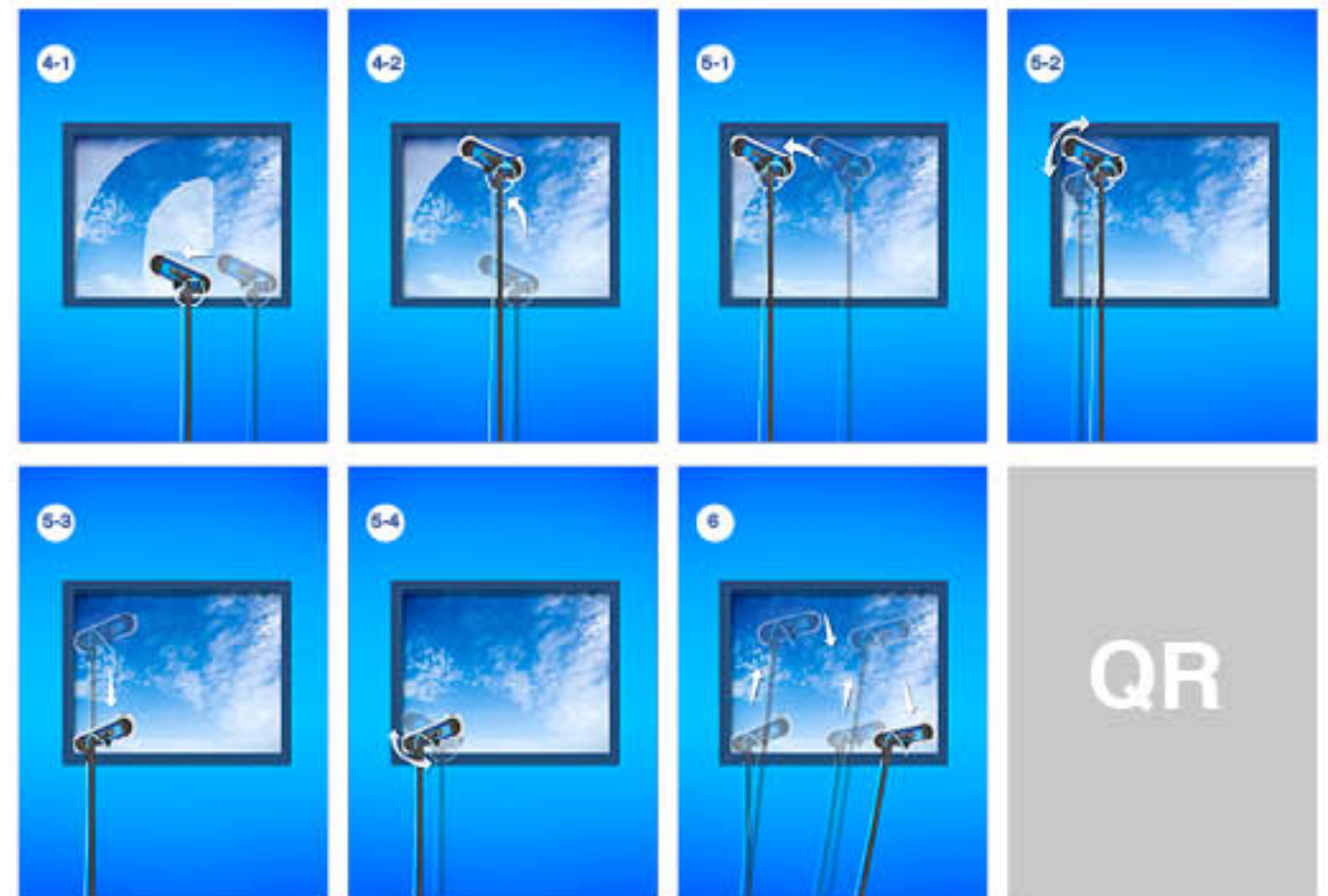
4. Bottom (off-center right) to top center, angling the brush through the movement so it is at 30-45 degrees by the time it hits the top frame. (Figure 4-1, 4-2)

5. Top-center to left corner, roll through the corner as many times as needed to dig out debris, follow left frame down to bottom left corner with brush angled slightly down towards the frame to the bottom corner, pull across the bottom of the frame with brush at 30-45 degrees for the width of the brush in the down-stroke. (Figure 5-1, 5-2, 5-3, 5-4)

6. Clean any center area of the window that is not covered by 2-5 with straight pull strokes, maximizing the use of the brush width, angling the brush slightly left or right (no matter) to clear the debris in the water flow across the top of the brush.(Figure 6)

7. REPEAT 2-6 as required if the window is dirty, or pay direct attention to any stubborn debris - you can see debris on the glass as it interferes with a clean cascade of water - you can see the cascade goes 'around' the debris.

8. Corners can be cleaned with rolling the brush through the corner for light debris, or a more intentional and aggressive action into the corners, again, rolling the dirt down into the high volume rinse water flow (see videos).



RADIAL BRUSH

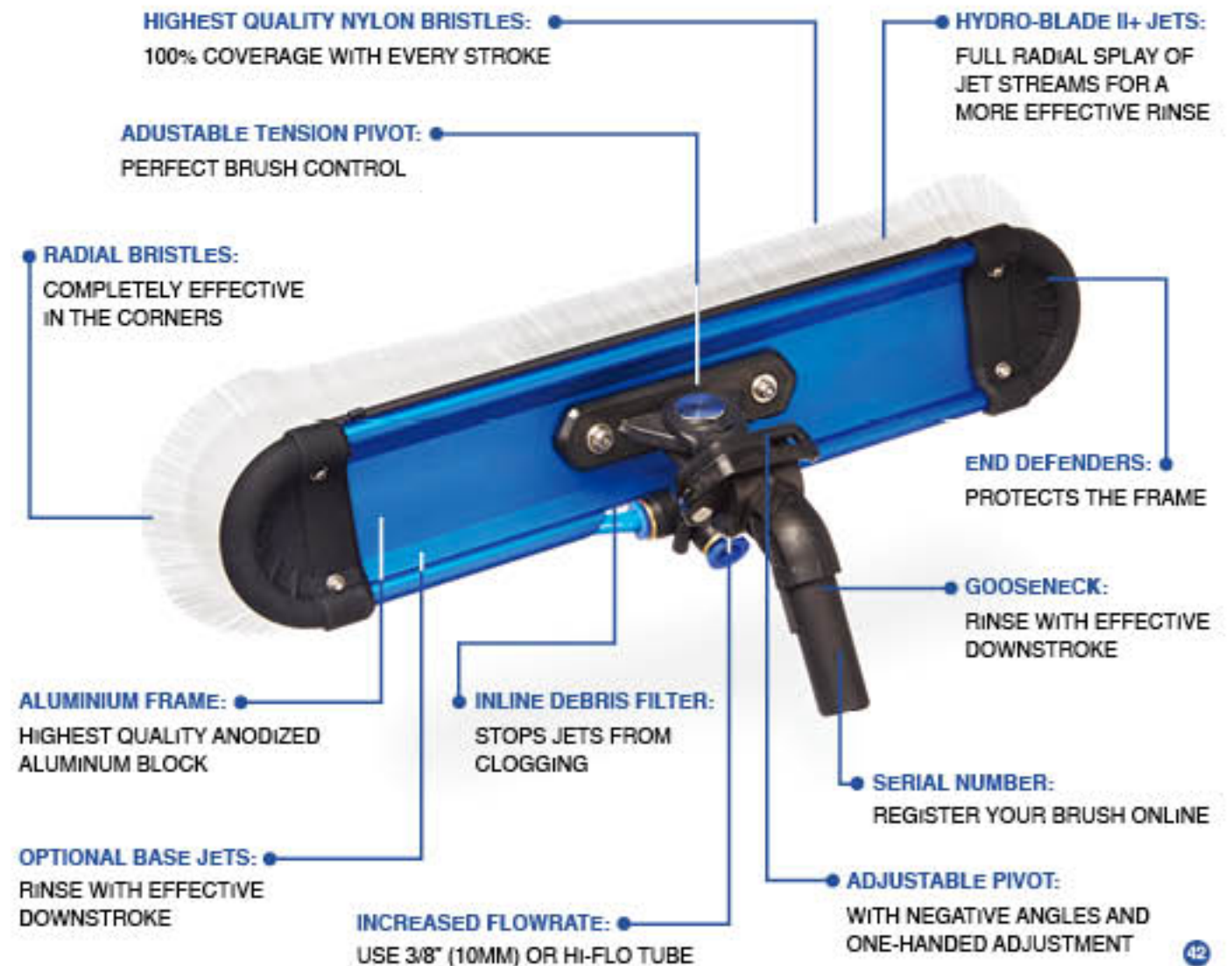
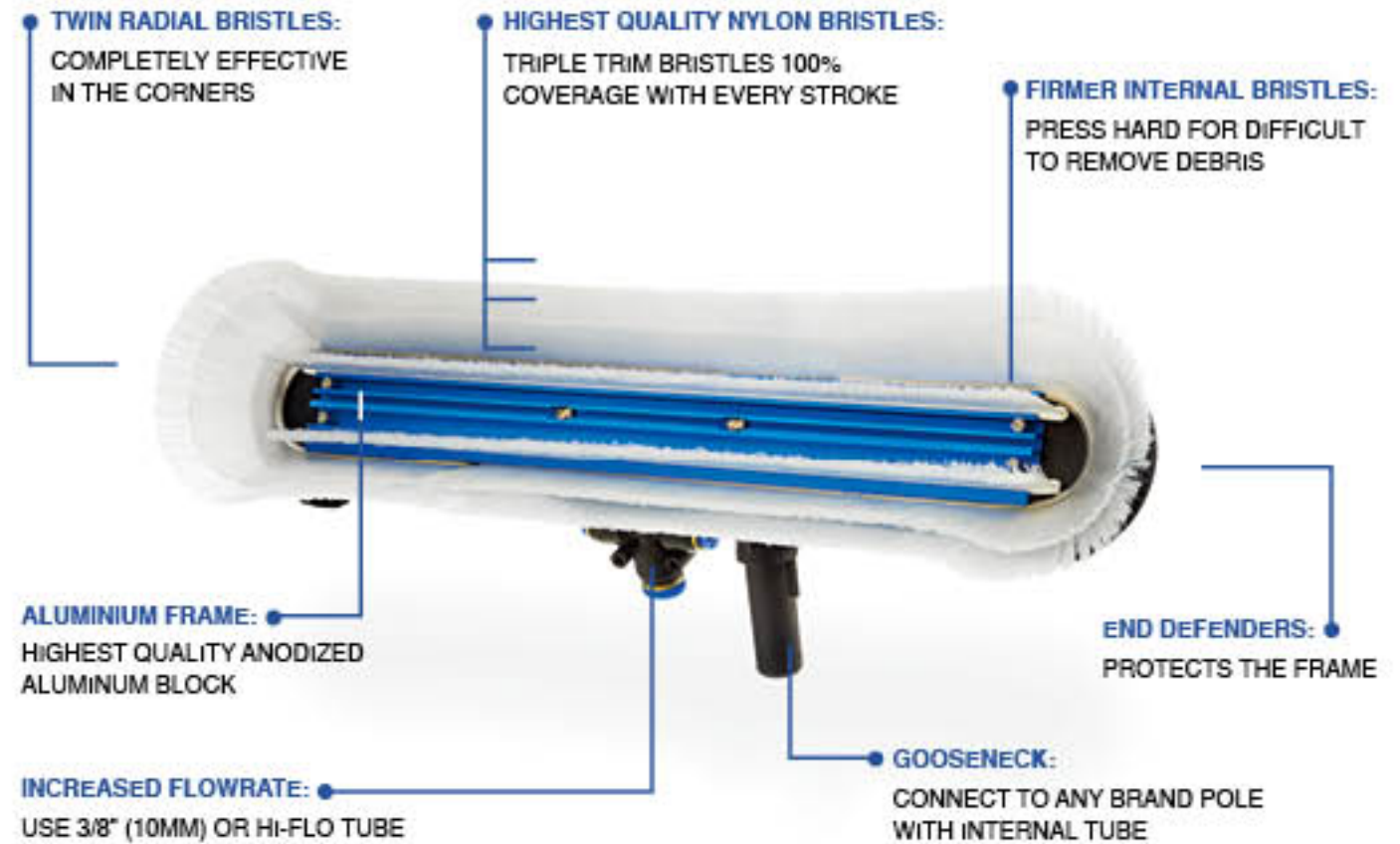
"THE GAME CHANGER that ACTUALLY CHANGED THE GAME!"

RADIAL comprises of a BLOCK fitted with Bristles in a circular arc at each end for perfect cleaning of corners, a unique PIVOT for perfect swivel function without the brush lifting off the glass, and a unique HYDRO-BLADE II+ that turns water 60° back on itself to perfect edge-to-edge rinse without wetting above the agitation zone.

RADIAL Brush offers you SINGLE ACTION window cleaning - AGITATE on the UPSTROKE, RINSE on the DOWNSTROKE with massive savings in worker time.

DESIGNED FOR: ANNUAL CLEANS: DEEP-FRAME and LOW-PROFILE FRAMES		
SIZE:	14" SPLAYED	18" SPLAYED
SKU:	1-003A-00008	1-003A-00009
MATERIALS:	ALU, NYLON, 304	ALU, PA, 304
WEIGHT(oz)*:	12.5	16.5
WEIGHT (gm)*:	380	480
RINSE:	26 Top jets	26 Top jets
AGITATION:	2 Radial Bristles	2 Radial Bristles
	2 Blade Bristles	2 Blade Bristles
BRISTLE TEMP:	< 212°F (100°C)	< 212°F (100°C)
CARTON SIZE:	14.4"X6.5"X4.5"	18.3"X6.5"X4.5"
PRICE: RINSE:	USD\$249	USD\$299

*without PIVOT



RADIAL ROCKER

"THE \$450 AN HOUR BRUSH"

RADIAL ROCKER has a new design of ROCKING PLATE to hold different SCRUBS 'flat' on the glass through the range of motion a pole goes through from the top of the window to the bottom of the window.

9 different SCRUBS can be fitted and re-used on RADIAL ROCKER to address the non-water soluble debris like fly and bee poo, artillery fungus, fern spores, paint overspray, stickers and sticker residue to name a few.

The radial bristles at the endcaps are perfect for cleaning corners, and HYDRO-BLADE II+ is perfect for rinsing edge-to-edge, and across the top frame.

DESIGNED FOR: DIFFICULT CLEANS: LOW-PROFILE FRAMES		
SIZE:	14" SPLAYED	18" SPLAYED
SKU:	1-003A-00010	1-003A-00011
MATERIALS:	ALU, NYLON, 304	ALU, PA, 304
WEIGHT(oz)*:	16.3	22.5
WEIGHT (gm)*:	462	640
RINSE:	26 Top jets	26 Top jets
AGITATION:	1 Radial Bristles	1 Radial Bristles
	18 sq In (120cm ²) SCRUB	26 sq In (175cm ²) SCRUB
BRISTLE TEMP:	< 212°F (100°C)	< 212°F (100°C)
CARTON SIZE:	14.17"X7"X5.3"	18.11"X7"X5.51"
PRICE: RINSE:	USD\$349	USD\$399



RADIAL LITE

"AS AMAZING AS RADIAL ... only LIGHTER!"

Whether you have a cheaper (more flexible) pole or a professional light-weight pole like Gardiner Extreme - these poles cannot take the bigger brushes. We developed RADIAL LITE 40% lighter.

DESIGNED FOR: REGULAR CLEANS, STOREFRONTS, ROUTE WORK		
SIZE:	14"	18"
SKU:	1-003A-00157	1-003A-00158
MATERIALS:	ALU, NYLON, 304	ALU, PA, 304
WEIGHT(oz)*:	8	10
WEIGHT (gm)*:	228	290
RINSE:	26 Top jets	26 Top jets
AGITATION:	4 Blade Bristles	4 Blade Bristles
BRISTLE TEMP:	< 212°F (100°C)	< 212°F (100°C)
CARTON SIZE:	14"X6"X4"	18"X6"X4"
PRICE: RINSE:	USD\$159	N/A



DEEP-FRAME ROCKER

"CLEAN COMMERCIAL WINDOWS AND SOLAR PANELS FASTER"

DEEP-FRAME ROCKER is designed for use on goosenecks and angle adaptors with an UP-DOWN motion, giving a faster, more stable clean. This means the water over the top of the bristles does hit the mullions, but it does not contaminate the rinse water.

Like RADIAL ROCKER, 9 different SCRUBS can be fitted and re-used on DEEP-FRAME ROCKER to address the non-water-soluble debris ranging from fly and bee poo, artillery fungus, fern spores, paint overspray, stickers and sticker residue to name a few.

Many a commercial window cleaner has declared "This is my favorite brush" - even though it is really designed for the deep frame windows.

ALSO IDEAL FOR SOLAR PANELS !

DESIGNED FOR: DIFFICULT CLEANS: DEEP-FRAME WINDOWS		
SIZE:	12.5"	16.5"
SKU:	1-003A-00006	1-003A-00007
MATERIALS:	ALU, NYLON, POM, 304	ALU, PA, POM, 304
WEIGHT(oz)*:	18.7	25.28
WEIGHT (gm)*:	531.4	716.8
RINSE:	26 Top Jets	26 Top Jets
	8 base jets	8 base jets
AGITATION:	2 Blade Bristles	2 Blade Bristles
	27 sq In (120cm ²) SCRUB	36 sq In (175cm ²) SCRUB
BRISTLE TEMP:	< 212°F (100°C)	< 212°F (100°C)
CARTON SIZE:	14.14"X7"X5.3"	18.11"X7"X5.51"
PRICE: RINSE:	USD\$249	USD\$299



*ALUMINIUM FRAME AND JETS COLOR MAY VARY

RELOAD

"TIME IS MONEY"

When we are cleaning windows, a smaller brush is often inefficient on large windows, and a wider brush is inefficient on smaller windows. As architects make buildings look more attractive, they use a combination of smaller and larger windows. As Window Cleaners, if we only have one brush, it must be a smaller brush. If we have many brushes, there is a time cost in going back to the vehicle to swap out brushes - and there is no system for swapping them out.

Often, the South and West walls of a building have debris 'cooked' on, making the cleaning of the window more difficult ... so working with a **ROCKER** Brush is the right decision.

RELOAD enables the Operator to carry a second **RADIAL** on his/her hip - giving the ability to efficiently change out between the 14" and the 18" **RADIAL** 'at the glass' to maximize efficiency.

RELOAD enables the Operator to carry a **RADIAL** as well on his/her hip so they can switch out when cleaning the East and North Wall windows.



"THE POWER OF CHOICE"

By carrying a full complement of **SCRUBS** on the Operator's hip, they can determine the most effective **SCRUB** for the particular challenges they face from one window to another.

SCRUBS HOLDER means you have the full range of aggressive agitators right with you 'at the glass'.

**SCRUBS
HOLDER**

ADVANCED TRAINING

1. A slight angle on the brush on long-stroke UP AGITATIONS, assists the water flowing off to the side faster for effective rinse of dirty water.

3. 'ROLL THE BRUSH' through the corners to get the radial bristles to 'dig and pick' debris from the corners (compared to pushing the brush into the corners like we do with ALL-ROUNDER).

5. When cleaning BELOW THE CHEST, consider to clean SIDEWAYS, rather than updown, using the same principles of coverage efficiency.

Remember - if you use a TOOL WITH A TECHNIQUE, you will get higher productivity.

- Considering other tools that change our efficiency;
- We don't use a Nailgun like a Hammer;
- We don't use a Vacuum like a Broom;
- We don't use a Lawnmower like a Scythe,
- And we don't use a RADIAL like a Broom-brush!

6. FRAMES can be cleaned using the same principles - it's just easier to define cleaning the glass with this technique. Treat the top of frames as if they are the top of the window, to prevent water going above the brush agitation.

2. An angle of 40-45 DEGREES is preferred across the top frame is better - we use gravity to 'pull' the water out of the top end jets across the top frame, preventing wetting above the agitation (assuming a balanced flowrate).

4. ANGLE THE BRUSH at 10° towards the frame (the same as we do with a squeegee blade) on the down-stroke (RINSE ACTION) so we are flushing the edge of the window (often more hydrophobic).

7. Perpendicular SIDES of DEEP-FRAMES can also be cleaned at ground and second level using the flexibility of PIVOT.

8. To get confidence in the efficiency and accuracy of your RADIAL BRUSH, always train and master the brush at eye-level, not at heights. Once you have mastered the technique, and you have confidence in the efficacy of the brush in both agitation and rinse, in both up-stroke, down-stroke, and rolling in the corners, extending your pole and working efficiently at heights is natural and intuitive.

Important Note to Business Owners: If your Technicians uses RADIAL like their previous brush (no matter a TUCKER, UNGER, or CONSTRUCTOR), they will not change their efficiency - it is in fact the TECHNIQUE that delivers the HIGHER HOURLY RATE. And yes, there is 'pain in change' - and 'resistance to change' - that is why we train our staff.

RADIAL has 100% success with new Window Cleaners, Pressure Washers adopting Water Fed Window Cleaning and Owner Operators, because either a) they have no previous biases, habits or techniques or b) they benefit directly from the increase in efficiency.

We see mixed results when business owners give RADIAL to their technicians with no introduction and say "Try this" - so the technician uses the only technique he knows - often the SCRUBBING AGITATION technique necessary when using Broom Brushes, and the OFF-GLASS-RINSE technique which is essential when using pencil jets.

9. RADIAL TECHNIQUE assumes a rigid pole - efficiency is a result of a direct, instant, and accurate transfer of your control efforts to the brush. A flexing pole cannot offer this. If you are struggling to achieve comfort with the RADIAL TECHNIQUE, consider to upgrade your pole to 100% carbonfiber.

11. Remember to choose the right tool for the job. Small brushes give more pounds per square inch pressure. Small brushes work better on small windows. South and West wall windows may have more difficult to remove debris than North and East facing windows in the Northern Hemisphere (opposite in Southern Hemisphere). This is also a factor in dealing with sun-bleach caused oxidation of frames (compared to Softwash bleached oxidation).

13. For Cut-Ups (French Panes), do not use a ROCKER Brush - a RADIAL will clean the windows and the frames in the same action - treat the whole window as one, with attention to each pane as required.

12. Remember WATER FED is a tool - just like any one brush, no tool is a universal solution without losing overall efficiency - sometimes traditional mop and squeegee is the right tool to use.

CAN MY RADIAL BRUSH WORK WITH ANY BRAND ?

-YES!

However - there are a lot of things to take into consideration:

POLES

RADIAL can be purchased pre-fitted to match the pole tip of most poles on the market, or a compatible adaptor like GARDINER, IONICS, FACELIFT, TUCKER, UNGER, and after-market reseller poles.

RADIAL works best with a 'direct transfer' of effort from the Technician to the Brush for precision and accuracy. If you have a pole that flexes, you will not achieve the same results as you will with a rigid pole. In this case, plan to upgrade your pole.

HOSE / TUBE

RADIAL is designed for 3/8" (10mm) OD TUBE - using it with 5/16" (8mm) TUBE is potentially problematic unless you have capability for high pressure (which is counter-productive compared to running a bigger tube). RADIAL LITE is the only RADIAL BRUSH designed to work with 5/16" TUBE. RADIAL is designed with HI-FLO tube for it's flexibility, however, any tube can suffice.