



**1300 Sumner Avenue
Cleveland, Ohio 44115-2851
Phone: 216-241-7333 • Fax: 216-241-0105
E-mail: dasma@dasma.com**

Metal Coiling Slat Door Terminology

An industry terminology standard can prove to be a helpful document:

- To facilitate communication between parties within the industry
- To improve the effectiveness of industry standards and other documents
- To reduce potential confusion and misunderstanding by recognizing and cross-referencing multiple terms that may have the same definition
- To educate interested parties outside an industry

The members of DASMA have compiled an extensive list of terms and definitions related to the rolling door industry to achieve these objectives.

The terminology information encompasses many common terms used in the rolling door industry. You will note that some terms are cross-referenced to a “primary” term. The “primary” term is the one that would be used most often in DASMA standards and technical publications.

Concerning the terms and definitions contained in this Technical Data Sheet, please note the following:

- This Technical Data Sheet is not to be construed as a standard-type document, and therefore the terms and definitions contained herein do not imply or suggest a given use to a particular manufacturer.
- This Technical Data Sheet includes a compilation of commonly used terms and may not be considered complete from an industry viewpoint.
- The terms and definitions are not universal. Variations within the industry may exist with regard to precise meaning.

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* Denotes fire door terminology only

1.0 SCOPE

The scope of this technical data sheet shall be to provide industry-accepted definitions for common metal coiling slat door terms. Multiple terms with the same definition are included if needed based on common usage of such terms. The primary term shall contain the definition.

2.0 TERMS AND DEFINITIONS

Access Panel: An opening in a ceiling for access to tension adjusting wheel and to drive mechanism (motor, crank, chain hoist). Furnished by the ceiling subcontractor or general contractor and not by the door manufacturer.

Adjusting Wheel: See Tension Wheel.

All Weather Door: A rolling service door having all the weather-stripping features, consisting of guide weather-stripping, hood baffle and bottom astragal.

Astragal: A compressible seal provided on the underside of the bottom bar.

***Authority Having Jurisdiction (AHJ):** The organization, office, or individual responsible for approving equipment, an installation, or a procedure.

***Automatic Closing Device:** A device, that causes the door or window to close when activated by a fusible link or detector.

***Automatic Fire Detectors:** See Detectors.

Backroom: Amount of clear unobstructed space extending back from the face of the wall.

Barrel Assembly: A cylindrical horizontal member at the head of the opening that supports the door curtain and contains the counterbalance springs.

Barrel Ring: A component attached to the counterbalance pipe or barrel, which is used to increase the curtain wrap diameter and which is attached to the curtain top slat.

Bar Stop: See Wind Bar.

Base Plate: Optional plate mounted on the floor to distribute weight from a framing system supporting the door.

Bellmouth: Flared upper portion of guides to ease entry of curtain into the guides.

Between Jamb Mounted: Type of mounting where the guides are positioned between the mounting surfaces and not on the surface (interior or exterior) of the wall. Guides are generally "packed out" mounted to the inside of jamb and hood below lintel. Clear opening size will be reduced and may require "fascia" to close off back of hood.

Bottom Bar: A reinforcing member at the lower edge of the door curtain assembly. It shall be provided with an astragal or sensing edge.

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Brackets: Plates bolted to the wall or to extensions of the guide wall angles that serve to support the barrel and form end closures for the hood.

Brush Seals: Term used to refer generically to the use of brush filament material either in use as a weather-seal or when used as smoke seals for smoke and fire doors.

Brush Weather-stripping: Weather-stripping for use on all configurations of doors to close the gaps at jambs and header. Brush material can be UL listed for "fire door" use.

Cable Sensor Edge: An edge that uses two cables inside a standard neoprene loop astragal. Upon connection with motor operator, a sensing field is established between the two cables. Any disturbance to this field causes the motor and door to stop and reverse (or stop).

Chain Hoist: A mechanical device to assist in raising and lowering the door by use of hand chain.

Charge Pin: A metal pin used to lock tension wheel after proper spring tension is applied.

Charge Wheel: See Tension Wheel

Closed Position: A position of the door curtain with the underside of the bottom bar, including an astragal or sensing edge in contact with the sill along the entire width of the opening.

Counter Shutter: A door used to close an opening, which includes a counter-type sill.

Counterbalancing: A method by which the hanging weight of the door curtain is balanced by helical torsion springs or weights.

Counterbalance Assembly: An assembly consisting of torsion springs, spring anchors, and a shaft, which is positioned inside the barrel assembly.

***Crush Plates:** Bearing plates provided where doors are mounted on concrete masonry wall units with hollow cells to accommodate through-wall bolts to prevent crushing of the hollow concrete masonry unit.

Curtain: Interlocked slats assembled together.

Curtain Slats: Formed sheet metal or extruded members that, where interlocked together, form the door curtain.

Cycle: An action on the door from the fully closed position, to the fully open position, and returned to the fully closed position.

Cylinder Lock: Key-operated locking device located on the bottom bar.

***Detectors:** A device suitable for connection to a circuit that has a sensor that responds to a physical stimulus such as heat or smoke.

Door/Grille Combo: Combined assembly of a rolling service door and a rolling grille door sharing guides and common bracket plates. Allows full security when required and ventilation with door opened and grille closed.

Double Throw Lock: Center locking device that throws a locking bar into both guides, mounted on bottom bar.

Drive Gear: Large gear for chain- or crank-operated units. It is directly fastened to the door shaft on the drive side bracket plate.

Drive Plug Assembly: See Plug End.

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Drive Shaft: The shaft in the barrel that is securely attached to the barrel, through welding or pinning. When this shaft rotates the barrel should also rotate.

***Dropout:** Weighted mechanical device for disengaging gearing or motor operator for rolling fire doors. Also used to activate closing spring and to release governor in case of fire.

***Drop Test:** Test performed on a fire door to ensure proper operation during emergency. Testing is required to be performed annually (see NFPA 80).

"E" Guides: - Common expression for the shape that guides form when they are mounted to steel jamb supports or frames.

Electric Sensor Edge: See Sensing Edge.

***Electromechanical Release:** A device, which holds the automatic closing device until it is released upon receipt of a signal from a fire alarm or detection system.

Emergency Electric Operation: Any rolling door with a motor operator and an Uninterruptible Power Supply (UPS) capable of opening and closing the door several times while facility line power is off.

Emergency Release Device: Permits emergency egress (exit). Normally furnished on grilles in Malls/Shopping Centers where building codes dictate. Device allows manual operation of the door without electrical power to open.

Endlock: A component which is attached to curtain slat ends at every other slat to prevent slats from shifting laterally, and to provide curtain wearing surface in guides.

End Plates: See Brackets.

Exterior Hood: Hood construction with a flat flange at the top of hood to accept field caulking.

Exterior Mounted: Condition where door is mounted on exterior surface exposed to weather and wind load. Usually requires "exterior hood" and "gear covers".

Face of Wall: Door mounting condition where guides mount directly to wall, and side clearance is allowed for tension wheel and drive mechanism.

Fascia: Metal closure for the back of door housing.

Fenestrated Slats: A curtain with holes or slots in slats to allow air infiltration.

***Fire Door:** The door component of a fire door assembly.

***Fire Door Assembly:** Any combination of a fire door, a frame, hardware, and other accessories that together provide a specific degree of fire protection to the opening.

***Fire Protection Rating:** The designation indicating the duration of the fire test exposure to which a fire door assembly or fire window assembly was exposed and for which it successfully met all acceptance criteria as determined in accordance with NFPA 252, *Standard Methods of Fire Tests of Door Assemblies*, or NFPA 257, *Standard for Fire Tests of Window Assemblies*, respectively.

***Fire Shutter:** A fire door assembly used for the protection of a window opening in the exterior wall.

***Flame Baffle:** A hinged piece of sheet metal within the hood that, when released, closes the space between the top of the curtain and the hood of a rolling steel fire door.

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***Fuse Link Housing:** A box in which fusible links are sometimes furnished when rolling fire doors are mounted above ceiling to provide a finished exposure area in ceiling for link.

***Fusible Link:** Two pieces of metal held together by low-melting-point solder.

Gear Cover: Metal cover protecting the drive mechanism from weather and debris.

***Governor:** A device that controls the rate of descent of the door during automatic closure.

Grille Door: An upward acting rolling gate offering security without loss of visibility or ventilation. Widely used in shopping malls and parking areas.

Guide: Vertical assembly in which the curtain travels and that is fastened to the jamb, retaining the edges of the door curtain and closing the space between the curtain edges and the jamb.

Guide Standout: The distance that face-mounted guide assembly extends from wall face.

Guide Weatherseal (1 Side): A strip of weather-stripping material that is attached to the exterior guide angle and designed to compress against the exterior surface of the curtain slats. The material may be vinyl, neoprene rubber, or brush filaments.

Guide Weatherseal (2 Side): The weather-stripping material is applied on both the exterior and interior guide angles and is designed to compress against both the interior and exterior curtain surfaces.

Gussets: See Brackets.

Hand of Operation: The side on which the door operation mechanism is placed, as viewed from the coil side of the door. It is either a RH or LH operation.

Header Seal: Weather-stripping mounted to opening header to seal the opening between header and curtain, sometimes used where hood baffle is ineffective.

Headplates: See Brackets.

Headroom: Amount of clear unobstructed space above the door lintel or header.

Helical: A term referring to the type of torsion spring used in the spring counterbalance.

High Cycle Design: Door components and operator designed for a fixed number of cycles for a specific period of time.

Hood: A sheet metal housing that mounts horizontally between the brackets, serving as an enclosure for the coiled curtain and closing the space between the door coil and the lintel.

Hood Baffle: A flap of material with one end secured to the interior of the hood and the other resting on the curtain, designed to retard air infiltration over the top of the curtain and through the hood (optional).

Housing: See Hood.

Inertia Brake: A unit that is attached to the door shaft and headplate or wall, which will stop the door from free falling should there be a failure in the motor operator brake, roller chain drive or torsion spring assembly. When the shaft is moving at a certain RPM the unit will lock up the shaft, preventing it from moving until door can be repaired.

Initial Charge: See Initial Turns.

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Initial Tension: See Initial Turns.

Initial Turns: Amount of turns of the tension shaft to apply spring tension from zero with the door in the fully open position. These turns provide the minimum moment or force to hold door in the open position.

Inset: See Setback.

Inside Adjusting Wheel: See Inside Tension Wheel.

Inside Tension Wheel: Spring adjusting wheel located inside bracket plate so that no additional sideroom is required beyond the guide.

Interlock, External: An electrical switch to prevent motor operation if locking device is not first disengaged.

Intermediate Hood Support: A rigid member, which is contoured to the shape of the hood and mounted to the wall, between the headplates. The hood is then attached to the support to give the hood rigidity.

Jamb: The vertical member that frames the side of an opening in the wall.

Jamb Angle: See Wall Angle.

Jamb Load: Force exerted on jamb by guide assembly when curtain is subjected to wind load.

***Labeled:** Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the Authority Having Jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of

labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

***Label Size Door:** The largest size of a fire door or fire shutter assembly fire proven by test to meet a specific fire rating.

Lift Handle: A handle supplied on manual push-up doors, to assist in raising and lowering the door.

Lintel: A horizontal member spanning and carrying the load above an opening.

***Magnetic Release:** Device connected to a smoke detector or alarm system, that on either an interruption of electrical power or applied signal will release the automatic closing device of a fire door or fire shutter.

Manual Override: Means of operating a motorized shutter by manual operation in case of power loss.

Master Keying: Arrangement whereby cylinder locks, although fitted with different keyed cylinders can be opened or locked by means of one "master" key.

Motor Cover: Metal cover to protect the motor from exterior weather, debris, or to meet OSHA safety requirements.

Mullion, Motorized: A combined guide assembly joining two adjacent rolling doors where center guide is hinged and motorized to lift up and out of the way, to expose a full opening width when both doors are open.

Mullion, Removable: A combined guide assembly joining two adjacent rolling doors, grilles or shutters where center guide is removable to expose a full opening width.

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***NFPA 72, National Fire Alarm Code:** Code deals with the application, installation, performance, and maintenance of fire alarm systems and their components.

***NFPA 80, Standard for Fire Door and Fire Windows:** Regulates the installation and maintenance of assemblies and devices used to protect openings in walls, floors, and ceilings against the spread of fire and smoke within, into, or out of buildings.

***NFPA 105, Standard for the Installation of Smoke-Control Door Assemblies:** Regulates the use of door assemblies in openings where passage of smoke is to be governed.

Offset: Dimension between face of header or jamb and centerline of curtain. Required to reduce drag of curtain on bellmouth of guides when curtain is in a lowered position.

***Oversized Label:** A term applying to a fire door or fire shutter assembly that has not been fire tested, ~~and~~ but receives a label or a Certificate of Inspection which does not indicate that the door is capable of furnishing “Standard Fire Protection”, but ~~only~~ that the door conforms to the construction requirements and was manufactured in accordance with the door’s listing / approved agency requirements.

Packout: Guide build-out to clear an obstruction or provide clearance for drive or tension mechanism when door is between-jamb mounted.

Panic Release Device: See Emergency Release Device.

Pass Door: Hollow-metal pedestrian door integrated into the rolling door, the frame of

which is hinged at the jamb so doorframe swings out of the opening.

Perforated Slats: See Fenestrated Slats

Pipe Shaft: See Barrel Assembly.

Plug End: Drive end of barrel assembly driven by gear or sprocket for which the curtain is raised and lowered. Consists of assembly of short solid shaft and one or more round plates welded to the shaft and pipe, which fit within the pipe.

Pre-turns: See Initial Turns

***Rolling Steel Fire Door:** A fire door assembly consisting of a curtain, bottom bar, barrel, guides, brackets, hood and an automatic closing device.

Safety Stop Bearing: See Inertia Brake.

Security Chain Box: Metal enclosure that encloses hand chain in a steel pad-lockable assembly attached to door guide.

Sensing Edge: A device added to the underside of the bottom bar of a power operated rolling door, which stops or reverses the door curtain upon contact with an obstruction when closing under power.

Sensing Edge, Pneumatic: An air hose installed inside the bottom bar astragal and connected to a diaphragm switch, to signal the motor operator to stop or stop-and-reverse the door.

Sensing Edge, Electric: An electrical bottom bar astragal enclosed with two parallel foils. When closing door bottom bar touches an obstruction, the foils close an electric circuit to cause the operator to stop or stop-and-reverse the door.

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Sensing Edge, Infrared Type: Bottom bar astragal enclosing a tube with an infrared transmitter at one end and a detector at the other end. When IR source is obstructed the motor operator will stop or stop-and-reverse the door.

***Service Counter Fire Door:** A labeled fire door assembly used for protection openings in walls where the primary purpose of the opening is for nonpedestrian use, such as counter service for food, a pharmaceutical dispensary, package and baggage transfer, or observation ports.

Setback: A standard space where the guide is recessed from edge of the jamb at both sides of opening on a face of wall-mounted door.

Sideroom: Required unobstructed space on either side of the opening.

Slat: See Curtain Slat.

Slide Bolt: Locking device on bottom bar, which slides into guide or guide shoe and is equipped for padlocking. Mounted either inside, outside or both sides of the door.

Slide Grille: A side-sliding grille product that requires little headroom and no floor track. The grill is able to follow a curved lease line and stacks into a side pocket in the wall.

Sloped Bottom Bar: Tapered bottom bar to match sloped sill of opening. Accomplished by inserting a tapered plate between bottom bar angles. This tapered plate will hang into opening on low side unless door height is increased and coil raised to have sloped bar clear opening when door is open.

***Smoke Detector:** A device that senses visible or invisible particles of combustion and/or heat.

***Smoke Gasketing:** Brush seal used on fire doors or fire shutters to reduce the passage of smoke and gases.

***Spot-Type Detector:** A device with a detecting element concentrated at a particular location. Typical examples are bimetallic detectors, fusible alloy detectors, certain pneumatic rate of rise detectors, certain smoke detectors, and thermoelectric detectors.

Spring Cycle Life: Spring counterbalance is designed for a fixed number of cycles.

Spring Counterbalance: See Barrel Assembly.

Stand-out: The distance that guide assembly extends out from the wall on face-of-wall mounted doors.

***Starter, Fire Door:** A mechanical device to start the closing of door in the event of a fire and to do it independently of the hand chain, crank or motor operator normally used to close door.

Starter Slats: Partial slats used to connect curtain to barrel or barrel rings.

Stops: Bars mounted at top of guides to prevent bottom bar from traveling out of the guides when the curtain is fully raised.

Stop Lock Bearing: See Inertia Brake.

Tapered Bottom Bar: See Sloped Bottom Bar.

Tension Wheel: A component attached to the counterbalance tension shaft, which controls the spring tension as it is locked to the bracket.

Thru-Wall Operation: A door driven by means of a hand chain, crank or motor operator located on the opposite side of the wall.

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***Thru-Wall Fusible Link:** Extending a fuse linkage to the opposite side of an opening, with respect to the side the door is mounted on. Required per NFPA 80 for all non-exterior mounted doors.

Thumb Turn Mortise Cylinder: Locking device, much like a cylinder lock but does not require a key to lock or unlock.

Torsion Spring: A helical wound spring in a counterbalance assembly, used to counterbalance the curtain.

Tubular Operator: A cylindrical operator that mounts directly into the pipe and electrically drives the barrel assembly.

Vision Lite: A series of single cutouts in a door, glazed with clear plastic.

Wall Angle: An angle of the guide assembly, which attaches to the face of wall and supports the load of the door assembly.

Wicket Door: See Pass Door.

Wind Bar: Channel or bar welded inside guide groove, which engage windlocks under wind load.

Windlock: A component attached at predetermined intervals to slat ends to prevent curtain from leaving the guides under wind load, and which is used in conjunction with wind bars inside the guides.

Working Turns: The additional winding of the springs as the barrel rotates and the curtain closes.

"Z" Guides: - Common expression for the shape that guides form when they are mounted to masonry jambs.

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