

THERMALEX® 2000



COMMERCIAL-INDUSTRIAL
SECTIONAL OVERHEAD DOORS





Model U100: Solid/Closed Door

- Offers different thicknesses, with optimum R-Values
- **TX380, TX450, TX450-20, TX500**



Model R112G: Thermal Windows

- 18" x 8" (457mm x 203mm) or 24" x 12" (609mm x 308mm) windows, insulated and sealed
- Available in Black or White moulded PVC frame
- Other glazing options available; consult factory
- **TX380, TX450, TX450-20, TX500**



Model V130G: Full View Sections

- Intermediate full-view section, finished in Polyester White or Brown; (up to 30% of door face to a maximum of 3 sections in a door).
- Extruded aluminum, 6063-T6
- Standard Thermopane glass; (other glazing options available)
- Insulated sealed unit held in place with quick snap-on mouldings
- **TX450, TX450-20** only

STANDARD WINDOW SCHEDULE

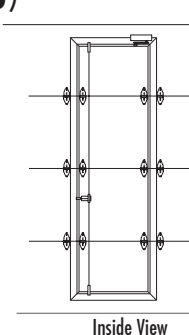
Door Width	Max. # of Windows 18" x 8" frame	Max. # of Windows 24" x 12" frame
8'-2"	3	2
10'-2"	4	3
12'-2"	4	3
14'-2"	5	4
16'-2"	5	4
18'-2"	6	5
20'-2"	6	5
22'-2"	7	6
24'-2"	8	6

HEIGHT SCHEDULE

Door Height	No. of Sections
8'-1"	4
10'-1"	5
12'-1"	6
14'-1"	7
16'-1"	8
18'-1"	9
20'-1"	10

PASS DOOR (optional – only available in TX450)

- Easy access without opening overhead door
- Energy saving in both heated or air-conditioned buildings
- Provides entry into building when overhead door is only access or emergency exit in case of power failure
- Standard size 34"w x 84"h (864mm x 2134mm)



After 30 years, Upwardor® continues to be an industry leader due to an unwavering commitment to research and development. The **Thermalex® 2000 Series** is specifically designed and built for commercial and industrial applications. Using only the highest quality materials, steel panels are manufactured to strict tolerances on a fully automated continuous foamed-in-place line. This results in a durable, clean and consistent finished product, which offers exceptional value.

Key Features and Benefits:

Polyurethane foam insulated (Zero OPD) provides the highest R-Values and U-Values in the industry, and is environmentally safe and friendly

Consistent foam density and foam/steel adhesion with a 95%+ closed cell ratio ensures panel is free of voids or deterioration over time resulting in superior panel strength and optimum insulating efficiency year in, year out

Chemically bonded and sealed thermal break – Maximizes door insulating efficiency by preventing heat transfer or panel retention of air or moisture

Panels are dimensionally stable at all temperatures, unaffected by extreme climate conditions

Corrosion resistant G60 hot-dipped galvanized steel skins with baked-on primer (.02 mil) and top finish coat (.07mil) of polyester paint. Clean appearance inside and out yet durable for long-term protection against rust and the harshest of environments

Tongue and groove joint design (TX450, TX450-20, TX500) with dual-fin weather seal – prevents air, rain, ice and snow infiltration when door is closed

Exclusive continuous double steel reinforcement hinge strips (TX450, TX450-20, TX500) – permits use of industry standard "full" hinges and allows flexible cut-to-size inventory management

THERMALEX® 2000

INSULATED SECTIONAL GARAGE DOORS

SELECTION GUIDE

Series # Panel Thickness	Thermalex TX380 1-1/2" (38mm)	Thermalex TX450 1-3/4" (44.5mm)	Thermalex TX450-20 1-3/4" (44.5mm)	Thermalex TX500 2" (50.8mm)
Limited Warranty	5 Year	10 Year	10 Year	10 Year
Hardware/Spring Warranty	1 Year*	1 Year *	1 Year *	1 Year *
Insulation Type/Foam Process	Polyurethane/Continuous	Polyurethane/Continuous	Polyurethane/Continuous	Polyurethane/Continuous
R-Value/U-Value	14.1/0.07 ⁺	16.3/0.06 ⁺	16.3/0.06 ⁺	18.4/0.05 ⁺
Thermal Break (between exterior & interior skins)	Chemically Bonded & Sealed	Chemically Bonded & Sealed	Chemically Bonded & Sealed	Chemically Bonded & Sealed
Section Joint	Shiplap w/dual-fin weather seal	Tongue & Groove w/dual fin weather seal	Tongue & Groove w/dual fin weather seal	Tongue & Groove w/dual fin weather seal
Gauge Steel Skins - min. (exterior/interior)	26/26	26/26	20/26	26/26
Horizontal Hinge Plate(s) (reinforcement strip)	One Continuous 1-1/4"(31.8mm) 20ga Strip	Two Continuous 1-1/4"(31.8mm) 20ga Strips	Two Continuous 1-1/4"(31.8mm) 20ga Strips	Two Continuous 1-1/4"(31.8mm) 20ga Strips
End Stiles - Galvanized	20ga	20ga or 16ga	20ga or 16ga	20ga or 16ga
Colors Available (interior always white)	Bright White/Brown	Bright White/Brown	Bright White only	Bright White only
Panel Appearance (texture)	Horizontal Ribs (Stucco embossed)	Horizontal Ribs (Stucco embossed)	Flush - No Ribs (Stucco embossed)	Horizontal Ribs (Stucco embossed)
Maximum Standard Width	**16'2" (4928mm)	** 28'0" (8534mm)	** 24'6" (7468mm)	** 28'0" (8534mm)
Maximum Standard Height	**16'0" (4877mm)	** 20'0" (6096mm)	** 20'0" (6096mm)	** 20'0" (6096mm)
Insulated Windows	Sealed Units 18" x 8" or 24" x 12"	Sealed Units 18" x 8" or 24" x 12"	Sealed Units 18" x 8" or 24" x 12"	Sealed Units 18" x 8" or 24" x 12"
Full View Aluminum Sections	N/A	White/Brown Insulated Sealed Glass	White/Brown Insulated Sealed Glass	N/A

* Warranty applies to springs & hardware as (if) supplied by Upwardor®.

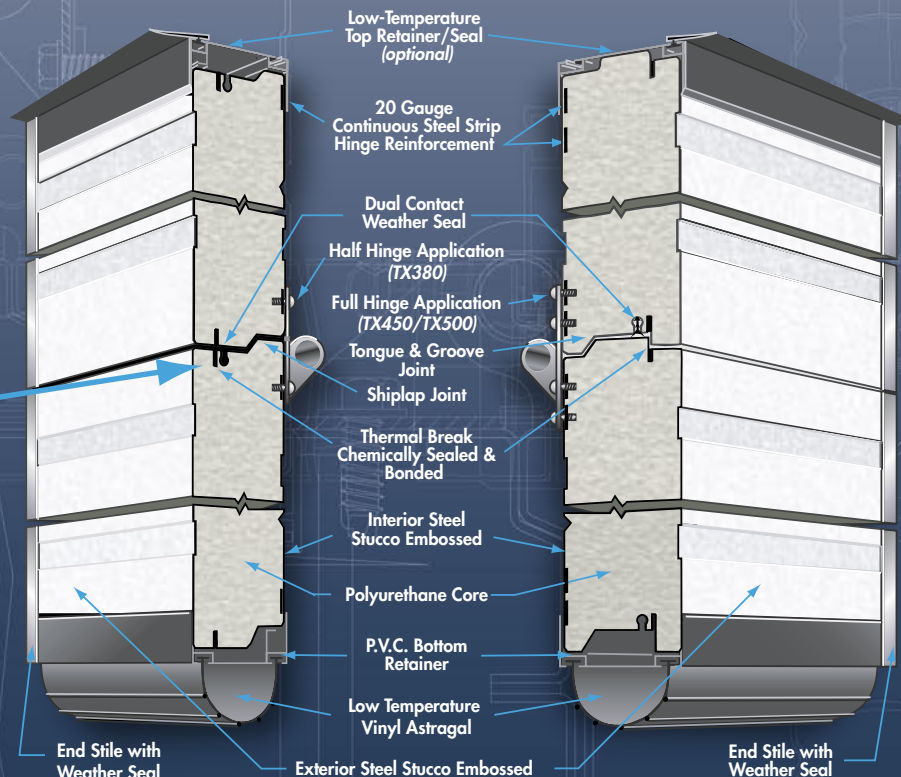
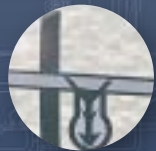
**Consult Factory for special applications and larger available sizes.

⁺Calculated Value

THERMALEX® 2000

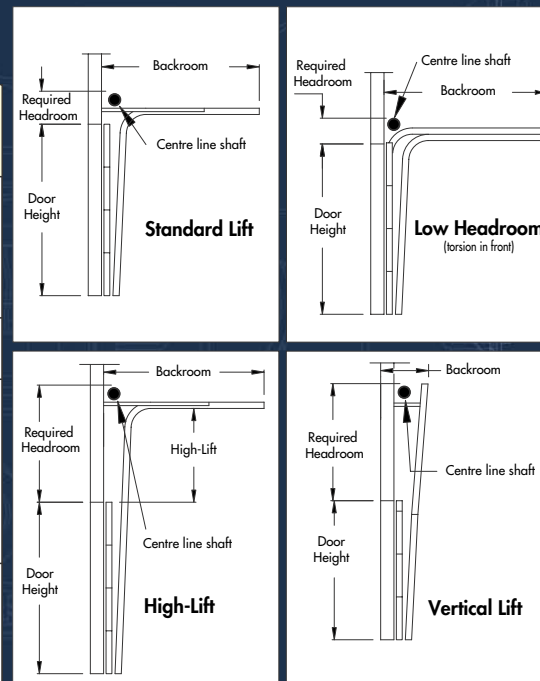
Series TX380

Series TX450/Series TX500



THERMALEX® 2000

LIFT TYPE	SPECIFIC PARAMETERS	HEADROOM*			SIDE ROOM*				BACKROOM*
		2" Track		3" Track	2" Track		3" Track		2" and 3" Track
		12" radius	15" radius	15" radius	Angle Mount	Bracket Mount	Angle Mount	Bracket Mount	
STANDARD LIFT	Door Height up to 18' (5.49m)	13" (330mm)	16" (406mm)	18" (457mm)	3.25" (83mm)	3.75" (95mm)	3.5" (89mm)	4.25" (108mm)	Door Height +18" (+457mm)
	Door Height above 18' (5.49m)	N/A	N/A	20" (508mm)					
VERTICAL LIFT	Max Door Height 28' (8.53m)	Door Height +18" (457mm)			3.25" (83mm)	3.75" (95mm)	3.5" (89mm)	4.25" (108mm)	18" (457mm)
HIGH-LIFT	High Lift up to 54" (1.37m)	N/A	Hi-Lift +9.5" (+241mm)	Hi-Lift +11.5" (+292mm)	3.25" (83mm)	3.75" (95mm)	3.5" (89mm)	4.25" (108mm)	Door Height - Hi-Lift +30" (+762mm)
	High Lift up to 120" (3.05m)	N/A	Hi-Lift +11.5" (+292mm)	Hi-Lift +12.5" (+318mm)					
	High Lift up to 164" (4.17m)	N/A	Hi-Lift +12" (+305mm)	Hi-Lift +13.5" (+343mm)					
LOW HEADROOM	Max Door Ht. 18' (5.49m)	Torsion in rear	10" (254mm)	12" (305mm)	8" (203mm)	7" (178mm)	8" (203mm)	8" (203mm)	Door Height +18" (+457mm)
			6" (152mm)	N/A					



*Minimum requirement for normal installation conditions.

SPECIFICATIONS:

Sectional Doors

Doors shall be **Thermallex® Series TX380, TX450, TX450-20, TX500 –Thermallex® Models U100, R112G, V130G** as manufactured by **Upwardor® Corporation**. Operation shall be manual push-up operation and include sections, track, brackets, and hardware to suit door opening and headroom available.

Related Work

All framing work, spring pads, frame extensions, caulking and electrical wiring shall be under other divisions.

Door Sections

Door sections shall be roll-formed continuous steel sheets, corrosion resistant Z275 ASTM, stucco embossed, and ribbed for added strength. Exterior steel skins shall be prefinished in bright white or brown with bright white interior skin. Paint finish shall be of Polyester. TX450, TX450-20 and TX500 door sections shall have a Tongue and Groove Joint with dual fin weather strip between section joints. TX380 door sections shall have a shiplap joint also with dual fin weather strip between section joints. Door sections shall be thermally broken and chemically sealed and bonded for added weather resistance. Sections shall be polyurethane insulated (Zero ODP) foamed-in-place by means of Continuous Process. Interior skin of each TX450, TX450-20 and TX500 section shall be reinforced by two continuous 1-1/4" (32mm) wide steel strips, 20 gauge, at top and bottom of section for mounting of either half or full hinge. TX380 sections shall have continuous hinge strip reinforcement at top and bottom of section for mounting of half hinge.

Glazing

Glazing for Model R112G shall be of 1/8" (3mm) thermopane sealed unit, clear, fitted into 18"x 8" (457mm x 203mm) or 24" x 12" (609mm x 308 mm) moulded plastic frame in black or white. V130G aluminum framed full view section shall be glazed with 1/8" (3mm) thermopane sealed unit (overall thickness 1/2" with 1/4" air space), clear, fitted with removable moulding for easy replacement. **Note:** other glazing options available, please consult factory.

Hardware

Upwardor® Corp. hardware shall be of galvanized steel, G60 ASTM, with gauge thickness to suit applications and shall be in accordance with drawings and specifications.

Tracks

Tracks shall be 2" (51mm) minimum, 14 gauge, or 3" (76mm) minimum, 12 gauge. All vertical tracks shall be bolted and assembled to a continuous 2" (51mm) x 4" (102mm) vertical angle, minimum 14 gauge, or to jamb brackets, 11 gauge, and shall be fully adjustable. Horizontal tracks shall have a maximum radius of 15" (381mm) with a continuous 12 gauge angle, 1-1/2" (38mm) x 2" (51mm), welded to the horizontal tracks.

Hinges/Rollers

Roller carriers shall be a minimum 13 gauge galvanized steel to suit door width. Doors 16' (4877mm) wide and over require double end hinges, along with strut bar reinforcement. Rollers shall be of 2" (51mm) or 3" (76mm) diameter, 10 ball bearing with hardened raceway and cold rolled 7/16" (11mm) x 4-1/2" (114mm) stem. Long stem 7" (178mm) rollers shall be supplied with double end hinges.

Torsion Springs

Torsion springs shall be oil tempered with minimum 10,000 standard cyclage (specify higher cyclage if required to maximum of 100,000 cycles) fitted on a continuous 1" (25mm) hollow, 14 gauge tube shaft, or on a 1" (25mm) cold rolled solid shaft, keyed, and mounted on ball bearings, supported by heavy gauge gusset plates. Counter weight system available on request. For added strength, 1-1/4" (32mm) diameter solid shaft and pillow block bearings also available.

Cable Drums

Cable drums shall suit the type of lift required and be able to withstand maximum cycle requirements. Cables shall be of galvanized aircraft grade, 7 x 19 construction, designed to suit door weight at a safety factor of 8 to 1.

NOTE: When specifying Chain Hoist or Jack Shaft Electrical operator on standard lift doors, specify solid shaft, spreader bars and pusher springs.

Installation

Installation of doors to be executed by qualified dealer/installer in accordance with installation instructions or shop drawings by **Upwardor® Corporation**.



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