



TRUEAIRLESS® SPRAY TIPS

A small part with great importance



PAINT LIKE A PROFESSIONAL

MAGNUM®
by GRACO

Read all about why choosing the right tip is so essential, how to choose the right tip for your application and how to get the best result out of your tips.

THE IMPORTANCE OF CHOOSING THE RIGHT TIP

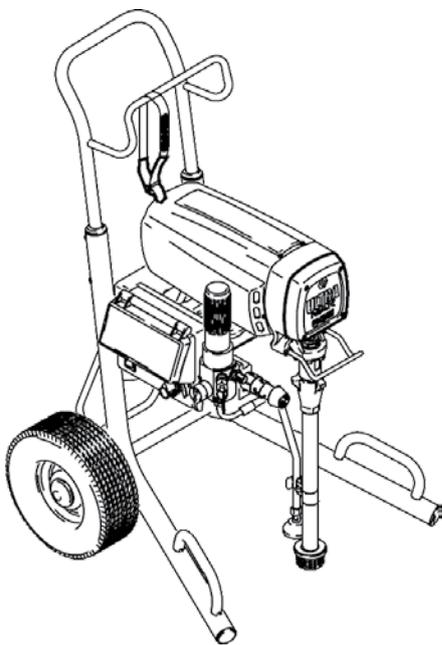
The spray tip may only be a small part of your sprayer, but the tip is of vital importance. Choosing the right spray tip for the material you are spraying will determine the quality of your finish and help you save time and money.

WHAT DOES A TIP DO?

An airless sprayer pumps and pressurizes the paint without the use of air. The paint is pushed through the small opening (orifice) of the tip under high pressure (up to 207 bar). This process atomizes the paint.



The spray tip tells the pump how hard it must work in order to maintain the required pressure. It ensures that the paint atomises under a certain fan width and flow rate – an effect similar to placing your thumb on the end of a garden hose.



THE PUMP PRODUCES THE PRESSURE OF THE PAINT



THE TIP DETERMINES THE SPRAY ANGLE AND SPRAY OUTPUT

So the tip determines the amount of paint that will be applied to the surface (paint flow) as well as the surface area the spray pattern will cover (spray width). That is why the quality of your finish depends greatly on the spray tip you choose.





WHY IS THE TIP SO IMPORTANT?

The correct tip ensures less overspray and therefore provides better control and finish. Consequently, not only will you use less paint, but you will be spending less time on the job.

THE RIGHT TIP

- Increases your performance
- Improves the quality of your work
- Keeps your costs under control

WHY SO MANY DIFFERENT TIPS AND SIZES?

You can compare this to choosing the right bit for your drill. There are bits designed for wood, others are made for metal or concrete. And then each of these bits comes in a variety of sizes. If you use the wrong bit for the wrong surface, you won't get the result you want. The same applies to airless tips.

WHAT DO THE TIP NUMBERS TELL YOU?

GRACO USES A UNIQUE NUMBERING SYSTEM FOR ALL AIRLESS SPRAY TIPS.

To make sure you always have the correct tip for the project and coating you're using, it's easier than you might think to "break the code" of numbers to understand tip sizing.

All of our Magnum by Graco paint sprayers include a TRA515 spray tip in the box. So let's take the TRA515 tip as an example.

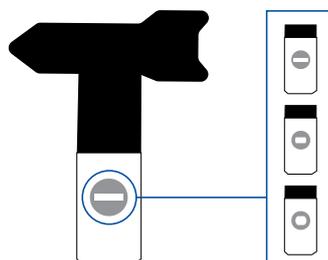
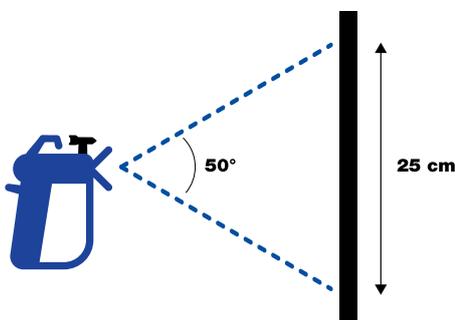
THE FIRST NUMBER

In this case '5', stands for the width of the spray distribution (spray width). It also matches the angle you are spraying at.

If the number is 5, then you are spraying at an angle of 50°.

Multiply the first digit by 5 and you get the actual spray width in centimeters if you hold the pistol 30 cm from the surface.

SO WITH THE 515 SPRAY TIP, THE SPRAY WIDTH WILL BE $5 \times 5 = 25$ CM



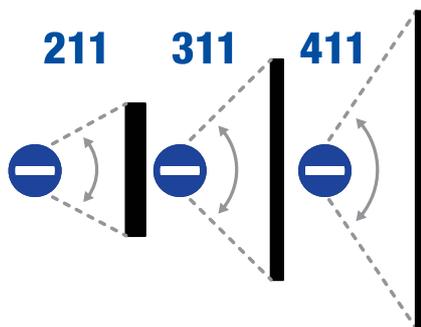
THE LAST TWO NUMBERS

of the tip, in this case 15, show the size of the spray orifice or hole size, indicated in thousands of an inch. This determines the amount of paint that the tip allows to go through.

The higher the number, the greater the flow with which you can spray.

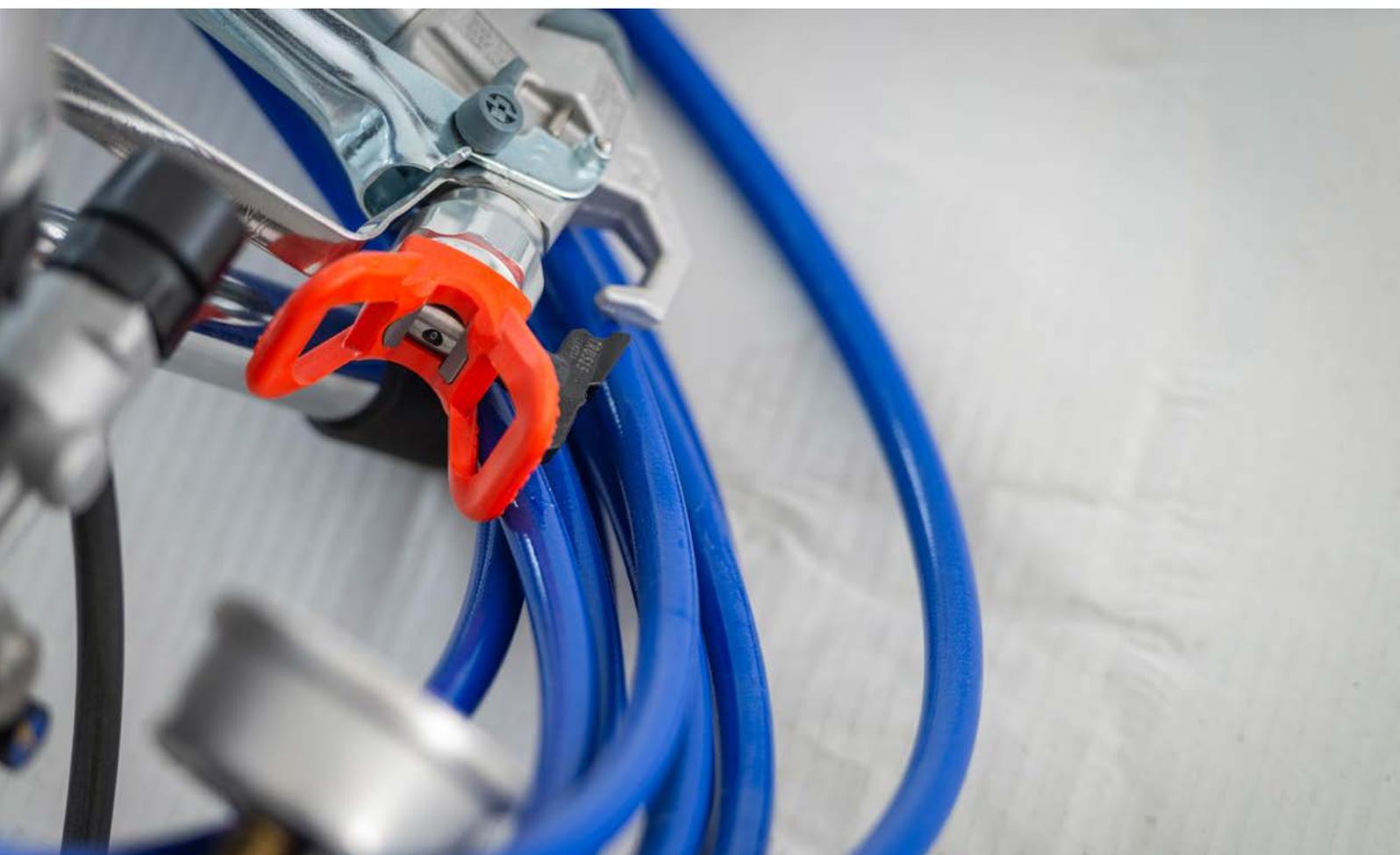
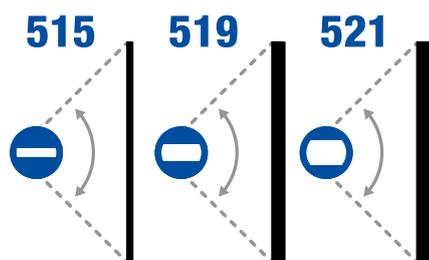
WITH THE 515 SPRAY TIP, THE '15' MATCHES AN ORIFICE OF 0.015 INCH

DIFFERENT FAN WIDTH SAME ORIFICE SIZE



LARGER FAN WIDTH
→
BIGGER SURFACE

DIFFERENT ORIFICE SIZE SAME FAN WIDTH



HOW DO YOU CHOOSE THE RIGHT TIP?

Choosing the right tip is done in three steps. First, you determine which application you need the tip for (that is, which material you will be spraying) and then the fan width and flow rate you need.

1

STEP 1: FIND YOUR PAINT OR MATERIAL AND THEN CHOOSE TIP SIZE

MATERIALS CHART							
THIN		MEDIUM			THICK		TIP SIZE
Wood stains	Opaque wood stains Varnishes Lacquers	Wood paints	Wall and ceiling paints General undercoats	Façade paints Antifouling	Thick façade paints	Particularly thick paints and non-paints	
X							.009
	X						.011
		X					.013
			X				.015
			X	X			.017
					X		.019
						X	.021

2

STEP 2: MATCH TIP SIZE TO FAN WIDTH TO FIND SPRAY TIP

SPRAY TIP CHART					
TIP SIZE	FAN WIDTH (IN CENTIMETERS)				
	10 cm	15 cm	20 cm	25 cm	30 cm
.009	209	309			
.011	211	311	411		
.013		313	413		
.015		315	415	515	
.017			417	517	
.019				519	619
.021				521	621

3

STEP 3: CONFIRM SELECTED TIP IS SUPPORTED BY SPRAYER

MAXIMUM TIP SIZE	
MAGNUM [®] by GRACO SPRAYERS	MAXIMUM TIP SIZE SUPPORTED
A20 Plus	.015 inch
A30 ProPlus	.015 inch
A45 ProPlus	.017 inch
A60 ProPlus	.019 inch
ProS19 ProPlus	.019 inch
A80 ProPlus	.021 inch
A100 ProPlus	.021 inch
ProS21 ProPlus	.021 inch

Please note that these are general guidelines. Please consult the paint/material manufacturer to confirm the recommended tip size.

STEP 1

WHICH APPLICATION DO YOU NEED THE TIP FOR?

Tips were developed for specific applications. The material you will be spraying and its thickness will determine the size of the spray tip opening and thus flow rate you need.

Thinner materials used for a fine finish (such as stain or varnish) require a tip with a smaller orifice. For heavier materials (such as latex paints), the orifice must be larger.

TRUEAIRLESS[®]

Magnum by Graco offers TrueAirless spray tips, specifically designed for airless applications.

The TrueAirless spray tips with SoftSpray Technology deliver a softer spray pattern to make it easier to deliver a professional quality finish. They will ensure greater control and minimum overspray.

These TrueAirless spray tips are ideal for interior and exterior paint jobs in homes and commercial projects.

STEP 2

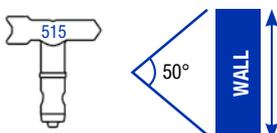
HOW WIDE DO YOU WANT YOUR FAN WIDTH TO BE?

The width of the spray fan is important for the type of project you are spraying.

The wider the fan width and thus the spray distribution, the faster you paint larger surfaces, but the consumption of paint is greater.

With a smaller distribution, you work more slowly, but you use less paint and you have more control.

Determine your fan width and divide that number by 5. That will tell you what the first number of your tip should be.



FOR EXAMPLE

if the fan width should be 25 cm, then the first number of the tip size must be 5 ($25 \div 5 = 5$). The number 5 matches a spray angle of 50°.

By the way, if you want a fan width of 15 cm, then the first number must be a 3 ($15 \div 5 = 3$). The angle in this case is 30°.

Small surfaces such as cabinets or doors require smaller fan widths.
Larger fan widths are better suited for larger surfaces such as walls and ceilings.

SMALL OR BIG SURFACE



SMALL SURFACE = SMALL FAN WIDTH
Like doors and trim work



BIG SURFACE = BIG FAN WIDTH
Like walls and ceilings

STEP 3

DOES YOUR PAINT SPRAYER SUPPORT THE SELECTED TIP?

Before selecting a spray tip, always make sure you know what sprayer you're using, and the size spray tips it can support. The pressure volume on each sprayer is different and this determines which size tips can be used. This information can be found in the sprayer manual.

MATCH YOUR SPRAYER WITH THE RIGHT TIP

MAGNUM PAINT SPRAYER	MAXIMUM TIP SIZE SUPPORTED
A20 PLUS	0.015 inch
A30 PROPLUS	0.015 inch
A45 PROPLUS	0.017 inch
A60 PROPLUS	0.019 inch
PROS19 PROPLUS	0.019 inch
A80 PROPLUS	0.021 inch
PROS21 PROPLUS	0.021 inch
A100 PROPLUS	0.021 inch

HELPFUL HINTS

- The 515 tip is included with each sprayer and thus compatible with all our Magnum by Graco paint sprayers.
- A sprayer can support all smaller tips up to its maximum tip rating.
- The 515 tip is sized to spray paint. Stain may need a smaller tip (see step 1).



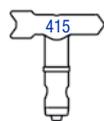
GET THE MOST OUT OF YOUR TIPS

Based on the general information above, you can choose the tip best suited for your application. We will provide you with some additional tips & tricks for this.

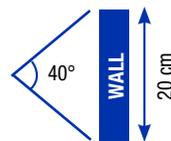
ADJUSTING TO THE RIGHT TIP

By experimenting with various tips, you become experienced and can easily decide which tip is the best one for your application.

TOO MUCH PAINT?



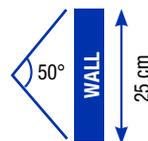
0.015" =
0.9 litres/minute



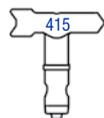
1) **Use a smaller tip orifice**
13 instead of 15



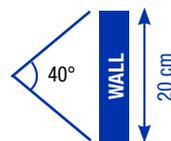
2) **Increase the spray angle**
5 instead of 4



NOT ENOUGH PAINT?



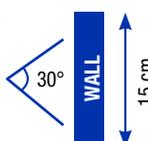
0.015" =
0.9 litres/minute



1) **Use a larger tip orifice**
17 instead of 15



2) **Decrease the spray angle**
3 instead of 4



REPLACING THE TIPS ON TIME

By remembering the comparison between tips and drilling bits, you'll also be able to understand how tip wear & tear can affect your work. Have you ever tried to drill into concrete with a worn-out bit? If you have, then you must know that it takes longer to drill a hole, that it takes more effort and that the result looks less professional.

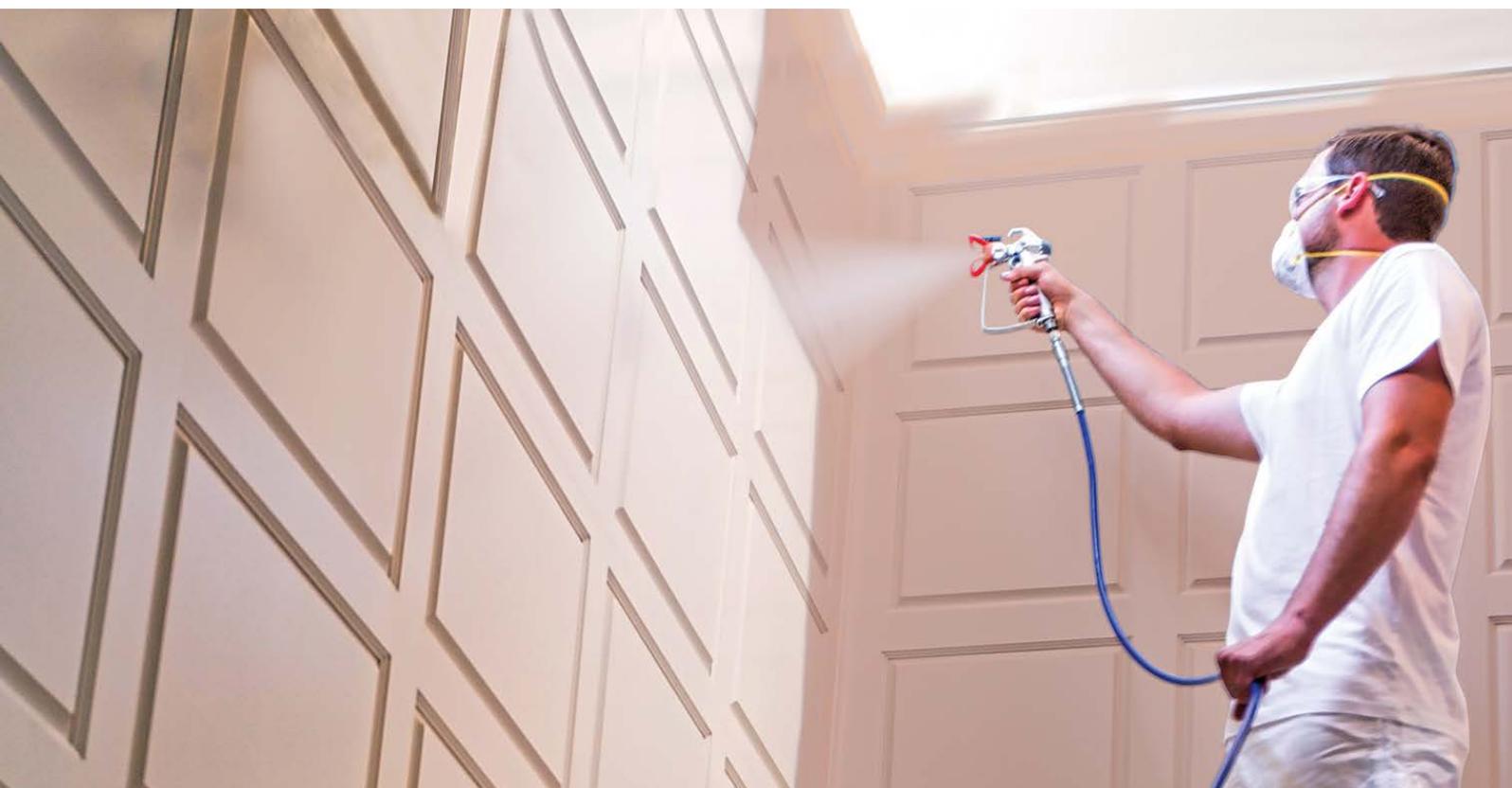
This is also the case if you continue to spray with a worn-out tip. What is more, by using a worn-out tip, it's quite possible that you'll exceed the sprayer's maximum flow rate. At the end of the day, the worn-out tip will cost you more than a new one.

Spray tips will wear with normal use. Since most coatings have solids that cause abrasion, spray tips will wear with normal use.

It is important to replace a tip when it gets worn to ensure a precise spray pattern, maximum productivity and quality finish.

When a tip wears, the orifice size increases and the fan width decreases. A greater tip orifice results in more paint coming out, causing more paint to hit a smaller area and wastes paint.

A decreased fan width will make the area you cover get smaller, resulting in more spray movements necessary to cover an area and thus more work. This causes more paint to hit a smaller area, which wastes paint and slows productivity.

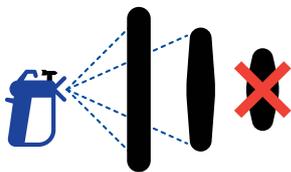


WHAT HAPPENS WHEN A TIP GETS WORN OUT?

Piston work pressure and abrasive material are the two main causes of worn-out tips.

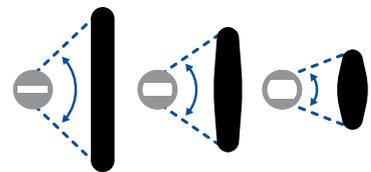
FAN WIDTH DECREASES

= more passes necessary
= more labor



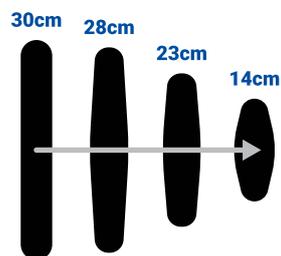
ORIFICE SIZE INCREASES

= more paint comes out
= more material cost



RESULT

= twice as much work
= 30% more paint for the same surface



CHANGE REGULARLY

Change your spray tip regularly to save money

NEW

1st digit x 5 = fan width*

10 cm
15 cm
20 cm
25 cm
30 cm

*at 30 cm spraying distance

WORN

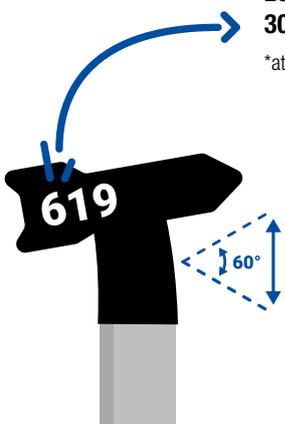
Time to change!

7 cm
10 cm
15 cm
20 cm
25 cm

FIVE TIPS

Five tips to extend the life of spray TIPS!

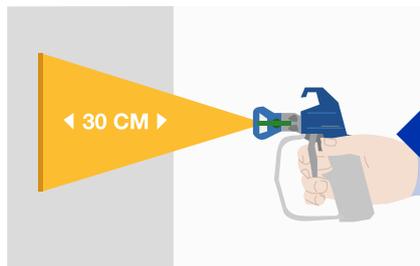
1. Spray at lowest possible pressure
2. Use correct size filters
3. Clean filters after every use
4. Use a soft brush to clean tips
5. Strain the coating material prior to spraying



6 SPRAY TIPS FOR THE BEST RESULTS

SET THE CORRECT PRESSURE

- Start at the **lowest** pressure
- Increase it slowly until a **uniform coat** appears

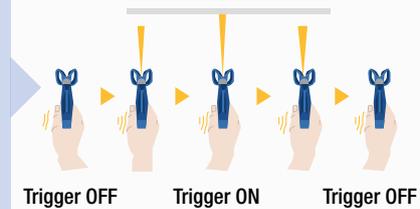


KEEP 30 CM DISTANCE

- Point the gun at **right angle** from the surface
- When using an extremely large spray tip, the distance may be greater

APPLY THE 'TRIGGERING TECHNIQUE'

- Start your painting stroke **before triggering** the gun
- Release it before ending each pass to **avoid paint build-up**

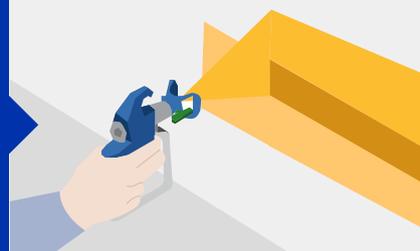


GO FOR THE PERFECT THICKNESS

- Paint coat is too thick:
- Move the gun faster
 - Use a smaller tip and wider range
 - Keep 30 cm away

APPLY THE 'OVERLAP TECHNIQUE'

- Overlap the previous stroke by **50%** to obtain an even effect



FOCUS ON THE CORNERS

- Aim your gun into the corner and spray along it



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Magnum by Graco - Paint like a Professional

Whether you're a weekend warrior, a serious DIY enthusiast, a handyman or remodeling contractor, or a painting professional, Magnum by Graco makes the ideal airless spraying equipment to meet your needs. Whether you are just starting out or moving up, choose the Magnum model to help you handle your job with ease. No matter what you're painting - entire homes, rooms, decks or fences - Graco has you covered!

OUR BRAND PROMISE TO YOU

Since 1926, **innovation**, **quality** and **A+ Service** have been at the centre of Graco.

Experience Innovation

Our focus on innovation results in products and equipment that lead the industry with technologically-advanced features, pioneering design, high performance and unparalleled reliability. In short, innovation is how you get better products!

Building Quality

You're investing in high-quality products built to last for years of reliable service. Moreover, we partner with our customers to better understand how you're deploying our products in the field, then use your experiences to improve performance and durability.



A+ service, every time

You'll see A+ Service in action when you contact any of our support services options no matter where you are in the world. We'll listen to your situation and work methodically to resolve it as quickly as we can. We are guided by a mindset of integrity and a customer service view centred on collaboration and relationships, not transactions.



We're here to answer questions and help address your needs:

www.graco.com/contact

Graco is certified ISO 9001.