

GENIE

S C I E N T I F I C



FUME HOOD SELECTION GUIDE

FUME HOOD SELECTION GUIDE

Laboratory fume hoods are one of the most vital pieces of safety equipment in a working laboratory. Fume hoods are designed to safely exhaust dangerous fumes, unpleasant odors, vapors, and particulates away from the user and safely out of the building.

This guide will help you safely select the best fume hood for your particular application.

Why Genie?



ChemTough™ The most durable general purpose fume hood liner on the market comes as the standard option on Genie hoods.



PowerLink™ Robust chain and sprocket sash counter balance system that will never fail, we guarantee it!



SlideSafe™ Horizontal sliding doors that hang from a heavy duty iBeam via rugged jump proof carriers for enhanced ease of use and safety. No more worrying about broken or gunked-up lower track wheels.



SpillSafe™ Fume hood work surfaces are dished to safely contain spills inside the hood.



AirDirect™ Bench top and distillation hoods are fitted with an aerodynamic airfoil to direct air across the work surface ensuring floor sweep for safe operation.



DirectConnect™ All our hoods are fitted with a simple round exhaust collar for connection to building HVAC. No complicated or expensive ductwork transition pieces needed, just a simple round connection



UL Listed
Genie hoods are
UL 1805 Listed



SEFA Member
Member of the Scientific
Equipment and Furniture
Association



California OSHA
As a CA company our hoods meet
and exceed all CAL/OSHA 5154.1.
Ventilation requirements for
laboratory fume hoods.



ASHRAE 110 Tested
Our hoods are
ASHRAE 110 tested

Important: Fume hoods only function safely when connected to a properly engineered and balanced HVAC system and building utility services. Failure to verify compatibility with your building can result in an unsafe system. Consult the proper trade professionals and a Genie fume hood expert with questions.

where you'll find it

Step 1:

- Determine Needed Interior Working Dimensions 2
- Standard Fume Hood Sizes 3

Step 2:

- Select Fume Hood Type 4
- Step 2A: Any Special Purpose Requirements? 4

Step 3:

- Select Sash Style 5
- Bench Top Sash Options 5
- Walk-In and Distillation Sash Options 6

Step 4:

- Select Interior Liner Material 7

Step 5:

- Identify Air Flow Requirements, Exhaust and Bypass Type 8
- Sash Operating Positions 8
- Exhaust System and Fume Hood Bypass Type 9

Step 6:

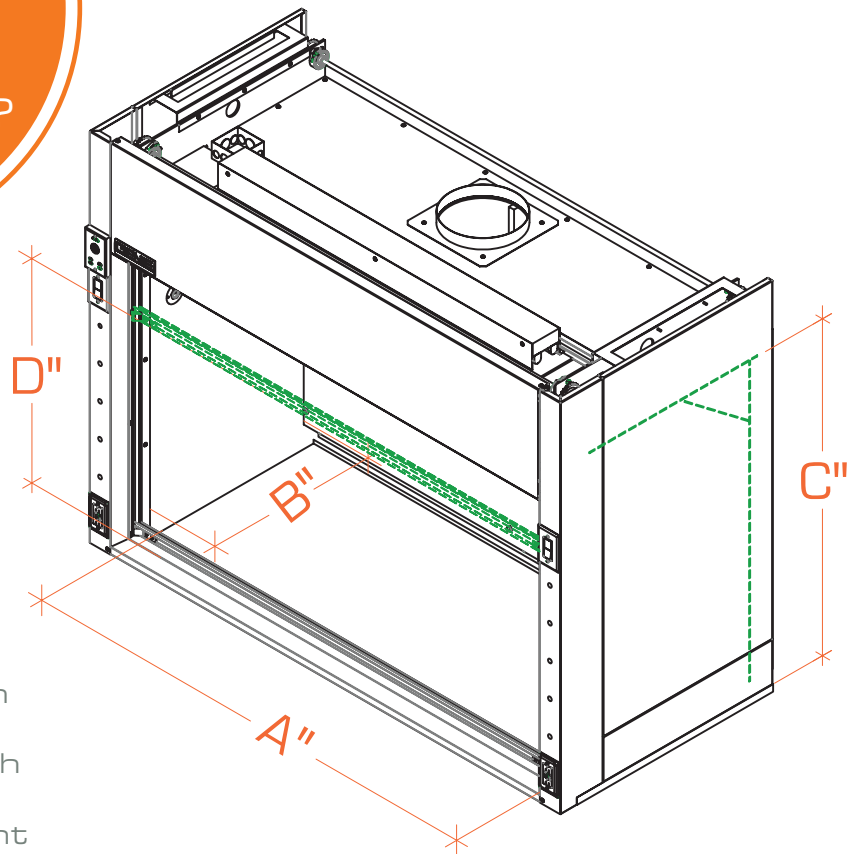
- Select Accessories 10
- 6A: Base Units 10
- 6B: Plumbing 10
- 6C: Electrical 10
- 6D: Specialty Accessories 10
- 6E: Exhaust Blowers 10

STEP 1

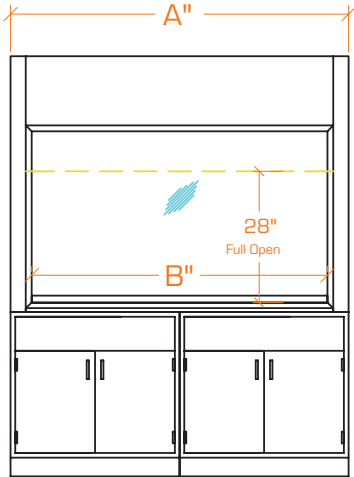
DETERMINE NEEDED INTERIOR WORKING DIMENSIONS

Based on the chemistry, apparatus, equipment and required interior working dimensions Genie will help you select the proper fume hood. All Genie hoods come in several standard widths and depths. If a standard size does not fit your needs we can easily customize to meet your requirements. Building custom fume hoods is our specialty.

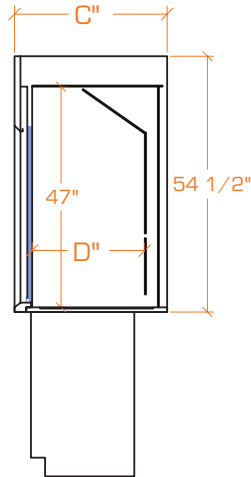
What are your needed interior working dimensions?



- A = interior width
- B = interior depth
- C = interior height
- D = max opening height for setup



elevation view –
bench top fume hood

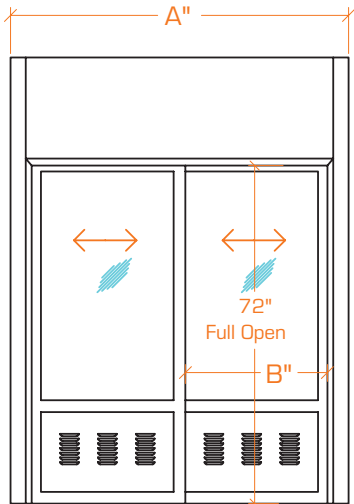


section view

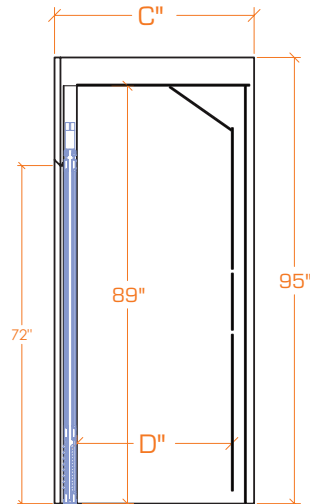
BENCH TOP HOODS *

width		depth	
A	B	C	D
36"	27"	32.5"	24"
48"	39"	38.5"	30"
60"	51"	44.5"	36"
72"	63"		
96"	87"		
120"	111"		

*Based on PowerLink Vertical Rising Sash.
Different sash type will affect interior dimensions.



elevation view –
walk-in fume hood

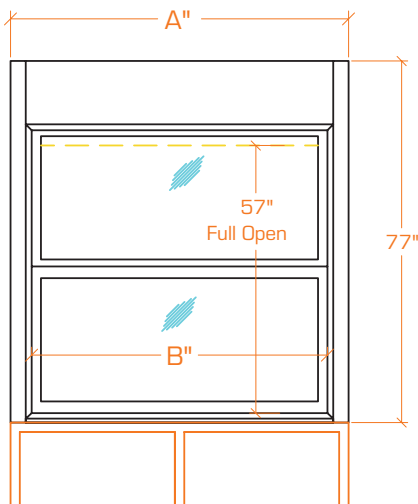


section view

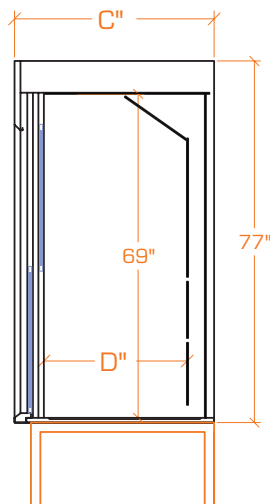
WALK-IN HOODS (Floor Mounted)

width		depth	
A	B	C	D
48"	18.25"	33.5"	24"
60"	25.25"	39.5"	30"
72"	30.25"	44.5"	36"
96"	39.25"	57.5"	48"
120"	51.25"		
144"	61.25"		

*Based on SlideSafe horizontal doors on two tracks.
48"–72" Hoods have (2) doors, 96"–144" have (4) doors.
Different sash type will affect interior dimensions.



elevation view –
distillation fume hood



section view

DISTILLATION HOODS *

width		depth	
A	B	C	D
48"	39"	36"	24"
60"	51"	42"	30"
72"	63"	48"	36"
96"	87"	60"	48"
120"	111"		

*Based on (2) vertical rising PowerLink Sashes.
Different sash type will affect interior dimensions.

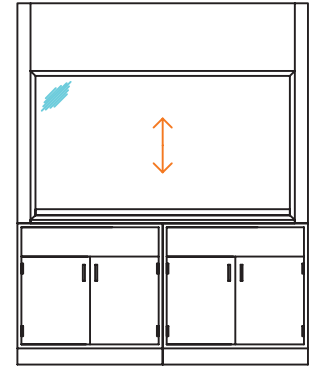
**DON'T SEE WHAT YOU NEED?
GIVE US A CALL.**

STEP 2

SELECT FUME HOOD TYPE

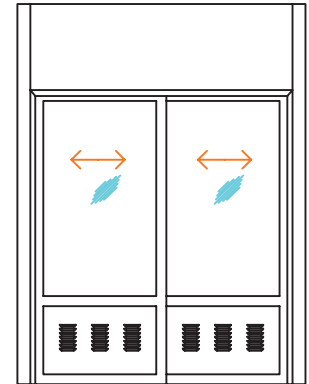
■ BENCH TOP FUME HOOD

- Mounts on SpillSafe™ top and base unit(s), most commonly cabinets.



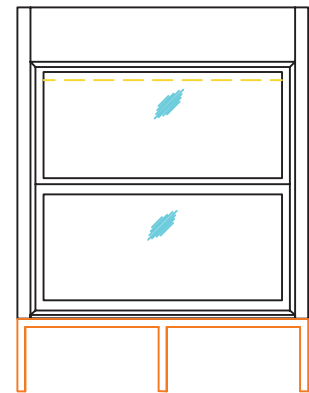
■ WALK-IN FUME HOOD (Floor Mounted)

- Sits directly on the floor
- Designed for large apparatus set ups and roll in equipment
- Building extra-large walk-in hoods in a specialty of Genie



■ DISTILLATION FUME HOOD

- Mounts on SpillSafe™ top & low height base unit(s)
- Extra interior height to accommodate tall apparatus, most commonly distillation racks



STEP 2A

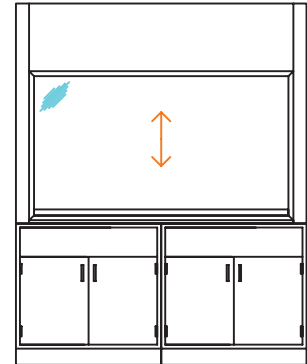
ANY SPECIAL PURPOSE REQUIREMENTS?

- ADA Compatible 
- Pass-Thru (Double Sided Hood)

STEP 3 SELECT SASH STYLE

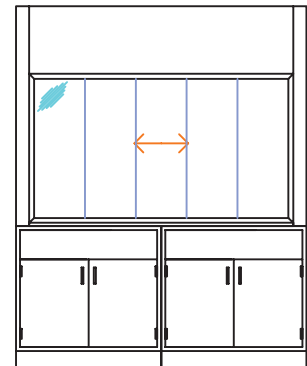
■ VERTICAL RISING SASH

- Driven by PowerLink™
- Frameless piece of laminated safety glass that moves up and down
- Most common sash type



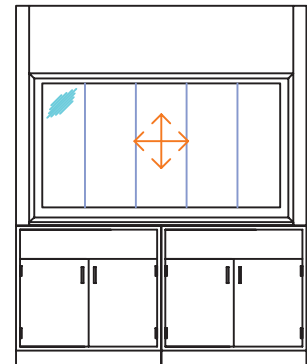
■ HORIZONTAL SASH

- Panes of laminated safety glass that move left and right in a track
- Contact Genie for # of panes per hood



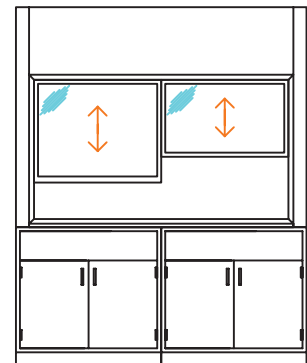
■ COMBINATION SASH

- Driven by PowerLink™
- Consists of a framed vertical rising sash that also has horizontal sliding panes of safety glass



■ SPLIT SASH

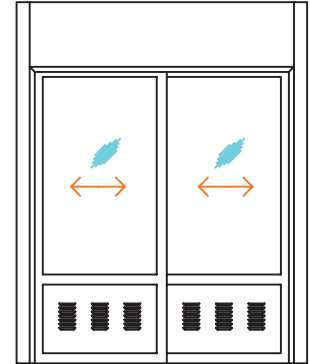
- Driven by PowerLink™
- Two framed safety glass sashes that can move up and down independently of each other with a disappearing center post



STEP 3 CONTINUED SELECT SASH STYLE

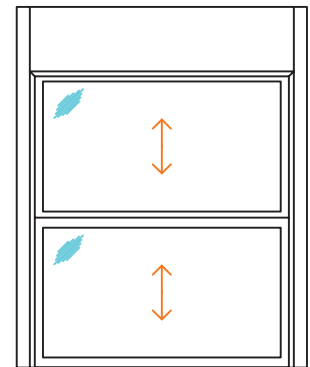
■ SLIDESAPE™ HORIZONTAL SASH

- Horizontal sliding doors that hang from a heavy duty iBeam via rugged jump-proof carriers



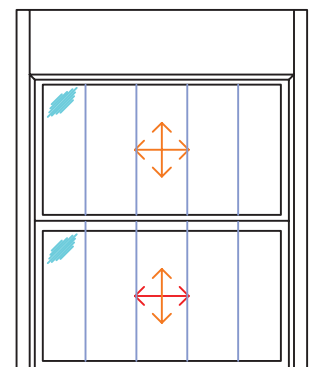
■ VERTICAL RISING SASH

- Driven by PowerLink™
- Dual framed pieces of laminated safety glass that move up and down
- Allows for threshold free access



■ COMBINATION SASH


- Driven by PowerLink™
- Consists of dual framed vertical rising sash that also have horizontal sliding panes of safety glass



STEP 4 SELECT INTERIOR LINER MATERIAL

The fume hood exterior (powder coated) and superstructure (galvanized) are made from steel.

The interior is lined with a specialty material selected to withstand your chemistry.

Liner Material	Advantages	Disadvantages
ChemTough™ Standard Genie liner Bright White, 0.25" thick Phenolic Resin 	<ul style="list-style-type: none"> - Superior general purpose liner - High chemical resistance to broad range of chemicals - Fire Rated - Excellent Structural strength 	
Stainless Steel T304/T316 #4 Finish, 18ga	<ul style="list-style-type: none"> - High tolerance to flames & heat - Easy to clean and sterilize 	<ul style="list-style-type: none"> - Subject to attack by some chemicals
Polypropylene White, 0.25" thick	<ul style="list-style-type: none"> - Superior resistance to corrosives 	<ul style="list-style-type: none"> - Poor tolerance to flames & heat

Other liner options available. Speak with a Genie fume hood expert for more information.

STEP 5 IDENTIFY AIR FLOW REQUIREMENTS, EXHAUST AND BYPASS TYPE

Fume hoods have two distinct sash operating positions. This ensures better protection of users and helps reduce the amount of supply air needed from your HVAC system.

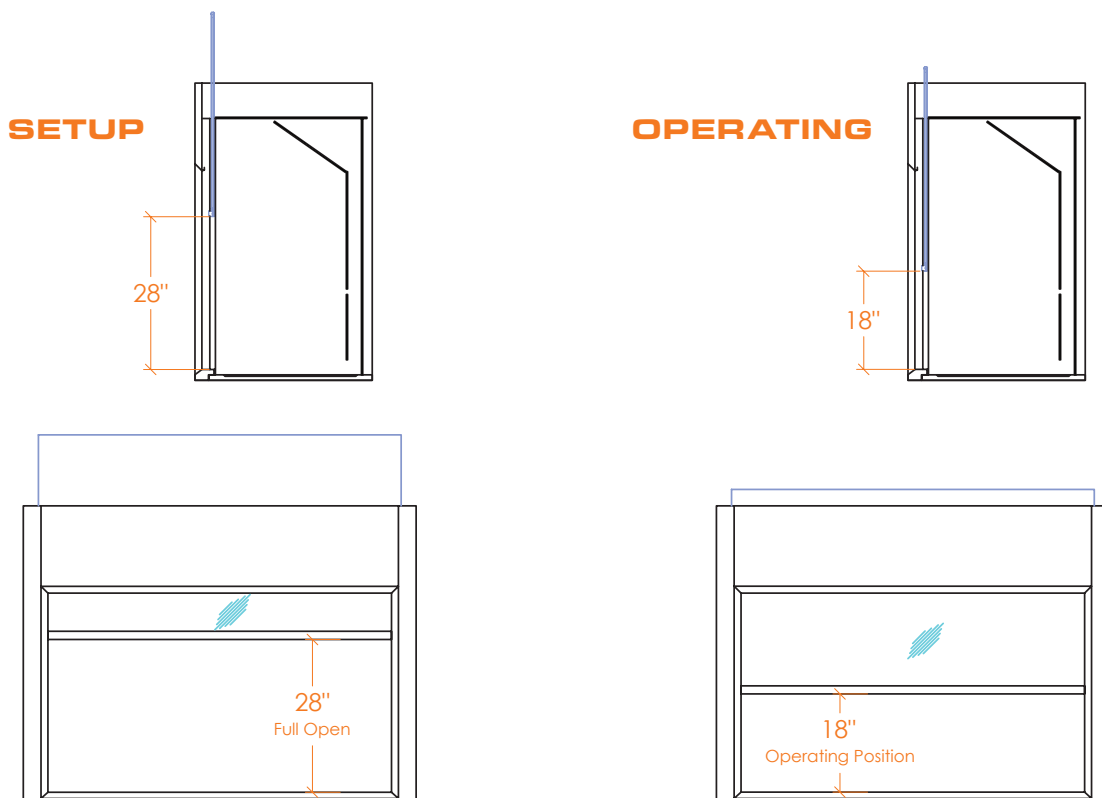


1. FULL OPEN SETUP POSITION:

The max opening of the sash to allow for loading and setup of the experiment. It is very important to double check your required full open dimensions, particularly when selecting walk-in and distillation hoods. You want to ensure you can get the intended items into the fume hood. The experiment should never be performed in the full open setup position!

2. OPERATING POSITION:

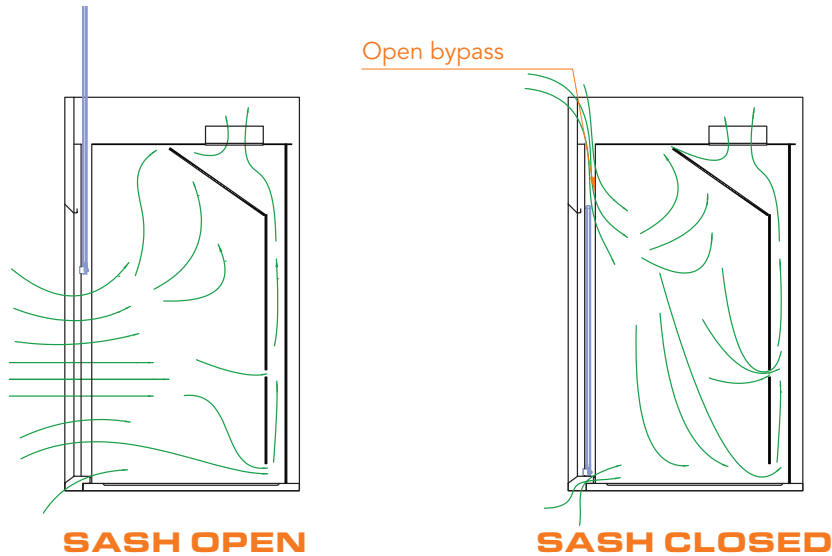
Position of the sash while the experiment is being performed. As a California company Genie adheres to the CAL-OHSA standard of 100FPM face velocity calculated at the sash operating position.



EXHAUST SYSTEM AND FUME HOOD BYPASS TYPE

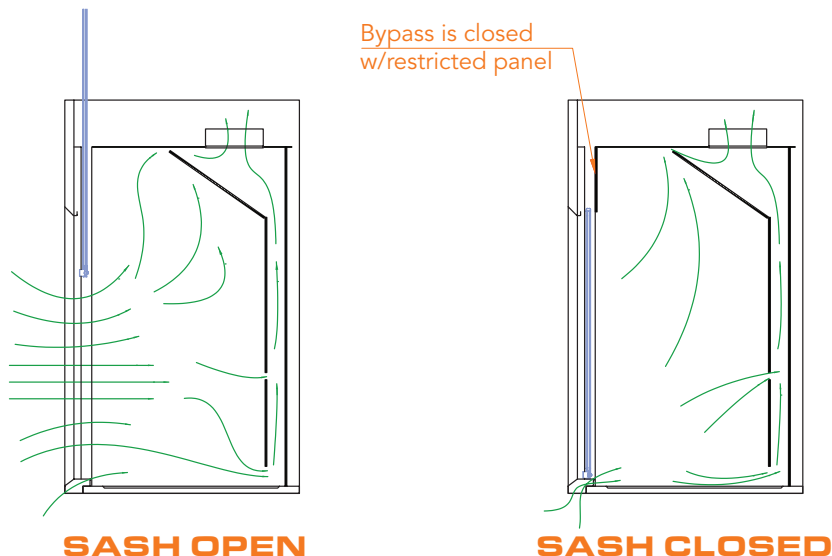
Open Bypass-Constant Volume Exhaust System

- A constant volume exhaust system will exhaust the same amount of air (CFM) regardless of the sash position.
- An open bypass is used to divert air from the face opening when the sash is lowered to help limit variation to the face velocity.
- This is the most common type of exhaust system.



Restricted Bypass-Variable Air Volume (VAV) Exhaust System

- A VAV is an exhaust system that typically maintains constant fume hood face velocity by adjusting blower motor speeds and duct dampers in response to changes in sash position. Normally only used with a multitude of fume hoods.
- The hood bypass is restricted to limit air entering the unit.



STEP 6A

BASE UNITS

(Bench and Distillation Only)

- Standard Cabinets
- Corrosive Storage (ACID/BASES)
- Flammable Solvent Storage
- Vacuum Pump Cabinets
- Table Stand
- ADA Height Cabinets and Tables

STEP 6B

PLUMBING

- Remote Plumbing Service Fixtures
- Sinks

STEP 6C

ELECTRICAL

- 120v GFI Duplex *
- Light Switch *
- Blower Switch *
- Vapor Proof T8 Fluorescent light fixture *
- Airflow Alarm
 - Analog *
 - Digital
- Explosion Proof Fixtures for Class 1 Division 1 Environments
- Additional voltage outlets

* Standard Electrical package on Genie hoods

STEP 6D

SPECIALTY ACCESSORIES

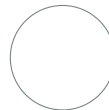
- Secondary containment trays
- Cord Ports
- Ceiling Enclosure Panel
- Distillation Racks
- Sash stops

STEP 6E

EXHAUST BLOWERS

- Genie can specify and provide the correct exhaust fan for your fume hood, along with accessories like exhaust stacks.

WHITE WHITE
wh121



GRAY BLUE
ral5008



SILK GRAY
ral7044



PURPLE RED
3004



ANTIQUÉ WHITE
wh16



PASTEL BLUE
5024



LIGHT GRAY
gr230



TEXTURE SILVER
gr673



BEIGE
bg02



BRILLIANT BLUE
5007



LIGHT GUNMETAL
gr10



SEMI GLOSS BLACK
bk05



*The standard colors above are a representation only; color may vary slightly from finished product. Powder coated steel samples are available upon request.

Genie Scientific, Inc.

☎ 800.545.8816 p 714.545.1838 f 714.641.0496

17430 Mt. Cliffwood Circle, Fountain Valley, CA 92708

www.geniescientific.com

MADE IN THE USA

