



Product Update

March 1, 2012

#P420

Revision 01

WDMA PERFORMANCE DUTY LEVELS

Subject: Duty Level Ratings of VT Doors (per WDMA Performance Standards)

VT doors are able to meet the "Extra Heavy Duty" level. The top rail and hinge stile screw withdrawal as well as hinge load and cycle slam meet extra heavy duty with standard constructions. The face screw withdrawal for Stave, SCL and 45-min rated particle core meet extra heavy duty without additional blocking. Particle and 45-min Agrifiber meet "Heavy Duty" without additional blocking. Blocking is required for standard Agrifiber, Acoustic and Mineral core doors where hardware will be attached to the face using screws. Blocking is generally not required for through bolted hardware. The table on page 2 shows the duty level for the physical properties by core type.

Door Type	Screw Withdrawal			Hinge Load	Cycle Slam
	Hinge Stile	Top Rail	Core		
Particleboard* (Non-rated & 20-Min)	Extra Heavy Duty	Extra Heavy Duty	Particle core doors meet "Extra Heavy Duty" requirements when blocked for screw-attached surface hardware. Without blocking the core screw withdrawal meets "Heavy Duty" requirements.	Extra Heavy Duty	Extra Heavy Duty
Particleboard (45-Min)	Extra Heavy Duty	Extra Heavy Duty	This Particle core doors meets "Extra Heavy Duty" requirements for screw attached surface hardware without blocking.	Extra Heavy Duty	Extra Heavy Duty
Acoustic Construction	Extra Heavy Duty	Extra Heavy Duty	Acoustic door constructions meet "Extra Heavy Duty" requirements when blocked for screw-attached surface hardware. Without blocking the core screw withdrawal is below "Standard Duty" requirements.	Extra Heavy Duty	Extra Heavy Duty
Agrifiber (Non-rated, 20-45 min)	Extra Heavy Duty	Extra Heavy Duty	Agrifiber core doors meet "Extra Heavy Duty" requirements when blocked for screw-attached surface hardware. Without blocking the core screw withdrawal meets "Heavy Duty" requirements.	Extra Heavy Duty	Extra Heavy Duty
Stave**	Extra Heavy Duty	Extra Heavy Duty	Stave core meets "Extra Heavy Duty" requirements and requires no blocking for screw attached surface hardware.	Extra Heavy Duty	Extra Heavy Duty
SCL**	Extra Heavy Duty	Extra Heavy Duty	SCL core meets "Extra Heavy Duty" requirements and requires no blocking for screw attached surface hardware.	Extra Heavy Duty	Extra Heavy Duty
Mineral	Extra Heavy Duty	Extra Heavy Duty	Mineral core doors meet "Extra Heavy Duty" requirements when blocked for screw-attached surface hardware. Without blocking the core screw withdrawal is below "Standard Duty" requirements.	Extra Heavy Duty	Extra Heavy Duty



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* This includes the Standard core, No-UF core and FSC certified core.

** This includes the both the Standard core and the FSC certified core.

The table on page 3 shows the performance values required for each duty level per WDMA I.S. 1-A (04).

Performance Attribute	Duty Level		
	EXTRA HEAVY DUTY	HEAVY DUTY	STANDARD DUTY
Adhesive Bond Durability WDMA TM-6,1988	Type II	Type II	Type II
Cycle Slam WDMA TM-7,1990	1,000,000 cycles	500,000 cycles	250,000 cycles
Hinge-Loading WDMA TM-8,1990	550 lbs. (2440 N)	475 lbs. (2110 N)	400 lbs. (1780 N)
Door Finishes Various ASTM test methods	TR-6/OP-6 or equal *	TR-4/OP-4 or equal *	TR-2/OP-2 or equal *
Screwholding WDMA TM-10,1990			
Door Face unblocked	550 lbs. (2440 N)	475 lbs. (2110 N)	400 lbs. (1780 N) **
Door Face (with optional blocking) ***	700 lbs (3110 N)	700 lbs (3110 N)	700 lbs (3110 N)
Vertical Door Edge	550 lbs. (2440 N)	475 lbs. (2110 N)	400 lbs. (1780 N)
Horizontal Door Edge (applies when hardware are attached)	300 lbs. (1330 N)	240 lbs. (1060 N)	180 lbs. (810 N)
Telegraph WDMA T-1	Maximum 0.010 in. per 3 in. (0.25 mm per 76 mm) span		
Warp Tolerance WDMA T-2	maximum 0.25 in per 3'-6" x 7'-0" (6.35 mm per 1050 mm x 2100 mm) door section		
Squareness WDMA T-3	Diagonal variance 0.125 in. (3.17 mm)		

* Other formulations may exhibit similar performance characteristics, but must meet or exceed the performance levels for the systems specified to be considered as equal.

** If screwholding power is less than 400 lbs. (1780 N) blocking or thru-bolts are recommended for operable hardware.

*** Blocking may be specified in certain hardware applications where a specifier deems the frequency and severity of use so dictates. Blocking is a material used for improved screwholding at hardware attachment points (not required in core types such as SCL or Stave Lumber). Refer to Sections C-10 through C-14 for blocking options.