

Republic

Doors and
frames



Republic Doors and Frames has a long history as one of the nation's leading manufacturers of commercial steel doors and frames.

Republic is committed to not only providing the best doors and frames in the industry but also to supporting its customers with dependable delivery and exceptional service.

Contents

Intro	2
Standard door specifications	6
Hardware locations	7
Standard door features	8
Embossed doors	9
Universal frames	10
Drywall frames	11
Frame elevations	12
Bullet resistant products	13
Acoustical (STC) rated products	14
FEMA 320/361 tornado products	15
Hurricane rated products	16
Lead lined products	17
Fire rated products	18
Door / frame handing chart.	19

Steel is famously strong but there are additional advantages to bear in mind when you ask yourself, "Why steel?"

Steel provides the best long-term value in the door and frame industry. It lasts longer, requires the fewest repairs, and is sturdier than other products. Steel's natural strength also outperforms other materials in security, fire rating, sound reduction, vandal resistance, sanitation, and more. Hollow metal will outperform wood, aluminum, and fiberglass in demanding environments. Even when those other materials use special cores or other techniques they are still unable to match the performance and longevity of hollow metal.

A beneficial byproduct of the strength and durability of hollow metal is the low total cost of ownership. Properly installed and maintained hollow metal doors often last 30 years or longer. As the years pass, steel doors can be inexpensively repaired in the field while softer, less durable wood and aluminum doors will have to be replaced.

Are you seduced by the so-called warmth of wood? Consider this: Today's steel doors offer endless options for attractive appearances. Whether you are looking for a modern stainless steel appearance, a vibrant colored finish, or even a faux finish, steel's versatility allows it to satisfy the aesthetic requirements of most projects. And, don't forget all those advantages of performance and longevity!

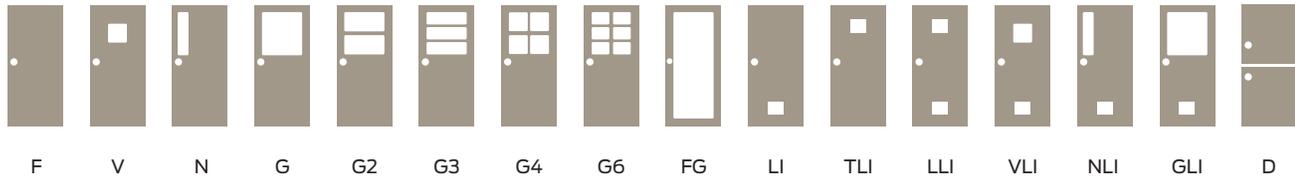
According to the Steel Recycling Institute each year, more steel is recycled in the US than paper, plastic, aluminum, and glass combined. Over the past 50 years more than 50 percent of the steel produced in this country has been recycled through the steelmaking process.

So we encourage you to ask, "Why Steel?" We think you will like the answer.



Standard door specifications

Door styles



For complete steel door construction specifications refer to ANSI/SDI-100. Selection of the appropriate steel door should be based on the following criteria:

1. Frequency of use (low, moderate, high)
2. Subjection to and degree of possible abuse
3. Hardware requirements
4. ADA requirements
5. Fire code(s) regulations
6. Sound retardation and/or insulation requirements
7. Design and appearance
8. Conformance to local building codes

Finish paint colors

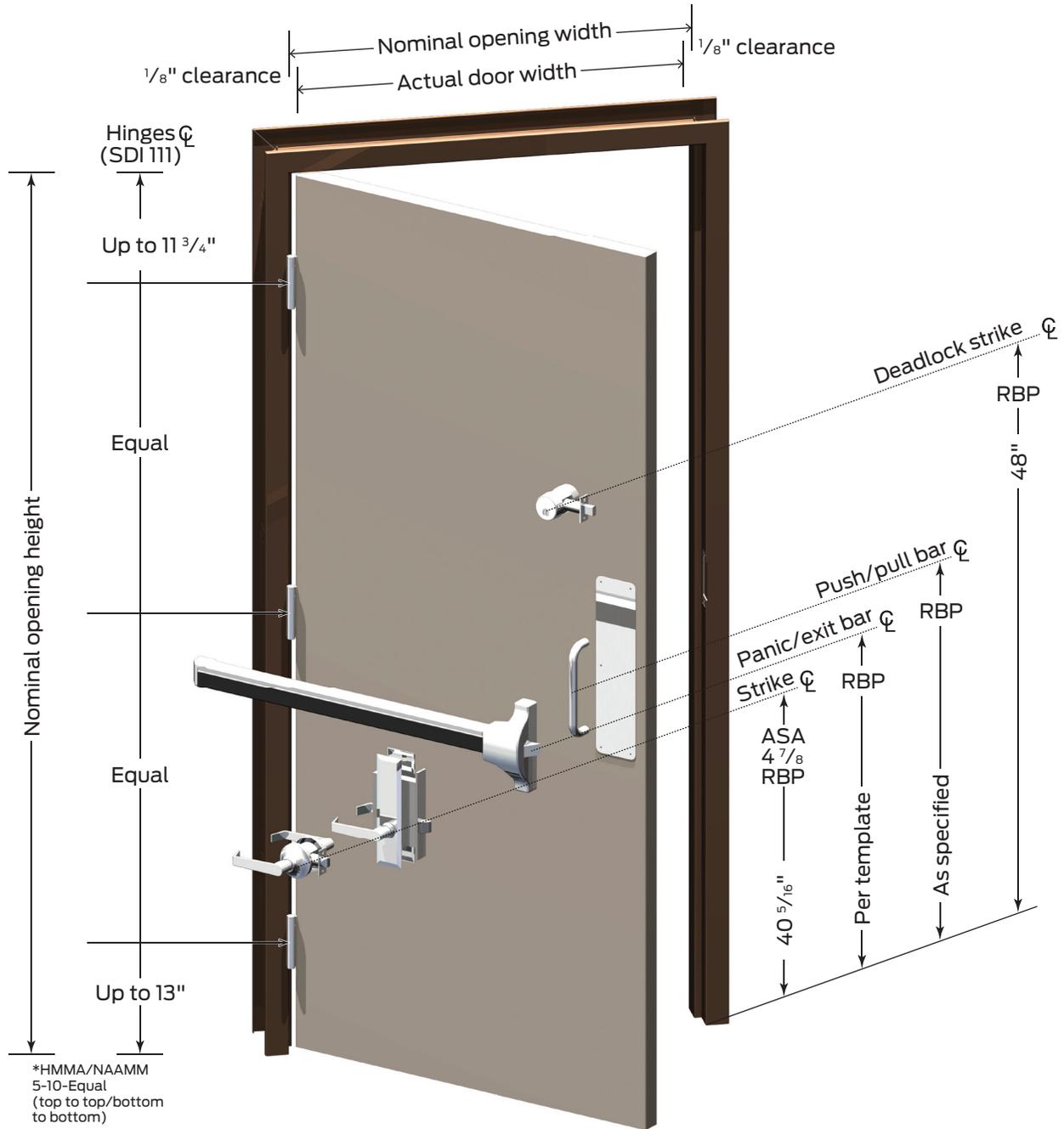


Due to variations in printing processes, actual colors may vary slightly from those pictured. Other colors available upon request.

SDI classifications

Grade	Model	Construction	RBP Series
I Physical performance level C (1 3/4" and 1 3/8") Standard duty Minimum gage = 20	1	Full flush	DP/DL 420, DE820/18 DP/DL 420, DE820/18
II Physical performance level B (1 3/4" Only) Heavy duty Minimum gage = 18	1 2	Full flush Seamless	DP 418, DL 418, DE 418 DP 418, DL 418, DE 418
III Physical performance level A (1 3/4" Only) Extra-heavy duty Minimum gage = 16	1 2	Full flush Seamless	DL 416, DE 416 DL 416, DE 416
IV Physical performance level A (1 3/4" Only) Extra-heavy duty Minimum gage = 14	1 2	Full flush Seamless	DE 414 DE 414

Hardware locations



Locations	RBP	SDI	ADA	HMMA	NAAMM
Deadbolt strike	48"	48"	48"		
Deadbolt cyl				46"	46"
Strike	40 5/16"	38" - 42"		38"	38"
Panic/exit bar	Per template			38"	38"
Push/pull bar	As specified			42"	42"

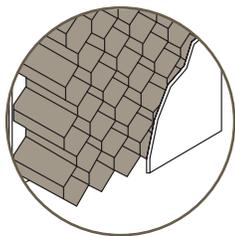
References:

- RBP Republic Doors and Frames
- SDI Steel Door Institute
- ADA Americans with Disabilities Act
- HMMA Hollow Metal Manufacturer's Association
- NAAMM National Association of Architectural Metal Manufacturers

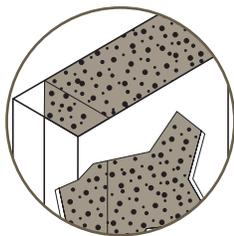
NOTE: When Government Series 86 lock is used (ANSI A115.1) dimension to center of lock is 3/8" less.

Standard door features

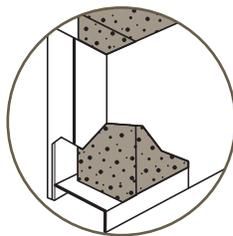
Cores available



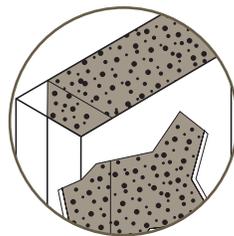
Honeycomb (standard)



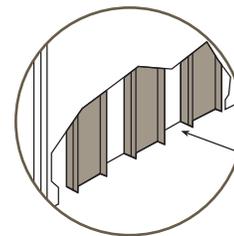
Polystyrene



Mineral fiberboard

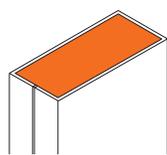


Polyurethane

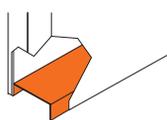


Steel stiffened

Standard construction

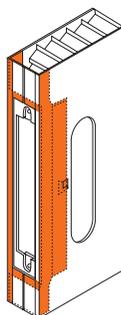


Flush Top
Channel and
Visible Seam.



Inverted
Bottom Channel
(Approximate
depth $\frac{9}{16}$ ")

16 gage
mortise lock
reinforcement
with provisions for
Gov't Series 86
mortise lockset
and ANSI A115.1
lock front
($1\frac{1}{4}$ " x 8").

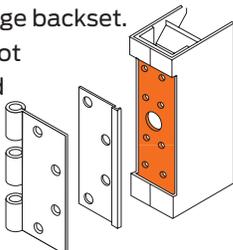


Continuous 14 gage steel
integral mortise lock
reinforcement with
provisions for government
series 86 mortise lockset
and ANSI A115.1 lock
front ($1\frac{1}{4}$ " x 8").



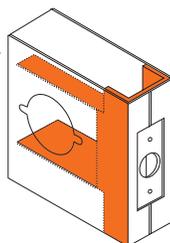
Doors have provisions for $4\frac{1}{2}$ "
full mortise Heavy Weight or
Standard Weight hinges
with $\frac{1}{4}$ " hinge backset.

Doors are not
handed and
use hinge
fillers.



DL Series
(shown)

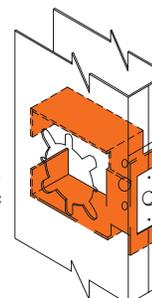
Continuous 16 gage steel integral
lock channel reinforcement with
provisions for
government series
160 or 161 cylindrical
locksets ($2\frac{3}{4}$ "
backset) and ANSI
A115.2 lock front
($1\frac{1}{8}$ " x $2\frac{1}{4}$ ").



DL Series
(shown)

Lever Lock Prep—161 DT
(Modified 161 Prep)
Conforms with ANSI
115.18 161 Lever lock
specs.

WARNING:
Use Rose Trim with a
minimum diameter of
 $3\frac{5}{16}$ " to cover prep.



DL Series
(shown)

Door(s) over 3'6" in width, 7'6" in height, or 250 lbs. — Republic recommends additional hinge(s) or continuous hinge application.

Options available

Door thickness:

- $1\frac{3}{4}$ " (Standard)
- $1\frac{3}{8}$ " (Honeycomb and Styrene)
- 2" and $2\frac{1}{4}$ " (Steel stiffened)

Gages:

- 20, 18, 16 and 14 (Steel stiffened not available in 20 ga.)

Material:

- CRS (standard) A60 and G90

Door edges:

- Visible seam (Standard)
- Seamless bondo
- Seamless welded

Sizes:

- From 1'0 x 1'0 to 4'0 x 10'0 (all cores)
- Steel stiffened core available up to 5'0 x 10'0

Fire ratings:

- 20 minutes through 3 hours (see fire section for options)

SDI levels:

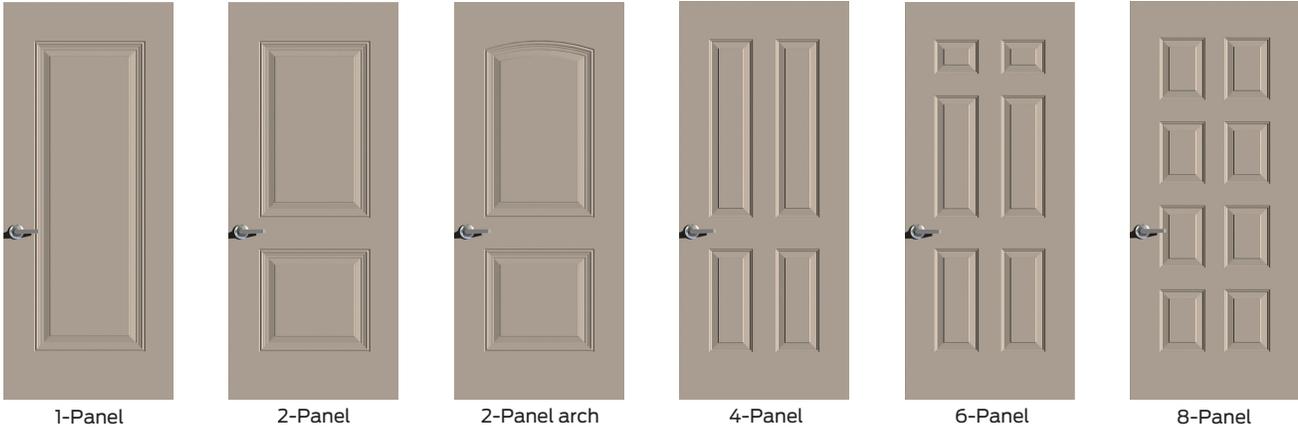
- 1-4

Physical performance:

- Level A – 1 million cycles (all cores)

Embossed doors

Republic's complete line of commercial hollow metal embossed panel doors provide a wide range of design flexibility for your architectural needs. Whether you select a traditional design or a HD design door, you will be adding a beautiful entrance to any architectural opening with rich, distinctive panel embossments.



SDI Levels 1-3

Steel door performance with decorative designs

- 6 panel options
 - 1 3/8" thick
 - 8 foot with elongated panels
 - STC 40 (STC hardware available)
- High definition designs
 - (1 panel, 2 panel, and 2 panel arch top)

Designs available with glass kits

Consult factory for more designs



* Due to availability, certain sizes, patterns may require minimum quantity purchases.

High definition embossments

1-Panel, 2-Panel and 2-Panel arch top



Universal frames

Typical frame profiles

Republic offers a complete line of single return frames. Frames are available in 16, 14 or 12 gage steel; cold rolled or A60 galvanized. Frames (16 and 14 gage) are manufactured with die-cut, mitered, tab and slot design for easier assembly and interlocking corners. Our frames are available as knock down units or welded.

Double rabbet



Single rabbet



Cased open

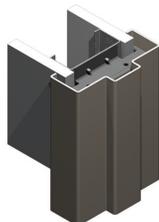


Double egress



Typical wall construction

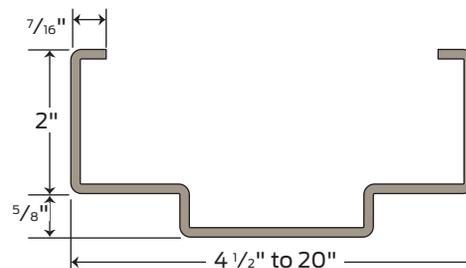
Stud



Wrap



Butted



Typical sill and wall anchors

Prepared opening



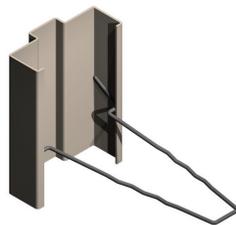
Sill anchor



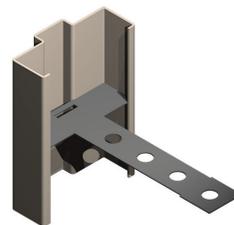
Stud



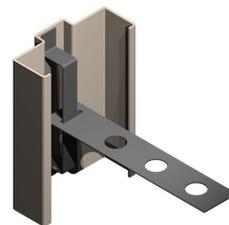
Wire



T



Strap



Options available

Corner conditions:

- KD mitered, saw mitered, notched, square cut, face welded or full profile welded

Frame details:

- 3" to 20" (single rabbet)
- 4 1/2" to 20" (double rabbet)
- 4 3/4" to 20" (double egress)

Gages:

- 16, 14 and 12
- (KD mitered not available on 12 gage)

Material:

- CRS (standard), A60 and G90

Fire ratings:

- 20 minutes through 3 hours (see fire section for options)

Available as:

- 3-sided frames
- Stick sections
- Elevations

Frames are manufactured for various wall conditions, from new construction to existing. Conformance to SDI standards, and ANSI A250.8.

Drywall frames

Typical frame profiles

Republic offers a complete line of double return frames available in 16 and 14 gage cold rolled or A60 galvanized steel. Frames are knock-down construction and are designed to be installed in standard or non-standard wall sizes over pre-finished or unfinished drywall.

Double rabbet



Single rabbet



Cased open



Double egress

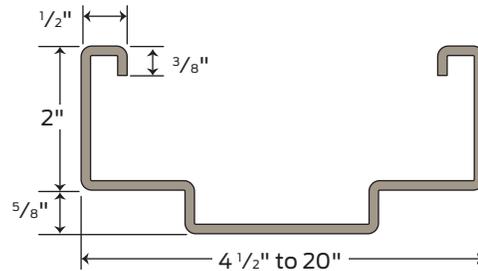


Typical wall construction

Stud



Wrap



Typical sill and wall anchors

Pressure anchor



Sill anchor (loose)



Drywall frames are available for either 1 3/8 or 1 3/4 inch thick doors. They have precision mitered corners for a smooth attractive design.

Options available

Corner conditions:

- KD mitered, saw mitered, notched, square cut, face welded or full profile welded

Frame details:

- 3" To 20" (single rabbet)
- 4 1/2" to 20" (double rabbet)
- 4 3/4" to 20" (double egress)

Gages:

- 16 And 14

Material:

- CRS (standard), A60 and G90

Fire ratings:

- 20 minute through 90 minute

Available as:

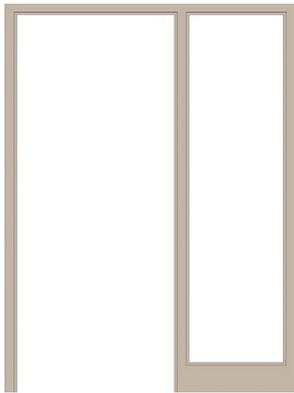
- 3-sided frames
- stick sections
- Elevations

Frame elevations

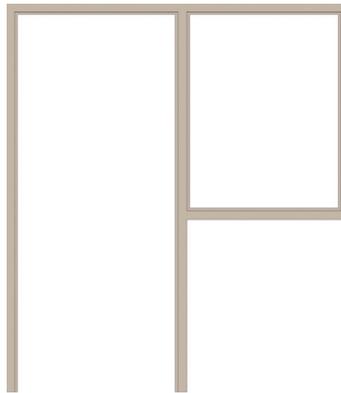
Republic's pre-engineered steel frame components provide unlimited flexibility for opening systems. Components are used to fabricate even the most complex entrance fronts, partitions, and window wall designs. The variety of jamb depths and sizes permit greater design freedom.

Example elevations

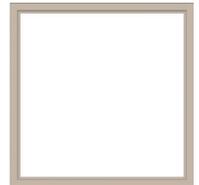
Full side lights



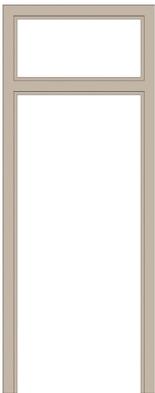
Partial side lights



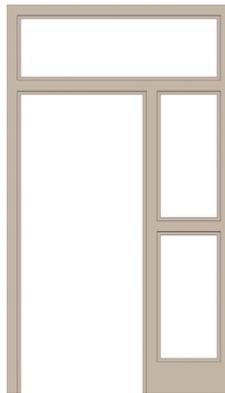
Borrowed lights



Transom frames



Transom/side light



Options available

Corner conditions:

- KD mitered, saw mitered, notched, square cut, face welded or full profile welded

Profiles available:

- Universal and drywall

Frame depths:

- 3" To 20" (single rabbet)
- 4 1/2" To 20" (double rabbet)

Gages:

- 16, 14 And 12*
 - Drywall not available in 12 gage
 - Mullions not available in 12 gage

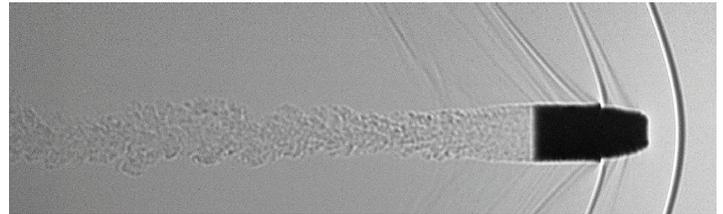
Material:

- CRS (standard), A60 and G90

Fire ratings:

- 20 minutes through 90 minutes (see fire section for guidelines)

Bullet resistant products



Republic offers up to eight levels of bullet resistant door and frame protection, ranging from 9mm handguns (Level 1) up to 7.62mm military assault rifles (Level 8). All bullet resistant doors are tested and labeled in accordance with UL752 and constructed per SDI Level 4. They also come standard with polystyrene or mineral wool core for interior or exterior applications. These assemblies are designed for installations such as public utility and military buildings, cashier islands and currency exchanges, cellular tower units and any other security location requiring bullet resistance.

Republic's bullet resistant systems offer various levels of protection defined by UL72 standard ratings. These levels of security have been established by UL (Underwriters Laboratory), the primary testing organization for materials used in these systems. Each of the 8 levels shown here have been tested and found effective at stopping a variety of projectiles, especially ones most typically used during an armed robbery. Although the UL72 ratings extend to Level 8, most banks, credit unions, and convenience stores are typically protected in Levels 1-3.

Republic's bullet resistant doors are available in Levels 1-8, tested and labeled in accordance with UL752 and constructed per SDI.

- SDI Level 4
- UL752 Levels 1-8

Level	No. of shots	Ammunition	Grain	Minimum velocity
1	3	9mm full metal copper jacket	124	1,256 fps
2	3	.357 magnum	158	1,250 fps
3	3	.44 magnum lead semi-wad cutter gas checked	240	1,350 fps
4	1	.30 caliber rifle lead core	180	2,540 fps
5	1	7.62mm rifle full metal jacket military ball	150	2,750 fps
6	5	9mm full metal jacket	124	1,400 fps
7	5	5.56mm rifle full metal jacket	55	3,080 fps
8	5	7.62mm rifle full metal jacket military ball	150	2,750 fps
Supplementary shotgun	3	12 ga. rifled lead slug	437	1,585 fps

Features

- **Single Doors through 5'0 x 10'0 opening**
 - **Paired Openings through 10'0 x 10'0***
* Bullet Resistant Astragal is required
 - **Frame Elevations Available**
Consult Tech Support for details
 - **Glass Kits Available (Glass by others)**
Consult Tech Support for details
- Door(s) over 3'6" in width, 7'6" in height, or 250 lbs. — Republic recommends additional hinge(s) or continuous hinge application.

Acoustical (STC) rated products

Take control of your environment and reduce unwanted noise with Republic's acoustical (STC rated) doors and frames. Acoustical performance of building products, components, and systems is an important consideration for engineers, specifiers, and building owners. This is especially true in highly populated cities, areas around highways, railroads, airports, and high density residential zones. The demand for efficient noise control in these areas is rising constantly.

Using the latest sound absorbing techniques and materials, Republic's engineering professionals have developed a superior sound transmission class (STC) rated assembly consisting of a noticeably lighter weight door (approximately 25% less than current market products) along with standard "rabbeted" hollow metal frames. These assemblies utilize 1 3/4" (proprietary) sound-core doors, standard hollow metal frames and a low profile sealing system that is aesthetically pleasing to the eye and easier to install.

Hardware packages

STC hardware package

STC 40 through 47 (singles)

1. Bulb seal – Zero 485
2. Threshold options – Zero
 - 564—1/4" to 3/8" bottom clearance
 - 566A—3/8" to 1/2" bottom clearance
 - 560—5/8" to 3/4" bottom clearance
3. Perimeter seal (options)
 - Zero 8150
 - Zero 119W
 - Pemko S773
 - Pemko S88

STC hardware package

STC 48 through 52 (singles)/STC 47 (pairs)

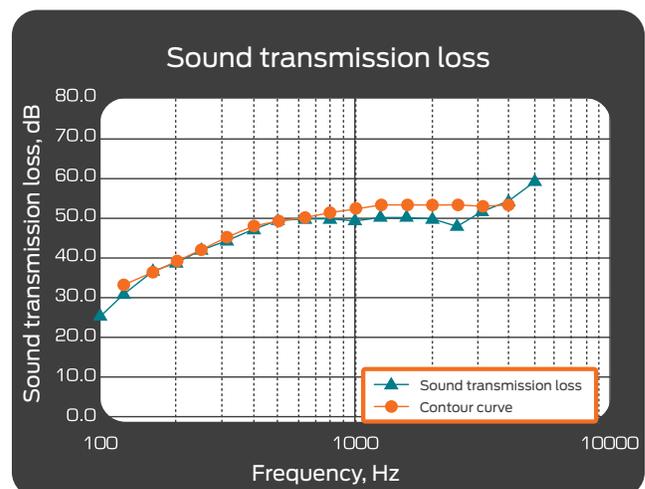
1. Bulb seal – Zero 870
 - 564—1/4" to 3/8" bottom clearance (only option for STC 52)
 - 566A—3/8" to 1/2" bottom clearance
 - 560—5/8" to 3/4" bottom clearance
2. Perimeter seal (options)
 - Zero 8150
 - Zero 119W (only option for STC 52)
 - Pemko S773
 - Pemko S88
3. Door bottom - Zero 367
4. Door sweep – Zero 328
5. Hinges – options
 - Zero Z955 – 4.5"
 - Zero Z953 – 5.0"

Tested per ASTM E90 and E413

Ratings available

- Single flush doors STC 40 to STC 52
- Single 6-panel embossed doors as STC 40
- Pairs of flush doors STC 47 (max)

Consult Tech Support for details



FEMA 320/361 Tornado Products

Tornadoes form quickly giving people little time to prepare. Tornado prepared rooms and buildings provide shelter. Republic's FEMA (Tornado) doors and frames are an important part of the equation for areas of refuge.

When a tornado threatens, individuals need to have a safe place to go and time to get there. Lives are saved when individuals receive and understand the warning, know what to do, and know the safest place to go.

Republic FEMA 320 and 361 doors are designed, tested, and certified per the tornado shelter construction guidelines developed by the Federal Emergency Management Agency. These guidelines include test requirements that simulate a 250 mile-per-hour ground speed tornado, including the impact force of building materials propelled at 100 miles-per-hour.

Features

- Single openings 3068 thru 4080
- Paired openings 6068 thru 8080
- Shutter Assemblies (flush) design
- Single openings 2843 thru 4080
- Paired openings 5443 thru 8080
- Fire rating available

Door(s) over 3'6" in width, 7'6" in height, or 250 lbs.
(Republic recommends additional hinge(s) application).

Approved hardware applications

Exit Devices

Von Duprin®

- 2 point Latch WS 98/9927(F)
- 3 point Latch WS 98/9957(F)

Lock / Latch

Schlage® MultiPoint, lever with CVR

- 3 point LM/LMV9300
- Ives® SB 360 Top and Bottom surface bolts / inactive leaf

ICC500 2014 Minimum criteria for life safety

Hurricane rated products

Hurricanes in the United States have been responsible for tragic loss of life. They have also inflicted billions of dollars in property damage. In response, many regions have adopted strict building code provisions intended to enhance the structural integrity of commercial buildings.

Republic offers a wide variety of windstorm certified doors and frames.

Certifications for

Florida building code 2014:

- FL15868
- FL15869
- FL15870
- FL15871

Hardware applications

- 4.5" Hinges
- Cylindrical lock
- Mortise lock
- Rim exit device
- Card lock
- Surface vertical rod
- Surface bolts / ASA / astragal

Options available

Windload ratings:

- | | |
|--------------------------|-------------|
| ▪ Single flush door | +/- 114 psf |
| ▪ Single embossed door | +/- 80 psf |
| ▪ Single glass kit door | +/- 50 psf |
| ▪ Single louvered door | +/- 60 psf |
| ▪ Paired flush doors | +/- 70 psf |
| ▪ Paired glass kit doors | +/- 50 psf |
| ▪ Paired louvered doors | +/- 60 psf |
| ▪ Frame elevations | +/- 50 psf |

Up to:

Maximum door sizes:

- | | |
|--------------------|-------------|
| ▪ Single doors | 4'0 x 8'0 |
| ▪ Pair of doors | 8'0 x 8'0 |
| ▪ Frame elevations | 12'8 x 10'4 |

Door designs:

- Flush
- Embossed
- Glass kits (up to full glass)
(glass by others)
- Louvers (up to full louver)

Lead lined products

Lead lined doors and frames are the ideal application for medical facility use. Lead is effective scattering gamma rays and x-rays. The aesthetics of Republic's lead-lined products for radiology areas are consistent with other hollow metal openings.

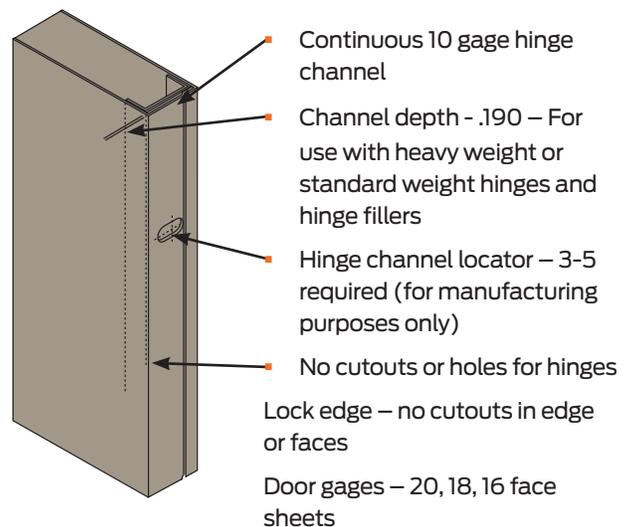
Features

- 1/16" Lead lining
- Steel stiffened core
- Glass kits available (consult tech support for details)
- Pairs of doors (lead lined astragal required)
- Sizes available: single – through 5'0 x 10'0 and pairs through 10'0 x 10'0

Replacement doors

Republic's UNIFIT door is designed for quick and easy door replacement. Continuous hinge and lock channels inside the door edges provide the flexibility to conveniently locate hardware preps for the perfect retrofit solution.

All UNIFIT Doors have a continuous hinge reinforcement channel.



Fire rated products

The emphasis on life safety and property protection has never been greater than it is today. Doors play a very important role in the fire resistance of a building; they allow people to evacuate safely from a building by limiting the spread of fire and smoke to other areas.

Fire doors provide the following functions:

- Provide safe egress from a fire area
- Inhibit the fire from spreading
- Protect life and property by reducing smoke hazards
- Serve as a regular door pathway at all times

Underwriters Laboratories and Intertek / Warnock Hersey Approved

Requirements: Doors must be self-latching, self-closing and use fire rated hardware.

Fire rated glass (supplied by others) must be used for the appropriate rating on doors and frames with glass.

Hollow Metal Doors* and Frames* tested in accordance with UBC 7-2, UL 10B and UL 10C meeting the requirements of NFPA 80, NFPA 252 and SDI 118.

Hollow metal door options

Ratings available:

- 20 minutes through 3 hours

Maximum sizes:

- Single: 5'0 x 10'0 and pairs - 8'0 x 10'0
- Double egress pairs: 8'0 x 8'0

Cores:

- Honeycomb, Styrene, Steel stiffened,
- Mineral fiberboard (250° degree tr)

Designs:

- Flush, embossed, glass kits, louvers, dutch
- Narrow and vision light kits 3 hour (max)
- Half glass kits 90 minutes (max)
- Full glass kits 20 minutes (max)
- Louvers—fusible link,
(24" X 24" max and 1 per door) 90 minutes (max)
- Dutch doors
- (Astragal and both leaves latch) 90 minutes (max)

Specialty doors:

- FEMA and hurricane doors 3 hour (max)

Hollow metal frame options

Ratings available:

- 20 Minutes through 3 hours
- Maximum sizes:
- Single - 5'0 x 10'0 and pairs - 8'0 x 10'0
- Double egress pairs - 8'0 x 8'0

Corner conditions:

- KD (knock down), face welded or full profile weld

Frame types:

- 3-Sided universal (KD or welded) 3 hour (max)
- 3 Sided drywall (KD) 90 minutes (max)
frame elevations
(Welded and sizes vary by rating)
- Transom frames with panels
(Welded and sizes vary by rating) 3 hour (max)

* Doors and Frames may have certain fire rating restrictions based on various options, consult Tech Support or refer to Tech Data for specific details.

Door / Frame Handing Chart.

How to determine hand of door and frame.

Hand all doors by standing outside or key side - facing

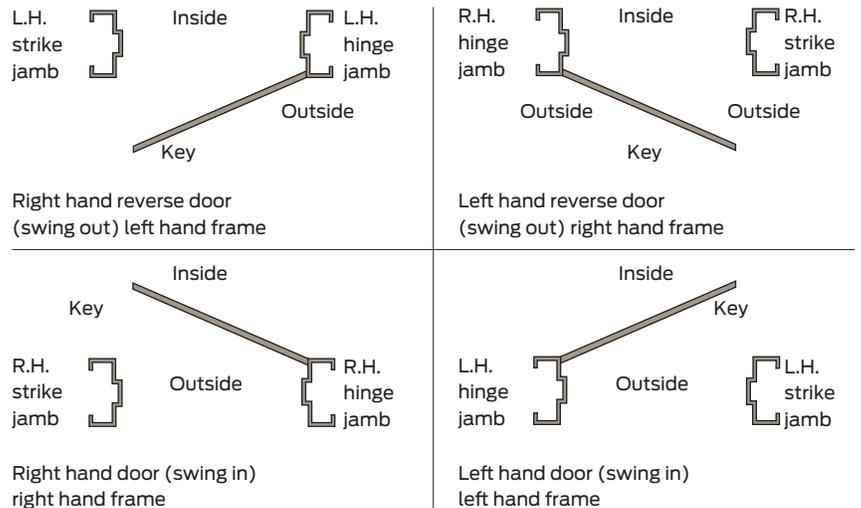
Single doors

When door leaves swing toward you and hinges are on right side of door:

- Door is right hand reverse
- Frame is left hand

When door leaves swing to inside and hinges are on right side of door:

- Door is right hand
- Frame is right hand



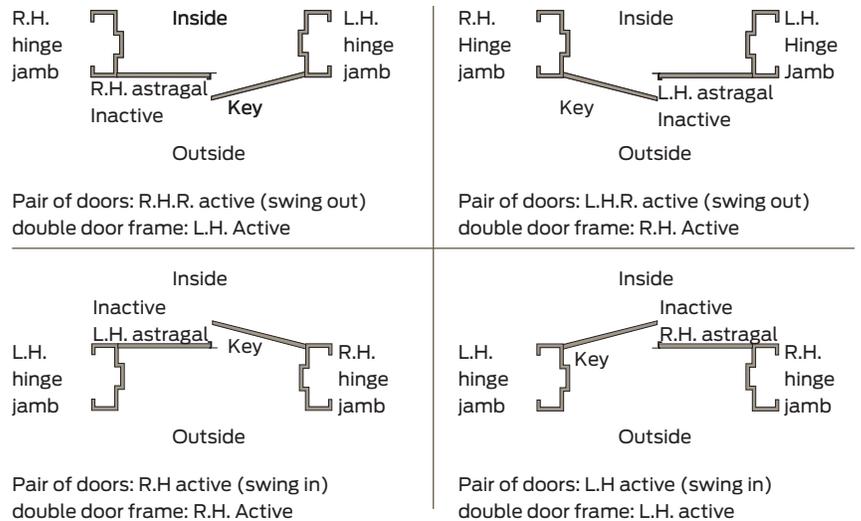
Pair of doors

When door leaves swing toward you and hinges are on right side of active leaf:

- Door is right hand reverse active
- Frame is left hand active

When door leaves swing to inside and hinges are on right side of active leaf:

- Door is right hand active
- Frame is right hand active



About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a \$2 billion company, with products sold in almost 130 countries.

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