

Flush Door Core and Frame Details

Wood Door Technical Manual

Architectural Flush Wood Door Codes	1-2
Performance Standards.....	3
Graham Supreme Door	
GSD SR 35-40	4
GSD SR 41-45.....	5
GSD SR 31, 33, 39, and 44.....	6
GSD SR 46-47.....	7
Graham Bullet Resistant Door	
GSD-BR	8
Graham Premium Door	
GPD PC.....	9
GPD EC.....	10
GPD AF.....	12
GPD FD 45	13
GPD FD 60.....	14
GPD FD 90.....	15
GPD HC	16
GPD ARD	17
Graham Custom Door	
GCD PC	19
GCD EC	20
GCD AF	21
GCD FD 45.....	22
GCD FD 60	23
GCD FD 90	24
Graham Supreme Door	
High Pressure Decorative Laminate	
GSD SR 35.....	25
GSD SR41.....	26
GSD SR42.....	27
GSD SR46.....	28
Graham Premium Door	
High Pressure Decorative Laminate	
GPD PC 3-ply	29
GPD PC 5-ply	30
GPD EC.....	31
GPD AF.....	32
GPD FD 45	33
GPD FD 60.....	34
GPD FD 90.....	35
Maiman Flush Doors	
Thermal Fused.....	36
Integris.....	37
Industry Standards - Core/Adhesives	38
Fire Door Labels	39-40

Notes

Flush Door Core and Frame Details
Wood Door Technical Manual

Architectural Flush Wood Door Codes

Flush Door Core and Frame Details

Wood Door Technical Manual

WDMA'S Door Specification Descriptor

Description

Particleboard Core Door	
PC-5	Particleboard core, stiles and rails bonded to core and core assembly abrasively planed prior to application of crossband and face veneer.
PC-7	Particleboard core, stiles and rails bonded to core and core assembly abrasively planed prior to application of three ply skin.
PC-HPDL-3	Particleboard core, stiles bonded to core and core assembly abrasively planed prior to application of high pressure decorative laminate.
PC-HPDL-5	Particleboard core, stiles bonded to core and core assembly abrasively planed prior to application crossband and high pressure decorative laminate.
PC-LPDL-M2	Structurally engineered M2 particleboard core thermally fused to low pressure decorative laminate face.
FPC-5	Particleboard core, stiles and rails non-bonded to core prior to application of crossband and face veneer.
FPC-7	Particleboard core, stiles and rails non-bonded to core prior to application of three ply skin.
FPC-HPDL-5	Particleboard core, stiles and rails non-bonded to core prior to application of crossband and high pressure decorative laminate.
Structural Composite Lumber Core Door	
SCLC-5	Structural composite lumber core, stiles and rails bonded to core and core assembly abrasively planed prior to application of crossband and face veneer.
SCLC-7	Structural composite lumber core, stiles and rails bonded to core and core assembly abrasively planed prior to application of three ply skin.
SCLC-HPDL-3	Structural composite lumber core, stiles and rails bonded to core and core assembly abrasively planed prior to application of high pressure decorative laminate.
SCLC-HPDL-5	Structural composite lumber core, stiles and rails bonded to core and core assembly abrasively planed prior to application high pressure decorative laminate.
FSCLC-5	Structural composite lumber core, stiles and rails non-bonded to core prior to application of crossband and face veneer.
FSCLC-7	Structural composite lumber core, stiles and rails non-bonded to core prior to application of three ply skin.
FSCLC-HPDL-5	Structural composite lumber core, stiles and rails non-bonded to core prior to application of crossband and high pressure decorative laminate.

Machining Fire Doors

Flush Door Core and Frame Details

Wood Door Technical Manual

WDMA'S Door Specification Descriptor

Description

Neutral Pressure Tested Fire Door	
FD-20-5 FD-20-7 FD-20-HPDL-3 FD-20-HPDL-5	Fire Rated Door, labeled for 20 minutes (available in all core assemblies other than hollow core)
FD-45-5 FD-45-7 FD-45-HPDL-5	Fire Rated Door, labeled for 45 minutes
FD-60-5 FD-60-7 FD-60-HPDL-5	Fire Rated Door, labeled for 60 minutes
FD-90-5 FD-90-7 FD-90-HPDL-3 FD-90-HPDL-5	Fire Rated Door, labeled for 90 minutes

Positive Pressure Tested Fire Door	
FD-20-5 FD-20-7 FD-20-HPDL-3 FD-20-HPDL-5	Fire Rated Door, labeled for 20 minutes Positive Pressure (PP) (available in all core assemblies other than hollow core)
FD-45-5 FD-45-7 FD-45-HPDL-5	Fire Rated Door, labeled for 45 minutes Positive Pressure (PP)
FD-60-5 FD-60-7 FD-60-HPDL-5	Fire Rated Door, labeled for 60 minutes Positive Pressure (PP)
FD-90-5 FD-90-7 FD-90-HPDL-5	Fire Rated Door, labeled for 90 minutes Positive Pressure (PP)

Hollow Core Door	
IHC-5, 7, HPDL	Institutional Hollow Core
SHC-5, 7, HPDL	Standard Hollow Core

Specialty Core Door	
SR	Sound Resistant
LL	Lead Lined
BR	Bullet Resistant

NOTE: Doors manufactured to this standard will fulfill the requirements of regular door functions. Doors are available which exceed these basic construction requirements. For details about these doors consult individual door manufacturers for illustration.

Performance Standards

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

		WDMA/AWS Extra Heavy Duty*	Particle Core	Mineral Core	Engineered Core	Integris	Thermal Fused
Stile Split Resistance	TM-5	-----	572 lbs.	847 lbs.	572 lbs.	NA	NA
Adhesive Bond Durability	TM-6	Type II	Type I	Type I	Type I	NA	NA
Cycle Slam	TM-7	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000
Hinge Loading	TM-8	550 lbs.	747 lbs.	683 lbs.	747 lbs.	588 lbs.	1239 lbs.
Screw Holding Capacity	TM-10						
Door Face/Core		550 lbs.	337 lbs.**	60 lbs.**	973 lbs.	980 lbs.	699 lbs.
Vertical Door Edge		550 lbs.	744 lbs.	782 lbs.	744 lbs.	780 lbs.	909 lbs.
Horizontal Door Edge		300 lbs.	720 lbs.	438 lbs.	720 lbs.	706 lbs.	NA

*WDMA I.S. 1A-13

**If Screwholding power is less than 400 lbs. Blocking is recommended for surface application of hardware.

Use of LSL blocking on partial doors will increase door face/core screw holding to greater than 550 lbs.

Use of Fire Stop II blocking on mineral core doors will increase door face/core screw holding to greater than 550 lbs.

GSD-SR 35-40

Flush Door Core and Frame Details

Wood Door Technical Manual

Acoustical Core

WDMA Extra Heavy Duty

SR5

Construction

Horizontal Edges:

- Bonded to core
- 3" minimum after factory trim
- No additional blocking required for thru bolted closers

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated with a matching veneer edge band

Core:

- Proprietary lead free Sound Resistant material
- Contains no added Urea-formaldehyde

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b and UL 10c requirements
- Available with factory installed lite with metal vision panel

Acoustical Rating:

- Sound Transmission Class (STC) 35-40 operable
- Available with factory installed lite with metal vision panel or wood moulding
- Required gasketing (with threshold) is included in price of door and provided by Graham
- Door thickness 1 3/4"
- Top clearance 1/8"
- Hinge side clearance 1/8"
- Lock side clearance 1/8"
- Undercut clearance (from finished floor) 3/8"
- Single swing, or Pair with hollow metal mullion
- Uses standard or heavyweight hinges (4.5" or 5")
- For use with cylindrical locks, mortise locks, mortise card locks, and thru-bolted closers
- Minimum size - 2'0" x 6'0"
- Maximum size - 4'0" x 8'0"
- Tested in accordance with ASTM E90 and E413
- Can be used with Frameworks aluminum Type II frame and achieve the STC 35 rating and 20 minute UL10c category B fire rating in single opening

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty Hinge Loading and Screw Holding (horizontal and vertical door edges)
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 3/32" (2.3mm) nominal high density engineered wood composite
- Optional with no added Urea-formaldehyde

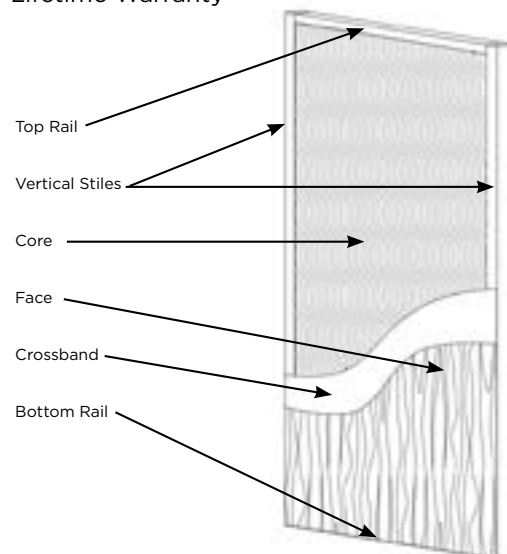
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available
- MR Credit 7 - Certified Wood
- IEQ 4.4 - Low-emitting Materials
- IEQ 9 - Enhanced Acoustical Performance (LEED for schools) STC 35 operable (flush door)
- California Air Resources Board (CARB)

Lifetime Warranty



GSD-SR 41-45

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

Acoustical Core

WDMA Extra Heavy Duty

SR5

Construction

Horizontal Edges:

- Bonded to core
- 3" minimum after factory trim
- No additional blocking required for thru bolted closers

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated with a matching veneer edge band

Core:

- Heavy Duty Sound Resistant Core Material

Acoustical Rating:

- Sound Transmission Class (STC) 41-45 operable
- Available with factory installed lite
- Required gasketing (with threshold) is included in price of door and provided by Graham
- Door thickness 1 3/4"
- Top clearance 1/8"
- Hinge side clearance 1/16"
- Lock side clearance 1/8"
- Undercut clearance (from finished floor) 3/8"
- Single swing, or Pair with hollow metal mullion
- Uses standard or heavyweight hinges (4.5" or 5")
- For use with cylindrical locks, mortise locks, mortise card locks, and thru-bolted closers
- Minimum size - 2'0" x 6'0"
- Maximum size - 4'0" x 8'0"
- Tested in accordance with ASTM E90 and E413

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty Hinge Loading and Screw Holding (horizontal and vertical door edges)
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

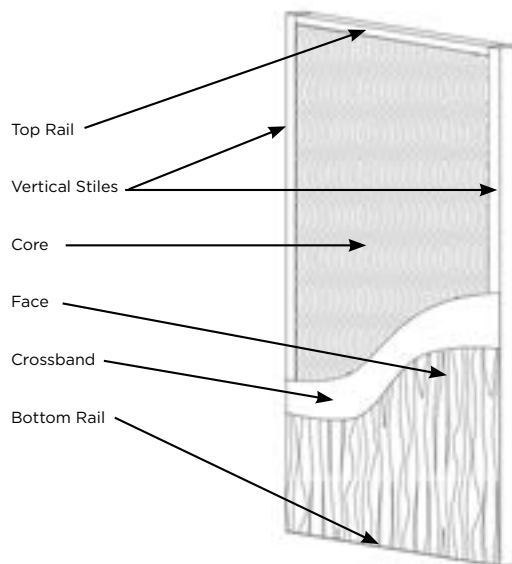
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match
- Available with MicroShield® Antimicrobial finish

Certifications and Sustainability:

- Optional LEED 3.0 credits available MR Credit 7 - Certified Wood IEQ 4.4 - Low-emitting Materials IEQ 9 - Enhanced Acoustical Performance (LEED for schools) STC 35 operable (flush door)
- California Air Resources Board (CARB)

Lifetime Warranty



GSD-SR 31, 33, 39, and 44

Flush Door Core and Frame Details

Wood Door Technical Manual

Acoustical Core

WDMA Extra Heavy Duty

SR5

Construction

Horizontal Edges:

- Bonded to core
- 3" minimum after factory trim
- No additional blocking required for thru bolted closers

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated with a matching veneer edge band

Core:

- Proprietary Sound Resistant material
- Contains no added Urea-formaldehyde

Acoustical Rating:

- Sound Transmission Class (STC) 31, 33, 39, and 44 operable
- Required gasketing (with threshold) is included in price of door and provided by Graham
- Door thickness 1 3/4"
- Top clearance 1/8"
- Hinge side clearance 1/8"
- Lock side clearance 1/8"
- Undercut clearance (from finished floor) 3/8"
- Pair of doors - no mullion required
- Uses standard or heavyweight hinges (4.5" or 5")
- For use with cylindrical locks, mortise locks, mortise card locks, and thru-bolted closers
- Minimum size - 2'0" x 6'8"
- Maximum size - 4'0" x 7'0" (paired opening 6'0" x 7'0")
- Tested in accordance with ASTM E90 and E413

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty Hinge Loading and Screw Holding (horizontal and vertical vvdor edges)
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

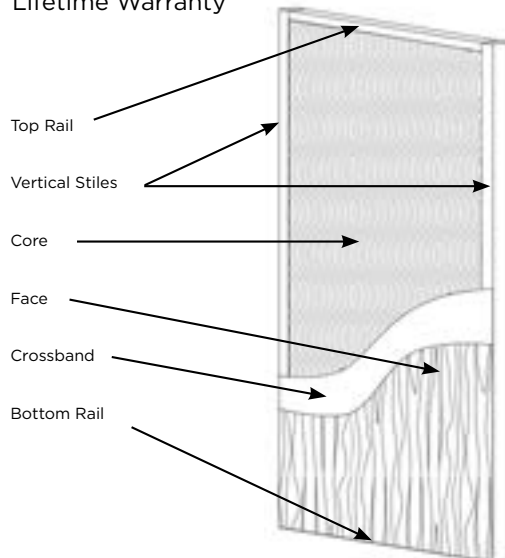
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match
- Available with MicroShield® Antimicrobial finish

Certifications and Sustainability:

- Optional LEED 3.0 credits available MR Credit 7 - Certified Wood IEQ 4.4 - Low-emitting Materials IEQ 9 - Enhanced Acoustical Performance (LEED for schools) STC 35 operable (flush door)
- California Air Resources Board (CARB)

Lifetime Warranty



GSD-SR 46-47

Flush Door Core and Frame Details

Wood Door Technical Manual

March, 2018

Acoustical Core

WDMA Extra Heavy Duty

SR5

Construction

Horizontal Edges:

- Bonded to core
- 3" minimum after factory trim
- No additional blocking required for thru bolted closers
- Optional closer and lock block available

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated with a matching veneer edge band

Core:

- Proprietary Sound Resistant material
- Contains no added Urea-formaldehyde

Acoustical Rating:

- Sound Transmission Class (STC) 46-47 operable
- Required gasketing (with threshold) is included in price of door and provided by Graham
- Door thickness 1 3/4"
- Top clearance 1/8"
- Hinge side clearance 1/16"
- Lock side clearance 1/8"
- Undercut clearance (from finished floor) 3/8"
- Single swing
- Uses standard or heavyweight hinges (4.5" or 5")
- For use with cylindrical locks, mortise locks, mortise card locks, and thru-bolted closers
- Minimum size - 2'0" x 6'0"
- Maximum size - 4'0" x 8'0"
- Tested in accordance with ASTM E90 and E413

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty Hinge Loading and Screw Holding (horizontal and vertical door edges)
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

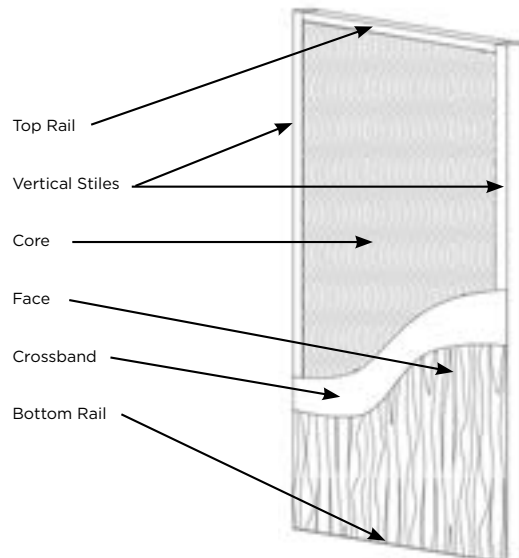
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match
- Available with MicroShield[®] Antimicrobial finish

Certifications and Sustainability:

- Optional LEED 3.0 credits available MR Credit 7 - Certified Wood (available for STC 46 only)
- IEQ 4.4 - Low-emitting Materials IEQ 9 - Enhanced Acoustical Performance (LEED for vschools) STC 35 operable (flush door)
- California Air Resources Board (CARB)

Lifetime Warranty



GSD-BR

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Bullet WDMA/AWS Extra Heavy Duty BR-5

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers
- Optional closer and lock blocks available

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a matching hardwood face (standard for Oak, Birch, and Maple)

Core:

- Laminated multi-layer ballistic core
- Optional to UL 10c (positive pressure) Category "B"

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density vengineered wood composite
- Optional with no added Urea-formaldehyde

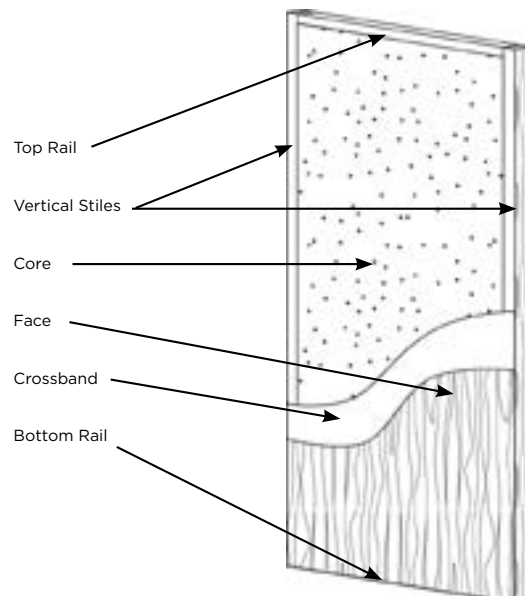
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match
- Available with MicroShield® Antimicrobial finish

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - MR 4 - Recycled Content (standard)
 - MR 5 - Regional Materials
 - MR 7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- UL 752 bullet levels 1-3

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

GPD-PC

Flush Door Core and Frame Details Wood Door Technical Manual

July, 2016

5-Ply Particleboard Core WDMA/AWS Extra Heavy Duty PC-5

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers
- Optional closer and lock blocks available

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a matching hardwood face (standard for Oak, Birch, and Maple)
- Structural composite lumber (SCL) laminated with a matching veneer edge band on veneers other than listed above as standard with optional hardwood stiles face available

Core:

- Conforms to ANSI A208.1 Standard LD1 Particleboard Core - 28 lbs/ft³ Optional LD2 available - 32 lbs/ft³
- Meets requirements of LEED MR4
- Optional to UL 10c (positive pressure) Category "A"

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Acoustical Rating:

- Sound Transmission Class (STC) 30 operable with required seals

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

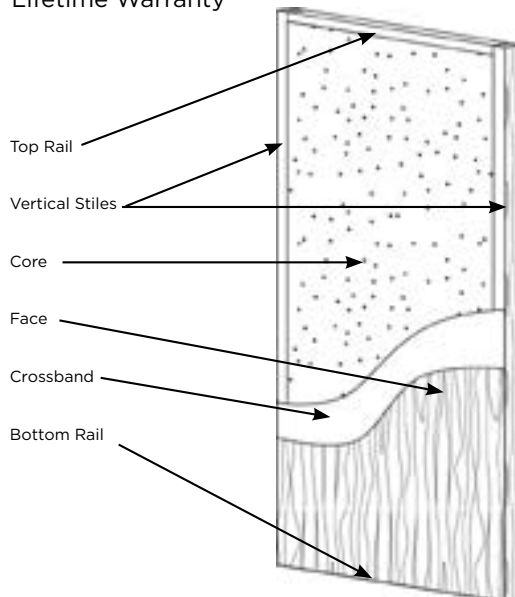
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - MR 4 - Recycled Content (standard)
 - MR 5 - Regional Materials
 - MR 7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
 - IEQ 9 - Enhanced Acoustical Performance (LEED for schools) STC 35 operable (flush door)
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

GPD-EC

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Engineered Composite Lumber Core WDMA/AWS Extra Heavy Duty SCLC-5

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a matching hardwood face (standard for Oak, Birch, and Maple)
- Structural composite lumber (SCL) laminated with a matching veneer edge band on veneers other than listed above as standard with optional hardwood stileface available

Core:

- Structural Composite Lumber
- Meets requirements of LEED MR4
- Contains no added Urea-formaldehyde

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Acoustical Rating:

- Sound Transmission Class (STC) 31 operable with required seals

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

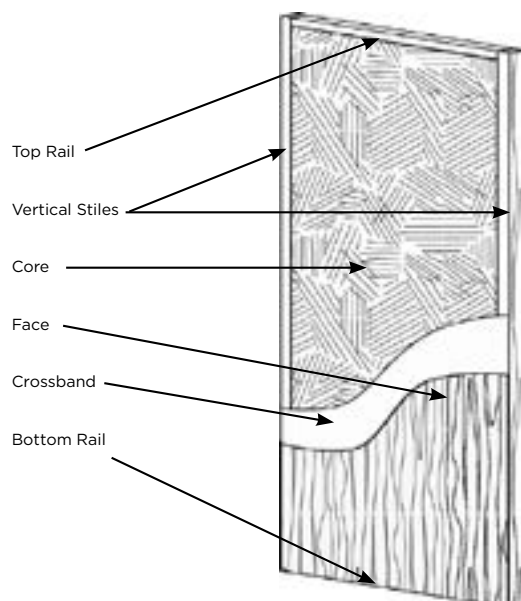
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - MR 7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
 - IEQ 9 - Enhanced Acoustical Performance (LEED for schools) STC 35 operable (flush door)
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



Notes

Flush Door Core and Frame Details Wood Door Technical Manual

July, 2016

GPD-AF

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Agrifiber Core WDMA/AWS Extra Heavy Duty AF-5

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a matching hardwood face (standard for Oak, Birch, and Maple)
- Structural composite lumber (SCL) laminated with a matching veneer edge band on veneers other than listed above as standard with optional hardwood stiles face available

Core:

- Agrifiber
- Conforms to ANSI A208.1
- Contains no added Urea-formaldehyde

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Acoustical Rating:

- Sound Transmission Class (STC) 29 operable with required seals

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

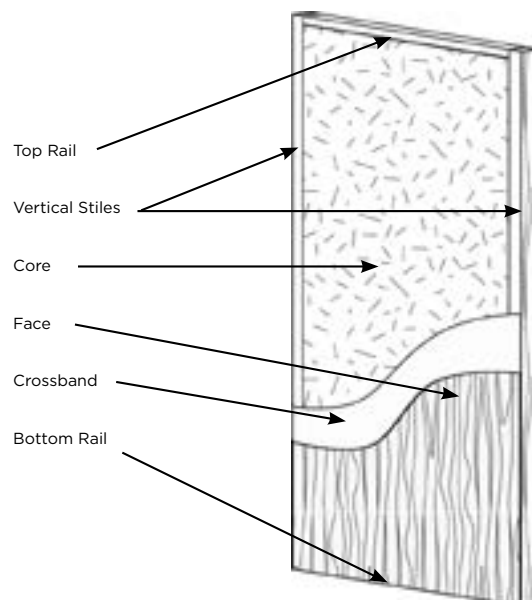
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - MR 4 - Recycled Content (standard)
 - MR 6 - Rapidly renewable Materials
 - MR 7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

GPD-FD 45

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

5-Ply Fire Core WDMA/AWS Extra Heavy Duty FD-5

Construction

Horizontal Edges:

- Top and bottom rails - wood or composite material, specific configuration to Graham Label Service Listing
- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer & lock block available

Vertical Edges:

- Matching vertical edges - wood or composite material, specific configuration to Graham Label Service Listing
- Bonded to core

Core:

- Fire Resistant Composite Core per Graham Label Service Listing
- Contains no added Urea-formaldehyde
- Agrifiber core available in limited options

Fire Rating:

- 45 minute fire rating
- 250 degree temperature rise
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

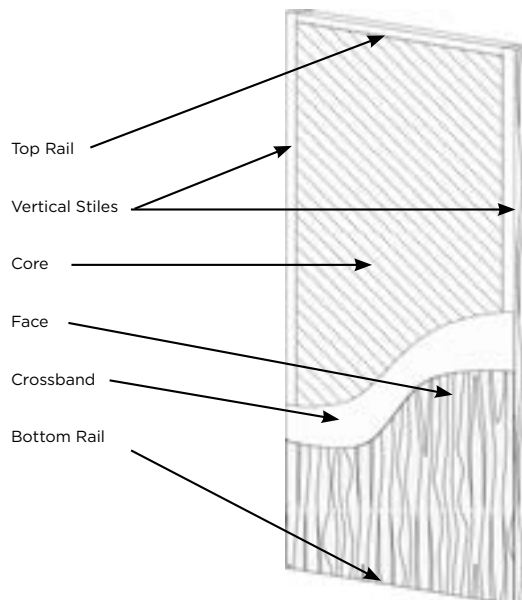
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available**
 - MR 7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

**See Graham LEED Documentation

GPD-FD 60

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Fire Core WDMA/AWS Extra Heavy Duty FD-5

Construction

Horizontal Edges:

- Top and bottom rails - wood or composite material, specific configuration to Graham Label Service Listing
- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer & lock block available

Vertical Edges:

- Matching vertical edges - wood or composite material, specific configuration to Graham Label Service Listing
- Bonded to core

Core:

- Fire Resistant Composite Core per Graham Label Service Listing
- Contains no added Urea-formaldehyde

Fire Rating:

- 60 minute fire rating
- 250 degree temperature rise
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

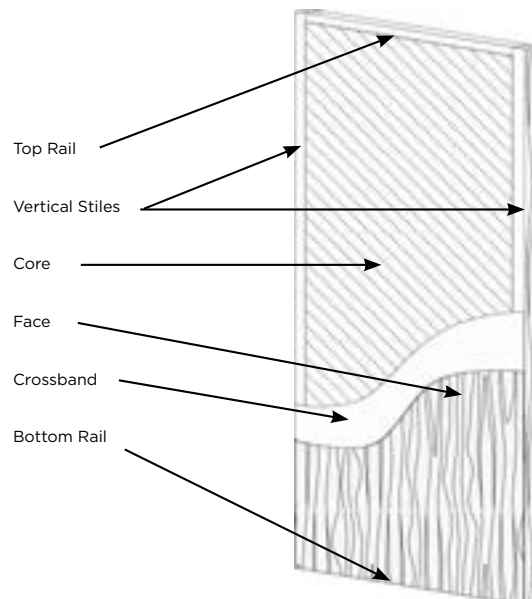
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available**
 - MR 7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

**See Graham LEED Documentation

GPD-FD 90

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

5-Ply Fire Core WDMA/AWS Extra Heavy Duty FD-5

Construction

Horizontal Edges:

- Top and bottom rails - wood or composite material, specific configuration to Graham Label Service Listing
- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer & lock block available

Vertical Edges:

- Matching vertical edges - wood or composite material, specific configuration to Graham Label Service Listing
- Bonded to core

Core:

- Fire Resistant Composite Core per Graham Label Service Listing
- Contains no added Urea-formaldehyde

Fire Rating:

- 90 minute fire rating
- 250 degree temperature rise
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

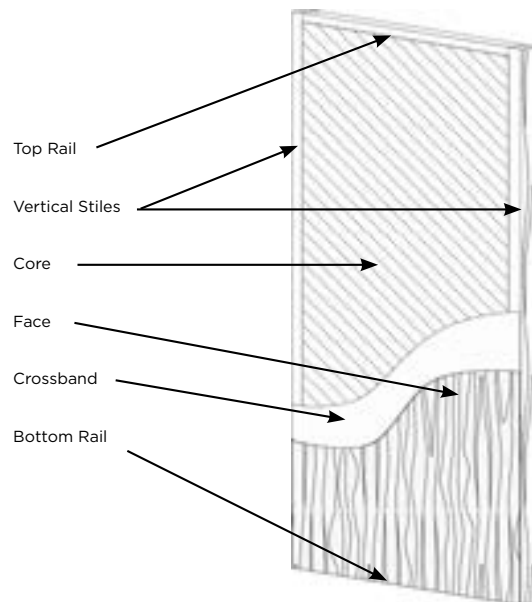
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available**
 - MR 7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

**See Graham LEED Documentation

GPD-HC

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Hollow Core HC-5

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a matching hardwood face (standard for Oak, Birch, and Maple)
- Structural composite lumber (SCL) laminated with a matching veneer edge band on veneers other than listed above as standard with optional hardwood stiles face available

Core:

- Conforms to ASTM C578, Type 1
- Solid Polystyrene Core

Fire Rating:

- Not available

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

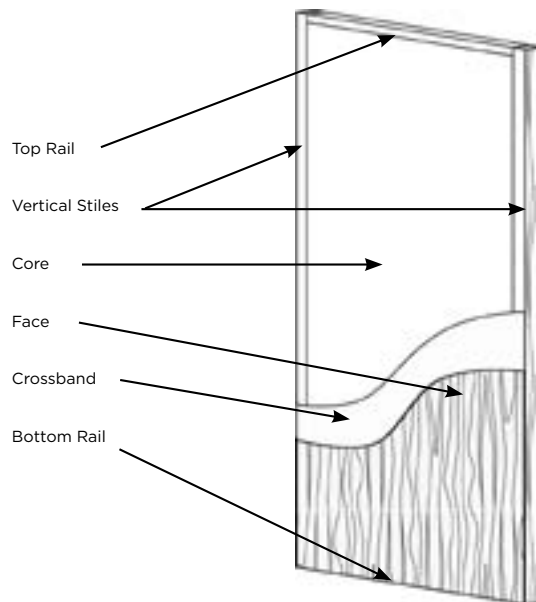
Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

No Warranty



5-Ply Attack Resistant WDMA/AWS Extra Heavy Duty SCLC-5

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers

Vertical Edges:

- Matching vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a matching hardwood face (standard for Oak, Birch, and Maple)
- Structural composite lumber (SCL) laminated with a matching veneer edge band on veneers other than listed above as standard with optional hardwood stiles face available

Core:

- Structural Composite Lumber
- Meets requirements of LEED MR4
- Contains no added Urea-formaldehyde

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- Available in a wide variety of vertical & horizontal grain wood species, Sketch Face, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Glazing:

- Curries Type 10 kit with 9/16" pocket width available in narrow lite or half glass
- School Guard Glass™ SG5™
- Glass and kit are factory installed in door-- Single opening with single lite visible glass size 3" - 35-3/16" width x 10" - 43-1/4" height--Glass for sidelights or borrowed lights shipped loose for field installation by others--Sidelight visible glass size: 6" - 47" x 10" - 92.75"--Borrowed light visible glass size: 3" - 95" x 10" - 47" (horizontal orientation), or 3" - 47" x 10" - 95" (vertical orientation)

Assembly Frame:

- Curries M or CM series 16 gauge (14 gauge optional)
- Ceco Door SU/SQ or BU/BQ series 16 gauge (14 gauge optional)
- 3 Piece frames available knocked down or welded--Sidelight and borrowed light frames available welded only

Assembly Hardware:

Lock Options:

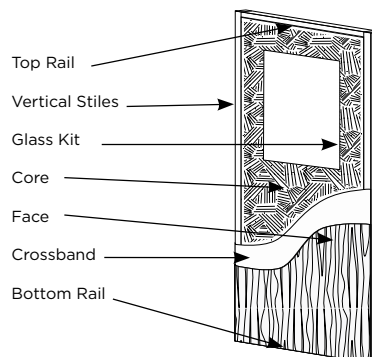
- SARGENT 8200 series mortise lock with Latchbolt, dead bolt and LS escutcheon
- Corbin Russwin ML2000 series mortise lock with dead bolt, VR (Vandal Resistant) escutcheon and lever trim*
- Yale SL8800 series mortis lock with dead bolt, SL (Security) escutcheon and lever trim*
- *equivalent hardware not tested

Hinge Options:

- 3 or 4 each 4-1/2" x 4-1/2" standard weight hinges
- Pemko steel continuous hinge

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - MR 7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)



Lifetime warranty on flush door; 10 year warranty on factory glass install and replacement of glass only.

Notes

Flush Door Core and Frame Details

Wood Door Technical Manual

GCD-PC

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

5-Ply Particleboard Core WDMA/AWS Extra Heavy Duty PC-5

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers
- Optional closer and lock blocks available

Vertical Edges:

- Mill option hard wood vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a mill option hardwood face

Core:

- Conforms to ANSI A208.1 Standard LD1 Particleboard Core - 28 lbs/ft³
- Optional LD2 available - 32 lbs/ft³
- Meets requirements of LEED MR4
- Optional to UL 10c (positive pressure) Category "A"

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Custom Grade

Face Veneer:

- Available in a wide variety of wood species, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

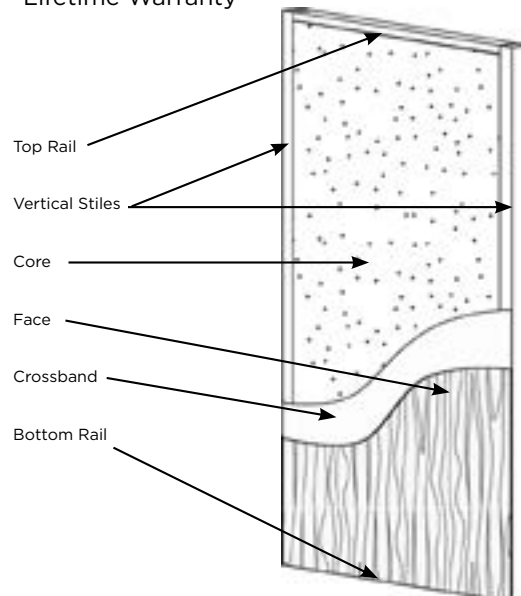
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - MR 4 - Recycled Content (standard)
 - MR 5 - Regional Materials
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

GCD-EC

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Engineered Composite Lumber Core WDMA/AWS Extra Heavy Duty SCLC-5

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers

Vertical Edges:

- Mill option hard wood vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a mill option hardwood face

Core:

- Structural Composite Lumber
- Meets requirements of LEED MR4
- Contains no added Urea-formaldehyde

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty
- Aesthetic: WDMA - Custom Grade

Face Veneer:

- Available in a wide variety of wood species, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request
- WDMA/AWS "AA" Grade available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

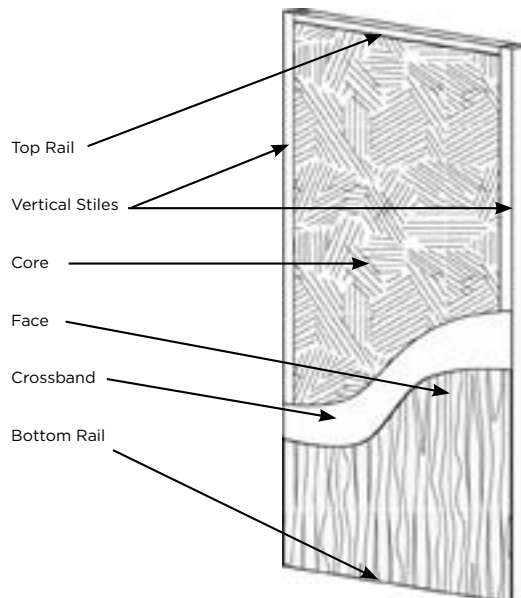
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available
- IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



GCD-AF

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

5-Ply Agrifiber Core WDMA/AWS Extra Heavy Duty AF-5

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers

Vertical Edges:

- Mill option hard wood vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a mill option hardwood face

Core:

- Agrifiber
- Conforms to ANSI A208.1
- Contains no added Urea-formaldehyde

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Custom Grade

Face Veneer:

- Available in a wide variety of wood species, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

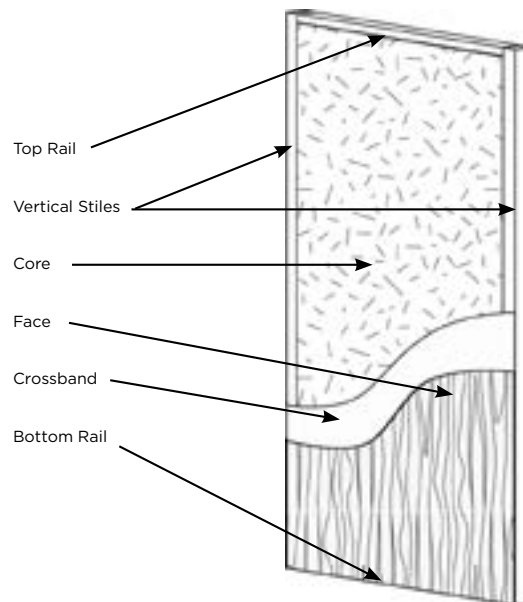
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - MR 4 - Recycled Content (standard)
 - MR 6 - Rapidly Renewable Materials
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

GCD-FD 45

Flush Door Core and Frame Details

Wood Door Technical Manual

January, 2018

5-Ply Fire Core WDMA/AWS Extra Heavy Duty FD-5

Construction

Horizontal Edges:

- Top and bottom rails - wood or composite material, specific configuration to Graham Label Service Listing
- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer & lock block available

Vertical Edges:

- Mill option hard wood vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a mill option hardwood face

Core:

- Fire Resistant Composite Core per Graham Label Service Listing
- Contains no added Urea-formaldehyde
- Agrifiber core available in limited options
- Response Engineered Core (REC) when blocking required

Fire Rating:

- 45 minute fire rating
- 250 degree temperature rise
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Custom Grade

Face Veneer:

- Available in a wide variety of wood species, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

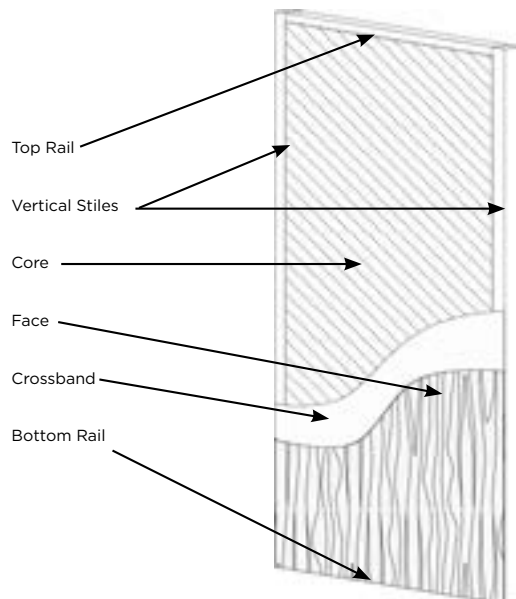
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available**
 - MR7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

**See Graham LEED Documentation

GCD-FD 60

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

5-Ply Fire Core WDMA/AWS Extra Heavy Duty FD-5

Construction

Horizontal Edges:

- Top and bottom rails - wood or composite material, specific configuration to Graham Label Service Listing
- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer & lock block available

Vertical Edges:

- Mill option hard wood vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a mill option hardwood face

Core:

- Fire Resistant Composite Core per Graham Label Service Listing
- Contains no added Urea-formaldehyde

Fire Rating:

- 60 minute fire rating
- 250 degree temperature rise
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Custom Grade

Face Veneer:

- Available in a wide variety of wood species, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

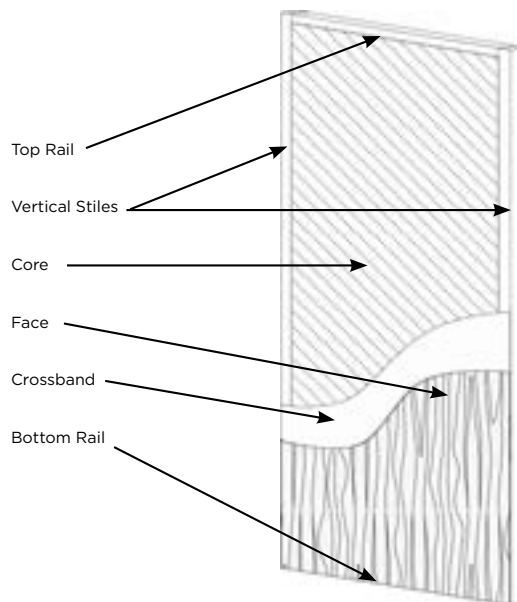
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available**
 - MR7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

**See Graham LEED Documentation

GCD-FD 90

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Fire Core WDMA/AWS Extra Heavy Duty FD-5

Construction

Horizontal Edges:

- Top and bottom rails - wood or composite material, specific configuration to Graham Label Service Listing
- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer & lock block available

Vertical Edges:

- Mill option hard wood vertical edges
- Bonded to core
- Structural composite lumber (SCL) laminated to a milloption hardwood face

Core:

- Fire Resistant Composite Core per Graham Label Service Listing
- Contains no added Urea-formaldehyde

Fire Rating:

- 90 minute fire rating
- 250 degree temperature rise
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Custom Grade

Face Veneer:

- Available in a wide variety of wood species, Medium Density Overlay (MDO), and Primed Hardboard
- WDMA/AWS "A" Grade, Book and Running Match, standard
- Slip, Balance, and Center Balance Match available upon request

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

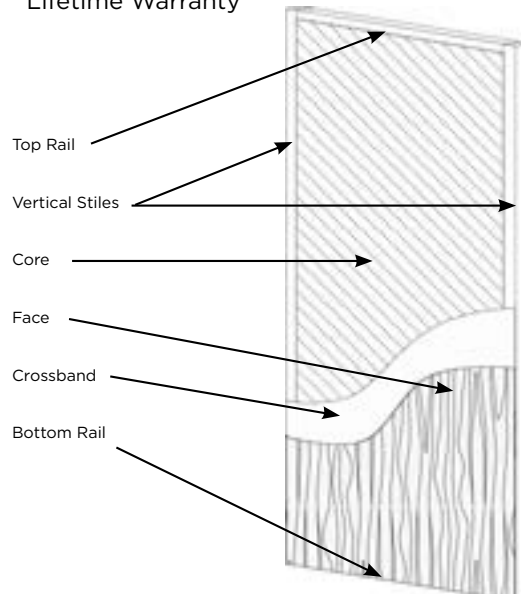
Finish:

- UV cured factory finish meets or exceeds WDMA TR-6 and Architectural Woodwork Standards (AWS) First Edition - System #9
- Available in 28 standard colors and custom color match

Certifications and Sustainability:

- Optional LEED 3.0 credits available**
 - MR7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra heavy Duty face screw holding standards.

**See Graham LEED Documentation

GSD-SR 35

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

Acoustical Core

WDMA Extra Heavy Duty

SR5

HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Bonded to core
- No additional blocking required for thru bolted closers
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Structural composite lumber (SCL) laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Proprietary Sound Resistant material
- Contains no added Urea-formaldehyde

Acoustical Rating:

- Sound Transmission Class (STC) 35 operable
- Available with factory installed lite (up to and including 1298 in² visible area)
- Required gasketing (with threshold) provided by Masonite Architectural Wood Doors upon request
- Door thickness 1 3/4"
- Top clearance 1/8"
- Single swing, or Pair
- Uses standard or heavyweight hinges (4.5" or 5")
- For use with cylindrical locks, mortise locks, mortise card locks, and thru-bolted closers
- Minimum size - 2'0" x 6'0"
- Maximum size - 4'0" x 8'0"
- Tested in accordance with ASTM E90 and E413, in fully grouted hollow metal frame

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty Hinge Loading and Screw Holding (horizontal and vertical door edges)
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- Decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wilsonart, Pionite, Nevamar

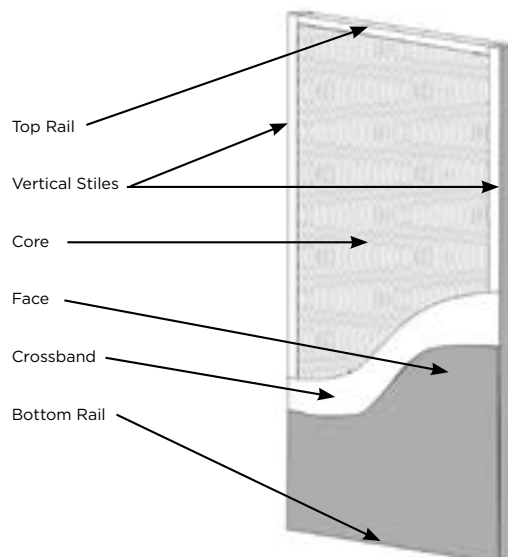
Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - IEQ 4.4 - Low-emitting Materials
 - IEQ 9 - Enhanced Acoustical Performance (LEED for schools) STC 35 operable (flush door)
- California Air Resources Board (CARB)

Lifetime Warranty



GSD-SR 41

Flush Door Core and Frame Details

Wood Door Technical Manual

Acoustical Core

STC 41

WDMA Extra Heavy Duty

SR5

HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Bonded to core
- No additional blocking required for thru bolted closers
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Structural composite lumber (SCL) laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Heavy Duty proprietary Sound Resistant Core Material

Acoustical Rating:

- Sound Transmission Class (STC) 41 operable
- Available with factory installed lite (up to and including 864 in² visible area)
- Required gasketing (with threshold) provided by Masonite Architectural Wood Doors upon request- Door thickness 1 3/4"
- Single swing, or Pair
- Uses standard or heavyweight hinges (4.5" or 5")
- For use with cylindrical locks, mortise locks, mortise card locks, and thru-bolted closers
- Minimum size - 2'0" x 6'0"
- Maximum size - 4'0" x 8'0"
- Tested in accordance with ASTM E90 and E413, in fully grouted hollow metal frame

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty Hinge Loading and Screw Holding (horizontal and vertical door edges)
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- Decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wilsonart, Pionite, Nevamar

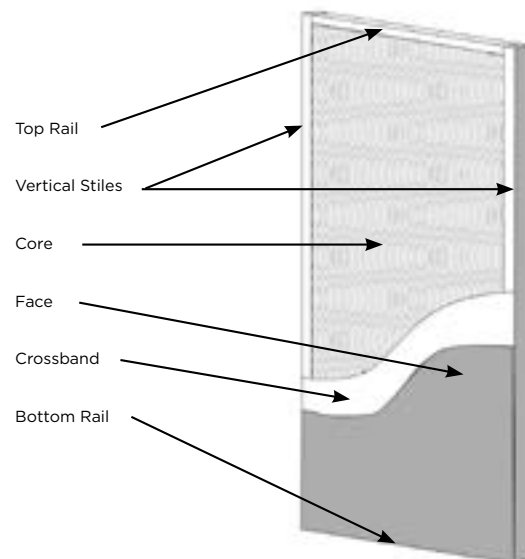
Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - IEQ 4.4 - Low-emitting Materials
 - IEQ 9 - Enhanced Acoustical Performance (LEED for schools) STC 35 operable (flush door)
- California Air Resources Board (CARB)

Lifetime Warranty



GSD-SR 42

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

Acoustical Core

STC 42

WDMA Extra Heavy Duty

SR5

HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer and lock blocks available
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Structural composite lumber (SCL) laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Heavy Duty proprietary Sound Resistant Core Material

Acoustical Rating:

- Sound Transmission Class (STC) 42 operable
- Available with factory installed lite (up to and including 484 square inches visible area)
- Required gasketing (with threshold) provided by Masonite Architectural Wood Doors upon request
- Door thickness 1 3/4"
- Single swing, or Pair with mullion
- Uses standard or heavyweight hinges (4.5" or 5")
- For use with cylindrical locks, mortise locks, mortise card locks, and thru-bolted closers
- Minimum size - 2'0" x 6'0"
- Maximum size - 4'0" x 8'0"
- Tested in accordance with ASTM E90 and E413, in fully grouted hollow metal frame

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty Hinge Loading and Screw Holding (horizontal and vertical door edges)
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- .050 Thick decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wilsonart, Pionite, Nevamar

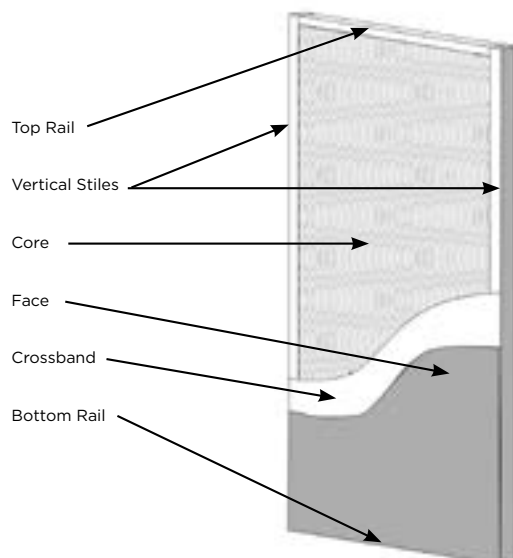
Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - IEQ 4.4 - Low-emitting Materials
 - IEQ 9 - Enhanced Acoustical Performance (LEED for schools) STC 35 operable (flush door)
- California Air Resources Board (CARB)

Lifetime Warranty



GSD-SR 46

Flush Door Core and Frame Details

Wood Door Technical Manual

Acoustical Core

STC 46

WDMA Extra Heavy Duty

SR5

HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer and lock block available
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Structural composite lumber (SCL) laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Heavy Duty Proprietary Sound Resistant Material
- Contains no added Urea-formaldehyde

Acoustical Rating:

- Sound Transmission Class (STC) 46 operable
- Available with factory installed lite (up to and including 100 square inches visible area)
- Required gasketing (with threshold) provided by Masonite Architectural Wood Doors upon re-quest
- Door thickness 1 3/4"
- Single swing, or Pair
- Uses standard or heavyweight hinges (4.5" or 5")
- For use with cylindrical locks, mortise locks, mortise card locks, and thru-bolted closers
- Minimum size - 2'0" x 6'0"
- Maximum size - 4'0" x 8'0"
- Tested in accordance with ASTM E90 and E413, in fully grouted hollow metal frame

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty Hinge Loading and Screw Holding (horizontal and vertical door edges)
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- Decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wil-sonart, Pionite, Nevamar

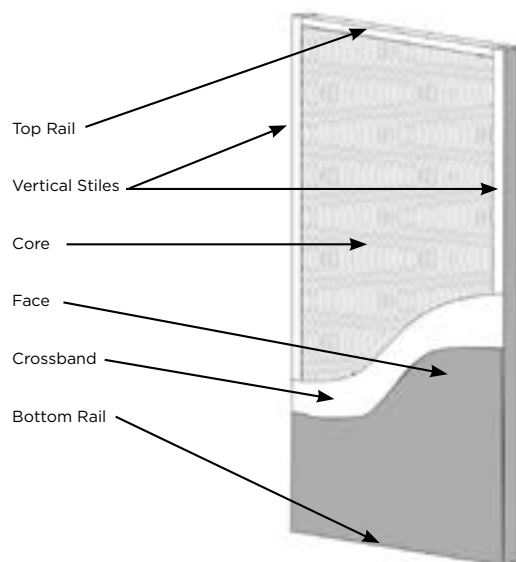
Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - IEQ 4.4 - Low-emitting Materials
 - IEQ 9 - Enhanced Acoustical Performance (LEED for schools) STC 35 operable (flush door) - California Air Resources Board (CARB)

Lifetime Warranty



GPD-PC

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

3-Ply Particleboard Core WDMA/AWS Extra Heavy Duty PC-3 HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- No additional blocking required for thru bolted closers
- Optional closer and lock blocks available
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Structural composite lumber (SCL) laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Conforms to ANSI A208.1
- Standard LD1 Particleboard Core - 28 lbs/ft³
- Optional LD2 available - 32 lbs/ft³
- Meets requirements of LEED MR4
- Optional to UL 10c (positive pressure) Category "A"

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Acoustical Rating:

- Sound Transmission Class (STC) 30 operable with required seals

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- .050 Thick decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wilsonart, Pionite, Nevamar

Certifications and Sustainability:

- Optional LEED 3.0 credits available

MR 4 - Recycled Content (standard)

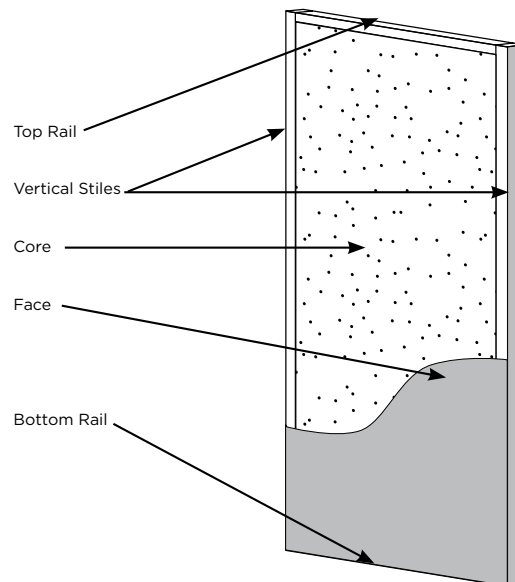
MR 5 - Regional Materials

MR 7 - FSC Certified Wood

IEQ 4.4 - Low-emitting Materials

- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra Heavy Duty face screw holding standards.

GPD-PC

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Particleboard Core WDMA/AWS Extra Heavy Duty PC-5 HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers
- Optional closer and lock blocks available
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Structural composite lumber (SCL) laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Conforms to ANSI A208.1 Standard LD1 Particleboard Core - 28 lbs/ft³ Optional LD2 available - 32 lbs/ft³
- Meets requirements of LEED MR4
- Optional to UL 10c (positive pressure) Category "A"

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Acoustical Rating:

- Sound Transmission Class (STC) 30 operable with required seals

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- .050 Thick decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wil-sonart, Pionite, Nevamar

Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

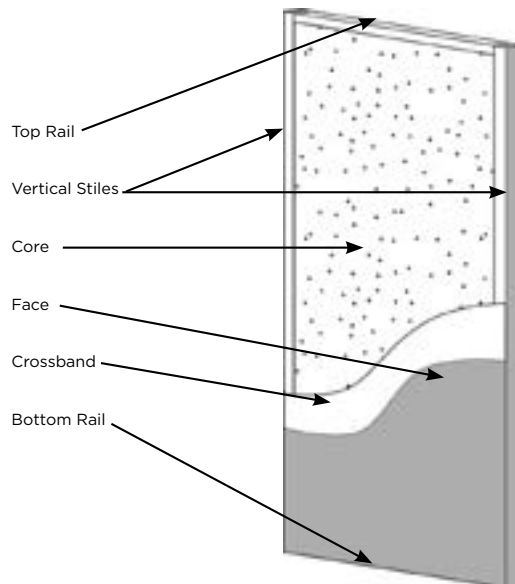
Certifications and Sustainability:

- Optional LEED 3.0 credits available

- MR 4 - Recycled Content (standard)
- MR 5 - Regional Materials
- MR 7 - FSC Certified Wood
- IEQ 4.4 - Low-emitting Materials

- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra Heavy Duty face screw holding standards.

GPD-EC

Flush Door Core and Frame Details Wood Door Technical Manual

July, 2016

5-Ply Engineered Composite Lumber Core WDMA/AWS Extra Heavy Duty SCLC-5 HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Structural composite lumber (SCL) laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Structural Composite Lumber
- Meets requirements of LEED MR4
- Contains no added Urea-formaldehyde

Fire Rating:

- 20 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Acoustical Rating:

- Sound Transmission Class (STC) 31 operable with required seals

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- .050 Thick decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wilsonart, Pionite, Nevamar

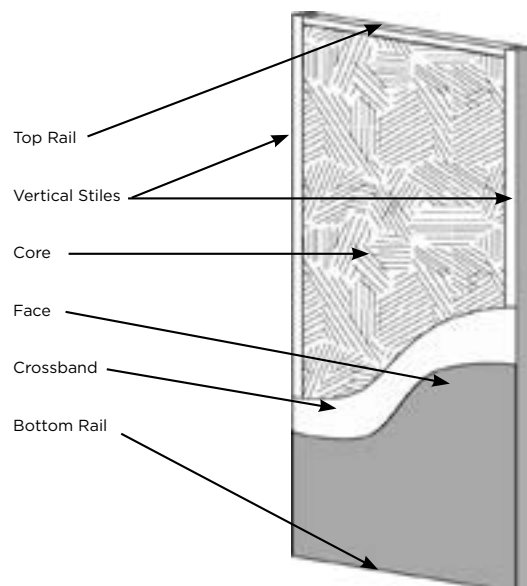
Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Certifications and Sustainability:

- Optional LEED 3.0 credits available
 - MR 7 - FSC Certified Wood
 - IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



GPD-AD

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Agrifiber Core WDMA/AWS Extra Heavy Duty AF-5 HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Top and bottom rails - structural composite lumber
- Bonded to core
- 1" minimum after factory trim
- No additional blocking required for thru bolted closers
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Structural composite lumber (SCL) laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Agrifiber or Structural Composite Lumber
- Conforms to ANSI A208.1
- Contains no added Urea-formaldehyde

Fire Rating:

- 45 minute fire rating available
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Acoustical Rating:

- Sound Transmission Class (STC) 29 operable with required seals

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- .050 Thick decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wilsonart, Pionite, Nevamar

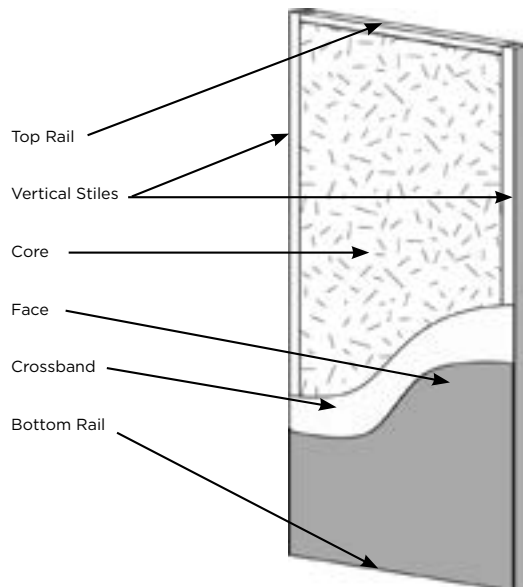
Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Certifications and Sustainability:

- Optional LEED 3.0 credits available
- MR 4 - Recycled Content (standard)
- MR 6 - Rapidly renewable Materials
- MR 7 - FSC Certified Wood
- IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra Heavy Duty face screw holding standards.

GPD-FD 45

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

5-Ply Fire Core WDMA/AWS Extra Heavy Duty FD-5 HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Top and bottom rails - wood or composite material, specific configuration to Label Service Listing
- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer & lock block available
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Structural composite lumber (SCL) laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Fire Resistant Composite Core per Graham Label Service Listing
- Contains no added Urea-formaldehyde

Fire Rating:

- 45 minute fire rating
- 250 degree temperature rise
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- .050 Thick decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wil-sonart, Pionite, Nevamar

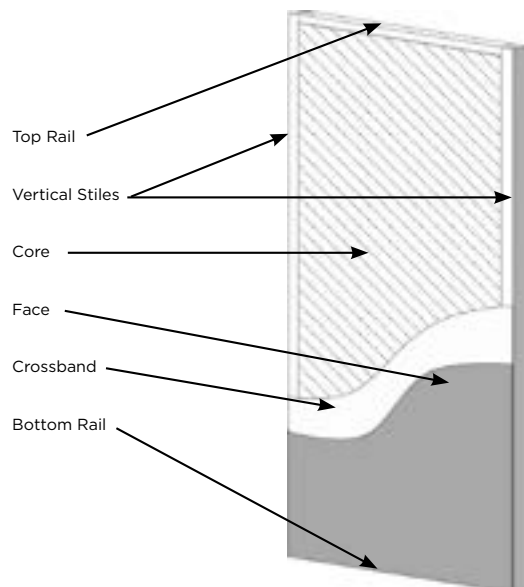
Crossband:

- 1/16" (1.6 mm) minimum high density engi-neered wood composite
- Optional with no added Urea-formaldehyde

Certifications and Sustainability:

- Optional LEED 3.0 credits available**
- MR 7 - FSC Certified Wood
- IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra Heavy Duty face screw holding standards.

**See Graham LEED Documentation

GPD-FD 60

Flush Door Core and Frame Details Wood Door Technical Manual

5-Ply Fire Core WDMA/AWS Extra Heavy Duty FD-5 HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Top and bottom rails - fire resistant composite material, Service Listing
- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer & lock block available
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Fire resistant composite laminated with impact resistant polymer edge banding as standard (matching laminate optional)

Core:

- Fire Resistant Composite Core per Graham Label Service Listing
- Contains no added Urea-formaldehyde

Fire Rating:

- 60 minute fire rating
- 250 degree temperature rise
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- .050 Thick decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wilsonart, Pionite, Nevamar

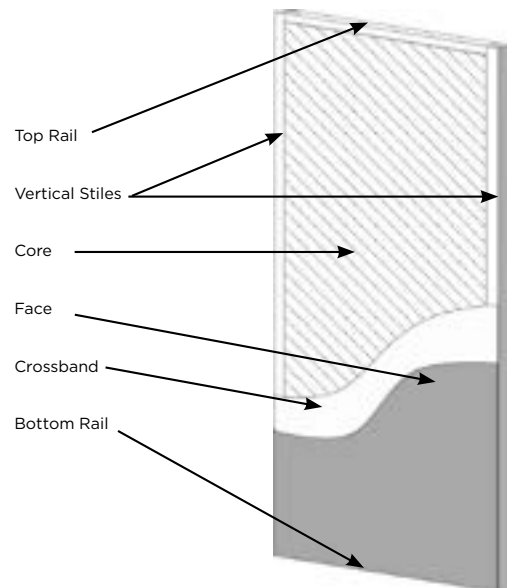
Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Certifications and Sustainability:

- Optional LEED 3.0 credits available**
- MR 7 - FSC Certified Wood
- IEQ 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra Heavy Duty face screw holding standards.

**See Graham LEED Documentation

GPD-FD 90

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

5-Ply Fire Core WDMA/AWS Extra Heavy Duty FD-5 HPDL (High Pressure Decorative Laminate)

Construction
Horizontal Edges:

- Top and bottom rails - fire resistant composite material, specific configuration to Label Service Listing
- Bonded to core
- No additional blocking required for thru bolted closers
- Optional closer & lock block available
- Impact resistant polymer edge banding as standard (matching laminate optional)

Vertical Edges:

- Bonded to core
- Fire resistant composite laminated with impact resistant polymer edge banding as standard (matching laminate optional)

- Core:

- Fire Resistant Composite Core per Graham Label Service Listing
- Contains no added Urea-formaldehyde

Fire Rating:

- 90 minute fire rating
- 250 degree temperature rise
- Meets UL 10b (neutral pressure) and UL 10c (positive pressure) Category "B" requirements
- Option to UL 10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty*
- Aesthetic: WDMA - Premium Grade

Face Veneer:

- 2 Ply construction
- .050 Thick decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wil-sonart, Pionite, Nevamar

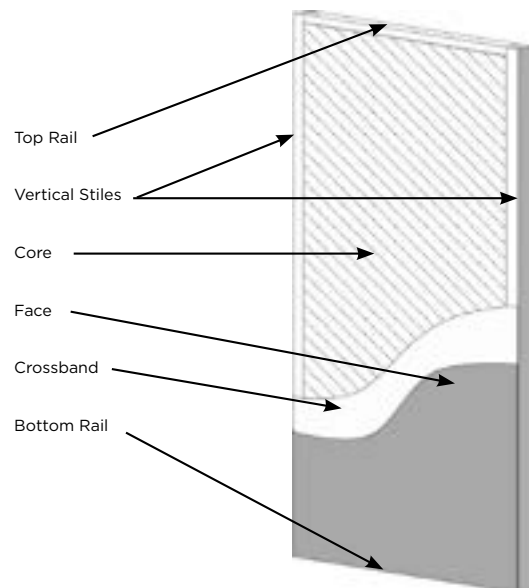
Crossband:

- 1/16" (1.6 mm) minimum high density engineered wood composite
- Optional with no added Urea-formaldehyde

Certifications and Sustainability:
Optional LEED 3.0 credits available**

- MR 7 - FSC Certified Wood IEQ
- 4.4 - Low-emitting Materials
- California Air Resources Board (CARB)
- GreenGuard - Indoor Air Quality & Children in Schools
- Collaborative for High Performance Schools (CHPS)

Lifetime Warranty



*Optional blocking required to meet Extra Heavy Duty face screw holding standards.

**See Graham LEED Documentation

Thermal Fused Flush Door Core and Frame Details Wood Door Technical Manual

Structurally Engineered Particle Board Core LPDL (Low pressure decorative Laminate)

Construction

Face Material:

- Faces are thermally fused to the core at approximately 600 psi and 392 degrees fahrenheit, no finishing required

Core Material:

- 42 lb. structurally engineered particle board core

Edgebanding:

- 1mm (.04") thick durable edgebanding completely seals the perimeter of the door, including the top and bottom

Reinforced Hinge Screw Locations:

- Pre-drilled, glued, spiral-grooved birch reinforcement of 2x the diameter of the hinge screws eliminate the need for stiles, rails and cross bands

Fire Rating:

- 90 minute fire rating - 250 degree temperature rise - Meets UL 10b (neutral pressure) and UL10c (positive pressure) Category "B" requirements
- Option to UL10c (positive pressure) Category "A"

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Construction Grade:

- Performance: WDMA/AWS - Extra Heavy Duty
- Aesthetic: WDMA - Premium Grade Face

Veneer:

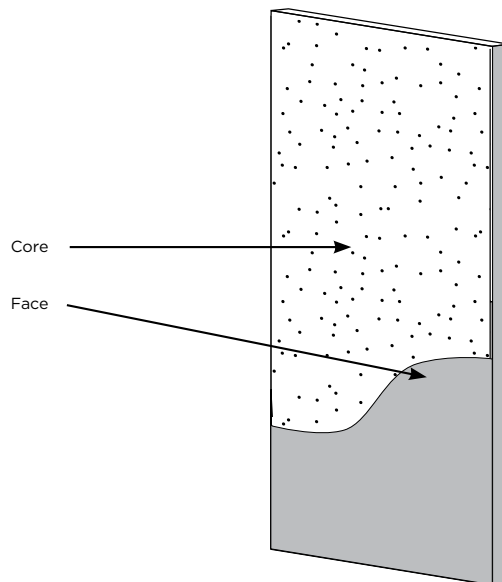
- .050 Thick decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wil-sonart, Pionite, Nevamar

Certifications and Sustainability: Optional LEED credits available:

MR 4 - Recycled Content
MR 7 - FSC Certified Wood

IEQ 4.4 - Low-emitting Materials:
composite wood & agrifiber products
IEQ 8.1 & 8.2 - Daylight and Views
- GreenGuard - Indoor Air Quality & Children in Schools

Lifetime Warranty



Integriss Moisture Resistant Door

Flush Door Core and Frame Details

Wood Door Technical Manual

July, 2016

3-Ply Moisture Resistant Core HPDL (High Pressure Decorative Laminate)

Construction

Horizontal Edges:

- Top and bottom rails - Pressure treated plywood laminated with a matching decorative laminate edge band
- Bonded to core
- No additional blocking required for thru bolted closers

Vertical Edges:

- Bonded to core
- Pressure treated plywood laminated with a matching decorative laminate edge band

Core:

- Moisture resistant core
- Conforms to ASTM D 1037, AWPA E7, and AWPA E16 standards

Fire Rating:

- 20 minute fire rating available
- Meets UL 10c (positive pressure) Category "A" and Category "B" without hose stream requirements

Adhesive:

- Doors constructed using Type I adhesives which contain no added Urea-formaldehyde

Performance Data:

Performance Attribute	Achieved
Cycle Slam, WDMA TM-7	1,000,000 Cycles
Hinge-Loadng, WDMA TM-8	688 lbs.
Screwholding, WDMA TM-10	
Door Face	980 lbs.
Vertical Door Edge	680 lbs.
Horizontal Door Edge	706 lbs.

Also passed ASTM F476 Level 40 and WDMA-15 vertical edge impact testing

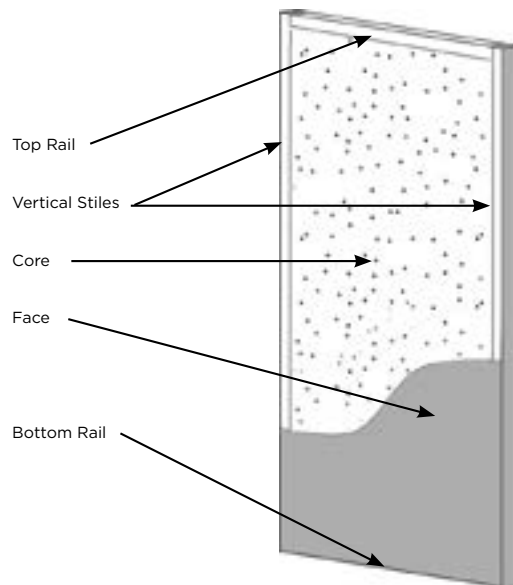
Face Veneer:

- Decorative laminate
- Wide variety of patterns, solid colors, and woodgrains
- Available decorative faces from Formica, Wilsonart, Pionite, Nevamar

Certifications and Sustainability: Optional LEED credits available:

- IEQ 4.1&4.2 - Low Emitting Materials: adhesives and sealants, paints & coatings
- IEQ 4.4 - Low Emitting Materials: composite wood & agrifiber products
- IEQ 8.1 & 8.2 - Daylight and Views

3 Year Warranty (Interior Applications)
1 Year Warranty (Exterior Applications)



Architectural 5-Ply Specification

Flush Door Core and Frame Details

Wood Door Technical Manual

WDMA I.S. 1-A-13

C-2: Crossbanding Requirements

Crossbanding (the layer of material under the faces of doors constructed of 5 or more plies) may be sound hardwood veneer, or engineered wood products (composites).

C-3: Core Requirements

Basic Core Types:

The most common core types are particleboard, structural composite lumber, fire resistant composite core and hollow.

Special Core Types:

Special cores for Sound Resistant Doors, Lead Lined, Bullet Resistant Doors, and others are available.

Particleboard Core:

Cellulose based materials that comply with standard ANSI A208.1 Particleboard, grade LD-1, LD-2 or M2.

Structural Composite Lumber Core:

Engineered composite wood products meeting the minimum requirements of WDMA Methodology for Recognition of Structural Composite Lumber in Millwork Applications.

Fire Resistant Composite Core:

Fire resistant composite core for fire doors per manufacturer's label service listing.

Hollow Core:

Slab polystyrene per ASTM C578, type 1. Expanded honeycomb made of corrugated fiberboard. Ladder core and grid core also permitted.

C-4: Edge Requirements

Vertical Edges (Stiles):

Hardwood or hardwood/structural composite lumber, one piece, laminated, or veneered. Specific configuration per manufacturer's standard with minimum performance requirements per section C-11 & A-9, Performance Levels for Architectural Wood Flush Doors.

Horizontal Edges (Rails):

Solid wood, or structural composite lumber meeting the minimum requirements of C-11 & A-9.

C-5: Vertical and Horizontal Edge/Core Interface

There are two types of interface between the core and the edges in solid core doors:

Bonded:

Vertical and horizontal edges of solid core doors must be securely bonded to the core with adhesives and then abrasively planed before veneering to insure minimal telegraphing of core parts through facing material.

Non-Bonded:

Edges are not bonded to the core material. The maximum gap between core and vertical and/or horizontal edges to be 1/32" (0.8 mm). Core and edging component thickness tolerance is +/-0.005" (0.1 mm) to assure minimal telegraphing of core parts through facing material.

C-6: Adhesives

Glue lines for face veneer assembly, between the various plies of the face, and between the facing and core assembly, are to be Type I or Type II. Glue lines between edging and core in bonded core assemblies are to be Type II minimum. Type I adhesives are exterior glues and are recommended for exterior use doors. Type II adhesives are interior use glues. Both adhesive types must meet the requirements specified in WDMA TM-6 Adhesive Bond Durability Test Method.

Fire Door Labels

Flush Door Core and Frame Details

Wood Door Technical Manual

Standard Fire Door Labels

Fire Doors with Transoms

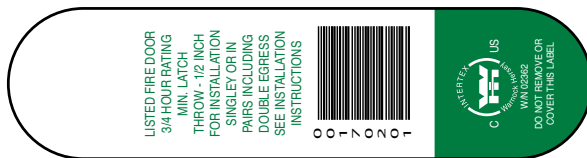
20 Minute Singles & Pairs with Metal Edges



20 Minute Singles



45 Minute Singles & Pairs



45 Minute Singles



60 Minute Singles & Pairs



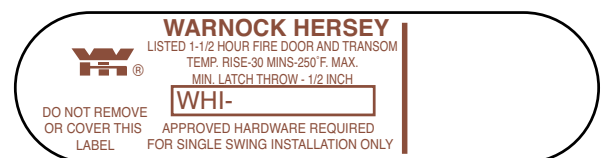
60 Minute Singles



90 Minute Singles & Pairs



90 Minute Singles



Fire Door Labels

Flush Door Core and Frame Details

Wood Door Technical Manual

Supplemental Fire Door Labels

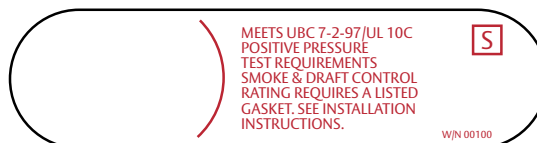
Surface Mounted Hardware



Fire Exit Hardware Label



Positive Pressure



Neutral Pressure Fire Door Installation Instructions

WARNING - This door has been labeled for compliance with NFPA 252 and UL 10b Neutral Pressure requirements. The validity of this label requires application of qualified components and hardware at installation. Failure to use approved listed hardware or drill pilot holes will void the fire label and the warranty.

Category A Positive pressure Fire Door Installation Instructions

WARNING - This door has been labeled for compliance with UBC Standard 7-2 1997 and UL 10c Positive Pressure requirements. The validity of this label requires application of qualified components and hardware at installation. Failure to use approved listed hardware or drill pilot holes will void the fire label and the warranty.

SPECIAL HARDWARE - CVR latch and EPT preps 40" above finished floor require the application of Tecnofire 2000 or Pemko HSS2000 intumescent lining the prep. Top flushbolts require 1" wide Tecnofire or two strips of Pemko HSS2000 applied across the top of the flushbolt.

SMOKE/DRAFT CONTROL - Listed Category H Smoke and Draft Control Gasket complying with UBC 7-2 1997 Part I and Part II shall be installed in the opening. If using the Pemko S88 seal as listed above, no other Smoke/Draft seal is required.

Category B Positive pressure Fire Door Installation Instructions

WARNING - This door has been labeled for compliance with UBC Standard 7-2 1997 and UL 10c Positive Pressure requirements. The validity of this label requires application of qualified components and hardware at installation. Failure to use approved listed hardware or drill pilot holes will void the fire label and warranty.

EDGE SEALS - Certain fire rated doors require edge seals to comply with Positive Pressure listing. These seals are surface applied in the field.

SPECIAL NOTES FOR ALL FIRE DOORS

DO NOT REMOVE METAL FIRE RATING LABEL FROM THIS DOOR!

DO NOT trim for width and height.

CLEARANCES - Proper clearance of 1/8" at door top and hinge/latch edges must be maintained.

MORTISE HINGES - USE ONLY #12 X 1-1/4" Threaded-to-the-head steel wood screws for application. Pre-drill 5/32" pilot holes for all screws.

SURFACE MOUNTED BUILDERS HARDWARE - Attach with steel throughbolts only, unless interior blocking is provided.

LOCKS & LATCHES - Attach with threaded-to-the-head steel wood screws. Pre-drill proper pilot holes for screws

FRAMES - This door shall be installed in a listed and labeled frame of equal or greater fire rating made of 16 or 18 gauge steel, wood, or other material.

Notes

Flush Door Core and Frame Details
Wood Door Technical Manual