

Liquid silicone rubber parts are used in many markets.



Graco Fluid Automation

LIQUID SILICONE RUBBER SOLUTIONS

PROVEN QUALITY. LEADING TECHNOLOGY.



Graco Fluid Automation: Superior quality. Minimal waste.

Engineering expertise meets manufacturing excellence

Graco Fluid Automation products resulted when Fluid Automation, Inc., a renowned innovator in metering and dispense equipment for liquid silicone rubber (LSR) materials, joined Graco Inc., the recognized world leader in fluid handling systems and components.



From our collective experience, we understand how the smallest error can lead to expensive material waste, costly overhead and likely profit loss. Graco Fluid Automation products are engineered to achieve the **highest degree of accuracy** – *every application, every time.*

Graco Fluid Automation provides the highest quality LSR dispensing equipment, created in world class manufacturing facilities and supported with outstanding customer service.



We're committed to finding you the **right solution.**



Graco Fluid Automation

F4-5 + F4-55

In the manufacturing of liquid silicone rubber (LSR) products, precision is paramount. Material waste is an expensive problem and substandard products are an intolerable failure. Minimize both with the Graco Fluid Automation F4-5 and F4-55.

Markets:

- MEDICAL
- INFANT CARE
- CONSUMER PRODUCTS
- AUTOMOTIVE
- INDUSTRIAL PARTS
- WEARABLES



Increased Precision

- High-resolution ratio control makes sure you stay on ratio

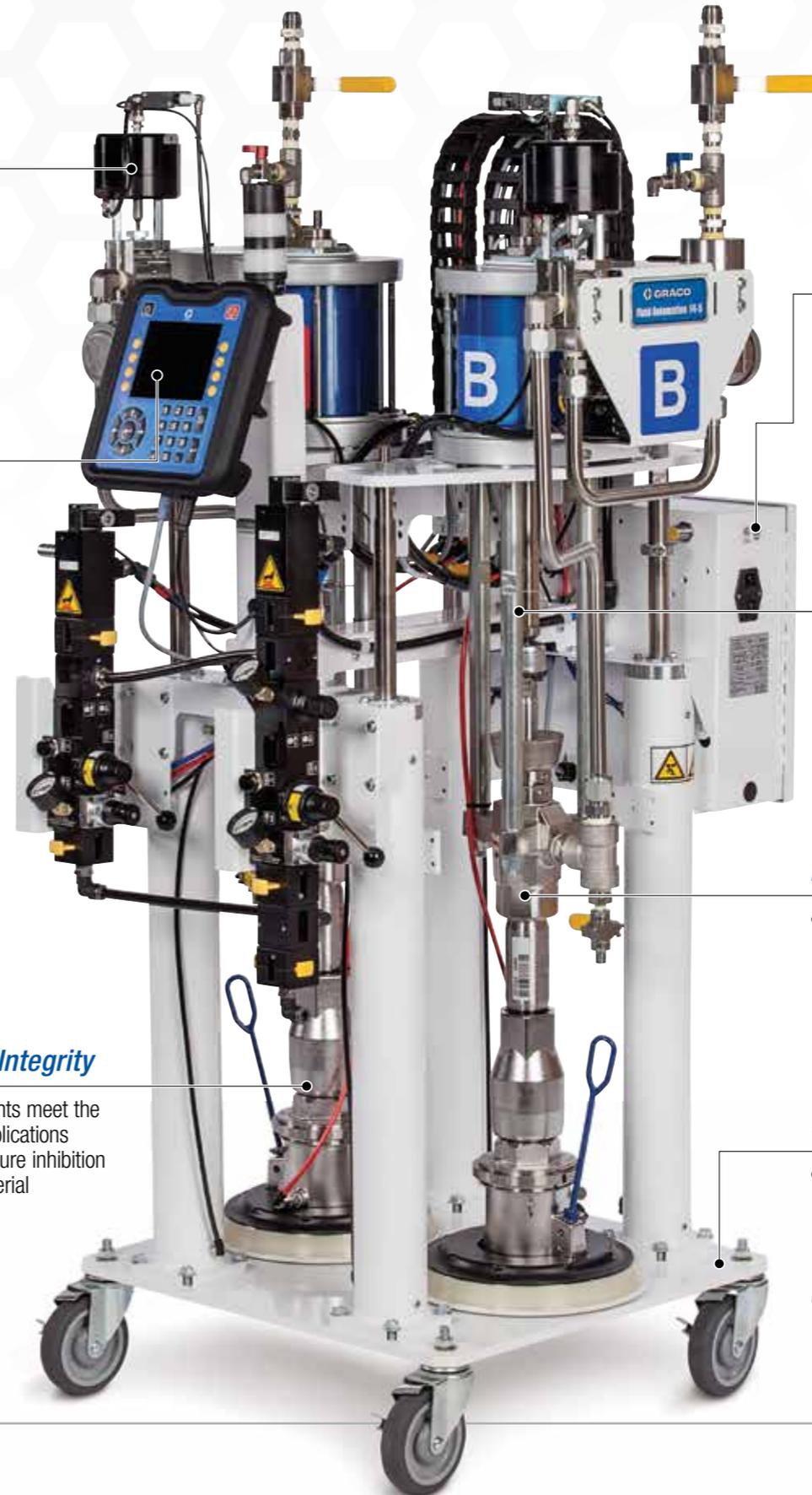
Easy Set-up and Operation

- Proprietary Graco Control Architecture (GCA) is user friendly, providing easy operation and troubleshooting
- Optional: Drum monitoring to reduce waste. Available on both F4-5 and F4-55

Maintains Material Integrity

- Stainless steel components meet the standard for sanitary applications prevent contamination, cure inhibition and discoloration of material

The F4-5 system



Better Color Control

- Mix two additive streams at ratios ranging from 0.5 to 6%

Less Material Waste

- Individual pump drives and optional sensors allow for automatic ratio control, minimizing waste

Easy Maintenance

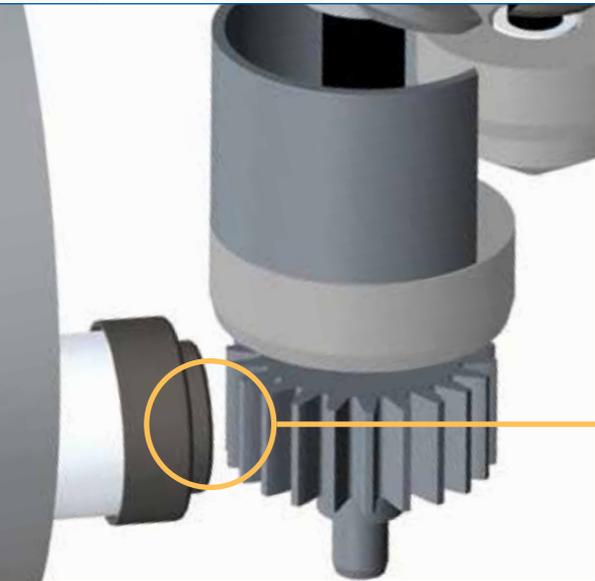
- Quick-disconnect pump removal mechanism simplifies the cleaning process

Cleanroom Convenience

- A smaller footprint and casters (optional on F4-55) allow for easy system movement and maintenance
- Pneumatic powered for quiet and clean operation

Graco Fluid Automation

F4-5 + F4-55



Precise ratio control, minimal material waste

The F4-5 and F4-55 systems take the ability to meter material flow to an almost microscopic level. Its helical gear uses multiple gear teeth to measure flow in very small increments. The increased number of measurements offer greater accuracy and assurance the machine is on ratio.

The result: More precise mixing, a better end product and less wasted material.

Easier operation with Graco Control Architecture™

The Graco Fluid Automation F4-5 and F4-55 systems feature intuitive user interfaces based on the Graco Control Architecture (GCA) modular system of processing and control components. The GCA system makes maintenance and service easy, thanks to built-in troubleshooting tools.

- Large, bright color screen makes the system easier to use
- Key pad entry makes it easy to program and reduces operator training time



F4-5 Model



F4-55 Model

Stay on ratio. Stop waste.

New straight-thread stack designs

Innovation guaranteed to improve your LSR production efficiency

High material costs, pressure drops, decreased throughput and lengthy material changeover processes can have a significant impact on LSR efficiency and productivity.

To help **reduce cleaning downtime while increasing production**, Graco Fluid Automation engineers have developed revolutionary new straight-thread barrel stack designs for the industry-proven F4-5 and F4-55 meter, mix and dispense systems.

Easier to clean + assemble

No tapered national pipe thread (NPT) threads and regulator and mixer enhancements for greater clearance.

Reduces cleaning time by 50 percent so you can spend more time producing parts.

Reduce pressure drops

High-flow material passages on the regulator are 225% larger which reduces pressure drops through the barrel stack.

Reduced thread galling + easier reassembly

Stackable plastic molded mixers with improved housing and mixer tolerances prevent common side-walling problems. Mixer life is increase by elimination breakage caused by repeated removal and installation.

Plastic mixers can be cleaned or disposed and replaced.



Single Pass Mixer

New straight-thread stack designs

Save material costs with customizable mixing

Use only the material you need with both multi-pass and single-pass designs:

Multi-pass mixer

- Supports up to 30 mix elements
- Configure the equipment to run as few mix elements as required: 6, 12, 18, 24, or 30

Single-pass mixer

- Includes 12 mix elements and can be configured to use only required mixers

Increase overall throughput

Two filter options:

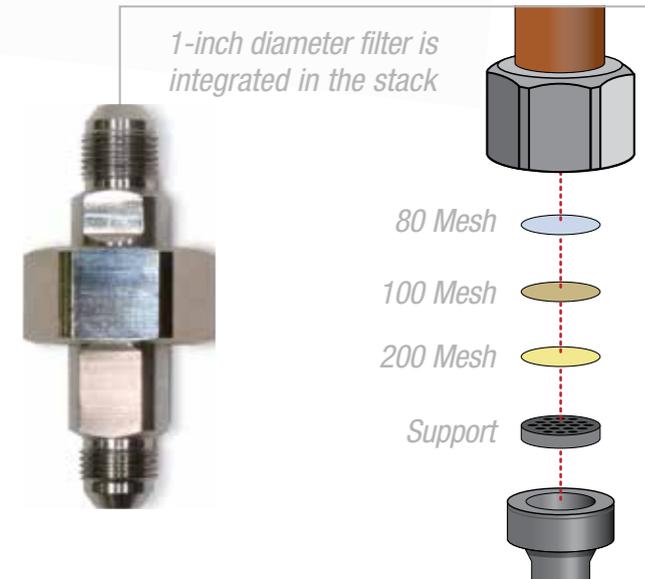
- 1-inch diameter filter comes standard, integrated in the stack assembly
- 2.5-inch filter option available



Multi-Pass Mixer



1-inch diameter filter is integrated in the stack



F4-5 + F4-55

Ordering information

Select your system

24X160	F4-5 LSR System, 5 Gal
24X166	F4-55 LSR System with 5 gallon platens and 24X1218 Caster kit, 5 Gal
24X167	F4-55 LSR System, 55Gal w/24X218 Caster Kit
24X168	F4-55 LSR System with 5 gallon platen kit, 5 Gal
24X169	F4-55 LSR System, 55 Gal

System accessories

24X218	F4-55M Caster kit
25A100	Continuous level kit F4-55M
25A101	Continuous level kit F4-5M
25A102	Dual press kit
257729	5 gal (20 l) Single wiper PTFE Platen
25A106	2nd Press cable kit
25A160	5 gal (20 l) Bucket girdle

Select your barrel stack

Tapered Thread Stack

SK556	Stack, 16mm x 12 mix element 3/4 NPT outlet
SK556-2A	Stack, 16mm x 12 mix element 3/4 NPT outlet
24R681	Stack, 2 pass, 32 mix element 3/4 NPT outlet
25A169	Stack, 2 pass, 24 mix element 1/2 NPT outlet

Straight Thread Stack (-12 JIC male inlets)

25A990	5 pass Stack 13mm X 15 mix element Material check valve only
25A992	5 pass Stack 13mm X 15 mix element with Fluid shut-offs
25A993	5 pass Stack 13mm X 15 mix element with SN751-1A Color Injector
25A995	Single Pass Stack 21mm X 12 mix element Material check valve only
25A997	Single Pass Stack 21mm X 12 mix element with Fluid shut-offs
25A998	Single Pass Stack 21mm X 12 mix element with SN751-1A Color Injector

Orders should be placed on GEDI or email a purchase order to OhioCS@Graco.com. For a complete listing of kit contents, please refer to the product manual.

Stack accessories

Tapered Thread Stack

SA920-G	1/2" Stack regulator
SA921-G	3/4" Stack regulator
SA925-1A	3/4" Stack filter
SA926-1A	1/2" Stack filter

Straight Thread Stack

25A899	Stack Regulator with pressure gauge
25A892	Stack Regulator
25A983**	2.5" dia Filter Assembly
25A909**	1" dia Filter Assembly
25C237	F4 Pressure transducer kit
25A987	Stack Valve shut-off

**Contains Support and 1 each of 80, 100, and 200 mesh elements.

Color options

25A103	Color flow meter kit, high resolution
25A161	Color flow meter kit, standard resolution
25A104	3 qt (3 l) Color tank kit [for F4-5 system]*
25A105	3 gal (11 l) Color tank kit [for F4-55 system]*
25A108	Color injector kit (Tapered Thread Stack)
25C478	Color Injector Kit (Straight Thread Stack)

* Color hose must be ordered

Color hose options

16U447	3/8" x 3.0m hose, blue
16U448	3/8" x 3.5m hose, blue
16U449	3/8" x 4.0m hose, blue
16U450	3/8" x 5.0m hose, blue

A & B hose options

24R213	1/2" x 3.0m hose, black
24R214	1/2" x 4.0m hose, black
24R215	1/2" x 5.0m hose, black
24R216	3/4" x 3.0m hose, black
24R217	3/4" x 4.0m hose, black
24R218	3/4" x 5.0m hose, black
128442	Adapter, -8JIC (m) x-12JIC (f) to connect 1/2" hoses to barrel stack above

NOTE: You have the option to run "off ratio" for additive packages. Graco can run from 0.8 - 1.2%

Specifications

F4-5 Machine Specifications

Viscosity range	50,000 to 5,000,000 cps
Flow rate	Min: 10g/min Max: 5lb/min @ 500,000 cps
Maximum output pressure	3,000 psi (241 bar, 24.1 MPa)
Ratio range	1:1
Pigment ratio range color injector style	0.5% to 6% (Depending on flow rate)
Air requirements	10 cfm @ 80 psi (5.5 bar, .55 MPa) (max 100 psi [7 bar, 0.7 MPa])
Power requirements	95-264 VAC, 50/60 Hz, 2.5A single phase
Weight	564 lbs (256 kg)
Height requirement retracted	66 in (168 cm)
Height requirement extended	87 in (221 cm)



F4-55 Machine Specifications

Viscosity range	50,000 to 5,000,000 cps
Flow rate	Min: 10g/min Max: 5lb/min @ 500,000 cps
Maximum output pressure	3,000 psi (241 bar, 24.1 MPa)
Ratio range	1:1*
Pigment ratio range color injector style	0.5% to 6% (Depending on flow rate)
Air requirements	10 cfm @ 80 psi (5.5 bar, .55 MPa) (max 100 psi [7 bar, 0.7 MPa])
Power requirements	95-264 VAC, 50/60 Hz, 2.5A single phase
Weight	1,200 lbs (544 kg)
Height requirement retracted	69 in (168 cm) low rider frame style
Height requirement extended	102 in (259 cm) low rider frame style

*With optional variable ratio kit; adjustable ratio from 0.8:1 to 1.20:1



Model 622

Small-shot meter, mix and dispense for two-component liquid silicone rubber (LSR)

The single acting design of the mountable Model 622 maintains consistent, accurate pressure, removing any possibility of pressure variations affecting shot sizes. Its high level of ratio accuracy and ability to add a third stream makes it ideal for medical and micro-molding applications.



Model 622 Specifications

Piston volume:	6, 12, 20 cc
Ratio:	1:1, fixed
Shot size:	40 cc maximum (20 cc per cylinder)
Feed pressure:	3000 psi maximum at barrel inlet
Additives:	Third and fourth stream option
Controls:	PLC

Space-Saving

Mount where it is most convenient or use as a stand-mount or tabletop model

Cost-Saving

A reduced number of components and fewer valves than most designs lowers the cost of cleaning and maintenance

Increased Precision, Less Waste

Single-acting design with closed-loop control provides repeatable pressures and eliminates shot-size variations, thereby reducing waste

Flexible Feeding System

Feed material using cartridges or feed pumps

Increased Efficiency

For small shots, program the 622 to refill after multiple shots rather than after each individual one

Third + Fourth Stream Option

Add colors or other fluid additives through the additional stream program

Optional: Hoses, mixer and manifold



Model 633

Air-powered, proportionally controlled meter, mix and dispense for two-component liquid silicone rubber (LSR)

The double-acting plungers of Model 633, driven by a common cylinder, ensure that material is delivered consistently at a 1:1 ratio. Its larger shot size capacity and ability to feed material to multiple locations make Model 633 an excellent solution for high-productivity medical, consumable and electronics manufacturing environments.

Model 633 Specifications

Feed:	Either 55 or 5-gallon feed system
Ratio:	1:1 fixed
Shot size:	Up to 150 cc (75 cc per cylinder)
Feed pressure:	3,000 psi maximum
Additives:	Third and fourth stream option
Controls:	PLC



Flexible

Programmable feed pressure makes it possible to utilize a common tandem feed station for one or more locations. Use third stream option simultaneously to feed different mixes.

Cost-saving

Lower the cost of cleaning and maintenance with a reduced number of components and fewer valves than most designs.

Consistent refills, less waste

The pneumatic proportional air-driven cylinders keep material delivering at a consistent rate.

Material-saving

With ratio tied to the A and B transducers, and an audible and visible refill alarm, the possibility of drawing a vacuum and wasting material is very low.

Third and fourth stream option

Add colors or fluid additives through the additional stream program.

Time-saving operation

A quick refill time of only three seconds at 1700 psi pump pressure keeps manufacturing running at a quick pace.

Wider variability in mold sizes

With a maximum shot size of 150 cc, Model 633 is capable of handling a wide range of manufacturing jobs.

Hoses, mixer and manifold are standard.



Graco has you covered.

Unmatched Quality.

Our focus on continued innovation keeps Graco Fluid Automation at the forefront of fluid handling technology. We typically reinvest three times the industry average into research and development. Our mission is to provide customers with products that result in the **lowest total cost of ownership** while maximizing product quality and business success.

Global Presence.

With facilities located in Europe, Asia Pacific and the United States, Graco provides a personalized, **end-to-end partnership experience**. Our engineers will lead the solution planning, testing and refining of your solution in our regional labs to ultimately overseeing the product installation process.

Global Support.

After installation, you'll receive **24/7 in-person support** from our worldwide distribution network of trained and certified distributors who offer relevant experience, product knowledge and responsive service to all our customers.

There is no better reassurance than Graco technology, product innovation and the people committed to helping you succeed all day, every day.

Contact us today!

Call **800-746-1334** to speak with a Graco representative, visit **www.graco.com/fluidautomation** for more information.



AMERICAS

MINNESOTA

Worldwide Headquarters
Graco Inc.
88-11th Avenue N.E.
Minneapolis, MN 55413

MAILING ADDRESS

P.O. Box 1441
Minneapolis, MN 55440-1441

OHIO

8400 Port Jackson Ave NW,
North Canton, OH 44720

EUROPE

BELGIUM

Graco BVBA
Industrieterrein - Oude Bunders
Slakweidestraat 31
B-3630 Maasmechelen,
Belgium
Tel: 32 89 770 700
Fax: 32 89 770 777

ASIA PACIFIC

AUSTRALIA

Graco Australia Pty Ltd.
Suite 17, 2 Enterprise Drive
Bundoora, Victoria 3083
Australia
Tel: 61 3 9468 8500
Fax: 61 3 9468 8599

CHINA

Graco Hong Kong Ltd.
Shanghai Representative Office
Building 7
1029 Zhongshan Road South,
Huangpu District
Shanghai, 200011
The People's Republic of China
Tel: 86 21 649 50088
Fax: 86 21 649 50077

INDIA

Graco Hong Kong Ltd.
India Liaison Office
Room 443, Level 4
Augusta Point, Golf Course Road
Gurgaon, Haryana, India 122001
Tel: 91 124 435 4208
Fax: 91 124 435 4001

JAPAN

Graco K.K.
1-27-12 Hayabuchi
Tsuzuki-ku
Yokohama City, Japan 2240025
Tel: 81 45 593 7300
Fax: 81 45 593 7301

KOREA

Graco Korea Inc.
Shinhan Bank Building
4th Floor #1599
Gwanyang-Dong, Dongan-Ku,
Anyang-si, Korea 431-060
Tel: 82 31 476 9400
Fax: 82 31 476 9801



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www.metermixdispense.com | 866 967 4660

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