SECTION 08 41 26

ALL GLASS ENTRANCES AND STOREFRONTS

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\*\* NOTE TO SPECIFIER \*\* InKan Ltd.; interior and exterior glass assemblies.  
 .  
 This section is based on the products of InKan Ltd., which is located at:

14 Indell Ln.  
 Brampton, ON, Canada L6T 3Y3  
 Toll Free: (800) 387-2481  
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[ [Click Here](http://www.arcat.com/company/33272) ] for additional information.

InKan Limited operates out of its own 4645 square meter (50,000 sf) facility in Brampton, Ontario. Its resources include in-house metal shear and brake equipment, a skilled welding department and a complete machine shop. InKan's tempering division boasts the most technologically advanced glass processing and handling equipment in the industry. A computerized, tong-free electric tempering furnace guarantees the highest quality of finish available.  
   
 Suspended Glass Wall and Glass Canopy:   
 The ideal solution for a large wall opening: the suspended glass assembly. The glass wall, acting as one unit, hanging from the head of the structure, not only provides a transparent, weatherproof membrane, but also acts as a structural wall. The wall may be interrupted by tempered glass doors or revolving doors to provide access where required.  
   
 Kiosks, Entrances and Partitions:  
 Entrances  
 Ultra-View by RDM complements any interior or exterior. Tempered glass doors and sidelites of 12mm (1/2 inch) or 10mm (3/8 inch) thickness permit minimal obstruction, creating the ultimate in open concept design. Entrance doors, kiosk boutiques and screens of tempered glass can be custom designed to suit virtually any application. Specially crafted hardware is available in a variety of finishes to enhance the crystal clarity of the glass.  
   
 Kiosks and Showcases:  
 Free standing or top and bottom secured, RDM glass kiosks can transform idle space into profitable, functional space. Choose from InKan's range of expertly crafted metal fittings and either 10mm (3/8 inch) or 12mm (1/2 inch) fully tempered Ultralite glass.  
   
 Partitions  
 To achieve the Ultra-View concept, RDM glass wall partitions can incorporate top and bottom rails or U-channels, either surface mounted or recessed. Not only attractive, RDM glass wall partitions also act as excellent sound barriers.  
   
 Glass Doors and Hardware:  
 Centre hung or offset pivot doors. Ultralite tempered clear glass or tinted glass. Standard or custom hardware. Aluminum, stainless steel, brass, bronze in a variety of finishes. Curved glass sliding doors.  
   
 Glass Balustrade:  
 A custom manufactured handrail in any combination of available finishes and styles, complemented by 12mm (1/2 inch), 15mm (5/8 inch) or 19mm (3/4 inch) clear tempered glass, will ensure lasting beauty, safety and that distinctive look so desirable in any decor.  
   
 Spandrel Glass:  
 OPACI-COAT-300 is a water-based silicone coating designed for use as a coloured opacifier for spandrel applications. OPACI-COAT-300 offers a unique alternative for glass coatings for exterior or interior decor.  
   
 Custom Metal and Sculpture:  
 No job is too small or too large to warrant our superior attention to detail, quality and safety.  
   
 Racquetball and Squash Courts:  
 All walls and fins are 12mm (1/2 inch) clear tempered glass with finished edges. All holes on the playing side are countersunk and dimensioned to receive special flush mounted fittings and hardware. A clear silicone compound is used to bond all joints. No glass-to-glass or glass-to-metal contact is permitted.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Exterior glass entrance doors.
    2. Glass vestibule doors.
    3. Glass interior doors.
    4. Frameless doors and sidelights for entrances and storefronts.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM B 455 - Standard Specification for Copper-Zinc-Lead Alloy (Leaded-Brass) Extruded Shapes.
    2. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
    3. ASTM C1048 - Standard Specification for Heat-Treated Flat GlassKind HS, Kind FT Coated and Uncoated Glass
    4. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference
    5. CAN 2-12.1-79 National Standard.
    6. CPSC 16 CRF Part 1201 II - Safety Standard for Architectural Glazing Materials.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 05 50 00 - Metal Fabrications.
    2. Section 06 10 00 - Rough Carpentry.
    3. Section 08 71 53 - Security Door Hardware.
    4. Section 08 83 13 - Mirrored Glass Glazing.
  1. SYSTEM DESCRIPTION
     1. Regulatory Requirements for Safety Glass Standard: Comply with CPSC 16 CRF Part 1201 II, "Safety Standard for Architectural Glazing Materials".
     2. Performance Requirements: Provide glass door assemblies that comply with specified performance characteristics. Test system by a recognized testing laboratory or agency in compliance with specified test methods. Provide certified test results.

\*\* NOTE TO SPECIFIER \*\* Test pressure below is an example only. Revise pressure to reflect the maximum load required for the size of the system. Consult ANSI A58.1 for wind velocity applicable to the project location.

* + - 1. Exterior Wind Loading: Provide exterior assemblies capable of withstanding uniform test pressure of 958 Pa (20 psf) inward and 958 Pa (20 psf) outward when tested in compliance with ASTM E 330.
      2. Interior Loading: Provide interior assemblies capable of withstanding uniform test pressure of 240 Pa (5 psf) inward and 240 Pa (5 psf) outward.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
        4. Certified test reports indicating compliance with performance requirements specified herein.
     3. Shop Drawings: Submit shop drawings for fabrication and installation. Include the following:
        1. Plans, elevations, and detail sections.
        2. Indicate materials, methods, finishes, and types of joinery, fasteners, anchorages, and accessory items. Specify finishes.
        3. Provide setting diagrams and templates for hardware, anchorages, sleeves, and bolts installed by others.
        4. Where materials or fabrications are indicated to comply with certain design loadings, include structural computations, material properties, and other information needed for structural analysis.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
       1. Where normal color and texture variations are to be expected, include 2 or more units in each set of samples showing the limits of such variations.
       2. Finish shall represent color range, finish thickness, and sheen to be expected in the finished Work.
    2. Verification Samples: For each finish product specified, two samples, minimum size 150 mm (6 inches) square, representing actual product, color, and patterns.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Not less than 10 years experience in the actual production of specified products.
        1. Components shall be factory fabricated and engineered by single entity.
     2. Installer Qualifications: Firm with 3 years experience in installation of systems similar in complexity to those required for this Project.
        1. Acceptable to or licensed by manufacturer.
        2. Successfully completed not less than 5 comparable scale projects using this system.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project. Delete if not required.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
       3. Refinish mock-up area as required to produce acceptable work.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Store products in manufacturer's unopened packaging until ready for installation.
     2. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
  2. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
     2. Field Measurements: Check openings by field measurement before fabrication to ensure proper fitting of work; indicate measurements on shop drawings.
        1. Where necessary, proceed with fabrication without measurements, and coordinate fabrication tolerances to ensure proper fit.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: INKAN Ltd., which is located at:14 Indell Ln.Brampton, ON, Canada L6T 3Y3Toll Free Tel: 800-387-2481Tel: 905-793-4747Fax: 905-793-9367Email: [request info (info@inkan.ca)](https://arcat.com/rfi?action=email&company=INKAN%252BLtd.&message=RE%253A%2520Spec%2520Question%2520(08450ikl)%253A%2520&coid=33272&spec=08450ikl&rep=&fax=905-793-9367);Web: <https://inkan.ca>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.
  1. MATERIALS
     1. Door Types: Refer to drawings for configuration.

\*\* NOTE TO SPECIFIER \*\* Delete door types not required.

* + - 1. Single And Double 100 Series - Rail at Top and Bottom.
      2. Single And Double 200 Series - Patch Fitting.
      3. Single And Double 250 Series - Top Patch, Bottom Rail.
      4. Single And Double 300 Series - Full Frame.
    1. Door Glass: Fully tempered safety glass complying with ASTM C1048, kind FT (fully tempered), condition A (uncoated surfaces), type I (transparent) flat, class and thickness as indicated. CAN 2-12.1-79 National Standard when applicable by jurisdiction.

\*\* NOTE TO SPECIFIER \*\* Delete door glass not required.

* + - 1. Glass: 10mm (3/8 inch) Ultralite tempered clear glass, as manufactured by InKan Ltd.
      2. Glass: Tinted glass in 10mm (3/8 inch) as manufactured by InKan Ltd.
      3. Glass: 12mm (1/2 inch) Ultralite tempered clear glass, as manufactured by InKan Ltd.
      4. Glass: Tinted glass in 12mm (1/2 inch) thicknesses, as manufactured by InKan Ltd.
      5. Glass: 19mm (3/4 inch) Ultralite tempered clear glass, as manufactured by InKan Ltd.
    1. Glass Panels: Fully tempered safety glass complying with ASTM C1048, kind FT (fully tempered), condition A (uncoated surfaces), type I (transparent) flat, class and thickness as indicated. CAN 2-12.1-79 National Standard when applicable by jurisdiction.
       1. Clear Glass: Provide Class 1 (clear) glass, unless otherwise indicated.

\*\* NOTE TO SPECIFIER \*\* Delete tinted glass not required. Refer to manufacturer's literature for tint colors and opacity treatments available.

* + - 1. Tinted glass: Class 3, (tinted light-reducing) glass of manufacturer's standard gray color.
      2. Tinted glass: Class 3, (tinted light-reducing) glass of manufacturer's standard bronze color.
      3. Thickness: 13 mm (1/2 inch), unless otherwise indicated.
    1. Door Fittings: Profile and arrangement selected by Architect from manufacturer's standard fittings. Comply with requirements indicated for kind and form of metal and finish.

\*\* NOTE TO SPECIFIER \*\* Patch fittings. Delete if not required. Delete alloys and cladding not required.. Bronze is also available as sheet cladding over aluminum core.

* + - 1. Aluminum Fittings: Fabricated from aluminum extrusions of alloy and temper recommended by manufacturer for use intended and required for application of finish indicated, but not less than strength and durability properties specified in ASTM B 221 for 6063-T5.
      2. Bronze Fittings: Fabricated from bronze extrusions complying with ASTM B 455, alloy C38500, Architectural Bronze.
      3. Stainless Steel Cladding: Stainless steel sheet cladding complying with ASTM 167, alloy 302, laminated to aluminum extrusions complying with ASTM B 221, 6063-T5.

\*\* NOTE TO SPECIFIER \*\* Spider fittings. Delete if not required.

* + - 1. Frameless glass stainless steel spider door fittings:
         1. Spider door fittings shall be manufactured from 316 marine grade stainless steel.
         2. Spider door fittings #483 and #452 as manufactured by A.G.A. Austvision.

\*\* NOTE TO SPECIFIER \*\* Available options include Spider door fittings finished in satin, polished stainless steel, gold or brass plate.

* + - * 1. Spider door fittings shall be stainless steel with finish as scheduled.
    1. Sidelight Fittings: Sidelight fittings and frames matching metal and finish of door fittings. Reinforce to support doors, sidelights, and transoms and to connect to adjacent construction. Refer to drawings.
    2. Anchors and Fastenings: Manufacturer's standard anchors and fastenings, concealed unless otherwise indicated.
       1. Finish heads of exposed fasteners to match base metal surfaces.

\*\* NOTE TO SPECIFIER \*\* Delete weather stripping if not required.

* + 1. Weatherstripping: Manufacturer's standard sweep-type weatherstripping.
  1. HARDWARE

\*\* NOTE TO SPECIFIER \*\* Delete door hardware not required.

* + 1. Top and bottom pivot hinges.
       1. Transom/Sidelite Pivot Patch: #317.4 (handed as required).
       2. Transom/Sidelite Pivot Patch for Fin: #317.41 (handed as required).
    2. Overhead Closer: Dorma BTS 80 Floor Closer as supplied by InKan Ltd.
    3. Overhead Concealed Closer: Dorma RTS 88 Overhead Concealed Closer as supplied by InKan Ltd.
    4. Overhead holder: Manufacturer's standard, heavy-duty concealed holder with dead-stop setting coordinated with opening angle selected for concealed floor closers.
    5. Overhead Stop: #152 Patch - Single Acting.
    6. Mortise deadbolt concealed in bottom rail complete with floor strike plate.
       1. Patch Deadbolt: #16500 Patch Lock with thumb turn.
       2. Patch Deadbolt: #319.5 Patch Lock with cylinder both sides.
    7. Rail and Stile Mounted Mortised Locks, Cylinders and Thumbturns as supplied by InKan Ltd.:
       1. Bottom Rail Locking: #AR 1830.
       2. Stiles Deadlatch: #AR 4711 Heavy Duty Deadlatch and Lock Housing.
       3. Bottom Rail Foot Bolt: AR 1850.
       4. Horizontal Bolt Bottom Rail Locking: #AR 1861.
    8. Egress Latch Paddle Push/Pull Device: #AR 4590 Latch Paddle Device (AR 4711 lock compatible). Handed and push/pull function as required.
    9. Push-pull: 25 mm (1 inch) diameter push bar with 25 mm (1 inch) pull mounted back to back complete with rosettes and security fasteners.
       1. 4000 Series.
       2. 4100 Series.
       3. 4200 Series.
       4. 4400 Series.
       5. 4500 Series.
       6. 4600 Series Combination (4000 + 4100).
       7. 4700 Series Combination (4200 + 4100).
    10. Threshold: Stainless steel, as supplied by manufacturer, continuous under doors.
  1. ACCESSORIES
     1. Sealants: Clear silicone sealant to comply with requirements of Section 07 90 00.
     2. Glazing Materials: Provide materials and installation procedures for glass setting required in compliance with Section 08 83 13.
  2. FABRICATION
     1. Tolerances: Verify dimensions on Site prior to shop fabrication.
        1. Fabricate items with joints neatly fitted and properly secured.
        2. Mill joints to a tight, hairline fit.
        3. Cope or miter corner joints.
     2. Design components to allow for expansion and contraction without causing buckling, excessive opening of joints, or overstressing of welds and fasteners.
     3. Form metal to the required shapes and sizes, with true curves, lines, and angles.
     4. Where finishing is required, complete assembly, including welding of units, before start of finishing operations. Provide finish surfaces of members exposed in final structure free of markings, burrs, and other defects.
     5. Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassembly units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
     6. Supply components required for proper anchorage. Fabricate anchorage and related components of same material and finish as metal fabrication, unless otherwise specified herein.
     7. Sizes of glass doors and profile requirements of fittings and hardware are indicated on the drawings.
        1. Fabricate holes and cutouts to receive hardware before tempering glass. Do not permit cutting, drilling or other alterations to glass after tempering.
        2. Fabricate work to accommodate required fittings, hardware, anchors, reinforcement, and accessory items.
     8. Continuity: Maintain accurate relation of planes and angles, with hairline fit of contacting members.
     9. Uniformity of Finish: Abutting members shall not have an integral color of variation greater than half the range indicated in the sample submittal, as judged solely by the Architect.

1. EXECUTION
   1. EXAMINATION
      1. Verification of Conditions: Examine areas and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.
      2. Do not begin installation until substrates have been properly prepared.
      3. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. INSTALLATION
      1. Install glass doors and accessories in compliance with manufacturer's recommendations.
      2. Set units level, plumb, and true to line. Adjust operating hardware to ensure proper operation.
      3. Provide anchorage devices and fasteners including threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors.
      4. Perform cutting, drilling, and fitting required for installation. Set accurately in location, alignment and elevation, plumb, level, and true, measured from established lines and levels.
         1. Provide temporary bracing or anchors in formwork for items which are to be built into concrete, masonry, or similar construction.
      5. Form tight joints with exposed connections accurately fitted with uniform reveals and spaces for sealants and joint fillers.
         1. Where cutting, welding, and grinding are required for proper shop fitting and jointing. Restore finished eliminating evidence of such corrective work.
      6. Do not cut or abrade finishes which cannot be completely restored in the field. At contractor's option do either of the following:
         1. Return items with such finishes to shop for required alterations, followed by complete refinishing.
         2. Provide new units.
         3. Field touch-up of finishes are not acceptable.
      7. Mounting brackets shall be securely mounted to building structure in a positive manner including sufficient reinforcements and anchors as required.
      8. Installation shall be rigid and secure, installed by mechanics experienced in erection of architectural metal. All screws and fittings shall be drawn up tightly. Rails shall be set plumb and aligned.
      9. Adjust doors and hardware to provide tight fit at contact points and at weatherstripping, for smooth operation and weathertight closure. Lubricate hardware and other moving parts.
      10. Clean door and frame surfaces promptly after installation, exercising care to avoid damage to coatings.
      11. Clean glass surfaces after installation, complying with requirements contained in Section 08 83 13 - Mirrored Glass Glazing.
   3. PROTECTION
      1. Protect installed products until completion of project.
      2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION